

Yoga Pathways to Wellbeing: Exploring Conceptualisations, Profiles and Mechanisms in Regular Ashtanga Yoga Practitioners

By

DANIELA RAMIREZ-DURAN

MAppPosPsych, B.Sc. Psychology (Hons)

ORCID 0000-0002-9967-7550

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Centre for Wellbeing Science
Melbourne Graduate School of Education
The University of Melbourne
Melbourne, Australia

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ABSTRACT

Yoga is an embodied practice founded in philosophical frameworks intended for the evolution of different dimensions of human existence and optimal functioning. With a solid body of research demonstrating its positive impact on health and wellbeing, recent studies mostly using quantitative methods have shifted their focus to understand practitioners' characteristics and the mechanisms yielding positive benefits. This thesis adds to these studies by exploring the pathways of yoga towards wellbeing by understanding how an international sample of regular practitioners within the Ashtanga Yoga (AY) tradition conceptualise wellbeing and yoga, examining differences and similarities in their wellbeing and yoga profiles, and understanding the mechanisms of yoga from their lived experience of a developing a long-term practice.

Guided by a social constructivist epistemology and interweaving Reflexive Thematic Analysis and Cluster Analysis, this predominately qualitative mixed-methods research comprises five studies using data from an online survey and semi-structured interviews to gain in-depth analysis of yoga, wellbeing, and their inter-relationships. While the first three studies were designed to understand how regular AY practitioners conceptualised wellbeing and yoga, the two subsequent studies focused on understanding the characteristics of practitioners and the pathways that their yoga practice paved towards wellbeing. Wellbeing was conceptualised as embodied, multidimensional, integrated, holistic, and dynamic, being experienced and perceived by the self as a whole. Wellbeing outcomes experienced in one dimension of the individual (i.e., physical, emotional, psychological, social, spiritual) were seen as permeating into other dimensions and in dynamic interaction with one another. Yoga

was conceptualised as an evolving system interweaving philosophical and practical components, and in close relation to health and wellbeing. Yoga was represented as a formal practice, as a lifestyle and a way of seeing the world, which could be further used as a path for self-inquiry and for spiritual development. The pathways of yoga towards wellbeing were varied across regular AY practitioners. While practitioners shared some common characteristics, including high levels of perceived health and wellbeing, mindfulness, compassion, openness to experience, and conscientiousness, they also varied in their engagement with the AY practice. The pathways towards wellbeing involved different levels of engagement with different components of the AY system (e.g., breathing, philosophical framework), in addition to experiencing increased autonomy and awareness through the AY method (i.e., way of teaching/learning), and the integration of mechanisms across neurophysiological, intrapersonal, interpersonal, and transpersonal domains. These findings suggest that AY can cater to different individuals, providing autonomy in ways of engaging with the practice over time, activating various pathways leading to wellbeing outcomes involving neurophysiological, intrapersonal, interpersonal, and transpersonal elements and processes.

Two conceptual models emerged from this thesis: a conceptual model of human functioning and wellbeing, and a conceptual model of the pathways of AY towards wellbeing. Together, these models articulate how a regular yoga practice can permeate into every dimension of human existence, yielding wellbeing benefits within the self and in relation to others. The ability to navigate through different levels of individual functioning, (i.e., from coping, to personal growth, to transcendence) in an embodied

and regulated manner can ultimately translate into a sense of integrated self, which is attuned to oneself, to others, and to the world around them. Overall, the thesis underscores the relevance of incorporating an embodied, holistic, transdisciplinary, and systems lens into wellbeing research, theory, and practice, as well as moving from purely cognitive wellbeing interventions to embodied and holistic ongoing practices and lifestyles that can lead to sustained intrapersonal, interpersonal, and transpersonal wellbeing outcomes.

Keywords: Ashtanga yoga, wellbeing, dimensions of wellbeing, regular yoga practitioners, mechanisms of yoga, reflexive thematic analysis, cluster analysis, mixed methods

DECLARATION

This declaration is to certify that:

- Materials included in this thesis have not been accepted for any other degree in any university;
- This thesis comprises only my original work towards the PhD and, to the best of my knowledge, it contains no material previously published or written by any other person, except where due reference is given in the text;
- No third-party editorial services were used in the preparation of this thesis;
- This thesis is less than 100,000 words in length, exclusive of tables, figures, references and appendices.

Signed: _____

Dated: May 2023

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I would also like to acknowledge other scholars at MGSE who provided support and guidance at different stages of my candidature. To Professor Kylie Smith, thank you

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PREFACE

This dissertation includes two published peer-reviewed articles, two peer-reviewed articles under review, and one unpublished manuscript intended for submission. These manuscripts present findings of original research derived from my PhD candidature. As the graduate researcher, I was the lead author of these publications and responsible for planning, executing, and preparing the work each article. Each manuscript reports on original research that I conducted during my candidature with the supervision of A/Prof. Margaret Kern and Prof. Helen Stokes. The preparation of this dissertation complies with The University of Melbourne's *Preparation of Graduate Thesis Rules*. Below, I provide an outline of how these manuscripts have been integrated into my dissertation and their publication status, along with the authors' contribution for the conceptual design, literature review, research design, data analysis, writing, and graduate researcher supervision. As part of my PhD candidature, these manuscripts have been funded by the National Agency for Research and Development (ANID) through Becas Chile, grant no.72190189. ANID was formerly known as the National Commission for Scientific Research and Technology (CONICYT).

Chapter 4: Conceptualisations of Wellbeing

This chapter entails a study investigating regular Ashtanga Yoga practitioners' definitions of wellbeing using Reflexive Thematic Analysis. This manuscript was published in the *International Journal of Wellbeing*:

Ramirez-Duran, D., Kern, M. L., & Stokes, H. (2022a). More than a feeling: Perceptions of wellbeing in regular Ashtanga Yoga practitioners. *International Journal of Wellbeing*, 12(2), 88-113. <https://doi.org/10.5502/ijw.v12i2.2027>

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	70%	75%	75%	80%	80%	n/a
Kern	15%	15%	15%	10%	15%	70%
Stokes	15%	10%	10%	10%	5%	30%

Chapter 5: Conceptualisations of Wellbeing Dimensions

This chapter includes a study published in *Frontiers in Psychology, Section Positive Psychology*. It extends on the previous chapter by specifically examining regular Ashtanga Yoga practitioners' conceptualisations of the physical, emotional, psychological, social, and spiritual dimensions of wellbeing using Reflexive Thematic Analysis.

Ramirez-Duran, D., Stokes, H., & Kern, P. (2022b). Going within, between and beyond:

An exploration of regular Ashtanga Yoga practitioners' conceptualisations of five dimensions of wellbeing. *Frontiers in Positive Psychology*.

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Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	70%	80%	75%	80%	85%	n/a
Kern	15%	10%	10%	5%	5%	30%
Stokes	15%	10%	15%	10%	10%	70%

Chapter 6: Conceptualisations of Yoga

This chapter encompasses a study examining the conceptualisations of yoga through the standpoint of regular Ashtanga Yoga practitioners, by using Reflexive Thematic Analysis. This paper has been submitted to *Psychology of Consciousness* and is currently under review.

Ramirez-Duran, D., Kern, M. L., & Stokes, H. (2023a). From practice to lifestyle: Conceptualisations of yoga in regular Ashtanga Yoga practitioners. *Manuscript Under Review*.

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	70%	90%	80%	90%	90%	n/a
Kern	15%	5%	10%	5%	5%	50%
Stokes	15%	5%	10%	5%	5%	50%

Chapter 7: Practitioners' Wellbeing and Yoga Profiles

This chapter includes a study exploring the profiles of regular Ashtanga Yoga practitioners using cluster analysis, based on a range of personal traits and characteristics of their yoga practice. This manuscript has been submitted to the academic journal *Mindfulness* and is currently under review:

Ramirez-Duran, D. & Kern, M.L. (2023). Exploring Wellbeing Profiles, Mindfulness, Compassion and Personality Traits in Regular Ashtanga Yoga Practitioners: A Cluster Analysis. *Manuscript Under Review*.

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	60%	80%	60%	80%	90%	n/a
Kern	40%	20%	40%	20%	10%	100%

Chapter 8: Yoga Pathways to Wellbeing

This chapter includes the final study of the thesis, investigating the relationships between yoga and wellbeing through the lived experiences of regular practitioners. The manuscript will be submitted for publication in a peer-reviewed academic journal after submission of the thesis.

Ramirez-Duran, D., Stokes, H. & Kern, M.L. (2023b). Pathways to wellbeing: Exploring the elements and role of Ashtanga Yoga in regular practitioners' wellbeing. *Manuscript in Preparation.*

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	80%	80%	80%	90%	80%	n/a
Kern	10%	10%	10%	5%	10%	50%
Stokes	10%	10%	10%	5%	5%	50%

Each chapter that has been published or submitted to a journal includes supplementary materials, which are labelled and mentioned through each chapter. All supplementary materials have been compiled in a separate file.

Research outputs from my PhD candidature have also been presented at the following conferences:

- Ramirez-Duran (2022). Insights from the mat: Looking at regular Ashtanga Yoga practitioners' embodied perceptions of wellbeing. Oral presentation (concurrent session) and poster presentation. Lifestyle Medicine Conference, Cairns.
- Ramirez-Duran (2021). Wellbeing through the yoga spectacles: An exploration of regular Ashtanga Yoga practitioners' definitions of physical, emotional, psychological, social and spiritual wellbeing. Poster presentation (video recording). 7th World Congress IPPA, Vancouver, Canada
- Ramirez-Duran (2021). Stories from the mat: Investigating transcendental and spiritual elements of wellbeing in regular Ashtanga Yoga practitioners. Poster presentation (video recording). 7th World Congress IPPA, Vancouver, Canada
- Ramirez-Duran (2020). Going within, between and beyond: An exploration of regular Ashtanga Yoga practitioners' conceptualisations of wellbeing. Mental Health PhD Program Conference, University of Melbourne
- Ramirez-Duran (2020). Going within, between and beyond: An exploration of regular Ashtanga Yoga practitioners' conceptualisations of wellbeing. MGSE Graduate Research Conference: A summer ideas festival. University of Melbourne, Australia.
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TABLE OF CONTENTS

ABSTRACT	iii
DECLARATION	vi
ACKNOWLEDGEMENTS	vii
PREFACE	ix
LIST OF TABLES	xx
LIST OF FIGURES	xxii
CHAPTER 1: INTRODUCTION	
Positive Psychology and Conceptualisations of Wellbeing	1
Conceptualising Yoga	3
Why Yoga and Wellbeing?	6
Why Ashtanga Yoga and Regular Practitioners?	9
Research Gaps, Aims, and Questions	11
Structure and Narrative of This Thesis	16
Summary	22
CHAPTER 2: THE SCIENCE OF WELLBEING AND YOGA	
Introduction	23
The Landscape of Wellbeing Conceptualisations	24
Scholar Perspectives of Wellbeing	24
Lay Conceptualisations of Wellbeing	28
The Landscape of Yoga Conceptualisations	32
Eastern and Western Conceptualisations of Yoga	32
Growing Interest in Yoga: Trends in Practitioners and Research	36
The Science of Yoga and Wellbeing	41
Defining the Landscape for the Yoga Pathways Towards Wellbeing	46
Ashtanga Yoga: Philosophy and Practice	46
Ashtanga Yoga Research	50
The Mechanisms of Yoga	54
The Self-Regulation Model	57
The Comprehensive Theoretical Framework of Neurophysiological and Neurocognitive Mechanisms in Yoga	58
Philosophical Assumptions and Intersections of Yoga and Wellbeing	60
Conclusion	62
CHAPTER 3. METHODOLOGY	
Introduction	64
Methodological Framework Considerations	64

The Overarching Philosophical Paradigm: Social Constructivism	66
The Rationale for Social Constructivism	68
Linking Research Inquiry and Methods Through the Philosophical Keystones of Phenomenology	73
Mixed Methods as the Research Design	77
Ethical Considerations	83
Methods	85
Participants	85
Procedure	86
Measures	88
Online Survey	88
Virtual Semi-Structured Interviews	93
Data Analyses	94
Quantitative Data Analyses	95
Qualitative Data Analyses	96
Summary	101
CHAPTER 4. CONCEPTUALISATIONS OF WELLBEING	
Chapter Synopsis	102
Citation	102
Funding Sources	103
Authors Contributions	103
More Than a Feeling: Perceptions of Wellbeing in Regular Ashtanga Yoga Practitioners	104
Abstract	104
Introduction	105
Expanding Conceptualisations of Wellbeing	106
Yoga: An Eastern Practice in the Western World	108
Ashtanga Yoga	109
The Current Study	114
Method	115
Participants	115
Measures	117
Data Analyses	116
Research Team and Coding Process	117
Results	119
Linguistic Representations of Wellbeing	119
Overarching Theme 1: The Multidimensional Nature of Wellbeing	126
Overarching Theme 2: The Holistic Nature of Wellbeing	128
Overarching Theme 3: The Non-Dualistic Nature of Wellbeing	129

Overarching Theme 4: The Dynamic Nature of Wellbeing	131
Discussion	133
Extending on Mainstream and Emerging Conceptualisations of Wellbeing	133
Knowing About Wellbeing Through Embodied Experience.....	136
Underlying Philosophical Assumptions in AYPs' Wellbeing Conceptualisations	138
Implications	140
Limitations and Future Directions	141
Conclusion	142
CHAPTER 5. CONCEPTUALISATIONS OF WELLBEING DIMENSIONS	
Chapter Synopsis	144
Citation	145
Funding Sources	145
Authors Contributions	145
Going Within, Between, And Beyond: An Exploration of Regular Ashtanga Yoga Practitioners' Conceptualisations of Five Dimensions of Wellbeing	146
Abstract	146
Introduction	147
Wellbeing Revisited	148
Dimensions of Wellbeing	150
Yoga, Wellbeing, and Dimensions of Human Existence	152
The Current Study	155
Method	156
Participants	156
Measures	158
Data Analyses	158
Generation of Codes and Definition of Themes	159
Results	162
An Overview of the Linguistic Landscape of Wellbeing Dimensions	162
Shared Meanings Across Regular AYPs' within Wellbeing Dimensions	168
Physical Dimension of Wellbeing	168
Emotional Dimension of Wellbeing	170
Psychological Dimension of Wellbeing	172
Social Dimension of Wellbeing	175
Spiritual Dimension of Wellbeing	177
Other Wellbeing Dimensions	179

Discussion	180
Shared Meanings Within and Across Wellbeing Dimensions	181
The Levels of Functioning in Wellbeing Dimensions	183
The Foundational Level of Individual Functioning	184
The Optimal Level of Functioning	186
The Contemplative Level of Human Functioning	189
The Levels in Perspective: Integrating Western and Eastern Views on Human Functioning	191
Implications and Future Directions	194
Limitations	195
Conclusion	196
CHAPTER 6. CONCEPTUALISATIONS OF YOGA	
Chapter Synopsis	198
Citation	199
Funding Sources	199
Authors Contributions	199
From Practice to Lifestyle: Conceptualisations of Yoga in Regular Ashtanga Yoga Practitioners	200
Abstract	200
Introduction	201
From Traditional to Modern Conceptualisations of Yoga	202
Defining Yoga in a Globalised World	205
Regular Yoga Practitioners and the Ashtanga Yoga Method	208
The Current Study	211
Method	212
Participants	212
Measures	213
Data Analyses	214
The Process of Generating Codes and Defining Themes	216
Results	220
Conceptualisations of Yoga in General	226
Conceptualisations of Yoga Philosophy	230
Conceptualisations of Yoga Practice	235
Discussion	239
Shared Meanings Across Yoga, Yoga Philosophy, and Yoga Practice	239
Yoga as an Embodied Framework to be Used On and Off the Mat	240
Yoga as an Embodied Path for Self-Knowledge	243
Yoga as a Path for Spiritual Awakening and Connection	245
Integration of Common Threads	248

Implications and Future Directions	249
Limitations	251
Conclusion	252
 CHAPTER 7. PRACTITIONERS' WELLBEING AND YOGA PROFILES	
Chapter Synopsis	253
Citation	254
Funding Sources	254
Authors Contributions	254
Exploring Wellbeing Profiles, Mindfulness, Compassion, and Personality Traits in Regular Ashtanga Yoga Practitioners: A Cluster Analysis	255
Abstract	255
Introduction	256
Yoga Practice, Health and Wellbeing	257
The Yoga Practitioner Profile	258
Types of Yoga Practitioners	261
The Ashtanga Yoga Practice	263
The Present Study	265
Method	269
Participants	269
Measures	270
Data Analyses	271
Results	274
Overview of Regular AYPs	274
General Overview of Clusters	277
Cluster 1: The Mind Tamers	281
Cluster 2: Not Too Bad	282
Cluster 3: Into Philosophy	283
Cluster 4: Into the Inner World and Beyond	283
Cluster 5: The Critical Ashtangis	284
Cluster 6: The Average Autonomous Ashtangi	286
Discussion	288
Common Patterns Across Regular AYPs	288
Wellbeing Patterns Across Clusters	291
Implications	296
Limitations and Future Directions	298
Conclusion	299
 CHAPTER 8: YOGA PATHWAYS TO WELLBEING	
Chapter Synopsis	301

Citation	302
Funding Sources	302
Authors Contributions	302
Pathways to Wellbeing: Exploring the Elements and Role of Ashtanga Yoga in Regular Practitioners' Wellbeing	303
Abstract	303
Introduction	304
Yoga and the Mechanisms of Health and Disease	306
Integrating Pathways into Theoretical Models of Human Functioning	308
Holistic and Transdisciplinary Models of Human Functioning	316
Transdisciplinary Model of Wellbeing	316
Attuned Representation Model of Self	317
The Current Study	319
Method	320
Participants and Context	320
Research Tools and Data Analysis	322
Results and Discussion	327
Relevant Elements of Ashtanga Yoga	328
The AY System	328
The AY Method	330
Processes Experienced Through Regular Ashtanga Yoga Practice	333
The Transformation of Bodily Systems, Sense of Embodiment, and Self-Regulation	333
Construction, De-Construction, and Harmonisation of the Self	338
Ways of Being and Ways of Living in the World	343
Wellbeing Outcomes Experienced by Regular Practitioners	350
Intrapersonal Outcomes	353
Interpersonal and Transpersonal Outcomes	355
Integration: A Conceptual Model of Ashtanga Yoga and Wellbeing	357
Implications and Future Directions	359
Limitations	361
Conclusion	362
CHAPTER 9: DISCUSSION AND CONCLUSION	
Introduction	363
Integration of Findings Across Chapters	363
Integration of Conceptual Models	364
Contributions to the Field and Implications	381

Empirical Contributions	387
Methodological Contributions	389
Theoretical Contributions	391
Implications	392
Limitations	396
Reflexivity	398
Conclusion	401
REFERENCES	403
APPENDIX 1: Ethics Approval	463
APPENDIX 2: Plain Language Statements for Online Survey (English and Spanish)	464
APPENDIX 3: Consent Forms for Online Survey (English and Spanish)	474
APPENDIX 4: Plain Language Statements for Interviews (English and Spanish)	478
APPENDIX 5: Consent Forms for Interviews (English and Spanish)	487

LIST OF TABLES

Table 1.1.	Summary of Research Gaps Addressed with this Thesis	13
Table 3.1.	Measures Included in the Online Survey	91
Table 4.1.	Regular AYPs' Perceptions of Wellbeing	122
Table 5.1.	Overview of Regular AYPs' Responses Word Counts for Each Dimension of Wellbeing	164
Table 5.2.	Definitions of Wellbeing Dimensions and their Themes, with Quotes from Regular AYPs and Frequencies	165
Table 6.1.	Overview of Regular AYPs' Responses Word Counts for each Aspect of Yoga	221
Table 6.2.	Conceptualisations of Yoga, Yoga Philosophy, and Yoga Practice with Themes and Quotes	223
Table 7.1.	Summary of Studies Examining Yoga Practitioners' Profiles	266
Table 7.2.	Sample of Categorical and Continuous Variables Selected for Clustering	272
Table 7.3.	Characteristics of Regular AYPs	276
Table 7.4.	Continuous Variables Descriptive Statistics by Cluster Group	279
Table 8.1.	Summary of Models Exploring the Mechanisms of Yoga	310
Table 8.2.	Questions from Semi-Structured Interviews Included in this Study	323
Table 8.3.	Summary of Themes Across AY Elements, Processes, and Outcomes ..	327
Table 8.4.	Integrative Summary of Proposed Model of AY Towards Wellbeing ...	351

Table 9.1.	Summary of Findings Addressing Research Questions in Each Chapter	
		366
Table 9.2.	Key Findings on Three Topic Areas Addressed in this Dissertation	381

LIST OF FIGURES

Figure 1.1.	Thesis Structure and Narrative	22
Figure 3.1.	Research Design of this Dissertation	82
Figure 3.2.	Studies Included in PhD Research Project	95
Figure 4.1.	AY Primary Series Chart	113
Figure 4.2.	Words Used by Regular AYPs to Define Wellbeing	121
Figure 5.1.	Application of the Six Steps of RTA in this Study	159
Figure 5.2.	Examples of Deductive and Inductive Coding Process	161
Figure 5.3.	Example of the Process to Generate, Review, and Define Themes	162
Figure 5.4.	Word Clouds for Physical, Emotional, Psychological, Social, and Spiritual Dimensions of Wellbeing as Defined by Regular AYPs	163
Figure 5.5.	Levels of Wellbeing Dimensions	181
Figure 5.6.	Common Themes Across Dimensions of Wellbeing	183
Figure 5.7.	Levels of Functioning in Relation to Dimensions of Wellbeing	193
Figure 6.1.	Ashtanga Yoga, The Eightfold Path of Patanjali	210
Figure 6.2.	Application of the Six Stages of RTA in this Study	215
Figure 6.3.	Examples of the RTA Coding Process	218
Figure 6.4.	Examples of the RTA Stages for Creating, Reviewing, and Defining Codes and Themes	219
Figure 6.5.	Word Clouds of the Conceptualisation of Yoga, Yoga Philosophy, and Yoga Practice	220

Figure 6.6.	Overarching Themes Across Yoga, Yoga Philosophy, and Yoga Practice	221
Figure 7.1.	Dendogram Generated for Hierarchical Clustering	274
Figure 7.2.	Differences Between Clusters in Terms of Wellbeing, Health, AY Philosophy, and Personal Traits	278
Figure 8.1.	Examples of Deductive and Inductive Coding	325
Figure 8.2.	Illustration of the RTA Process	326
Figure 8.3.	Conceptual Model of Ashtanga Yoga Pathways Towards Wellbeing	351
Figure 9.1.	Integration of Conceptual Models Emerging from the Dissertation ...	382
Figure 9.2.	Synthesis of Conceptual Models	387

CHAPTER 1: INTRODUCTION

This dissertation comprehensively explored the pathways of yoga towards wellbeing in regular practitioners within the specific tradition of Ashtanga yoga. In this thesis, I sought to first understand how regular Ashtanga yoga practitioners conceptualise wellbeing and yoga. Then, I aimed to explore potential differences and similarities in regular yoga practitioners' wellbeing and yoga profiles in relation to the elements of the Ashtanga yoga tradition. Finally, I sought to understand the mechanisms of yoga through the lived experiences of yoga practitioners engaging in a regular yoga practice. In this thesis, I draw and build upon a range of theoretical and philosophical frameworks and models, as well as empirical research from across a number of disciplines focusing on and relevant to yoga and wellbeing, which I describe through the pages of this thesis.

This introductory chapter provides a general theoretical and empirical background framing this dissertation. I begin with setting the rationale for this thesis by providing an overview of wellbeing and yoga, identifying the research gaps within the current literature. Next, I summarise and link the research gaps, linking these gaps to the aims of the research and the research questions. I conclude with an overview of the structure and narrative of the thesis, providing an outline of the key contributions emerging from this dissertation.

Positive Psychology and Conceptualisations of Wellbeing

Since its inception and over the past three decades, positive psychology (PP) has largely contributed to the understanding, measurement, and improvement of

wellbeing, building upon existing knowledge from fields such as philosophy, psychology, sociology, and economics (Oades & Mossman, 2017). Within PP, scholars have focused on subjective aspects, and broadly defined wellbeing as experiencing optimal functioning (Deci & Ryan, 2008; Seligman, 2011) or as both feeling good and functioning well (Huppert, 2014; Keyes & Annas, 2009). However, these general definitions pose the challenge of evaluating and choosing which elements comprise optimal experience. At an individual and subjective level, wellbeing can be understood in various forms depending on which elements are being considered and assessed. These variations can depend on the theoretical and epistemological perspectives of researchers and scholars (cf. Diener, 1984; 2000; Ryff, 1989; 2014; Huppert & So, 2013; Keyes, 1998; 2005; Seligman, 2011), as well as on people's characteristics, experiences, and context (cf. Hone et al., 2015; Wong, 2013). This diversity consequently influences how wellbeing is conceptualised and measured (Alexandrova & Fabian, 2022; Hone et al., 2015; Khaw & Kern, 2014), with implications on how to best cultivate and sustain wellbeing for different groups of people. This points to the need of understanding what wellbeing means for different people in different contexts in order to develop more sustainable and context-sensitive wellbeing interventions and practices.

Alexandrova and Fabian (2022) argue that clarifying conceptualisations and evaluations of wellbeing from the perspectives of both scholars and participants is key to understanding its nuances and building a solid empirical and theoretical ground. Indeed, recent research has ventured into understanding lay people's conceptualisations of wellbeing (cf. Bharara et al., 2019; Black & Kern, 2020; Garvey et al., 2021; Gee et al., 2014; Huang et al., 2020), with the potential to contribute to

existing scholarly knowledge and theoretical frameworks of wellbeing. Aligned with these arguments, throughout this thesis, I contend that involving participants in the process of defining and assessing wellbeing, rather than imposing theoretical assumptions, is fundamental. At the same time, I acknowledge the value arising from existing wellbeing theoretical frameworks and the empirical evidence emerging from them. For instance, conceptual overlaps across frameworks are evident (cf. Hone et al., 2014), generally highlighting elements within emotional, psychological, and social facets of wellbeing, which point to the widely accepted notion that wellbeing is a multidimensional construct. Distinctions can also be made between subjective wellbeing, or the felt experiences of individuals, versus objective wellbeing, or the conditions that make wellbeing likely to occur (Chia et al., 2020). Considering my background in psychology, wellbeing science, and positive psychology, throughout this thesis my approach to wellbeing is at a subjective and individual level. While acknowledging its multidimensionality, I do so in terms of individual facets founded in theoretical and empirical literature addressing emotional, psychological, social, and spiritual domains (e.g., Diener, 1984; 2000; Fisher, 2011; Ryff, 1989; 2014; Keyes, 1998, 2005). Hence, the content of these dimensions is not meant to be pre-defined, but rather to be further explored with participants.

Conceptualising Yoga

Yoga can be defined as a philosophy, a lifestyle, and a practice system that enables holistic development, including physical, mental, emotional, ethical, relational, and spiritual aspects of a person (Vivekananda, 2012). Traditionally, yoga is considered

as the stillness of mental oscillations (Yoga Sutra 1.2, Iyengar, 2005), and one commonly used interpretation of the Sanskrit term “yoga” is the binding and balance of mind, body, and spirit (Iyengar, 2005; Vivekananda, 2012). Specifically, yoga comprises mental and physical practices designed for the development of pure consciousness and transcending the self (De Michelis, 2005; 2008). Considering this perspective, yoga can be considered a conscious living lifestyle leading to the inquiry and transformation of the self, allowing individuals to achieve and sustain a sense of physical, mental, and spiritual wellbeing in an integrated manner, enhancing overall health (Bhavanani, 2016; Riggins, 2013; Salagame, 2011; Vivekananda, 2012).

Nonetheless, from a Western perspective, yoga has been often viewed as mainly a physical practice involving the performance of postures (Quilty et al., 2013; Singleton, 2010) and frequently linked to physical fitness and sports (Ivtzan & Jegatheeswaran, 2015). Furthermore, yoga has been stereotyped as a fundamental part of healthy and happy living, with slim and fit young women holding the ideal image of the modern yogi (Bailey et al., 2021; Hinz et al., 2021; Jeffrey, 2020; Miller, 2016). With yoga becoming a profitable industry worldwide and amassing more than one billion posts on Instagram using a yoga related hashtag (Miller, 2016; Zuckerman, 2020), the seemingly overall message is that yoga is body oriented and performance-based, promising happiness and fitness to those who practise it (Bailey et al., 2021; Hinz et al, 2021a; 2021b). While this clearly contrasts with traditional definitions, empirical literature usually refers to yoga as a mind-body intervention (e.g., Rice, 2001; Telles et al., 2014; Wahbeh, Elsas & Oken, 2008) or a holistic movement practice (e.g., Taylor, 2021; Vergeer et.al., 2017; Verger et al., 2021), emphasising the connection

between body and mind. By looking at the individual in a holistic way and highlighting the connection between mind, body and spirit, yoga can offer valuable insights in understanding optimal human functioning in an integrated manner.

However, with the exponential growth of yoga research (Gupta et al., 2018; Gururaja et al., 2020; Poornima & Surulinathi, 2019), it has become evident that researchers and scholars can define and operationalise yoga in different ways (Taylor, 2021; Park et al., 2018). Lately, efforts have been placed into developing and promoting the use of questionnaires to accurately inform the characteristics of yoga interventions in research (e.g., Büssing et al., 2021; Park et al., 2018). Still, similar to wellbeing research, conceptualisations and outcomes of yoga are usually assumed by researchers' theoretical and epistemological perspectives (Singleton & Larios, 2020). With yoga having the potential of being a transformative process, regular practitioners may conceptualise yoga and wellbeing in different ways, compared to scholars and other populations with less lived experience with the practice. Thus, their views can further inform and expand on existing empirical, theoretical, and popular knowledge on yoga and wellbeing.

To my knowledge, there are no studies looking at how seasoned practitioners, who have potentially experienced yoga in its broadest sense, conceptualise yoga. Thus, within this dissertation, I contend that similar to the construct of wellbeing, conceptualising yoga from experienced practitioners' perspective can provide a deeper and more nuanced understanding to the scholarly community and broader populations. This further aligns with the role of 'scholar-practitioner' proposed by Singleton and Larios (2020), which I embody throughout this dissertation. Scholar-practitioners are

“scholars who research, teach or write about yoga in accredited modern universities, but who also do and/or teach yoga as a practice” (Singleton & Larios, 2020, p.37). Being a regular yoga practitioner and teacher myself, as well as an emerging researcher/scholar like many in this field (cf. Atkinson, 2010; 2017; Jeffrey, 2020; Miller, 2016) places me in a bridging position, aiming to bring together knowledge from traditional sources, empirical literature, and expertise with the practice. Thus, rather than removing myself from the research, I acknowledge my background and situate myself as an active participant in the research contained in this thesis. I will discuss this in further detail throughout the thesis, especially in chapter 3 and chapter 8.

Why Wellbeing and Yoga?

Despite varieties in conceptualisations, wellbeing is considered a desirable state, as it has been related to an array of benefits, including enhanced performance and better physical and mental health outcomes (Cheng & Furnham, 2016; Diener et al., 2017; Kansky & Diener, 2017; Keyes, 2002; Ngamba et al., 2017; Lyubomirsky et al., 2005; Tenney et al., 2016), as well as social and work-related outcomes, and positive environmental behaviours (Lyubomirsky et al., 2005; Maccagnan et al., 2019; Oishi et al., 2007). Furthermore, evidence suggests that wellbeing can effectively be increased through specific interventions and practices (Sin & Lyubomirsky, 2009; van Agteren et al., 2021). With a considerable range of practices preceding and rooted beyond the field of PP, the role of researchers is to understand how these contribute to optimal human functioning, rather than attempting to claim authority over them (Oades & Mossman, 2017). This is the case for yoga, which is considered an ancient Eastern

practice originated thousands of years ago in India and studied within and beyond the boundaries of PP to enhance health and wellbeing.

Yoga conceptualises wellbeing and health as a dynamic process rather than as a state to be accomplished, with the practice potentially increasing overall health, including “physical, mental, emotional, social, and spiritual components” (Bhavanani, 2014, p.4; see also Vivekananda, 2012). Being a multifaceted practice involving multiple dimensions of human functioning, yoga has been studied across a variety of contexts, populations, topics, and disciplines. A study exploring research trends on the impact of yoga on health outcomes found that research outputs have mainly focused on the nervous system, presumably because of the effects of yoga on stress, but also on the musculoskeletal, cardiovascular, and endocrine systems (Gururaja et al., 2020). Indeed, according to a scientometric study, most of the empirical literature emanates from medical, biological sciences, and healthcare fields, with a discrete output from psychology, social sciences and arts and humanities (Gupta et al., 2018). As with wellbeing, yoga has been researched across disciplines through a variety of perspectives, which raises the need for integrating and generating knowledge from transdisciplinarity, which I do throughout this thesis.

Through the lens of the aforementioned predominant disciplines, yoga has been mostly investigated as short-term interventions with mainly clinical samples to reduce illness, enhance health, or improve ill-health and wellbeing (e.g., Brinsley et al., 2021; Pascoe & Bauer, 2015; Posadzki et al., 2014). Yoga research investigating wellbeing and health outcomes are outstripped by studies centring on clinical populations (cf. Cramer et al., 2014a; Wieland et al., 2021). Several studies assessing wellbeing have used

measurements for anxiety and depressive symptoms, reflecting a deficit standpoint to human functioning (e.g., Benavides & Caballero, 2009; Jarry, Chang & La Civita, 2017). Furthermore, studies focusing on wellbeing have usually considered specific dimensions of wellbeing and mainly used quantitative methods, with only a few assessing wellbeing holistically (cf. Park et al., 2016; Ross et al., 2013). This raises the need for further investigating yoga in relation to wellbeing and reiterates the consideration of multiple dimensions of wellbeing, as well as qualitative perspectives on wellbeing, yoga, and the interconnections of the two areas.

Research on wellbeing interventions in general have shown to be effective in improving wellbeing and diminishing ill-health symptoms (Bolier et al., 2013; Sin & Lyubomirski, 2009; van Agteren et al., 2021). However, it is only more recently that researchers have started focusing on the pathways and conditions by which these interventions result in positive outcomes (Lyubomirsky & Layous, 2013; van Agteren et al., 2021). A similar issue is apparent in yoga research. While several meta-analyses have found yoga has positive impacts on the treatment of mental and physical conditions, and in the enhancement of wellbeing in groups with clinical conditions (e.g., Cramer et al., 2013a; Cramer et al., 2017a), fewer studies have explored the pathways and conditions that contribute to the generation of such benefits (cf. Riley & Park, 2015; Streeter et al., 2012). Most of this research comes from medicine and health-related sciences, recently producing conceptual models on the mechanisms of yoga (cf. Cox & Tylka, 2020; Gard et al., 2014; Schmalzl et al., 2015). While rigorous and comprehensive, these models mainly look at physiological structures, processes, and outcomes, and a stronger link and dialogue within wellbeing science is required.

Furthermore, with yoga being a multicomponent practice, it can be challenging to disentangle relationships by only using linear or reductionist research methods, and thus applying a holistic and systems lens can help understand the complexity of these relationships (Kuntsevich et al., 2010). This is similar to what has been noted for future research in PP and wellbeing interventions (Kern et al., 2020; Lomas et al., 2020). Using yoga as a short-term intervention may narrow the understanding not only in terms of outcomes, but also in terms of the processes and the role of different elements. In this dissertation, I argue that both yoga and wellbeing need to be acknowledged in their multidimensional complexity by considering different components of yoga in the context of a long-term practice and different dimensions of human functioning related to wellbeing. I further argue that the use of a systems and transdisciplinary lens and mixed-methods approach is key to further advance research on yoga and wellbeing.

Why Ashtanga Yoga and Regular Practitioners?

One frequent critique in the yoga empirical literature is the lack of rigour in operationalising yoga and providing details about the yoga interventions, due to the array of styles and the differences within single yoga styles (cf. Elwy et al., 2014). Here, I focus on one particular and relatively under-researched yoga style. Ashtanga Yoga (AY) is a yoga tradition comprising a dynamic, vigorous, and sequential postural practice that highlights the role of slow conscious breathing while moving, along with the steadiness of mental activity through focused attention on the breath and on focal points, which can lead to meditative states (Maehle, 2006; Jois, 2016; Jois, 2018; Phillips, 2005). Furthermore, it has been argued that the postural or *asana* practice can address the

physical domain, eventually facilitating the cultivation of ethical attitudes and behaviours towards oneself and others (i.e., *yamas*, *niyamas*), moving the mind closer to the realisation of higher states of consciousness (Jois, 2018).

I have selected AY as the yoga tradition for this dissertation for a number of reasons. Firstly, it enabled me to conduct a controlled study by using a yoga style with a method that is clear, defined, systematised, and generally more consistent across practitioners in terms of how it is taught and practised. Secondly, AY comprises foundational elements (e.g., *trishtana*, *vinyasa*) underpinned by a philosophical framework. With the practice being designed to merge all elements of yoga simultaneously (Maehle, 2006), it might address different dimensions of individual functioning and wellbeing in a more integrated manner. Thirdly, my expertise in this particular tradition as a practitioner and more recently through teaching, enabled me to access a common language and experience to understand in depth what participants communicate. While this can be considered a limitation, it can also constitute a strength (see chapters 3 and 8), especially if personal context, background, and perspectives are acknowledged and reflexivity is applied (Braun & Clarke, 2023). For the purposes of this thesis, I refer to AY as the type of practice known as Ashtanga Vinyasa Yoga (i.e., the yoga practice) that can be sustained in Patanjali's philosophical eight-fold framework, also known as Ashtanga Yoga (cf. Iyengar, 2005).

AY practitioners are usually committed to practising frequently and consistently, since the system encourages developing an individual and regular practice through practising between 4 to 6 days per week. While research on yoga has typically included short-term practitioners, studies on regular or long-term yoga practitioners can provide

a broader and newfound perspective on the benefits and pathways of yoga to health and wellbeing outcomes (Kuntsevich et al., 2010). Studies looking at regular practitioners have usually described characteristics in relation to their practice, motivations, and other personal characteristics (e.g., Penman et al., 2012; Ross et al., 2013; Cramer et al., 2016). With fewer studies looking at characteristics in relation to wellbeing in particular, focusing on regular AY practitioners can help to understand how multiple elements of the practice play a role in yielding benefits over time in different areas of wellbeing (cf. Fiori et al., 2014; Jarry et al., 2017; Shaw, 2021). Thus, I contend that including regular yoga practitioners is essential to understanding the relationships between yoga and wellbeing.

Research Gaps, Aim and Questions

To my knowledge, there are no published studies examining how regular yoga practitioners perceive and define yoga, wellbeing in general, and different dimensions of wellbeing documented in the yoga and wellbeing literature (i.e., physical, emotional, psychological, social, spiritual). Furthermore, there are no published studies looking at wellbeing on a large cross-cultural sample of regular AY practitioners, nor investigating the relationships between different aspects of the AY and different dimensions of wellbeing.

Hence, this research project aims to examine AY practitioners' perceptions of yoga, their perception of how yoga relates to different aspects of wellbeing, and how the perception of their yoga practice and the perception of wellbeing vary depending on different conditions or characteristics of the practitioner. Additionally, the research seeks to explore whether AY practitioners have distinctive wellbeing profiles according

to their expertise with yoga, as well as to examine their perceptions on how different aspects of their yoga practice relates to different aspects of wellbeing. The primary research question is:

- What are the perceptions of regular Ashtanga Yoga practitioners in relation to the experience of yoga and their wellbeing?

Other questions that the research aims to address are:

- What are the perceptions of Ashtanga Yoga practitioners about how their yoga practice relates to their physical, emotional, psychological, social, and spiritual wellbeing?
- How does the perception of the yoga practice and the perception of wellbeing vary depending on the characteristics of the practitioner?
- Do yoga practitioners have distinctive wellbeing profiles based on their level of expertise with yoga?
- How do different aspects of the yoga practice relate to different dimensions of practitioners' wellbeing?
- What is the role of yoga in the interconnectedness between different dimensions of wellbeing?

Table 1.1 summarises the main research gaps identified within the literature and links them back to the aim of the thesis and the research questions, further noting the chapter addressing each question along with the related publications.

Table 1.1 *Summary of Research Gaps Addressed with this Thesis.*

Gaps in literature	Aim in thesis	Research question	Chapter	Publication Title and Status
Variations across scholarly definitions and measurements of wellbeing may limit the understanding of wellbeing in a particular population or context. Involving participants in the process of defining wellbeing can contribute to a more nuanced and contextualised understanding.	Understanding and measuring wellbeing from the perspective of participants	What are the perceptions of regular Ashtanga Yoga practitioners in relation to the experience of their wellbeing? What is the role of yoga in the interconnectedness between different elements of wellbeing?	Chapter 4: Conceptualisations of wellbeing	More than a feeling: Perceptions of wellbeing in regular AY practitioners Published in 2022
Same as above applies for dimensions of wellbeing. Though there is consensus about how wellbeing is a multidimensional construct, there is variation and overlaps in terms of what elements are included. Dimensions are often seen as independent from each other.	Understanding and measuring dimensions of wellbeing according to participants' perspectives Understanding the relationships between the dimensions of wellbeing through the lens of yoga	What are regular Ashtanga Yoga practitioners' perceptions about their physical, emotional, psychological, social, and spiritual wellbeing? What is the role of yoga in the interconnectedness between different dimensions of wellbeing?	Chapter 5: Conceptualisations of dimensions of wellbeing	Going within, between and beyond: Conceptualisations of five dimensions of wellbeing Published in 2022

No reported studies investigating perceptions of regular yoga practitioners about what yoga means to them from their lived experience.	Understanding yoga, yoga philosophy and yoga practice from participants' perspectives	What are the perceptions of regular Ashtanga Yoga practitioners in relation to the experience with yoga and their yoga practice?	Chapter 6: Conceptualisations of yoga	From practice to lifestyle: Conceptualisations of yoga in regular AY practitioners Under review in 2023
Few studies looking at practitioners' characteristics in relation to wellbeing in particular, as well as to a range of elements of the yoga practice. No previous studies have focused on profiles of AY practitioners in particular.	Exploring differences and similarities of regular practitioners according to personal characteristics, wellbeing, and elements of their yoga practice	How does the perception of the yoga practice and the perception of wellbeing vary depending on the characteristics of the practitioner? Do yoga practitioners have distinctive wellbeing profiles based on their level of expertise with yoga?	Chapter 7: Practitioners' wellbeing and yoga profiles	Exploring wellbeing profiles, mindfulness, compassion, and personality traits in regular AY practitioners: A cluster analysis. Under review in 2023
Less studies looking at wellbeing in yoga research compared to disease. Less studies investigating regular practitioners, and long-term benefits from the practice. The need to further investigate yoga in relation to wellbeing. Recent research focusing on the mechanisms of yoga and conceptual models, mostly from health sciences. The need	Understanding yoga pathways to wellbeing according to the lived experience of regular practitioners	What are the perceptions of Ashtanga Yoga practitioners about how their yoga practice relates to their physical, emotional, psychological, social, and spiritual wellbeing? What are AYPs' perceptions of how do different aspects of the yoga practice relate to different dimensions of practitioners' wellbeing?	Chapter 8: Yoga pathways to wellbeing	Yoga pathways to wellbeing: Exploring the elements and role of AY in regular practitioners. In preparation for submission in 2023

to study pathways from a wellbeing perspective.		What is the role of yoga in the interconnectedness between different dimensions of wellbeing?		
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Structure and Narrative of this Dissertation

This dissertation follows the University of Melbourne policy for *Thesis with Publications*, which encourages graduate researchers to publish research outputs emerging during and related to their candidature. This thesis includes five studies that are published, under review, or in preparation for publication. As the author of this dissertation and as per university guidelines, I am the lead author for all of these publications, holding primary responsibility for the content, review, and editing of the document. Published studies in chapter 4 and chapter 5 have been included as per the final publication, except for in-text citations and references that have been converted into APA 7 style for the dissertation. Additionally, because of the nature of peer-reviewed academic journal articles, each publication includes a literature review to provide context for each study. While this is necessary for a standalone study, in the context of a dissertation there are elements that are repeated with other sections. Since publications flowed sequentially and were generated at different timepoints, they cannot be changed. Next, I provide an overview of the structure and the narrative of this dissertation by summarising each chapter and explaining how the chapters flow and link together. This is further illustrated in Figure 1.1 below.

Chapter 2 provides a background of wellbeing science, and of the science and philosophy of yoga, particularly of AY. Philosophical underpinnings of yoga are explored in terms of one particular framework, and implications and connections to wellbeing are drawn. AY and the mechanisms of yoga are presented and discussed as under-explored areas, especially in the context of wellbeing. Drawing on philosophical assumptions in previous wellbeing and yoga research as well as in the foundations of

yoga and wellbeing, the chapter aims to provide potential connections to identify areas where yogic perspectives may enhance the understanding and conceptualisation of human functioning and wellbeing.

Chapter 3 focuses on describing and arguing the methodological foundations and procedures sustaining this PhD dissertation. It starts by making a case for using Social Constructivism as the overarching philosophical paradigm underpinning this research. I continue by describing and justifying the use of Interpretive Phenomenology as the approach linking research inquiry and methods, with reference to wellbeing and yoga theoretical and empirical literature to examine regular Ashtanga Yoga Practitioners' (AYPs) perceptions in relation to how they experience yoga and wellbeing. The chapter then argues for the need for a mixed-methods research design to address the research questions, proposing a sequential explanatory design. Within this structure, participants, procedures, and the data collection process for each stage of the project are described. The chapter ends by describing quantitative and qualitative analyses, which include Descriptive Statistics, Word Count Analysis, Cluster Analysis, and Reflexive Thematic Analysis (RTA), offering final insights into an overall synthesis. Resources related to ethical aspects are included in Appendices 1 to 5. Supplementary materials related to procedures and data collection relevant to this chapter are included in a separate file and mentioned throughout the chapter.

Chapters 4 to 8 present the five studies that comprise this thesis. Chapters 4, 5, and 6 focus on gaining a detailed understanding of how wellbeing and yoga are perceived by regular AY practitioners. Chapters 7 and 8 explore the connections

between yoga and wellbeing, looking at characteristics of practitioners as well as the elements of the AY practice and dimensions of wellbeing. Chapters 4 to 7 use data from an online survey (N=352), and chapter 8 uses data from semi-structured interviews conducted with a subset of participants from the online survey (N=23). Sample size varies across the studies using data from the online survey depending on how many participants responded the questions that were included for analysis. Supplementary materials related to data collection and analysis that are relevant to each chapter are included in a separate file, labelled accordingly, and mentioned throughout each chapter.

Chapter 4 entails a predominately qualitative mixed-methods study focusing on 166 regular AYPs, exploring participants' perceptions of subjective wellbeing. Conceptualisations of wellbeing were analysed using Word Count Analysis and RTA, which yielded 17 main themes and 73 sub-themes, across four overarching themes. These themes portrayed wellbeing as multidimensional, holistic, non-dualistic, and dynamic. Findings suggest that yoga may provide corporal and mental abilities resulting in the specific themes that emerged within participants' responses. Furthermore, AYPs' conceptualisations of wellbeing provide an avenue to explore embodied wellbeing, with implications in ways of knowing about and cultivating wellbeing, in ways that directly incorporate mind, body, and spiritual interconnections.

Chapter 5 is a predominately qualitative mixed-methods study expanding upon the study from the previous chapter, by exploring the perceptions of 137 regular

practitioners on different dimensions of wellbeing (i.e., physical, emotional, psychological, social, spiritual). Definitions for each dimension were analysed separately using Word Count Analysis and RTA, building upon, and extending on existing wellbeing and yoga models and literature. Findings portrayed dimensions as multileveled, with three levels of individual functioning (i.e., foundational; optimal functioning; and contemplative and transcendental levels). A higher-level analysis revealed common threads across dimensions of wellbeing, including freedom from and managing suffering, a positive and integrated sense of self, a sense of equanimity and steadiness, the self in relation to others and the world, and meta-awareness. The key theoretical contribution of this study is a preliminary conceptual model informed both by the empirical work and previous theories. Reinforcing findings from chapter 4, findings from this chapter highlight the importance of embodiment and transcendence in wellbeing frameworks, and the need to keep exploring the notion of the self as a multi-level system in relation to knowing about and cultivating wellbeing.

Chapter 6 comprises a predominately qualitative mixed-methods study focusing on a sample of 200 regular AY practitioners, to examine their conceptualisations of yoga, yoga philosophy, and yoga practice. This chapter sought to extend and complement previous studies on conceptualisations of wellbeing by defining yoga from participants' perspectives. Using Word Count Analysis and RTA, a conceptualisation for each aspect of yoga was generated. These conceptualisations challenge current assumptions about yoga, and reveal the entanglement of philosophical with spiritual and ethical aspects of the formal yoga practice, depicting yoga as an embodied integrated practice, as an

embodied path for self-knowledge, and a path for spiritual development. In conjunction with chapter 4 and 5, this chapter aimed to lay the foundations for the next chapters exploring wellbeing and yoga profiles of regular AY practitioners and the connections between yoga and wellbeing according to participants' lived experiences.

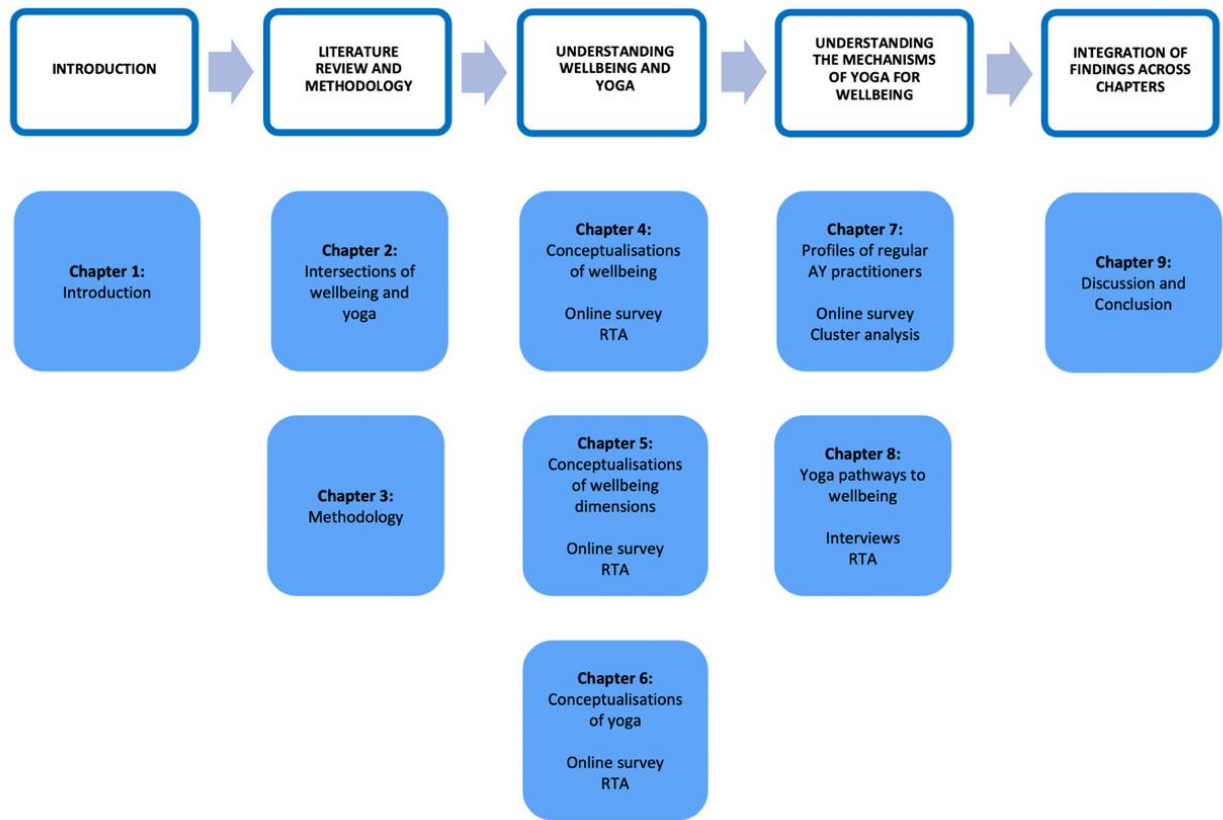
Chapter 7 entails a quantitative study using Cluster Analysis to explore wellbeing profiles in a sample of 235 regular AY practitioners. As a descriptive statistics method grouping information into clusters according to similarities in certain qualities, it organically blends with and complements RTA by finding patterns in the data through a quantitative approach, and by describing and interpreting these patterns. The analysis yielded six groups of practitioners, and revealed similarities within and across groups. All groups were found to experience high levels of wellbeing and believed that wellbeing was impacted by their yoga practice, especially the physical, emotional, and psychological dimensions. Clusters varied in terms of which wellbeing dimension was experienced in higher levels, and which dimension was most influenced by their practice, showing that different levels of engagement with physical, mental, and spiritual components of the AY practice related differently to wellbeing outcomes. The key contribution of this study is that these differences underscore the importance of considering differential pathways to prioritise and consolidate changes in wellbeing.

Chapter 8 comprises a qualitative study exploring the connections between the AY practice and wellbeing in a sample of 23 regular AY practitioners from different backgrounds, genders, locations, and levels of expertise with AY. This study used data from semi-structured interviews, which were analysed using RTA. The analysis was

divided into three areas: elements of AY, processes leading to wellbeing, and wellbeing outcomes. RTA produced three key themes illustrating the processes experienced by regular practitioners through AY towards wellbeing, which were informed by models on the mechanisms of yoga: (1) the transformation of bodily systems and a sense of embodiment and self-regulation, (2) the construction, deconstruction, and harmonisation of the self, and (3) ways of being and living in the world. These processes were found to be leading to intrapersonal, interpersonal, and transpersonal wellbeing outcomes. Findings revealed the need to address yoga and wellbeing from an embodied, systems-informed, and transdisciplinary perspectives. As a result, the main contribution of this chapter is a conceptual model of AY towards wellbeing. Implications include considering specific elements from the AY method and system as holding the potential to foster an embodied and regulated self across different levels of individual functioning leading to wellbeing.

Bringing together and integrating previous chapters, Chapter 9 discusses key findings across studies and synthesises the conceptual model of wellbeing proposed in chapter 5 and the conceptual model of AY towards wellbeing proposed in chapter 8. This final chapter concludes the dissertation by stating and discussing the main empirical, methodological, and theoretical contributions emanating from this dissertation, along with identifying limitations and future directions and discussing reflexivity throughout the thesis.

Figure 1.1. Thesis Structure and Narrative



Summary

This chapter has provided an overall view on wellbeing and yoga while providing a rationale for this thesis. This introductory chapter has laid out the foundations for understanding key evidence supporting research on wellbeing and yoga, and AY in particular. In providing this background and rationale, it identified the research gaps that led the research inquiry and clarified the structure and narrative for this dissertation. The next chapter will provide an in-depth analysis of the philosophical underpinnings of wellbeing and yoga, exploring potential similarities and uniqueness in each approach, with the intention of elaborating on contributions and interconnections between both disciplines.

CHAPTER 2: THE SCIENCE OF WELLBEING AND YOGA

Introduction

In this chapter, I provide a literature review on existing conceptualisations of wellbeing within the field of PP, as well as traditional and evolving conceptualisations of yoga, and examines the intersections between yoga and wellbeing. I first review some of the most renowned wellbeing theoretical frameworks related specifically to subjective wellbeing within the field of PP. The review provides a landscape of the main scholarly definitions that have been used and evaluates similarities and philosophical assumptions, and compares these definitions against lay people's conceptualisations of wellbeing. By identifying trends, overlaps, and gaps, the chapter establishes a context for wellbeing for this dissertation.

I then define yoga within its traditional Eastern context and its transition and evolution into the modern Westernised world. I discuss the growing interest in yoga practice and research, with a focus on the abundant body of empirical evidence on yoga as an effective intervention for health and wellbeing. Following this, I explain the specific tradition of AY is explained and argued for the context of this thesis, examining promising yet less abundant research on this specific type of yoga. Along with establishing this gap, I examine the mechanisms of yoga as a novel focus of inquiry to provide an argument to focus on the pathways of AY towards wellbeing. I end the chapter with a reflection on the philosophical assumptions of research inquiry of yoga

and wellbeing and contrast with philosophical underpinnings of yoga in relation to wellbeing, which are linked into the methodology in Chapter 3.

The Landscape of Wellbeing Conceptualisations

Scholar Perspectives of Wellbeing

As noted in Chapter 1, my focus on wellbeing is on subjective conceptualisations of the construct, rather than as an objective entity. From this perspective, scholars have broadly defined wellbeing as experiencing optimal functioning (Deci & Ryan, 2008; Seligman, 2011), or as the combination of feeling good and functioning well (Huppert, 2014; Keyes & Annas, 2009; Ryff et al., 2021). While these general definitions clearly focus on the positive evaluations about how people feel and function, they pose the challenge of assessing which elements comprise wellbeing. A considerable number of frameworks and tools measuring wellbeing have been developed over the last forty years, with many of them sprouting and gaining increased recognition after the advent of PP (Cooke et al., 2016; Lent, 2004; Linton et al., 2016). Being a construct relevant to a range of disciplines and fields, conceptualisations and terminology around wellbeing vary depending on their focus or purpose (Blanchflower & Oswald, 2011; Cooke et al., 2016; Lent, 2004; Linton et al., 2016; Roscoe, 2009). While acknowledging that wellbeing has been studied and conceptualised beyond PP (e.g., philosophy, economy, health) considering different levels (e.g., objective, subjective), the aim of this chapter is to review some of the most renowned wellbeing theoretical frameworks related specifically to individual subjective wellbeing within the field of PP. This review is not meant to be exhaustive,

but rather aims to provide a landscape of a sample of the main scholarly conceptualisations that have been used, to evaluate similarities and philosophical assumptions, identify overlaps and gaps, and establish part of the context for wellbeing for this dissertation.

Diener (1984; 2000) coined the concept of subjective wellbeing (SWB) to refer to the emotional and cognitive appraisal that individuals make to assess their own lives. SWB comprises two main domains: (1) the evaluation of overall life satisfaction (i.e., cognitive appraisal) and (2) the extent in which positive and negative affect exist (i.e., emotional appraisal). Specifically, the latter dimension has been related to the concepts of hedonic wellbeing or happiness, which refer to the pursuit of pleasure and the avoidance of displeasure (Deci & Ryan, 2008; Ryan & Deci, 2001). In contrast, other wellbeing conceptualisations adopt a different approach while focusing on different aspects of wellbeing. For instance, Ryff (1989; 2014) proposed and tested a theoretical model that focused on eudaimonic elements of wellbeing, or living a purposeful, meaningful, and fulfilling life (i.e., the good life, Deci & Ryan, 2008; Lent, 2004). She defined and measured what she called psychological wellbeing (PWB), represented by six elements: autonomy, environmental mastery, purpose in life, positive relationships, personal growth, and self-acceptance (Ryff, 1989; 2014; Ryff & Keyes, 1995; Ryff et al., 2021). Hedonic and eudaimonic traditions of wellbeing are rooted in the Greek philosophical concepts of hedonia and eudaimonia, which can be generally viewed as independent and even divergent approaches (Delle Fave et al., 2010). However, scholars have increasingly acknowledged the dialectical relationship between hedonic and eudaimonic wellbeing, as well as their overlaps, considering them together in more

encompassing approaches (Deci & Ryan, 2008; Delle Fave et al., 2010; Huta, 2016; 2017; Kashdan et al., 2008).

One theoretical framework representing such approach is the complete health model, which comprises hedonic (i.e., SWB), eudaimonic (i.e., PWB), and social wellbeing (Keyes, 2005). While his hedonic and eudaimonic aspects overlap with Diener and Ryff's conceptualisations, his distinctive social aspect comprised of social actualisation, social acceptance, social coherence, social contribution, and social integration. These aspects reflect the extent in which people are functioning well in the social domain (e.g., co-workers, local community) and are able to overcome social obstacles (Keyes, 1998). Within this model, wellbeing is seen within a dual continua model intersecting the presence and absence of both illness and wellbeing, defining it as "a syndrome of symptoms of positive feelings and positive functioning in life" (Keyes, 2002, p.207). Similar to Keyes (2005), Huppert and So (2013) identified "symptoms" of wellbeing, as a counterpart of mental illness symptoms. In their conceptual framework, they proposed a list of ten attributes that characterise flourishing or wellbeing, grouped into three categories: (1) positive appraisal (i.e., positive emotions), (2) positive functioning (i.e., competence, engagement, meaning, positive relationships); and (3) positive characteristics (i.e., emotional stability, optimism, resilience, self-esteem, vitality) (Huppert & So, 2013). Also combining approaches, Huta (2016) developed a conceptual framework that emerged from a review on the use of the concepts of hedonia and eudaimonia, which revealed common ways in which researchers defined wellbeing in psychology (Huta & Waterman, 2014). The model proposes four categories for defining wellbeing, including orientations,

behaviours, experiences, and functioning, which represent ways of living associated with either hedonic or eudaimonic wellbeing (Huta, 2016).

While these models imply that wellbeing is multidimensional in nature, by either considering different elements or by including different areas of the individual, the range of frameworks reveal the diversity of approaches in conceiving wellbeing. This relates to explicit and often implicit epistemological and theoretical assumptions held by their proponents (Kern et al., 2020). Although all these approaches consider wellbeing from an individual level using a subjective lens to assess wellbeing, the elements included in conceptualisations and measurements represent a selection of scholars' views and appraisals on what wellbeing should encompass. Conceptual overlaps amongst these theoretical frameworks are unveiled, pointing to the recognition of the role that positive emotions play in wellbeing, as well as the presence of positive attributes, personal development, purpose, meaning, and social connectedness. In addition, conceptual overlaps between wellbeing and other concepts (i.e., quality of life, wellness) emanating from other fields, such as health and counselling (Cooke et al., 2016; Rascoe, 2011) can complexify the landscape when researching across disciplines. Thus, with a range of wellbeing conceptual frameworks and operationalisations (Cooke et al., 2016; Linton et al., 2016), researchers face the challenge of examining and deciding which particular approach is the most appropriate for a particular context and why. Notwithstanding the value of these theoretical frameworks, research suggest that scholarly definitions do not necessarily match lay people's perspectives and experiences of wellbeing, which I now turn to.

Lay Conceptualisations of Wellbeing

Acknowledging these discrepancies in the ways of conceptualising wellbeing, recent research has focused on exploring lay conceptualisations across people representing varied characteristics, contexts, and age groups. For instance, based on their study exploring New Zealand workers' conceptualisations of wellbeing, Hone and colleagues (2014a) contend that scholars can hold different accounts of what the central components of wellbeing are. They surveyed workers and examined whether their conceptualisations of wellbeing were consistent with those proposed by scholars in mainstream theoretical frameworks. They found that workers estimated that physical health and work/life balance were central to wellbeing, and that elements typically considered core to many models, such as achievement, engagement, and optimism, were less central (Hone et al., 2015). Similarly, Bharara et al. (2019) explored New Zealand adolescents' perspectives of wellbeing and found that these differed to lay adults' conceptualisations and scholarly definitions of wellbeing. Specifically, they found that in general, adolescents regarded being kind, feeling safe, and having fun were central components to wellbeing. When comparing low and high socio-economic status, their perceptions differed in what was considered as more central (e.g., financial comfort, physical health). Also in New Zealand, Mark and Lyons (2010) used an interpretive phenomenological approach to investigate the perceptions of wellbeing in Maori healers. They found that aboriginal healers viewed wellbeing as integrated by body, mind, spirit, family, and land, representing a multidimensional and holistic approach.

Furthermore, mainstream wellbeing frameworks might not reflect cultural and individual diversity, as they have been developed within Westernised, Educated, Industrialised, Rich, and Democratic (WEIRD) populations (Black & Kern, 2020; Henrich et al., 2010). For instance, cultural differences have been found across Western and Eastern cultures in terms of how they value high or low intensity positive emotions in relation to wellbeing (Lim, 2016) and how they define wellbeing based on individualist or collectivist values (Wong, 2013). Usually, these cross-cultural differences have been overlooked by traditional conceptualisations and measurements, posing challenges to fully capture the nuances across individuals worldwide. Recent research has explored untranslatable words associated to wellbeing in languages other than English (Lomas, 2020) and inclusion of constructs in global wellbeing measurements across nations (Lambert et al., 2020). These examples represent efforts to widen the scholarly understanding of wellbeing nuances and being more inclusive when measuring the construct across populations.

Differences in how wellbeing is perceived can also be found in people from the same cultural background or cultural minorities within a larger society. For example, Black and Kern (2020) found differences in how people with Sensory Processing Sensitivity (SPS) conceptualised wellbeing, with perceptions being closer to those of Eastern cultures, highlighting elements such as harmony, balance, and the value of low intensity positive emotions. Similarly, Butler and colleagues (2019) identified domains that are relevant to Indigenous Australians and are not fully represented in mainstream wellbeing models, such as connection to Country, spirituality, and physical health. Huang et al. (2020) investigated Chinese students living

in Australia, who understood wellbeing in terms of physical and mental health, especially valuing relationships. These studies highlight the diversity in people's perspectives on what they regard as relevant to their own wellbeing.

Considering these subtleties and differences, it is clear that levels of wellbeing vary depending on the framework that is being used. Hone et al., (2014) measured wellbeing using four different frameworks across the same population, finding that wellbeing levels varied depending on the elements that were being measured. Similarly, Khaw and Kern (2014) found that whilst wellbeing elements from a widely disseminated framework (i.e., PERMA, Seligman, 2011) were well represented in a Malaysian sample, there were other elements that participants found relevant to wellbeing that were not captured by the measurement used. This evidence points to the relevance of considering lay people's perspectives when defining and evaluating well-being, as well as evaluating which framework would be most suitable to use when measuring wellbeing in a specific population. Indeed, Alexandrova and Fabian (2022) have underscored the relevance of acknowledging that wellbeing is a "thick construct", meaning that it describes and evaluates what it is simultaneously, and hence, is closely intertwined with those who make such distinctions (i.e., researcher/scholar and participants). Thus, the use of different approaches allowing the involvement of participants in the process of defining and assessing what it is, seems highly relevant for advancing theoretical and empirical knowledge about wellbeing (Lomas et al., 2020; Mitchell & Alexandrova, 2021).

Notwithstanding the array of frameworks defining and measuring wellbeing and despite the discrepancies between lay people's and researchers' views, there is a general agreement that it is a construct comprised by multiple dimensions (Chia et al., 2020; Friedman & Kern, 2014; Hone et al., 2014; Manning & Fleming, 2019). In general terms and at an individual level, wellbeing can be understood as the subjective appraisal regarding the presence of positive qualities and attributes rather than solely the absence of illness (Huppert, 2013; Keyes, 2007), and can be seen as both experiencing positive feelings and positive functioning in different areas of life (Huppert, 2013; Huta, 2016; Keyes & Anna, 2009). For the purposes of this dissertation, wellbeing will be considered from a subjective and individual level, and as a multidimensional construct comprising five areas: physical, emotional, psychological, social, and spiritual. This rationale is partly based on what the abovementioned frameworks and related research propose: that these dimensions of individual functioning are relevant for overall wellbeing. However, the content of each dimension is not intended to be defined beforehand, but rather to be co-created with participants based on their experiences and perspectives, and contrasted with wellbeing theories, consistent with the evidence previously presented. This will be further discussed in chapter 3 focusing on methodology, as well as in chapters 4 and 5 when specifically focusing on conceptualisations of wellbeing. Lastly, the rationale for defining wellbeing as comprised by these five dimensions also lies on the conceptualisations and foundations of yoga, as well as on the related views on human functioning, which I will consider in the next few sections.

The Landscape of Yoga Conceptualisations

Eastern and Western Conceptualisations of Yoga

Yoga is a Sanskrit term with a variety of meanings, including the commonly used concepts of “yoking” and “union”, as well as other lesser-known translations, such as “remedy”, “fitness”, and “meditation” (Monier-Williams, 1997). It has been estimated that yoga originated in the Hindu valley sometime between two thousand (Iyengar, 2005) and five thousand years ago (De Michelis, 2005). As a millennial system, yoga evolved within diverse contextual influences and worldviews that contributed shaping its meaning (De Michelis, 2008; Jain, 2014a). To provide a concise overview of this evolution, Foxen and Kuberry (2021) offered a classification of yoga grouped into three stages. The “yoga of going” represents the earliest periods, when yoga was considered a spiritual practice to transcend human experience and suffering by going to a higher plane. The “yoga of knowing” followed this period and represents yoga as an inner spiritual journey, leading to the transformation of consciousness. Finally, the “yoga of doing” represents the set of physical and mental techniques used mainly by ascetics to steady the mind and reach liberation. These ways of conceptualising yoga have been threaded with each other and with other traditions as yoga continued to evolve throughout time and while migrating from East to West (Foxen & Kuberry, 2021; Sarbacker, 2014; Singleton, 2010). Thus, yoga can be seen as a system comprising physical, mental, and spiritual practices.

Despite its longevity, yoga reached practitioners and science in Western cultures only over the last century (Iltzan & Jegatheeswaran, 2015; Singleton, 2010). Swami Vivekananda was the first yogi to travel from India to Europe and the U.S. in the 1890s,

where yoga teachings, including breathing, meditation, and physical postures, were first introduced to certain social circles (Syman, 2010). Vivekananda offered a Western adaptation of the teachings from the classical yoga text *The Yoga Sutras of Patanjali* in his book *Raja Yoga*, which contributed to the spread of these teachings over others in Westernised cultures (De Michelis, 2005). Indian yoga teacher and scholar Tirumalai Krishnamacharya also played a key influential role in the dissemination of yoga in the West. Considered by many as the father of modern yoga, Krishnamacharya extensively influenced the growth of *Hatha Yoga*, otherwise understood as postural yoga (Singleton & Fraser, 2014). Krishnamacharya tutored S.K. Pattabhi Jois and B.K.S. Iyengar amongst others who became renowned teachers in Westernised cultures due to the dissemination of particular yoga styles following his teachings. *Ashtanga Vinyasa Yoga* and *Iyengar Yoga* reached the West in the early 1970s after Western practitioners travelled to India and brought these teachings to their countries, becoming widely practised by students worldwide to date (Mohan, 2010). Notably, *Raja Yoga* and *Hatha Yoga* are two separate but often intertwined branches of yoga, with the former representing the path of meditation and self-inquiry, and the latter offering the means for physical and mental purification and balance (Saraswati, 2009). The interconnections between these two paths can be seen in how yoga has been conceptualised, studied, and practised in modern times, bringing physical, mental, and spiritual dimensions of the individual together.

In the Western world, yoga has been widely conceptualised and addressed through four elements: physical postures, breath control, concentration, and meditation (Büssing et al., 2012a; Riggins, 2013; Scmalzl et al., 2015). From a traditional

perspective, yoga is a broader method, comprising four additional elements. Altogether, these eight elements are described in *The Yoga Sutras of Patanjali* as *Ashtanga Yoga*, which is usually translated as *The Eightfold Path* or the eight limbs of yoga. *Sutra* is a Sanskrit word meaning “thread” and the yoga sutras represent concise threads or statements regarding the nature and practice of yoga, now accessible to modern practitioners in a written form containing the translation, transliteration, and interpretation of each *sutra* (Maehle, 2006). Specifically, the eight limbs represent a framework guiding practitioners through a journey of self-discovery and transformation towards pure consciousness (Iyengar, 2005; Saraswati, 2009).

The first four limbs (i.e., *yama*, *niyama*, *asana*, *pranayama*) are known as *bahiranga yoga*, representing the external stages of the eightfold path due to their impact on behaviour and external personality that are affected by the environment or external stimulation (Saraswati, 2009). *Yama* comprises moral considerations by which practitioners modulate their behaviour with others, including non-violence (i.e., *ahimsa*), truthfulness (i.e., *satya*), non-stealing (i.e., *asteya*), awareness of higher consciousness (i.e., *brahmacharya*), and non-possessiveness (i.e., *aparigraha*) (Jois, 2016; Saraswati, 2009). *Niyama* includes beliefs and codes in relation to self-discipline, guiding practitioners’ lifestyle. It comprises purity (i.e., *saucha*), contentment (i.e., *santosha*), self-discipline (i.e., *tapas*), self-study (i.e., *svadhyaya*), and cultivation of faith and devotion (i.e., *ishvara pranidhana*) (Jois, 2016; Saraswati, 2009). *Asana* refers to physical postures that are performed with a sense of ease and harmony. These can include static and dynamic postures (Iyengar, 2005; Saraswati, 2009). *Pranayama* refers

to the expansion of the vital energy (i.e., *prana*) through the regulation of the breath (Iyengar, 2005; Jois, 2016).

The last four limbs (i.e., *pratyahara*, *dharana*, *dhyana*, *samadhi*) are known as *antaranga yoga*, representing the internal stages due to the engagement of the mind in the processes of observing, analysing, reflecting, contemplating, and meditating (Saraswati, 2009). *Pratyahara* refers to developing skills to direct attention inwards and detach the mind from the constraints of the senses in relation to external objects (Iyengar, 2005; Jois, 2016). *Dharana* refers to the ability to bind the mind to a particular point or direction, which translates into focused attention or concentration (Jois, 2016; Saraswati, 2009). *Dhyana* refers to the state of meditation emerging from an established psychic awareness and self-inquiry process (Saraswati, 2009). *Samadhi* represents a state of pure consciousness, where the practitioner fuses with the object of meditation and the realisation of oneness occurs (Iyengar, 2005; Jois, 2016). In Western science certain elements of this framework (i.e., *yama*, *niyama*, *samadhi*) may not be included in yoga research due to the aim of maintaining a secular view of yoga (cf. Schmalzl et al., 2015). However, some scholars have explicitly included this framework within their research and conceptual models (cf. Gard et al., 2014), acknowledging that yoga is a system threaded with ethical and philosophical principles.

Similar to what has been described in the wellbeing literature (Kern et al., 2020) yoga researchers can intentionally or inadvertently adhere to certain perspectives, preferences, and priorities, thus instilling their personal values in their approach to yoga (Singleton & Larios, 2020). For the purposes of this research, I will be considering the *Eightfold Path of Yoga* as the philosophical and ethical foundations underpinning the

yoga practice. It is noteworthy to mention that yoga philosophy is broad, complex, and extensive, and exploring different philosophical traditions and frameworks is beyond the scope of this thesis. Due to the dissemination of this framework and the relevance to the yoga practice addressed in this dissertation, the *Eightfold Path* will keep being addressed in the next chapters, especially in chapters 4 to 8 when examining the conceptualisations of wellbeing and yoga and the pathways of yoga to wellbeing.

Following these traditional considerations, yoga involves physical, mental, and spiritual practices depending on what elements are being practised, as well as how and why these different elements are being included by the yoga practitioner. This raises the question of how yoga practitioners and Westernised cultures understand yoga. To the best of my knowledge, there are no previously published studies investigating the conceptualisations of yoga according to practitioners' perspectives. Though this will be further explored and discussed in chapter 6, in the next few sections I will mainly address the ways in which scholars and researchers have defined and framed yoga in research, including the characterisation of yoga practitioners. In doing so, I will provide a brief contextualisation on the landscape of yoga in modern Westernised societies.

The Growing Interest in Yoga: Trends in Practitioners and Research

According to recent estimations, around 300 million people practice yoga around the world, with over a third of practitioners being located in India and two thirds located elsewhere (Zuckerman, 2020). Different large national surveys conducted in Australia, Germany, the U.S., and the U.K. show that yoga practitioners tend to be highly educated, white, middle-aged women living in urbanised areas, motivated to practice for the betterment of physical and mental health (Cagas et al., 2022a; Cramer et al., 2017a;

Cramer et al, 2019; Park et al., 2014; Penman et al., 2012; Ross et al., 2012). In 2016, it was estimated that the number of people practising yoga in the U.S. would grow from 18 million people in 2008 to 55 million practitioners by 2020, with revenue from the yoga industry projected to be over 11 billion U.S. dollars by the same year (Statista Research Department, 2016). Yoga has become a profitable industry worldwide, worth more than 84 million U.S. dollars and amassing more than 1 billion posts on Instagram using a yoga related hashtag (Zuckerman, 2020). These numbers are impressive, and demonstrate the spread of this Eastern practice across the Western world. This also poses the question of how the understanding and practice of yoga has evolved from its original conception in a world where paradoxically capitalism prevails and healthy lifestyles are highly valued (Burley, 2008; Jain, 2014a).

Across scientific and public spaces, yoga has been generally defined as a mind-body practice involving physical postures, breathing methods, meditation, and relaxation used for the management and improvement of health and wellbeing (De Michelis, 2005; Jain, 2014a; Singleton, 2010). While this is aligned with some of the elements described in the *Eightfold Path of Yoga*, it may represent a simplified view of a more complex system. The rise of medical science as a highly valued source of secular knowledge and physical fitness as a desired state have contributed to the popularisation of yoga as a primarily physically oriented practice leading to positive physical and mental health outcomes (Foxen & Kuberry, 2021; Ivtzan & Jegatheeswaran, 2015). Indeed, research looking at yoga in social media have found that yoga is being communicated to broader audiences as physical exercise practised especially by lean and athletic young women who adhere to healthy lifestyles (Hinz et al., 2021a; 2021b; Bailey et al., 2022).

These views seem to be perpetuated by the yoga industry including gyms, merchandise, certifying agencies, and celebrities (Broad, 2012; Miller, 2016), creating the image that yoga is for certain purposes and for specific groups of people.

This rising interest in the practice has developed alongside the increasing research on yoga across different disciplines. Research on yoga can be traced back to the 1950s, but it has only been after the year 2000 that interest in investigating this discipline started to grow in a steady and exponential manner, largely attributed to increases in funding and further reinforced increments in research outputs validating the benefits of the practice (Cramer et al., 2014a; Gururaja et al., 2020; Poornima & Surulinathi, 2019). One study found that publications between 2007 and 2016 predominately derived from medicine (78.7%), followed by psychology, biochemistry, and health professions, whereas yoga research within social sciences, arts, and humanities accounted for less than 15% of publications (Gupta et al., 2018). A more recent study found that most yoga research output has been generated in the U.S. (37%), followed by India (19%) and Europe (13%), with the nervous system being the topic most widely investigated (Gururaja et al., 2020). Other research topics included musculoskeletal, cardiovascular, and endocrine systems. These studies reveal that yoga has been scientifically studied mainly in Westernised countries, through the lens of fields that imbue particular methodologies and approaches to its understanding.

Indeed, yoga has been widely investigated as a short-term intervention in clinical trials and randomised controlled trials (RCTs). With a significant body of research available to date, several meta-analyses and systematic reviews have assessed the effectiveness of yoga for improving physical and mental conditions and/or for enhancing

wellbeing, mostly amongst clinical population (Cramer et al., 2014a). Evidence suggest that yoga is an effective complementary intervention for treating asthma (Cramer et al., 2014b) and depression (Cramer et.al., 2013a; Pascoe & Bauer, 2015), alleviating chronic neck pain (Cramer et al., 2017a), reducing biological cardiovascular disease factors (Cramer et. al., 2014c), improving anxiety symptoms (Hofmann et al., 2016; Pascoe et al., 2021; Zoogman et al., 2019), and lowering blood pressure (Cramer et. al., 2014d; Hagins et al., 2013). Other meta-analyses have found positive short-term effects on psychological wellbeing (Cramer et al., 2012a) and on fatigue (Cramer et al., 2012b) of breast cancer patients and survivors, as well as short-term improvements in type 2 diabetes (Aljasir et al., 2010), chronic low back pain (Cramer et al., 2013b; Holtzman & Beggs, 2013), and increasing quality of life for schizophrenia patients (Cramer et al., 2013c).

Yoga has also been found beneficial for people with chronic illness and ill-health, improving physical, psychological, and spiritual wellbeing (Riggins, 2013). For example, it has been used as an intervention for cancer patients to improve symptoms related to emotional distress (Ülger & Yagli, 2010), pain (Carson et.al., 2007), fatigue (Danhauer et.al., 2009), and depression and anxiety (Gonzalez et al., 2021), as well as increasing quality of life, spirituality, mood, and overall wellbeing (Duncan et al., 2008; Lin et al., 2011), different sleep-related outcomes (Cohen et al., 2004) and body image, physical fitness constraints, strength, and flexibility (Van Puymbroeck et al., 2011). Amongst people suffering from musculoskeletal conditions, research shows that yoga can reduce pain and stiffness and improve physical function and mood (Kolasinski, 2005) and decrease anxiety (Kirkwood et al., 2005) and distress (Chou & Huffman, 2007), as well

as improve coordination, strength, and flexibility (Raub, 2002). Yoga can also be beneficial in ameliorating symptoms for people who have experienced post-traumatic stress disorder (Cramer et al., 2018; Gallegos et al., 2017). These findings mirror results from national surveys conducted in the U.S. and Australia finding that illness prevention, illness recovery, and improvement of mental health conditions were amongst the main motivations to practice yoga (Cramer et al., 2016; Penman et al., 2012).

It appears that both research and practice point to the fact that yoga has mostly been used and studied as a therapeutic tool to diminish illness. Cramer et al. (2014a) bibliometric analysis on yoga RCT found that approximately two thirds of the studies focused on clinical population. This is consistent with the research trends identified by Gururaja et al. (2020), noting that between 10 and 15% of research outputs corresponded to either clinical trials or RCTs. Gupta et al. (2018) found that research interest on mental health tended to revolve around depression, anxiety, and stress, while common themes on physical health included pain, cancer, and cardiovascular health. Notably, there are considerably more meta-analyses regarding improvements in ill-health over increases in wellbeing. This points to the predominance of a deficit viewpoint, as considerably fewer studies review the influence of yoga in positive mental health indicators in non-clinical populations (e.g., Hendricks et al., 2017). In line with this, most of the abovementioned studies have focused on examining the effectiveness of yoga as a short-term practice by using quantitative designs. While providing valuable information about the benefits of yoga, the predominance of quantitative research methodologies and often reductionistic epistemological assumptions, have further narrowed the understanding of yoga in the scientific community.

The Science of Yoga and Wellbeing

Research on yoga and wellbeing has only started to develop in recent years, especially within healthy populations and long-term practitioners. In terms of physical wellbeing, the physical practice of yoga can improve strength, coordination, endurance, and flexibility (Tracy & Hart, 2013; Büssing et al., 2012; Cowen & Adams, 2005), and the breathing exercises with meditation can increase awareness and feelings of calmness, in addition to decreases in anxiety (Büssing et al., 2012; Schmalzl et al., 2015). A review on different studies comparing yoga to other types of exercise found that yoga had similar or higher effects than exercise in almost every measurement, with exception of outcomes related to fitness, both in clinical and healthy populations (Ross & Thomas, 2010).

Other studies have explored yoga in relation to emotional and psychological wellbeing in regular practitioners. For example, Ivtzan and Papantoniou (2014) conducted a study assessing gratitude (i.e., hedonic or emotional wellbeing) and meaning (i.e., eudaimonic or psychological wellbeing) in relation to the extent of yoga practice in regular practitioners. They found both variables were positively correlated to the extent of yoga practice, concluding that regular practitioners can experience wellbeing in a holistic manner. Similarly, Moliver and colleagues (2013) conducted a study analysing emotional (i.e., subjective wellbeing) and psychological wellbeing (i.e., psychological attitudes, transcendence, mental mastery, and subjective vitality) in female yoga practitioners. Results suggested that higher levels of experience predicted greater levels of psychological wellbeing, with the strongest predictors being frequency and regularity of the practice, meditation hours, and nutrition. Remarkably, all

practitioners reported high levels of subjective wellbeing regardless the extent of their yoga practice. Another study focusing on medical students who participated in a semester-long yoga program found that their levels of self-regulation and self-compassion improved, pointing to enhancement in their psychological and emotional wellbeing (Bond et al., 2013). A meta-analysis focusing on articles addressing the influence of yoga on indicators of positive mental health in non-clinical adult populations found significant increases in psychological wellbeing when comparing yoga to the control groups (Hendricks et al., 2017). Findings from these studies suggest that practising yoga can positively impact emotional and psychological wellbeing and that seasoned practitioners can experience benefits in these areas holistically.

Whilst relational and spiritual domains of wellbeing have been far less studied, there are still investigations exploring these areas in relation to yoga. For instance, Ross and colleagues (2014) conducted a qualitative study to understand the influence of practising yoga on practitioners' interpersonal relationships. They identified four common themes indicating that practising yoga fosters personal growth, promotes social relationships, provides mechanisms to cope with difficulties related to social interactions, and that it leads to spirituality. According to Ross et.al. (2014), respondents attributed improvements in social relationships due to changes in their own attitudes and perspectives, reporting greater levels of patience, kindness, mindfulness, and self-awareness. They also reported a sense of community that was both practical and spiritual, allowing them to establish new friendships and providing them with a sense of belonging. Additionally, practitioners believed they were able to cope better with adversities and some of them experienced a sense of purpose and contributing to a

greater good. These findings are aligned with two studies conducted by Kishida and collaborators (2018a, 2019) showing that a regular yoga practice can play a key role in how seasoned practitioners relate to themselves and others. They found that by experiencing increased awareness and self-compassion, practitioners would perceive positive changes in their interpersonal relationships. Additionally, another study by the same authors on novice yoga practitioners found that trait mindfulness moderated the outcomes in relational benefits (Kishida et al., 2019a; Kishida et al., 2019b). Altogether, these findings suggest that engaging in a regular yoga practice may contribute to people's social wellbeing through the intrapersonal transformations that it fosters.

Regarding spiritual wellbeing, Ivtzan and Jegatheeswaran (2015) conducted a study examining the intentions of yoga practitioners and whether they changed over time. Findings revealed that practitioners tended to have physical intentions when they began practising yoga (e.g., improve strength and flexibility) and that these intentions remained stable over time. The study also showed that regular yoga practitioners could develop spiritual intentions over time, which tend to become stronger and more significant. Moreover, those who reported these intentions experienced greater psychological and emotional wellbeing compared to those with physical intentions. These findings are consistent with research reporting that practitioners' main motivations to start and to continue practising yoga include physical health, and that these evolve towards psycho-spiritual motivations (Park et al., 2014; Park et al., 2019; Penman et al., 2012). Gaiswinkler and Unterrainer (2016) also found a similar trend when investigating regular practitioners, revealing that those who were highly immersed in their yoga practice (i.e., yoga teachings) reported higher levels of spiritual

wellbeing, as well as increased mindfulness and decreased levels of mental health symptoms. Findings from these studies suggest that physical and spiritual motivations can be developed and maintained over time amongst regular yoga practitioners, and that the level of involvement with the yoga practice and teachings can play an important role in experiencing spiritual wellbeing.

Though several studies have investigated the connections between yoga and specific areas of wellbeing, there are fewer studies examining multiple dimensions together in the same sample at the same timepoint. Perhaps the most relevant investigations exploring improvements in different areas of practitioners' wellbeing are large surveys conducted in Australia and the U.S. For example, Penman et.al. (2012) in Australia asked participants to report the extent to which their yoga practice influenced their physical, mental, emotional, social, and spiritual wellbeing. Findings showed that respondents perceived improvements primarily in their physical health and secondarily in their mental and emotional wellbeing. Although participants also described improvements in spirituality and social relationships, these were not as significant as the aforementioned areas. Whilst this survey portrayed the improvements experienced by practitioners, it did not explore in detail how each area improved and why.

Ross and colleagues (2013) conducted an online yoga survey in the U.S. amongst Iyengar yoga practitioners in order to characterise their yoga practice, health outcomes, and beliefs about the impact of yoga on their health status. Results showed that virtually all surveyed yoga practitioners were either moderately mentally healthy (55%) or flourishing (44%). Specifically, over 85% of the participants reported improvements in their general health, energy level, and happiness and two thirds reported improvements

in their sleep and interpersonal relationships through their yoga practice. Additionally, around half of the respondents believed that yoga helped them maintain an appropriate weight and develop a healthier diet. Although almost two thirds of the practitioners reported having a chronic health condition, the vast majority believed they experienced enhanced health due to their yoga practice. Remarkably, practitioners were equally likely to perceive improvements in their general health, sleep, energy, diet, weight, relationships, and happiness, regardless of whether or not they reported having a chronic illness. Findings suggested that people who practice yoga believe it is beneficial for their health and the more people practice, the stronger this belief is, regardless of demographic variables. However, this study did not clarify if these beliefs influenced the development of the practice or vice versa, nor explained how and why people experience the benefits of the practice, and did not address spiritual elements.

In summary, much of the research in yoga has been conducted as a short-term intervention with clinical populations to assess health and wellbeing outcomes, mostly using quantitative methods and experimental research designs (e.g., clinical trials, RCTs) while adopting a deficit point of view (i.e., improvements in symptoms). Limitations across studies usually encompass limited sample sizes, lack or poor operationalisation and description of yoga interventions, and differences in the range of yoga styles included. Noteworthy, different styles can use different approaches in terms of how and to which extent certain elements should be practised, thus influencing how yoga is conceptualised and researched. In this dissertation, I focus on wellbeing in regular practitioners of one particular style of yoga known as *Ashtanga Vinyasa Yoga*, or simply *Ashtanga Yoga*. The next sections will provide an overview of the *Ashtanga Vinyasa*

Yoga method, the relationship to the underpinning framework of *Ashtanga Yoga* (i.e., eightfold path) mentioned earlier in this chapter, and relevant up to date research on this form of yoga practice.

Defining The Landscape for the Yoga Pathways Towards Wellbeing

Ashtanga Yoga: Philosophy and Practice

The term “Ashtanga Yoga” can be used to refer either to *The Eightfold Path* contained in *The Yoga Sutras of Patanjali* and described earlier in this chapter, or to the ashtanga vinyasa yoga method. Although different, they are interconnected. Maehle (2006) asserts that philosophical underpinnings included in *The Yoga Sutras* and the ashtanga vinyasa yoga practice can be seen as two sides of the same coin. Similarly, Jois (2016) argues that “practicing ashtanga [vinyasa] yoga means practicing all of the eight limbs” (p. 8). Throughout this dissertation, *The Eightfold Path* will be considered as the underpinning framework of the ashtanga vinyasa yoga practice. Thus, for the purpose of this thesis, I will refer to *Ashtanga Yoga* as the type of practice known as ashtanga vinyasa yoga (i.e., the method) that can be sustained in Patanjali’s philosophical eightfold framework.

Ashtanga Yoga (AY) is considered a method of postural yoga believed to derive from an early traditional system delineated by Rishi Vamana in the ancient and currently unlocatable text *Yoga Korunta* (Maehle, 2006; Smith, 2007). The method was taught and popularised by S.K. Pattabhi Jois at the Ashtanga Yoga Research Institute in Mysuru, India from 1973, who asserted that these teachings were verbally transmitted to him by his guru, Tirumalai Krishnamacharya (Jois, 2018; Stern, 2006). As stated before, the use of the term *ashtanga* denotes the reference to Patanjali’s eightfold path, otherwise

known as *Raja Yoga* (i.e., royal yoga) or the study of the mind (Mallinson, 2011; Smith, 2007). However, the description of the method by S.K. Pattabhi Jois also comprises teachings from *Hatha Yoga Pradipika*, another essential yoga text estimated to be written around the 15th century (Smith, 2007). *Hatha Yoga* is a branch of yoga pursuing physical strengthening and purification through the practice of *asana* and *pranayama* to enable transformation and transcendence (Feuerstein, 1996). Jois (2018) argued that through the asana practice the ailments of the body and the senses dissolve, facilitating the cultivation of ethical observances relating to oneself and others (i.e., *yamas*, *niyamas*). He further contended that *Hatha Yoga* can move the mind towards the realisation of pure consciousness, and thus, be paralleled to *Raja Yoga*. This supports the notion of yoga as a system intricately intertwining philosophy and practice.

AY has distinctive elements that differentiate it from other forms of yoga. One key feature of AY is *tristhana*, a Sanskrit term meaning three standing places, which specifically refers to the use of posture (*asana*), gazing point (*drishti*), and breathing throughout the practice (Jois, 2016). Physical postures are encouraged to be performed methodically and progressively, with guidance from a teacher, to slowly cultivate strength, steadiness, and health (Jois, 2018). Each posture has a specific gazing point, which allows the mind to anchor attention into one place during the practice, and therefore being more present with each pose. Breathing is performed only through the nose, and it is characterised by a continuous flow. Deepening and lengthening inhalation (i.e., *puraka*) and exhalation (i.e., *rechaka*) to equal extents is encouraged, making a gentle hissing sound at the base of the throat, usually called “free breathing with sound” (Keen, 2021; Stern, 2020).

Another key feature of AY is *vinyasa*, which is a system combining breath and movement throughout the practice. For each *asana* there is a sequence of movements to enter, stay within, and exit the pose; and each movement has been assigned one breath, either an inhalation or an exhalation. Thus, each *asana* has a certain number of *vinyasas*. For example, *Surya Namaskar A* (sun salutations) has nine movements, and thus, nine *vinyasas*. The purpose of combining breath and movement while practising *asanas* is to allow internal cleansing of organs, by stimulating blood circulation and sweat (Jois, 2018). Jois (2016) proposed that long term practice promotes the cleansing of the organs, to then allow the purification of the nervous system. To illustrate the elements and essence of the practice, the AY method has been paralleled to a *mala*, a Sanskrit term denoting garland. Here, the breath is thought to be a thread connecting each *vinyasa*, with each *vinyasa* representing a bead in this garland, and each *asana* representing one garland. The overall practice can also be thought of in these terms, “where each *asana* is like a flower strung on the thread of the breath” (Jois, 2018, p. xix).

The AY method derives from a traditional lineage, and it was conceived to condense the eight limbs of yoga into one complete practice (Maehle, 2006). Directing attention to a particular point and the purposeful use of steady breathing offers the mind the possibility to concentrate (*dharana*) as well as to withdraw from external disturbances perceived by the senses (*pratyahara*), turning the attention inwards. The set sequence also reduces the possibility of distraction, while the continuous flow of *vinyasa* combined with the short duration of postures allows the cultivation of a meditative state (*dhyana*). Jois (2018) also argues that the physical practice dissolves impurities to engage in moral observances (*yama* and *niyama*) and foster self-

transcendence (*samadhi*). Furthermore, Jois (2016) proposes that focusing on practising the external elements of yoga (i.e., *yama*, *niyama*, *asana*, *pranayama*) allows the cultivation of the other four internal elements (i.e., *pratyahara*, *dharana*, *dhyana*, *samadhi*).

AY is traditionally taught in a Mysore style, a term deriving from the place where it was originally taught in India (i.e., Mysuru). This translates into a one-on-one approach to introduce, tailor, and pace the practice according to the particular characteristics of the practitioner, while practising in a group setting. Practitioners are encouraged to build their own practice with support and guidance of a teacher, meaning that in a Mysore style class each practitioner will be practising their sequence at their own rhythm. Regardless of the level of expertise of practitioners, the AY sequence begins with *Surya Namaskar A* and *B*, and continues by progressively performing 11 standing asanas. Practitioners are then introduced gradually to asanas from the Primary Series (see Figure 4.1). Once students learn and master the Primary Series, they move onto the Intermediate Series, and then onto the Advanced Series. Regardless of the series that are part of practitioners' practice, after the last learnt pose, the practice finishes with a set sequence of closing *asanas* and *mudras* (i.e., seals). Importantly, asanas are incorporated and practised in a progressive manner and fitting practitioners' needs in order to cultivate strength and stillness (Jois, 2018). Moreover, asanas have specific gazing points (*drishti*) and internal energy seals (*bandhas*), and the *vinyasa* for each *asana* is traditionally counted using numbers in Sanskrit. This *vinyasa* counting method is usually used when teaching asanas for the first time and when conducting a weekly led class (Maehle, 2006; Swenson, 2007).

Developing a constant and consistent practice throughout time can allow practitioners to experience the full range of benefits of the practice (Maehle, 2006; Jois, 2018). This usually encompasses practising between 4 to 6 days a week and resting at least one day per week, in addition to encourage resting during both full and new moon, and during menstruation for women. According to Jois (2016) and Jois (2018), committing to the starting and closing postures is considered a good way to begin developing an AY practice. Since AY is highly systematic in terms of the practice and the teaching method, the selection of this type of yoga will enable the clarification of elements of the practice that other studies have not clearly addressed. In this thesis, I acknowledge the diversity of practical and philosophical elements involved in the practice while considering that participants may engage differently with them. Due to the particular characteristics of AY, in the next section I will specifically refer to research connecting AY to health and wellbeing to identify trends and gaps within the empirical literature.

Ashtanga Yoga Research

Although research on yoga is abundant, studies focusing exclusively on AY are scarce. Several studies have investigated the impact of the AY practice on physical and mental health outcomes, mainly using the practice as a novel intervention with small groups of people. A study conducted by Cowen and Adams (2007) investigated the effects of AY on heart rate variability in comparison with two other styles of yoga. Participants (n=16) engaged in one session of each style while wearing a device to measure heart rate changes. Results showed that AY was equivalent to moderate physical exercise, suggesting that the practice can contribute to cardiorespiratory

fitness. Benavides and Caballero (2009) conducted a pilot study to evaluate the effect of AY on weight in children and adolescents at risk of developing type 2 diabetes. After participating in a 12-week intervention, participants (n=14) showed decreases in their weight and improvements in anxiety, suggesting AY might be effective for weight loss as well as stress reduction. Gruber (2008) completed a study to assess physiological and psychological outcomes of a 3-month AY training program by comparing a group of untrained females to a group of females undertaking moderate traditional physical activity. Participants who underwent the AY training improved muscular endurance and flexibility, as well as cardiovascular fitness and stress-related measurements. This evidence supports the claim that this particular type of yoga can improve physical health, yet these studies are limited by their small sample sizes, the limited extension of the practice, and the lack of appropriate control groups.

Other studies have looked at groups with clinical conditions to assess the impact of yoga based on the AY method. Mazor and colleagues (2018) conducted a study to assess the feasibility of an Ashtanga-based yoga program on a group of women (n=21) at high risk of breast cancer after undergoing surgery. After eight weeks of weekly sessions, findings revealed that the practice was safe and that it improved upper body range of motion and strength. In their RCT, Kim and collaborators (2012) found that an eight-month program had a positive effect on improving lower body strength a group of pre-menopausal women (n=34). In a later study, the same authors found that the same program had a modest positive impact on bone formation in in the same group of women (Kim et al., 2015). Another RCT investigating the effect of a three-month AY program on a group of 47 clinically depressed individuals found that

the AY group practising three 90-minute sessions per week presented improvements in depressive symptoms, with decreased symptom severity and increased remission rates, suggesting that AY can be useful in the treatment of major depression (Bieber et al., 2021). Altogether, these findings suggest that AY can be a safe and effective method to be practised by people with different needs and ailments, improving their physical and mental health.

More recent research has explored neuro-physiological correlates in established AY practitioners, using a variety of techniques. A cross-sectional study conducted by van Aalst and colleagues (2020) used neuroimaging techniques to explore differences in glucose levels in brain regions in a small group of long-term AY practitioners. They found that seasoned practitioners showed decreased levels of glucose metabolism in brain structures linked to affect regulation, body awareness, movement, and balance. Years of practice were inversely correlated to glucose levels, suggesting that long-term AY practice plays a role in brain metabolism (van Aalst et al., 2020). A case study by Dybvik and Steinert (2021) using functional near-infrared spectroscopy (fNIRS) on an AY practitioner with 3 months of expertise revealed differences in prefrontal cortex activation whilst performing postures from primary series with different levels of technical complexity. This suggests that the AY practice may influence executive and cognitive functions related to specific brain areas, like awareness, memory, and cognitive flexibility (Dybvik & Steinert, 2021). Finally, a quasi-experimental study involving 21 regular AY practitioners explored the connections between body-related expertise and perceptual information by assessing performance in a test that required integration of vestibular, proprioceptive, and visual signals,

translating into balance, internal stimuli perception and field perception abilities respectively. Findings showed that AY practitioners were significantly less influenced by a deceiving visual setting, tending to rely more on internal bodily cues rather than external stimuli. Interestingly, practitioners who scored high on self-transcendence were less prone to be misled by the external signals and were more reliant on their own internal body signals (Fiori et al., 2014). These studies suggest that long-term AY practice can have an impact in neurological and physiological structures and functions.

In addition to these studies, there is also a handful of dissertations investigating AY on established practitioners or AY as an intervention. One dissertation evaluated the effectiveness of AY on autonomic homeostasis and respiratory function as mechanisms in improving cognitive functioning and psychological and physical self-reported symptoms (Casden, 2005). The author found that participants improved breathing retention, abdominal breathing, mood, energy levels, sleep quality, attention, and concentration. Another thesis explored wellbeing related elements amongst practitioners, namely flow and motivation, using a quantitative approach (Phillips, 2005). Findings showed that practitioners who experienced intrinsic and self-determined motivation were more likely to experience flow states. Other theses have employed a qualitative approach in small sample sizes to focus on the transformational experience lived through the yoga practice. A dissertation focusing on a phenomenological analysis of the lived experience of AY practitioners revealed that the practice can positively influence mind and body dimensions through a transformational process (Acebedo, 2013). LaChiusa (2016) explored the transformational influence of AY in regular female practitioners who were survivors of relational trauma. The

qualitative study found that the practice had a positive influence in affect modulation and body acceptance. Finally, Jones (2019) investigated the outcomes of the AY practice in regular practitioners recovering from substance abuse disorder. His qualitative analysis found that practitioners accounted their practice for transformational experiences in their lifestyle and in recovering sobriety, as well as experiencing enhancements in anxiety, depression, stress, confidence, and self-image. Altogether, these in-depth research projects focusing on AY practitioners suggest a common theme of experiencing improvements in multiple dimensions and attributing those outcomes to the practice.

The Mechanisms of Yoga

With a large body of evidence demonstrating the effectiveness of yoga for improving physical, mental, and spiritual aspects related to multiple health conditions and for cultivating positive health and wellbeing, researchers have started to turn their attention to the mechanisms of yoga. Research on the mechanisms and moderators of yoga is key to understand how yoga yields benefits and under which conditions those benefits arise. Most of this research stems from medicine and health related sciences, focusing on neurophysiological and neuropsychological structures, processes, and outcomes, using mostly objective measures (cf. Gard et al., 2014; Schmalzl et al., 2015). Although the focus of such research is mostly from a deficit standpoint (i.e., illness prevention and/or treatment) or in relation to stress rather than on wellbeing, it can still provide insights into positive health and optimal functioning, as well as into the interconnections between the mind and body. This section is especially relevant for Study 5 and will be revisited in Chapter 8.

Kuntsevich and collaborators (2010) examined the underlying mechanisms of yoga for health and disease. The main pathways highlighted the role of hormones, neurotransmitters, vagal tone, and natural killer cells in creating and restoring balance in physiological processes and in promoting early adaptive responses to stress. Similarly, a literature review conducted by McCall (2013a) investigating potential mechanisms of yoga for prevention and treatment of disease, found that most empirical evidence supported the regulation of the autonomic nervous system and the endocrine system as key mechanisms. Since several physical and mental health conditions have been linked to stress and have been found to be regulated by the nervous system (Kinser et al., 2012; Streeter et al., 2012), different studies have further focused on the mechanisms of yoga for specific health conditions and in relation to stress (e.g., Mehta et al., 2016; Pascoe et al., 2021; Singh et al., 2015). Indeed, the effects of chronic stress are cumulative (i.e., due to increased allostatic load) and can become highly detrimental for people's physical and mental health when ongoing stress overrides the physical and mental capacity of a person to cope with it (McEwen, 2003).

Along these lines, several studies have focused on the mechanisms of yoga in relation to depression, anxiety, and stress. For instance, Streeter et al. (2012) proposed a theory explaining the benefits of yoga for a range of usually comorbid health conditions, such as depression and chronic pain. Their theory posits that yoga can generate changes in these conditions by decreasing allostatic load in body systems involved in stress responses, restoring homeostasis. Specifically, yoga practices can improve health conditions through the upregulation of the parasympathetic nervous system and GABA system, and through the downregulation of the sympathetic nervous

system. This ultimately translates into a balanced autonomic nervous system and improvements in the capacity of the organism to respond to stress. In their systematic review assessing the mechanisms of change for depression, Meister & Juckel (2018) also identified biological mechanisms involving the autonomic nervous system activity (i.e., vagal tone, heart rate variability, cortisol), in addition to psychological mechanisms, such as mindfulness and rumination. Consistent with this evidence, a systematic review by Riley and Park (2015) also found physiological and psychological mechanisms in the relation between yoga and stress. These included the neurophysiological structures (i.e., posterior hypothalamus, vagus nerve, limbic system) and outcomes (i.e., cortisol levels), and psychological states and skills (i.e., positive affect, self-compassion, self-awareness, coping strategies, spirituality).

Kinser and colleagues (2012) hypothesised that yoga can impact processes and functions of the *Executive Homeostatic Network* (Taylor et al., 2010) through mindfulness, self-acceptance, self-confidence, emotion regulation, and healthy coping behaviours, ultimately leading to the amelioration of depressive and anxiety symptoms. Furthermore, physical postures and the slow breathing component of yoga can increase vagal tone, which in turn regulates neurotransmitters and hormones involved in mood regulation (Kinser et al., 2012). Arguably, these changes can also translate into improvements in health and wellbeing, since this network is involved in self-regulation and coping behaviours, goal accomplishment and a sense of competence and mastery, and the integration of information from the limbic system related to emotions, translating it into autonomic balance and behavioural responses (Kinser et al., 2012). The abovementioned studies expose the intricate entanglement of diverse structures,

processes, and outcomes across different levels of individual functioning, from physiological to psychological. Further studies have aimed at synthesising these mechanisms into theoretical or conceptual models explaining how the different components of yoga can lead to a range of health and wellbeing benefits. Here, I will outline two models relevant for chapter 8.

The Self-regulation Model

Using a systems approach, Gard and colleagues (2014) proposed that yoga is a set of integrated practices leading to physiological, cognitive, emotional, and behavioural self-regulation. Specifically, Gard et al., (2014) classified yoga elements into four categories mirroring *Patanjali's Eightfold Path*. These included ethics (i.e., *yama*, *niyama*), postures (i.e., *asanas*), breath regulation (i.e., *pranayama*), and meditation (i.e., *pratyahara*, *dharana*, *dhyana*, *samadhi*). These were considered as improving efficiency and promoting bidirectional communication and integration of interoceptive information, as well as higher and lower levels of brain networks. The model is based on evidence supporting yoga as impacting self-regulatory mechanisms using top-down and bottom-up mechanisms, and integrated with behavioural and neurocognitive sciences (e.g, Taylor et al., 2011; Thayer and Lane, 2000) as well as yoga, meditation, and third wave psychotherapies research (e.g., Vago & Silbersweig, 2012). These pathways are proposed to lead to three sets of outcomes, namely musculoskeletal strengthening, physical and psychological wellbeing, and pro-social and ethical behaviour.

The Comprehensive Theoretical Framework of Neurophysiological and Neurocognitive Mechanisms in Yoga Practices

Schmalzl and collaborators (2015) integrated neurophysiological bottom-up and neurocognitive top-down mechanisms of yoga-based practices into a comprehensive theoretical framework. Yoga mechanisms were explained in relation to three specific aspects of yoga, namely movement, breath, and attention; each involving specific structures and processes. Movement-based aspects of yoga can heighten the connection and shifting between motor, cognitive, and emotional circuits, thus promoting self-regulation and integration of body and mind. Breath-based aspects of yoga can facilitate the regulation of the autonomic nervous system, as well as feelings of calmness and social bonding. Attention-based aspects of yoga comprise a set of processes in lower and higher brain structures specifically linked to body awareness, meta-cognition, and gaze training (Schmalzl et al., 2015).

The authors further synthesise these aspects, processes, and outcomes of yoga into two main mechanisms of change. The first mechanism is the regulation of allostatic load, which is the ability to balance and maintain a state of homeostasis when facing the cumulative effects of stress (McEwen, 2003). The vagal nerve is considered key in regulating the allostatic load, which has been found to be associated with a range of physical, affective, cognitive, and social processes (Porges, 2003; 2007). Thus, they propose that yoga practices can promote vagal tone and decrease allostatic load through the breath directly affecting parasympathetic activity, strengthening of the respiratory system, and cultivating equanimity while maintaining challenging postures (Schmalzi et al., 2015). The second mechanism is the integration of bottom-up (i.e., neurophysiological) and top-down (i.e., neurocognitive) processes, in which bidirectional communication between the body and lower and higher brain structures

result in processing experiences and regulating physiological, intrapersonal, and interpersonal functioning. Hence, it is proposed that yoga can provide the opportunity to explore the dynamic interaction between physiological stress responses triggered by physical, emotional, or mental challenges, and regulatory systems.

In summary, extensive research on yoga demonstrates the wide range and reach of benefits that practitioners can experience. In addition, the incipient empirical and theoretical work on the mechanisms of yoga has contributed to further understand how the different components work in yielding such benefits. The models highlight the relevance of the vagal nerve and the autonomic nervous system in regulating and adapting to stress, with potential implications for wellbeing. The models also underscore the interconnectedness of physiological, emotional, cognitive, and social domains through bidirectional communication between the body and the brain (i.e., top-down and bottom-up pathways). However, this research and models emphasise bodily structures and processes, adopting mainly objective and naturalistic approaches. Research exploring the mechanisms of yoga specifically in terms of wellbeing is scant, and to the best of my knowledge, there are no published studies specifically examining these mechanisms in the case of AY grounded in empirical research and in participants' experiences. Next, I briefly discuss the philosophical assumptions in existing research and in yoga traditions, and the approach that this dissertation is going to follow.

Philosophical Assumptions and Intersections of Yoga and Wellbeing

Alexandrova (2015) posits that wellbeing science is a mixed-science, meaning that the field, unlike others, transcends the dichotomy of natural versus social sciences. She further argues that wellbeing science encompasses values from both interpretivist

and naturalistic traditions. For example, while it assumes that wellbeing is relevant, that there are varied appraisals in how it should be measured, and acknowledges the centrality of the lived experience (i.e., interpretivist), it also pursues generalisations of causality and the use of axiomatic and psychometric assessments (i.e., naturalistic). This dichotomy is reflected in the predominance of reductionistic research designs using pre-determined measurements that fail to capture the richness and diversity of experiences of a wide range of people (Kern et al., 2020; Lomas et al., 2020). Similarly, yoga has been widely researched using positivist or post-positivist epistemologies focusing on physical and physiological measurements to examine mostly linear relationships between the yoga practice and health related outcomes (Kuntsevich et al., 2010). Paradoxically, yoga is experiential in nature, and thus, the same issue noted by Alexandrova (2015) in the case of wellbeing science can apply to yoga.

As an integrated system encompassing a philosophical framework and practical methods, the meaning of yoga ultimately comes to life through the lived experience of such knowledge and practice. The evolution and unification of different dimensions of the individual (i.e., mind-body-spirit) through the yoga practice requires the experience of awareness of such dimensions and a shared language and framework to explain how the benefits are acquired (Sullivan et al., 2018a). Here, it is essential to consider that from a yogic perspective, the term experience and perception can be treated as equal, and that experiences or perceptions gained through the senses are a form of direct cognition and true knowledge (Saraswati, 2009). In this context and following this rationale, wellbeing emerges within the experience of awareness of bodily and mental phenomena through the yoga practice, and is conceptualised through a shared

language. Thus, a phenomenological approach to yoga and wellbeing enables placing practitioners' lived experiences to the forefront and guiding the research inquiry. In this thesis, I define experiences as encompassing a wide range of phenomena (see Chapter 3) including mental representations. Throughout the dissertation, I use the term perceptions interchangeably with conceptualisations, as both are mental representations shaped in a context and communicated through language.

The individual experience of yoga and wellbeing emerge as a dynamic interaction and co-creation between the lived body, the mind, and the environment as experienced through the embodied mind (Sullivan et al., 2018a; Varela et al., 2016). Within yoga philosophy, body, mind, and spirit are part of a continuum in which different individual dimensions interact towards gaining increased awareness of humans' spiritual nature (i.e., *pancha kosha* model, see Chapter 5). In contrast, prevailing Westernised scientific views of human functioning tend to dichotomise mind and body, and view mental phenomena as a result of neurophysiological processes. Thus, the intention of this dissertation is to bring these different paradigms together, by considering empirical evidence on the outcomes and mechanisms of yoga and wellbeing within the abovementioned philosophical frameworks and assumptions guiding the research inquiry. Following Sullivan and collaborators (2018a), I argue that when the physical (i.e., postures, breath), mental (i.e., attention, meditation), and ethical (i.e., *yama*, *niyama*) practices of yoga are acknowledged within a traditional philosophical framework, they can delineate a path towards wellbeing. Yoga philosophy and the AY tradition in particular can serve as a shared language in which the experience of yoga and wellbeing is framed and explained. Hence, yoga and wellbeing science will be viewed as two

systems sharing certain assumptions and dynamically interacting to co-create meaning and knowledge through the lived experience of practitioners. This speaks to the assumption of reality being co-constructed, which is linked to the Social Constructivist paradigm. This will be further discussed in the next chapter.

Conclusion

This chapter has provided a broad-ranging literature review exploring current conceptualisations of wellbeing and yoga from different standpoints, including academic, traditional, empirical, and lay people's perspectives. The literature review also explored the intersections of yoga and wellbeing by examining empirical evidence in terms of outcomes and mechanisms, and by outlining philosophical assumptions that can help guiding the research inquiry, which will be further address in the next chapter.

Throughout the literature review, the identification of gaps across the existing theoretical and empirical literature reveal several areas that position and direct this thesis. Yoga has been widely studied as a short-term intervention and shown to be effective in improving symptoms and wellbeing in clinical populations through research using quantitative approaches, RCTs, and clinical trials within medicine and health related fields. Compared to yoga in general, less is known about AY as there are limited studies published, especially in terms of wellbeing. Similarly, research on the mechanisms of yoga is relatively new and mostly take a deficit standpoint, without fully addressing the processes by which yoga leads to wellbeing. Thus, this dissertation focuses on exploring the pathways of AY towards wellbeing from a range of angles. Sustained in philosophical assumptions about the experiential and inter-subjective

nature of yoga and wellbeing, the dissertation looks at conceptualisations of wellbeing and of yoga as well as the pathways of yoga towards wellbeing from practitioners' perspectives. This will be further argued in the following chapter.

CHAPTER 3: METHODOLOGY

Introduction

This chapter describes and argues the methodological foundations and procedures of the dissertation. I begin by stating and arguing for Social Constructivism (Vigotsky, 1978) as the overarching philosophical paradigm underpinning this research. I next describe and justify the use of Interpretive Phenomenology (Heidegger, 1962) as the approach linking research inquiry and methods through key worldviews and principles, with reference to wellbeing theories as well as yoga philosophy and research to examine regular Ashtanga Yoga Practitioners' (AYPs) perceptions and conceptualisations in relation to how they perceive their yoga practice and their wellbeing, and how their yoga practice relates to their own wellbeing. I then argue for the need for using a mixed methods research design to thoroughly address the main research question and additional research questions, and describe participants, procedures and the data collection process for each stage of the project, with details further elaborated in subsequent chapters. I end the chapter by describing quantitative and qualitative analyses, offering final insights into an overall synthesis, setting the stage for the subsequent studies described in Chapters 4 through 8.

Methodological Framework Considerations

Scientific research is implicitly or explicitly grounded in the researcher's philosophical worldviews and related assumptions. Explicit and straightforward consideration of worldviews and assumptions helps to guide and structure inquiry (Creswell & Plano Clark, 2011). From an early stage, the researcher should be mindful

about how previous knowledge, experience, and understanding of the phenomenon influences the processes of collecting, analysing, and interpreting data (Elliot & Timulak, 2005). Choosing and committing to a particular approach can lead to designing and implementing the methods clearly and coherently in terms of purpose, structure, and findings (Lopez & Willis, 2004).

Crotty (1998) proposed a framework for crafting a research proposal by identifying and threading together four key elements: (1) the philosophical paradigm delineating assumptions regarding the nature of reality (ontology) and the way knowledge is created (epistemology), (2) the theoretical approach that the researcher brings from their field of expertise to the study, (3) the methodological approach or research design, and (4) the methods for data collection, analysis, and interpretation. Greene (2006, 2008) contends that four key interrelated elements need to be critically appraised to choose and develop a research design: identifying fundamental philosophical assumptions, defining the logic for inquiry or methodology, specifying the guidelines or strategies for the research to be conducted, and identifying socio-political interests and commitments. Similarly, Creswell and Plano Clark (2011) advise researchers to clearly and explicitly identify philosophical worldviews and to justify them in the context of mixed-methods research, which includes acknowledging the grounding paradigm, describing its elements, and relating them to certain methods used in the study.

These scholars agree on the importance of identifying, explaining, and justifying the philosophical standpoint, the methodological approach and the methods or strategies of the research. In this thesis I choose to align with a Social Constructivist

Paradigm (Vygotsky, 1978), with a mixed-method research approach. An Interpretive Phenomenological lens (Heidegger, 1962) is used with reference to wellbeing theories and yoga philosophies to examine regular AYPs perceptions in relation to how they experience and conceptualise yoga and wellbeing, and the connections between them. In the next section, I review the philosophical assumptions of the paradigm and approaches underpinning the methodology for this study, and provide a rationale for choosing these approaches. Following this, this chapter describes and justifies the research design, the participants, and the methods for data collection and analysis, with details further elaborated in subsequent chapters (see Chapters 4 to 8).

The Overarching Philosophical Paradigm: Social Constructivism

Guba and Lincoln (1994) define a paradigm as “a set of basic beliefs (or metaphysics)” (p. 107), representing a particular way of seeing the world, its nature, people’s role in it and the potential relations within that world. These authors posit that any research paradigm can be suitably used with either quantitative or qualitative approaches, since a paradigm is an overarching term preceding the selection of a particular method, based on epistemological and ontological reasoning. Following this rationale, this thesis is guided by a Constructivist paradigm in general, and a Social Constructivist paradigm in particular.

Onwuegbuzie, Johnson, and Collins (2009) argue that Constructivism acknowledges the co-existence of multiple and equally valid interpretations of the same phenomenon. Schwandt (1998) expands on this, contending that Constructivism aims to comprehend the meaning and definition of lived experiences from the participants’ subjective standpoints. Following this argument, participants are considered social

actors actively constructing meanings from their experiences, and testing and adapting those meanings based on new experiences (Schwandt, 1998). Similarly, Guba and Lincoln (1994) assert that people give intentions and meanings to their actions and thus, their acknowledgement and understanding is fundamental to understand human behaviour. Although they posit these experiences are specific to each individual, they also assert that common aspects within a group of people can be found.

This foundational philosophical assumption is aligned with the purpose and main research question of this research project, which aims to examine the perceptions of regular AY practitioners in relation to their own experience about their yoga practice and their wellbeing. The focus of the research acknowledges the subjective nature of reality and the value of understanding the phenomena from the participants' standpoint to build knowledge. Both wellbeing and yoga practice are personal and subjective phenomena, since they are lived, perceived and conceptualised in particular ways by each individual. Participants' accounts of yoga and wellbeing can enable researchers to better understand these constructs and generate knowledge from this perspective. In this sense, Constructivist inquiry uses a bottom-up approach, in which people's perspectives lead to finding patterns, which in turn leads to an overall understanding of the phenomena, whilst recognising the value of diversity of those points of view (Creswell & Plano Clark, 2011).

Although sharing these basic assumptions, several branches can be found within the Constructivist paradigm, including Radical, Cognitive, Cultural, Communal, Critical, Evolutionary, Post-modern, and Social (Murphy, 1997; Onwuegbuzie et al., 2009). Despite the classification, Murphy (1997) suggests that differences between each

standpoint are not clearly delineated. She does distinguish Radical Constructivism (Von Glaserfeld, 1989) from Social Constructivism, in which the former places more emphasis on the individual's cognitive process to build knowledge, whereas the latter focuses on agreement between individuals to define reality. In other words, Social Constructivism is focused on the ways in which knowledge is generated or constructed within individuals, while acknowledging that the individual experience "is experienced through culturally shared categories of meaning" (Harper, 2011, p. 6).

The foundational cornerstones of Social Constructionism are that realities are socially constructed through language, that knowledge emerges from social processes and that human beings are reflective in nature (Galbin, 2014). It is noteworthy that the use of the terms "constructivism" and "constructionism" arguably represent different meanings in the literature. The term "constructivism" is usually linked with the Constructivist paradigm and streams linked to intrapsychic processes, and hence avoided by most social constructionist researchers (Harper, 2011). However, for purposes of this research, these terms will be used interchangeably, as the emphasis and distinction is placed on the relational aspect by purposefully using the term "social". Thus, this research is underpinned by a Social Constructivist paradigm and I will provide the rationale for selecting this particular worldview next.

The Rationale for Social Constructionism

Social Constructivism focuses on shared inter-subjectivity and how meaning and knowledge are socially constructed, rather than solely examining individual cognitive processes (Gergen, 1985; Murphy, 1997). This implies that perceptions of the world exist within language as a manifestation of interactions between people (Gergen & Gergen,

1991) and that the mind is not a mere mirror or representation of an external reality (Galbin, 2014). The Social Constructivist paradigm posits that through a social interaction process comprising language, history, and action, certain people at specific time and places construct particular meanings of situations (Schwandt, 1998). These assumptions are consistent with this thesis as it accepts the notion that yoga practitioners can express their perception about yoga and wellbeing through language, whether it be in written or spoken forms.

Here, I assume that participants can define the concepts of yoga and wellbeing based on their own experience of the yoga practice, rather than assuming that these concepts only exist independent from the observer. The meanings (i.e., how they perceive yoga and wellbeing) will be found within their own words, especially in how they use those words to express and shape their reality. This reality exists in the mind, yet is rooted in social contexts and processes. Thus, it is through social interaction that knowledge is created together between researcher and participant as the investigation unfolds (Grbich, 2013). Expanding on this dynamic process of the construction of mental representations within social interactions, it seems necessary to further explain how they have been theorised and how these assumptions can inform this research project.

Social Constructivism places special emphasis on how processes of enculturation and socialisation involving past and current social relationships play a key role in shaping people's present existence (Owen, 1995). Berger and Luckmann (1996) posit that social phenomena are generated and maintained by the engagement in social practices, through the processes of externalisation, objectivation, and internalisation. Externalisation is the enaction of a practice or the creation of an artefact by an

individual. When the practice is introduced to and re-enacted by others, it enters the social realm and becomes part of a collective consciousness, being objectivised or perceived as something that is part of the external world. When other generations come into this world where this conceptualisation already exists, internalisation occurs, incorporating it as their own understanding of the world. These processes acknowledge that social practices construct people's realities as much as their individual experience of such practices, as pre-existing in their world. In the context of this research, social phenomena such as yoga and wellbeing can be considered as social inventions that have been externalised, objectivised, and then internalised to different extents. For instance, yoga is a millenary system of practice and philosophy that has been enacted and re-enacted by uncountable practitioners throughout history, with traditions and practices verbally passed on from teacher to student, and with students becoming teachers to subsequent students. Today yoga has become an artefact existing worldwide, with practitioners most likely internalising it and contributing to the construction of their realities.

Guba and Lincoln (1994) argue that the purpose of Social Constructivist inquiry is to comprehend and re-construct people's original constructions and reach social agreement, whilst remaining open to new interpretations in light of new information. It argues that the aim of research and scholarship is to generate knowledge, appreciating its fluidity and expanding possibilities, rather than reaching an ultimate and fixed truth (McLeod, 1997). This is well aligned with the purpose of the thesis, which seeks to understand practitioners' experiences by accessing their perceptions through language. Additionally, within this paradigm, I assume that knowledge is generated by the use of

signs and symbols shared by a collective (Grbich, 2013). This might not only refer to different languages such as English or Spanish, but also the particular language within the yoga community and within the AY tradition and community in particular. Through history and tradition involving philosophy and practices, yoga teachers and students have construed, adapted, and shared meanings around the practice through yoga's original language (Sanskrit) and their own native languages in their particular contexts.

Similarly, wellbeing science and positive psychology have contributed to the knowledge about and for wellbeing, with practices being incorporated in different settings where they are accessible to a range of people. Scholarship in this area can be further enriched by broadening the understanding of wellbeing from practitioners' conceptualisations and experiences. Here, my previous knowledge and experience on yoga and wellbeing is relevant, both to access participants' meanings and to generate knowledge with the participants. Furthermore, all of the assumptions discussed above permeate the methodology, influencing the selection of methods that allow expression of participants' viewpoints through language and in a context of interaction with the researcher, through open-ended questions and interviews. These methods will be discussed to a greater extent below.

The choice of the Social Constructivist paradigm is also rooted in the need of providing broader and more diverse perspectives into the research fields of yoga and wellbeing. Social Constructivism advocates for alternate approaches to mainstream and imperialist views prevailing in scientific circles, as well as for imbuing diversity, transdisciplinarity, and multiculturalism into research practices (Burr, 2015). This thesis advocates for an alternate approach to research on wellbeing and yoga. Specifically,

wellbeing has often been studied across specific populations, mostly within WEIRD societies, and a call for using alternate epistemologies and methodologies has been recently raised (Black & Kern, 2020; Lomas et al., 2020). Yoga has been mostly studied in Western science considering limited elements and particular views of researchers that narrow the understanding of this system (Singleton & Larios, 2020). Similarly, there is a need to consider the potential of yoga as a holistic practice in research (Bhavanani, 2014). An alternate approach taken by this dissertation means moving from modern and imperialist conceptualisations that have excluded certain views and favoured specific scientific methods, towards the inclusion of lay conceptualisations of a variety of practitioners whilst acknowledging the aboriginal roots of yoga and the variety of worldviews that practitioners across the world may hold.

Thus, as a post-modern approach, Social Constructivism implies revising and transcending assumptions on individual rationality, empirical evaluation, the representational nature of language, and the narrative of progress (McNamee & Hosking, 2012). Accordingly, this thesis seeks to embrace multiple standpoints and comprehend the meaning of socially shared constructs. Aligned with Social Constructivism, the creation of meaning as a collective underpinned by language is the centre of attention for inquiry, and the understanding of such a world of meanings is achieved through interpretation (Schwandt, 1998). These assumptions are aligned with Phenomenology (Heidegger, 1962) as a philosophical approach, contributing to bridge the research paradigm with the data collection methods and analysis strategies included within this project. Schwandt (1998) asserts that Constructivism views on how to create knowledge can be articulated with Interpretive Phenomenological standpoints. A

description of Phenomenology, both Descriptive and Interpretive, will be provided next, along with their connections to Social Constructivism to support the argument of using key elements from these approaches for this research. As contended in Chapter 2, Phenomenology is viewed here as a philosophical tradition addressing the study of experience that can complement epistemological and ontological principles discussed above.

Linking Inquiry and Methods through the Philosophical Keystones of Phenomenology

Appraised as a philosophical movement (Smith, 2018), which later evolved into a research methodology (Yee, 2019), Phenomenology emerged as a philosophical tradition that focuses on studying phenomena as experienced first-hand and subjectively by individuals. From a philosophical stance, a phenomenon can be defined as something that is experienced by someone who can subjectively and consciously sense, perceive, or experience such phenomenon (Yee, 2019). Phenomenology is concerned with studying phenomena as they appear in people's consciousness and how they experience them either internally (i.e., perceiving) or externally (i.e., performing) (Smith, 2018). Phenomenology enables the grounding of scholarly fields as its philosophy offers a way to understand phenomena before engaging in empirical actions (Owen, 2003). Consistent with this view, in this thesis, Phenomenology is understood as a useful lens for guiding this research in understanding wellbeing and yoga from the perspectives of AY practitioners.

Although the word "phenomenology" has been used to refer to experiences as merely sensations, Phenomenology encompasses a broader range of experiences, including perceptions, cognitions, emotions, corporeal awareness, embodied actions,

and social actions, as well as the significance of objects that are experienced in each person's lived world (Smith, 2018). Therefore, Phenomenology seeks to explore and gain an in-depth comprehension of underlying meanings and essence of a phenomenon as experienced by individuals, considering how they make sense of the phenomenon of interest (Grbich, 2013). This philosophical approach is of particular relevance to this thesis, as the main aim is to understand how regular AYPs perceive wellbeing and yoga, as well as the relationship between the two, based on their own and broad range of experiences as regular yoga practitioners.

A number of orientations towards the philosophy of Phenomenology have been described in the literature, including Transcendental, Naturalistic, Existential, Hermeneutical, and Heuristic Phenomenology (Grbich, 2013; Smith, 2018; Yee, 2019). Grbich (2013) argues that differences between these approaches are tied to the degree in which researchers can bracket themselves out from the object of study and to the extent in which the essence that the phenomenon can be separated from participants' experiences. Yee (2019) contends that these different approaches can be generally classified into two main branches: Descriptive and Interpretive. Descriptive or Transcendental Phenomenology, which derives from Husserl's (1982) work, aims at describing a type of experience whilst bracketing queries about the nature of reality. Interpretive or Hermeneutical Phenomenology stems from Heidegger's (1962) work, who expanded on Husserl's views. Interpretive Phenomenology focuses on the interpretation of a type of experience through the association of personal understandings of the world to relevant contextual features (Smith, 2018). Whilst both approaches are unique and lead to different methods, they share the same foundations.

Yee (2019) argues that the emergence of different phenomenological approaches offers possibilities for different research purposes rather than diminishing the value of one or other approach, while the centrality of experience remains being the key. For the purposes of this thesis, I acknowledge the foundations laid by Descriptive Phenomenology whilst considering Interpretive Phenomenology as the approach that best aligns with the nature of this investigation. In the next paragraphs, I review key elements of each approach along with their relevance to this project.

According to Transcendental or Descriptive Phenomenology, a phenomenon becomes an object that can be objectivised due to the intentionality of our awareness of the object, and to the sense-making that arises from the awareness of that object, which involves a series of mental constructions that are grouped together and related to each other (Yee, 2019). Here, the phenomena under study are yoga and wellbeing as perceived and/or performed by regular AYPs. Following Descriptive Phenomenology, each person's world involves processes to explain, clarify, and signify objects as things that exist in their world, and hence rendering them as objective, yet still subjective (Yee, 2019). In this case, both yoga and wellbeing are considered objects that exist in regular AYPs' worlds with particular significations to each person. Furthermore, whilst each person is bounded to their own world, objects of consciousness or awareness may be common across different people and be experienced and understood through a sense of co-presence and empathy, leading to intersubjective objectivity (Yee, 2019). The AY practice is an example of this. Although the individual experience and comprehension is unique for each practitioner, it constitutes a shared object amongst AYPs. This phenomenological approach contends that the world is made up of the sum of all

possible experiences and experiential cognitions of objects (Husserl, 1982). This means that it not only considers the current experience but also past and plausible experiences and cognitions related to an object. This translates into considering wellbeing and yoga in a broader sense from AYPs' points of view, including their existing, past, and ideal views on such phenomena.

Hermeneutic or Interpretive Phenomenology seeks to understand the interpretations of individuals' experiences of the phenomenon by them being in the world not only with themselves, but also with others (Grbich, 2013; Lopez & Willis, 2015; Reiners, 2012). Interpretive Phenomenology aims to unveil hidden elements of people's experiences and relationships, by searching for, describing, and interpreting underlying meanings in individuals' narrative accounts whilst considering the contextual elements of the world in which they live in (Lopez & Willis, 2015; Smith, 2018). Thus, Interpretive Phenomenology proposes that people's realities are influenced by their context and history, which is aligned with the Social Constructivism worldviews discussed above. Furthermore, this approach recognises that researchers' previous knowledge as well as their conceptual frameworks and theoretical orientations are highly valuable and essential for defining research questions, making methodological decisions, and interpreting results (Lopez & Willis, 2015).

In this thesis, my previous knowledge in wellbeing and yoga as well as my experience as a regular AYP has contributed to my ability to identify research gaps and to develop and shape this research project. Both knowledge and experience are essential in the process of coding, analysing, and interpreting the data from participants, as researcher and participant share common languages and context. Notably, this

approach is aligned with the Social Constructivist paradigm and Interpretive Phenomenology. This might seem misaligned with Descriptive Phenomenology, since it has been regarded as a tradition of enquiry positing that reality is objective and independent from contextual and historical factors and that researchers must strip their previous knowledge and bracket themselves out in order to avoid influencing their study (Lopez & Willis, 2015). However, this tradition ultimately acknowledges the subjectivity and intersubjectivity of reality, and recognises that this intersubjectivity occurs between the researcher and the researched, with researcher's lived experiences purposefully integrated in the research process (Yee, 2019). This further supports the argument for using a Phenomenological approach to link and articulate research inquiry and methods.

In sum, this section has described, explained, and argued the philosophical paradigm and approaches underpinning this research project, which are driven by Social Constructivism and aligned with Interpretive Phenomenology. This alignment enables the selection of a research design that best fit these philosophical assumptions and most appropriately addresses the research questions, which for the purposes of this thesis, was a mixed methods design.

Mixed Methods as the Research Design

Based on a review of definitions proposed by leading scholars on the field, Johnson, Onwuegbuzie, and Turner (2007) define mixed methods as a kind of research in which one or more investigators blend aspects of quantitative and qualitative research, such as stances and gathering, analysis, and interpretation of data, with the aim of providing depth and breadth to the comprehension and confirmation of the phenomenon under study. These authors argue that mixed methods could be

positioned between the qualitative and quantitative poles of a continuum, with the intention of acknowledging the benefits of each tradition whilst providing a middle ground for certain research problems, as well as higher-class results and outcomes (Johnson et al., 2007).

Johnson and Onwuegbuzie (2004) and Creswell and Plano Clarke (2011) contend that using quantitative and qualitative approaches conjunctly can be considered as a third tradition of inquiry, expanding on traditional quantitative and qualitative research as mono-methods. They refer to this tradition as mixed methods research and propose that Pragmatism is the most suitable paradigm for this type of inquiry, since it provides an epistemological rationale and logic to combine approaches and methods based on practicality. However, Onwuegbuzie et al. (2009) argue that mixed methods research can involve more nuanced approaches within a continuum, including qualitative mixed and quantitative mixed research. They propose that “qualitative dominant mixed methods research” (Onwuegbuzie et al., 2009, p.124) can adopt an overarching Constructivist perspective of the researching process whilst acknowledging the value of including a quantitative approach. Consistent with such statements and following the same rationale, this predominantly qualitative mixed methods research project was guided by a Social Constructivist paradigm, as described above.

Creswell and Plano Clark (2011) and Elliot and Timulak (2005) have suggested that decisions about which methodological approach to use for a study should arise from and be closely related to the problem formulation and particular questions of the research project. As stated above, the focus of this research was the exploration and understanding of regular AY practitioners’ perceptions of their wellbeing and of their

yoga practice, of how yoga relates to different aspects of wellbeing and how the perception of the yoga practice and the perception of wellbeing vary depending on different conditions or characteristics of the practitioner. Other areas of interest included exploring whether practitioners have distinctive wellbeing profiles according to their expertise with yoga and examining their perceptions on how different aspects of their yoga practice relates to different aspects of wellbeing. Some of these aspects needed to be addressed mostly from a quantitative stance and others mostly using a qualitative stance, whereas some aspects needed to be addressed by the combination of these two approaches. For instance, whilst a quantitative approach could be useful to quantify yoga practice and wellbeing levels in yoga practitioners to identify individuals with different levels of expertise with yoga and of wellbeing, a qualitative approach could be more suitable to understand practitioners' perceptions of their yoga practice and wellbeing in more depth and detail. Since the main focus of this thesis was to understand practitioners' perceptions of wellbeing and yoga, as well as their perceptions about how the two are related, the qualitative component played the primary role in answering the main research questions, with the quantitative data playing a supporting role in the research.

Frels and Onwuegbuzie (2012) argue that whilst qualitative methods are suitable for answering research questions regarding why and how certain phenomena occurs, quantitative methods are more appropriate for responding to questions about characterising individuals and looking into relationships between variables and quantities. They suggest that one of the strengths of mixed methods research is its ability to tackle both types of questions in one study. Similarly, Creswell and Plano Clark

(2011) contend that quantitative data can provide an overall understanding of a problem by generally assessing large groups of people and limited variables, whilst qualitative data can offer a more detailed comprehension by in-depth explorations of participants' perceptions. These authors suggest that by providing different approaches to study the same phenomena, the amalgamation of quantitative and qualitative research in a mixed method design can contribute to a more thorough comprehension of the research problem. They propose that mixed methods design could be the best option in cases where a single source of data might not be enough to address the research questions and where there is a need to understand more deeply and explain preliminary results. Moreover, they suggest that qualitative information can aid in bridging the comprehension of the meaning of quantitative information regarding relationships between variables. Thus, in order to effectively address the overall research question and specific questions for this research project, I have chosen a mixed methods design as the most suitable methodological approach.

According to Creswell and Plano Clark (2011), the selection of the type of mixed method research design should be based on four key decisions. Firstly, there is a need to establish the extent in which quantitative and qualitative strands interact. In the case of this research project, the relation between both strands will be interactive, as Stage 2 depends on results from Stage 1, with both including quantitative and qualitative components to a different extent. Specifically, Stage 1 involved quantitative and qualitative data and analysis, and Stage 2 primarily involved further qualitative data and analysis from participants included in Stage 1. Secondly, there is a need to define the priority of each strand. Although it has been stated that this research project is mainly

qualitative, both methods are even in terms of priority since each is equally relevant for addressing the research questions. Thirdly, there is a need to establish the timing for each strand. In this case, strands are combined in each stage to different degrees. The first stage combined mostly quantitative with qualitative data collection, data analysis, and interpretation of findings. This mixed method stage preceded a mainly qualitative phase, meaning that the project had a sequential timing. Finally, there is a need to state the strategy to mix and interpret the data. This research mixed strands at data collection (e.g., online survey), data analysis, and interpretation, connecting the data from stage 1 to the collection of data for stage 2. Therefore, the specific type of mixed method approach proposed for this research project was a sequential explanatory design including two stages: a predominately quantitative stage followed by a qualitative stage.

The first stage consisted of an online survey, in which a large sample of participants (n=352) who were practising AY answered a variety of quantitative and free-response questions about their yoga practice and their wellbeing. A subset of respondents (n=235) from Stage 1 regarded themselves as regular AY practitioners and were included in the studies described in this thesis (see Chapters 4 to 8). From this sample, participants who reported interest and consent to be contacted were then invited to complete a virtual semi-structured interview, which gathered more detailed information about their perceptions. This sample was purposefully selected based on their responses to the online survey to represent different levels of expertise with yoga as well as a variety of demographic characteristics. The reasons to include participants from Stage 1 into Stage 2 is grounded in the notion that these participants are those who can provide the most relevant information to explain findings from Stage 1

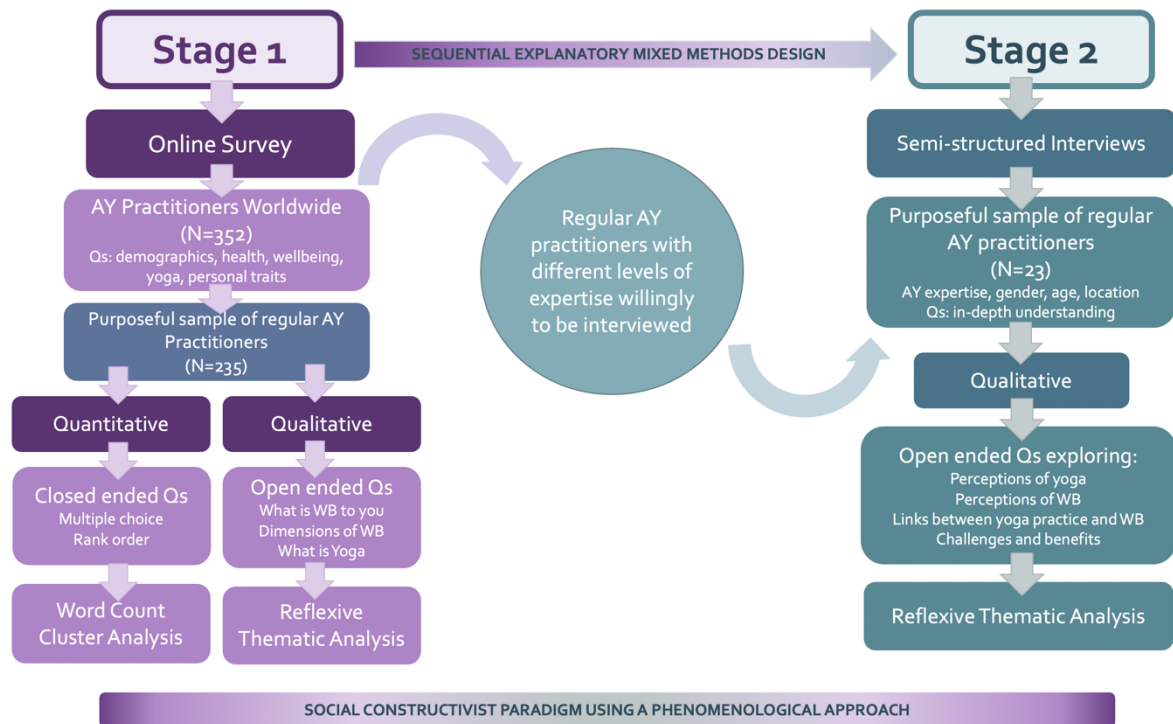
(Creswell & Plano Clark, 2011). Similarly, I used the sample of regular AY practitioners from the online survey to conduct a number of studies using only data from the survey.

Sequential explanatory research designs are generally used when the study focuses on assessing trends and associations between variables with quantitative data whilst also examining the mechanisms and reasons explaining those trends (Creswell & Plano Clark, 2011). Some of the reasons proposed by Creswell and Plano Clark (2011) to conduct this type of mixed methods research design include using the qualitative data to explain results from the quantitative stage, using quantitative findings to group participants and follow them up using a qualitative stage, and using quantitative findings about participants' characteristics to guide purposeful sampling for a qualitative stage (Creswell & Plano Clark, 2011). This research project relates to these three purposes, since it uses quantitative data from the first study to purposefully select a sample of participants identifying themselves as regular AYPs for the second study, group these individuals according to their level of expertise with yoga, and to follow them up in Stage 2 to further examine their perceptions about the connections between their yoga practice and their wellbeing in greater depth and detail (see Figure 3.1).

Creswell and Plano Clark (2011) argue that sequential explanatory designs usually comprise a quantitative phase using a Post-Positivist paradigm followed by a qualitative phase using a Constructivist paradigm. However, I argue that both stages of this research are underpinned by a Social Constructivist paradigm. Although a stage comprising quantitative elements could suggest a Post-Positivist approach, I use this stage to assess participants' perceptions according to their own personal and subjective definitions and accounts of their yoga practice and wellbeing, and therefore, I address

the research problem mainly using a bottom-up approach. In the next several sections, I briefly overview the participants, procedure, measures, and data analyses. Further details are provided in subsequent chapters.

Figure 3.1. *Research Design of this Dissertation.*



Ethical Considerations

Due to its focus on positive aspects and enjoyable activities, research on wellbeing and yoga can be generally considered low risk. However, every form of research encompasses ethical considerations to be followed and potential risks that need to be foreseen. An ethics application for both stages of the research project was submitted to the Human Research Ethics Committee of the University of Melbourne in September 2019, which was approved in February 2020 (#1955377.1). Each stage of the

research project included a Plain Language Statement (PLS) and a Consent Form for participants who were involved in the studies (see Procedure section below for details).

Since the PhD program was funded by an overseas organisation and the research entailed an international sample of yoga practitioners, the overall research project was considered standard risk. Additionally, some of the survey questions involved disclosure of illness or symptoms, which might be sensitive to some individuals. To address any potential experience of distress during the online survey or interviews, participants were given the opportunity of skipping questions that they would rather not answer or withdrawing from the study at any point without having to provide reasons. The PLS included relevant resources and information on mental health support for people residing in Australia and abroad in case they needed.

The online survey asked participants to allocate up to 45 minutes of their time in order to complete all the questions. To compensate their time and effort, participants were able to choose to participate in a draw for a prize. All participants who wanted to be part of the draw had an equal chance to win an online Meditation Teacher Training program offered by The School of Positive Transformation valued at \$690 AUD or one of five Amazon.com gift cards of \$50 AUD each. An Excel function generating random numbers was used to choose the winners according to their participant number. Interview participants were offered a \$20AUD Amazon.com gift card to thank them for their time and involvement (about 60 minutes). It is noteworthy to clarify that there was no affiliation prior or during the implementation of the research. Through my network in PP, this organisation was interested in the research and offered the course as a way to encourage participation in the survey and reach a large scale of participants.

Furthermore, I chose the Amazon.com website to provide the gift cards since it allowed participants across the globe to redeem them at their convenience based on their location.

The research involved English and Spanish speaking AY practitioners. Spanish and English are amongst the most spoken languages around the world (Ethnologue, 2019), and including different languages enabled me to give a better representation of people practising yoga than English alone. Noteworthy, I am fluent in both these languages and my primary PhD supervisor has moderate proficiency in Spanish, which allowed the use of both languages across the studies. This involved translation and backtranslation of the online survey (see Supplement 1) and the questions for the semi-structured interviews (see Supplement 2), as well as the PLS and Consent Form for each stage of the research (see Appendices 1 – 5), and resources used for recruitment (see Supplement 3).

Methods

Participants

This research project included English and Spanish speaking adult (18+ years old) AY practitioners located in Australia and abroad. For the online survey, the sample included 352 participants, which provided a diverse set of participants and a much larger sample than has been included in existing studies of AY practitioners. From the 352 participants, 235 participants regarded themselves as regular AYPs. The number of participants for each of the four studies including data from the online survey varied depending on the questions that had been responded and included in each study. Each study includes details about participants who were included and compared against the

broader sample. This information is provided in each chapter (see Supplements for Chapters 4 to 8).

As part of the online questions, participants were invited to indicate willingness to be interviewed, and 91 regular AYPs expressed their interest in participating in the interviews. Drawing on those individuals who agreed to be interviewed, a subset of individuals was selected for the second stage of the research project. People were selected for the interviews to represent different levels of expertise regarding their yoga practice by considering a combination of mainly two variables: years of regular practice and asana sequence. The purposeful sample was intended to represent different genders, age groups, cultural backgrounds, and locations. This was accomplished by including people residing in each continent considering different countries, who were fluent in speaking either English or Spanish. I initially estimated to include 8 to 12 participants to represent different levels of expertise (i.e., beginners, established, senior). A total of 23 participants were interviewed to explore their perceptions and experiences with the yoga practice and how they perceived their yoga practice is connected to one or more areas of wellbeing in greater depth and detail.

Procedure

I conducted the recruitment process with oversight by my primary supervisor, after obtaining ethics approval for conducting this research project. In Stage 1, participants were recruited through online social media platforms such as Facebook, LinkedIn, Reddit, and Instagram. A Facebook page was created for the research project with a related Instagram account to reach different groups, communities, studios, and

individuals around the world. The information about the study was shared through public posts in English and Spanish, with a link to access the survey in each language accordingly (see Supplement 3).

The recruitment strategy also included approaching different Ashtanga Yoga studios based in Australia and overseas, and sending them posters that they could include in their newsletters and/or social media. I also used email communications by using contact lists available through the Melbourne Graduate School of Education (MGSE) and the Centre for Wellbeing Science (CWS) at the University of Melbourne. Potential participants were able to click on a link, which led them to a Qualtrics-based survey. Both English and Spanish versions of the online survey were available, allowing participants to choose their preferred language for completing the online survey.

The survey began with a Plain Language Statement and Consent Form (see Appendices 2 and 3, respectively), and then proceeded with the survey questions. Consenting individuals were then immediately able to complete the online survey, which explored different aspects of their wellbeing, as well as of their yoga practice, personal traits, health, and demographic information. The approximate time commitment for the survey was between 15 to 45 minutes, depending on whether they only wanted to answer the demographic, yoga, and wellbeing questions (15 minutes), or were willing to also complete the health and personal characteristics questions (adding 15 to 30 minutes). Participants were able to complete the survey on a personal electronic device with internet connection at a time and in a location of their preference. At the end of the survey, participants had the option to be part of a prize

draw and to receive a report, in which case they were asked to provide contact details. Also at the end of the survey, participants were invited to indicate willingness to engage in a follow-up virtual interview. If they were willing to participate, they were be asked to provide their contact details (see Supplement 1 for further details on the online survey)

For Stage 2, potential participants were contacted individually by email to confirm participation in the interviews and were be asked to read the Plain Language Statement (see Appendix 2) and agree to the consent information for participating in the interviews. After returning the signed Consent Form (see Appendix 3), an online scheduling site was used to arrange the date and time of the interview, on a date and time convenient both for each participant and myself. Once they booked the time for their interview, participants received an email confirming the meeting. Participants could choose to reschedule or to cancel the interview at any point. A reminder was sent to participants an hour prior to the interview with a link and details to connect online using an electronic device with internet connection. The virtual interviews were conducted using Zoom, an online videocall platform which the University of Melbourne has a professional license for. Interviews were recorded using the Zoom software and recordings for each interview were stored in a password protected file on a secure server at MGSE. The approximate time commitment for each interview was 60 minutes, although interviews varied between 40 to 90 minutes (see Supplement 2 for further details on the interview questions).

Measures

Online Survey

Quantitative and qualitative data was collected through Qualtrics survey software. The survey comprised six parts and took about 30 minutes to complete. Part 1 included demographic questions. Part 2 included questions about the yoga practice and practitioners' experiences. This part included three sections with quantitative and free-response questions. The first section included only closed-ended questions about the Ashtanga Yoga practice, the second section explored experiences regarding the elements of yoga through closed-ended questions, and the third section examined motivations for practising yoga using closed-ended and free-response questions. Part 3 included quantitative and open-ended questions about wellbeing, including how the participants defined wellbeing, how relevant each area of wellbeing was for them (i.e., physical, emotional, psychological, social, spiritual) and to what extent they experienced wellbeing in each area. Part 4 included one quantitative question about the extent in which participants perceived their yoga practice has influenced their wellbeing. These four parts took about 15 minutes to complete.

Following this portion of the survey, a break was included to thank people for responding and to ask them whether they were interested in completing an additional set of questions exploring how other factors, such as physical health, personality and individual characteristics might impact the relationship between yoga and wellbeing. This next section took about 15 additional minutes to complete. If participants agreed to continue, they moved on to Part 5, which included a variety of closed-ended

questions, most of them compiled from different existing measurements, presented in the following order as summarised in Table 3.1. Finally, Part 6 included a free-response question for participants to provide comments if they wanted to add something, an invitation to participate in Stage 2 and the option of participating in the prize draw and receiving a written summary of research findings. Mental health resources were included at the end of this part, in case participants experienced distress during the completion of the survey. The full English and Spanish versions of the online survey can be found in Supplements 1.1 and 1.2 respectively.

Table 3.1. Measures Included in the Online Survey

Measurement	Authors	Nº of Items	Description
Big Five Personality Traits – Ten Item Personality Inventory (TIPI)	Gosling, Rentfrow & Swann (2003)	10 items	Self-report questionnaire measuring five broad factors of personality (Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness to Experience). This is a short version of the Revised NEO Personality Inventory by Costa & McCrae (1992).
The Gratitude Questionnaire – Six Item Form (GQ-6)	McCullough, Emmons & Tsang (2002)	6 items	Self-report questionnaire evaluating the tendency to experience gratitude in everyday life.
Freiburg Mindfulness Inventory (FMI)	Buchheld, Grossman & Walach (2001)	14 items	Self-report questionnaire assessing the experience of mindfulness in daily life.
General health and health related behaviours	Developed for this research	3 items	Closed-ended questions assessing height, weight and type of diet.
Medical and mental health conditions	Developed for this research	20 items	Self-reported questions about 19 common medical and mental health conditions and status of diagnosis and treatment.
Injuries related to yoga	Developed for his research	1 item	Single self-report item indicating injuries related to yoga.
General health status	Ware & Sherbourne (1992)	1 item	Single self-report item rating general health, from short form health survey (SF-36)
Santa Clara Brief Compassion Scale	Hwang, Plante & Lackey (2008)	5 items	Self-report questionnaire measuring compassion towards others. This is a short version of the Compassionate Love Scale by Sprecher and Fehr (2005)
Self-Compassion Scale (SCS) Short Form	Raes, Pommier, Neff & Van Gucht (2011)	12 items	Self-report questionnaire measuring self-compassion, comprising 6 subscales (self-kindness, self-judgement, common humanity, isolation, mindfulness and over-identification). This is the short form of the Self-Compassion Scale by Neff (2003).

Measurement	Authors	Nº of Items	Description
The Quiet Ego Scale	Wayment, Bauer & Sylaska (2014)	14 items	Self-report questionnaire measuring self-identity transcending egoism and defensiveness. Comprises four factors (detached awareness, inclusive identity, perspective taking and growth).

Virtual Semi-structured Interviews

Qualitative data was collected through virtual interview recordings within the Zoom platform. Interviews were semi-structured in nature, with 10 to 15 open-ended questions exploring participants' experiences of their yoga practice and how they relate their practice to their wellbeing, with a greater depth and extent than addressed in the online survey. The interview included questions about the meaning of their yoga practice, sharing their story about their yoga journey, identifying relevant elements of yoga in their practice, the influence that yoga has had in their life and wellbeing, challenges they have faced, and realisations or successes. The questions provided a structure to guide the interview and cover specific areas of interests. However, there was a degree of flexibility to adapt the questions based on each participant. The recorded interviews that were conducted in English were then transcribed verbatim into a digital file for analysis using the Otter.ai software, which is integrated with the Zoom technology. The transcription was then verified by listening to each interview at least two times to correct any error in the automated transcription.

Recorded interviews that were conducted in Spanish were transcribed verbatim separately, as the software did not have that language incorporated. Each interview was played at least three times to make sure that the transcription was accurate. Transcriptions of interviews conducted in Spanish were translated into English for data analysis. After transcriptions were finalised, participants were given the opportunity to receive a digital file with the transcribed interview to make amendments before analysing the information. Participants were also given the chance to reimburse their time by sending them a gift card they could use either within Australia or abroad. The

full English and Spanish versions of the interview script and questions can be found in Supplements 2.1 and 2.2 respectively.

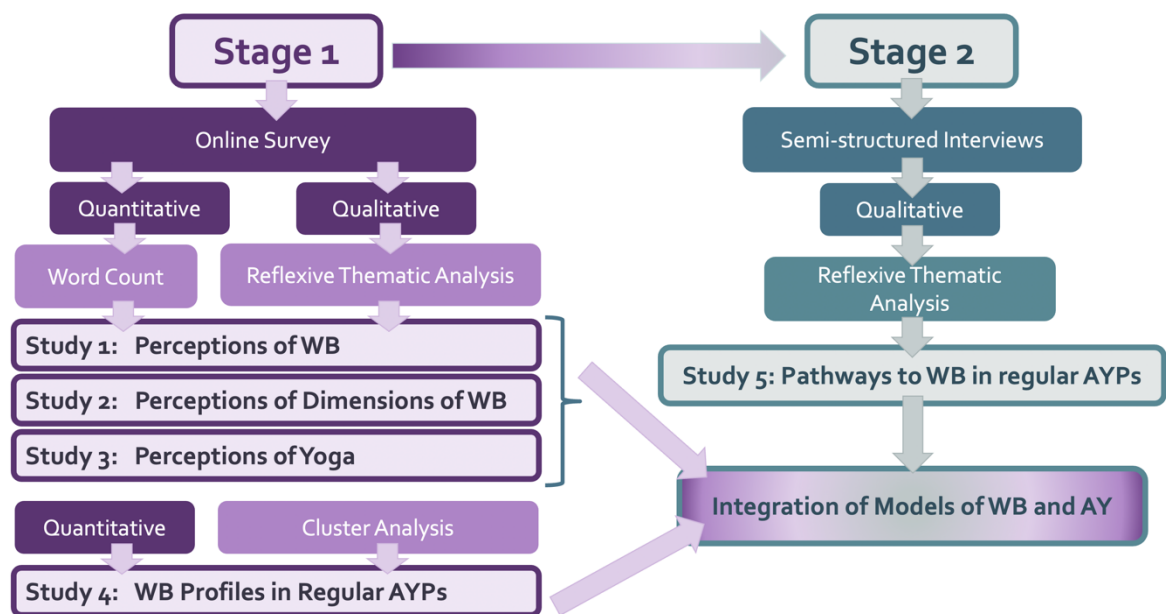
Data Analyses

Onwuegbuzie and colleagues (2009) argue that from a Constructivist stance, employing quantitative methods, comprising collection, analysis, and/or interpretation, represents one of multiple valid perspectives when studying a particular phenomenon. They suggest that both quantitative and qualitative data analysis are equally valid and likely to be used, arguing that descriptive statistical analysis can provide “richer data and interpretations” (Onwuegbuzie et al., 2009, p. 130). I contend that using descriptive statistics can be utilised to enrich qualitative methods by, for instance, acquiring word counts to familiarise with the data and complement narrative descriptions (Onwuegbuzie et al., 2009).

Although strategies for data analysis were delineated at the beginning of the research project prior to the data collection, these were subject to change in the process due to the nature of the approach that I was using, since data was being generated as the research progressed in collaboration with participants. In particular, quantitative data analysis was dependent on the number of participants included in the online survey, and part of the qualitative data analysis (i.e., interviews) relied on data gathered from the survey. It is noteworthy that data from Stage 1 was used to address different research questions through different studies, thus selecting different survey items and data analysis methods for each study (see Chapters 4 to 8 for further details). Figure 3.2 summarises studies emerging from each dataset, with the emergent

model arising from the analysis of all previous studies. The description of the specific method for each study will be addressed in more detail in their corresponding chapter. Here I will focus on providing a brief overview of the selection of methods, most of which are common to the multiple studies included within this thesis.

Figure 3.2. *Studies included in PhD research project*



Quantitative Data Analyses

For quantitative data, descriptive statistical analyses were used to describe the sample in terms of demographics and yoga practice. Qualitative data such as responses to the open-ended questions from the survey were also analysed in terms of word frequencies. The two main analyses included were Word Count analysis and Cluster Analysis. As stated above, this and the following section will provide an overview and

a rationale for choosing these analyses. Each of them will be explained in more depth in the context of each study in subsequent chapters.

Word count analysis was used as a quantitative data analysis method to complement qualitative data analysis described below. This analysis was used to explore extension of participants' responses, frequently used words, and summarise themes contained in the qualitative analysis of definitions of wellbeing, dimensions of wellbeing and yoga. The creation of word clouds offered a synopsis and a general comprehension of the data using visual aids, as proposed by Eichstaedt et al., (2021) and McNaught and Lam (2010) (see Chapters 4, 5, and 6 for details).

Cluster analysis was used to explore the variation in AY practitioners' definitions and self-reported levels of wellbeing and health as well as personal traits, based on demographics, AY practice and AY philosophy characteristics of practitioners. Cluster analysis is a multivariate data reduction method identifying structures within the data according to certain qualities to distinguish groups based on similarities (Moisl, 2015). Non-hierarchical cluster analysis identifies groups by partitioning clusters based on pre-specified criteria or deduced from the data (Moisl, 2015). In the study exploring wellbeing profiles in regular AYPs, a number of variables related to their yoga practice were pre-selected for clustering, namely demographics and AY practice and philosophy (see Chapter 6 for details).

Qualitative Data Analyses

Qualitative data collected from the survey (i.e., definitions of wellbeing, dimensions of wellbeing, yoga, yoga philosophy, and yoga practice) were initially

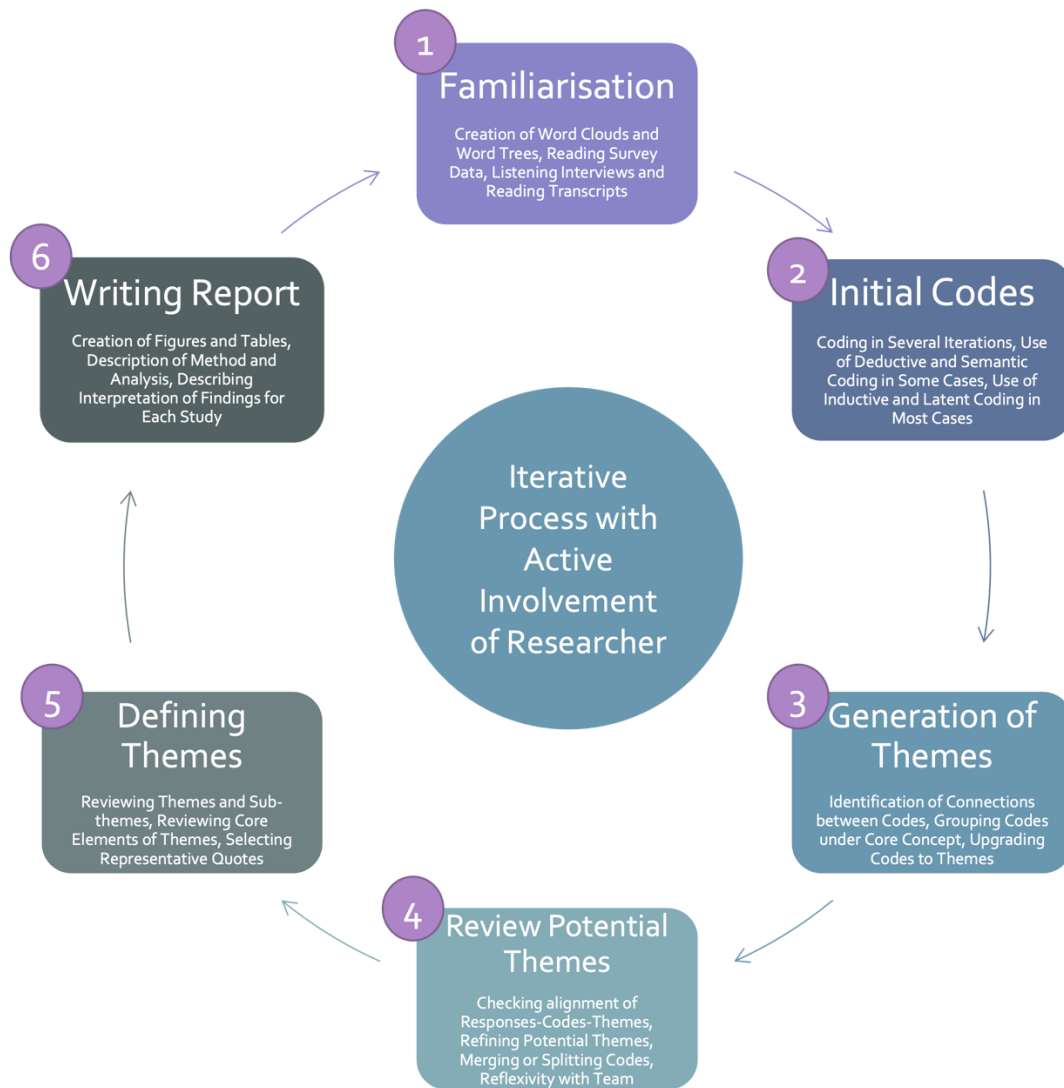
analysed using Word Count analysis to provide an initial overview of the textual information reported by participants before analysing them thematically to identify patterns across the sample. This also served as a way to familiarise myself with the data prior to analysis. Qualitative data gathered through the interviews was transcribed into digital files and then transcriptions were coded and thematically analysed. In both cases (i.e., survey and interviews) data was analysed using a specific type of Thematic Analysis (TA), known as Reflexive Thematic Analysis (RTA; Braun & Clarke, 2012; 2021), which is further detailed and contextualised in each study (see Chapters 4, 5, 6 and 8 for details).

TA can be understood as a family of methods that share some attributes while differing in others. Common features entail both inductive and deductive approaches to coding, identifying implicit and explicit meanings, using processes to develop codes and themes, and advocating for theoretical flexibility (Braun & Clarke, 2020). Differences include divergent research values, conceptualisation of key elements, and procedure for analysis, which has led to a broad classification into three types of TA. These include Coding Reliability, Reflexive, and Codebook approaches (Braun et al., 2019; Braun & Clarke, 2020; 2021). While the former views coding as the identification of evidence for a theme based on most frequently mentions by participants, the latter conceptualises themes as summaries of topics and shares research values of Reflexive approaches. Reflexive methods conceptualise themes as “patterns of shared meaning underpinned by a central organising concept” (Braun & Clarke, 2020, p. 39). In this set of approaches to TA, the researcher takes an active part in theme development through a reflective process of analysis and interpretation, by which themes that seem

divergent share a latent meaning that is generated by the researcher along with their values, expertise and training (Braun & Clarke, 2020).

I chose Reflexive Thematic Analysis (RTA; Braun & Clarke, 2012; 2021) as the preferred method for analysing qualitative data, as it aligns with the philosophical assumptions and theoretical underpinnings argued in the first sections of this chapter. In RTA, coding is conceived as a subjective, flowing, and unshaped process, with codes evolving due to reflexivity of the researcher, who deepens their understanding of the data while striving on reflecting upon their assumptions that contribute to shaping and delimiting their coding (Braun & Clarke, 2020; 2021). While this method is organic and unstructured, it is still systematic, in that it proposes six iterative stages to guide the data analysis and interpretation process. Braun and Clarke (2012) described the following phases: (1) familiarisation with the dataset, (2) code development, (3) generation of potential themes, (4) revision of potential themes, (5) definition and denomination of themes, and (6) elaboration of a written report (see Figure 3.3). Furthermore, RTA welcomes methodological creativity and innovation as long as it is theoretically mindful and coherent (Braun & Clarke, 2021), which enabled the combination of methods to analyse data depending on the needs and aims of each study.

Figure 3.3. *Stages of RTA Applied to This Dissertation*



Braun and Clarke (2020) contend that depending on how the data analysis is conducted, there is a “potential for great similarity in output from pattern-based/across-case methodologies” (p. 38), such as Interpretive Phenomenological Analysis (IPA), Grounded Theory (GT, constructivist in particular), and TA (RTA in particular). Beyond assessing the superiority of one method over another, relevance should be placed on the pertinence of such method in regards to the research aim and questions as well as

the theoretical assumptions, and that these are aligned and coherent with the research design and procedures (Levitt et al., 2017; Willig, 2013).

Here, I argue that RTA is the best approach for the purposes of this research project. Although similarities can be found across GT, IPA, and RTA, both GT and IPA focus on a detailed analysis of cases and use particular methods that distinguish them from RTA. For instance, IPA prioritises an in-depth analysis of each case before identifying themes across participants, while GT advocates for a fine-grained coding process of each case prior to the generation of themes across the sample (Braun & Clarke, 2020). Although it can be argued that either IPA or GT could be pertinent for this research project, I have decided to use RTA for several reasons. While this research project acknowledges a phenomenological approach, it contemplates the selection of a relatively large-sized purposeful and varied sample, seeking heterogeneity within the group of participants rather than focusing on the particularities of each case. Hence, IPA does not meet all the needs of this project. IPA tends to overlook social context, mainly considers solely interviews for data collection and ultimately seeks heterogeneity within a small and intentional sample (Braun & Clarke, 2020). Since the expected outcome of this research project is to generate an emergent model of wellbeing, it could also be argued that GT is the best fit. However, as I discussed above, the focus of the research is not placed on social processes as GT intends. Furthermore, this project is staged into different consecutive phases that are not meant to go beyond the description and interpretation of patterns for each study, without the intention of conducting any theoretical sampling due to the time and scope of the overall project.

Summary

This chapter has provided a detailed description and argumentation of the methodological foundations of this research project. In the chapter, I offered a comprehensive rationale for the selection of philosophical paradigm and approaches that framed the research as a whole and each study in particular. I described the method underpinning and linking the studies across this research project, providing details about participants, procedure, measurements, and data analyses, along with a critical reflection about the choice of methods. The next chapters present a series of studies that arose through the course of this project, based on the methodology detailed within this chapter, before turning to the integration and findings arising from this thesis.

CHAPTER 4: CONCEPTUALISATIONS OF WELLBEING

Chapter Synopsis

Chapter 4 is a publication titled 'More than a feeling: Perceptions of wellbeing in regular Ashtanga yoga practitioners' published in the *International Journal of Wellbeing* in June, 2022. The paper includes the first study of this dissertation, which focuses on understanding how regular AY practitioners define wellbeing. The data used in this study are derived from an online survey, in which participants responded to an open-ended question focused on defining wellbeing. Using Word Count Analysis imbedded in the familiarisation stage of RTA, four overarching themes were identified depicting the nature of wellbeing (i.e., multidimensional, holistic, non-dualistic, dynamic), each of which was defined considering core components of each theme following RTA guidelines. The original manuscript uses the term 'perceptions of wellbeing'. As argued in Chapter 2, I use the term 'perception' interchangeably with 'conceptualisation'. For purposes of consistency throughout this dissertation I have revised the original manuscript in terms of numbering for tables, figures, and supplementary material to match the structure of this thesis. Supplementary material for this chapter has been provided in a separate document and labelled as *Supplement 4*.

Citation

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Authors' Contributions

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	70%	75%	75%	80%	80%	n/a
Kern	15%	15%	15%	10%	15%	70%
Stokes	15%	10%	10%	10%	5%	30%

More Than a Feeling: Perceptions of Wellbeing in Regular Ashtanga Yoga Practitioners

Abstract

As the understanding of subjective wellbeing within different populations continues to evolve, it is necessary to ensure the perspectives of people with diverse worldviews are included. This mixed methods study focuses specifically on 166 regular Ashtanga yoga practitioners (AYPs), exploring participants' perceptions of subjective wellbeing. Definitions were analysed using word count analysis and Reflexive Thematic Analysis, which yielded four overarching themes about the nature of wellbeing. The *multidimensional nature* included emotional, psychological, physical, spiritual, social, and ethical elements. The *holistic nature* highlighted integration, balance, and stability across wellbeing dimensions. The *non-dualistic nature* represented wellbeing comprised of seemingly dichotomous concepts (e.g., agency/receptiveness). The *dynamic nature* included change and embodied moment-to-moment experiences. Yoga may provide corporal and mental abilities resulting in the specific themes that emerged within participants' responses. AYPs' conceptualisations of wellbeing provide an avenue to explore embodied wellbeing, with implications in ways of knowing about and cultivating wellbeing in a way that directly incorporates mind, body, and spiritual interconnections.

Keywords: ashtanga yoga, wellbeing, reflexive thematic analysis, holistic wellbeing, mind-body

Introduction

Positive psychology as a discipline has advanced the conceptualisation, measurement, and cultivation of wellbeing (Kern et al., 2020). Over the past three decades, an array of theoretical frameworks and models have been proposed, conceptualising subjective wellbeing as a multidimensional construct, including emotional, cognitive, psychological, social, physical, and spiritual dimensions (Chia et al., 2020; Friedman & Kern, 2014). Although not necessarily an absolute truth, the various models, with related measures and interventions, have been incorporated into a range of programs, curricula, and other practical applications (Cooke et al., 2016; Kern et al., 2020).

However, the conceptualisations and measures themselves bring several often-unacknowledged biases and implications. For example, wellbeing within different populations depends on which conceptual framework is used (e.g., Black & Kern, 2020; Hone et al., 2014; Joshanloo, 2013); lay people's definitions do not always match scholarly definitions of wellbeing (e.g., Hone et al., 2015); and different populations perceive wellbeing in different ways (e.g., Bharara et al., 2019; Black & Kern, 2020; Huang et al., 2020). This points to the need for studies within specific populations, identifying what wellbeing means and how it is experienced by different groups of people within their natural contexts, as well as reflecting on the implications of choosing particular approaches and measurements that may or may not align with these conceptualisations. The use of alternative research designs and methods to study wellbeing within groups holding alternate worldviews provides opportunities to consider more inclusive definitions of optimal functioning (Kern et al., 2020).

In this article, we focus on the perceptions one specific population: regular Ashtanga Yoga Practitioners (AYPs). We first consider some of the existing models and frameworks of wellbeing, stressing limitations of existing approaches commonly used within positive psychology and the value of incorporating alternative approaches to broaden and deepen our understanding of wellbeing as a construct. Second, we briefly review yoga as a practice and a worldview, arguing for its potential to provide relevant insights into conceptualisations of wellbeing. While there are many forms of yoga, we focus specifically on Ashtanga Yoga (AY), which is a systematic method that encourages a regular practice and can potentially influence practitioners' views and experiences of wellbeing. Third, drawing upon qualitative data from 166 regular AY practitioners, we analyse practitioners' perceptions of wellbeing. Finally, we discuss implications, limitations, and potential future directions for research and practice.

Expanding Conceptualisations of Wellbeing

With some exceptions (e.g., Wong, 2013), scholars and practitioners within the positive psychology arena have been driven by several often-unacknowledged epistemological assumptions, including methods that are reductionistic in nature, viewing human nature from a deterministic lens, with a tendency toward making universal claims, and a bias toward quantitative data (Kern et al., 2020; Waterman 2013). Nomothetic approaches have been widely used in the social sciences to explore and examine common characteristics, experiences, and phenomena across people, with the aim of identifying commonalities in human existence (Lomas et al., 2020; Nafstad, 2015). While this has enabled positive psychology to advance in the study and betterment of happiness and optimal functioning, it offers limited opportunities to

understand the particularities of wellbeing within specific groups, populations, and cultures (Lomas, 2015).

In contrast, ideographic approaches view people as unique individuals, valuing subjective experiences, diversity, and culture (Nafstad, 2015; Wong, 2013). They often align with qualitative methods, allowing the researcher to comprehend the individual as a whole and in interaction with their immediate and broader social, cultural, and environmental context (Waterman, 2013). Lomas et al. (2020) proposed that positive psychology is expanding and shifting its focus from a more individualistic, agentic, and Westernised view of human functioning and wellbeing, towards a more inclusive, diverse, and cross-cultural approach. This shift involves moving from positivist and post-positivist methodological approaches to other epistemologies, including constructivist and phenomenological perspectives. Qualitative and mixed-methods research designs can contribute to deepening and broadening the understanding of subtleties and complexities of optimal human functioning (Hefferon et al., 2017; Kern et al., 2020; Lomas et al., 2020), allowing researchers to draw on the strengths of each (Creswell & Plano Clark, 2011).

Examining non-Western worldviews at an epistemological level can aid in expanding the knowledge about how wellbeing is defined, measured, and cultivated in a manner that values diverse perspectives (Kern et al., 2020; Lomas et al., 2020). Teramoto-Pedrotti et al. (2012) pointed to the value of both cross-cultural (i.e., across nations) and multicultural (i.e., cultures co-existing within a nation) studies, with a need for greater consideration of the value placed on the work and perspectives of people from diverse, non-Western backgrounds (see also Lomas, 2015). This means considering

how lay people from different age groups, minorities within Western societies, and people with different cultural and ethnical backgrounds define and experience wellbeing (Bharara et al., 2019; Black & Kern, 2020; Bourke & Gelden, 2007; Hone et al., 2015; Huang et al., 2020; Joshanloo, 2014).

Yoga: An Eastern Practice in the Western World

One population that might offer unique perspectives and insights around wellbeing is regular yoga practitioners. Yoga is an ancient Eastern practice, estimated to have originated thousands of years ago in the Hindu Valley (De-Michelis, 2005). Considered a method that binds mind, body, and soul with the divine, yoga has been traditionally defined as the cessation of mental fluctuations, enabling a more harmonious and balanced lifestyle (Iyengar, 2005). It has been argued that yoga can improve overall health by addressing physical, mental, and spiritual elements through the transformation of the self (Bhavanani, 2016; Riggins, 2013; Salagame, 2011).

Research on yoga has exponentially grown over the past decades (Jeter et al., 2015; Gupta et al., 2018), with an increase in the number of practitioners in Western countries (Birdee et al., 2008; Cramer et al., 2016). The practice of yoga is associated with a range of health benefits (Büssing et al., 2012; Hendricks et al., 2017), with therapeutic benefits for both physical and mental illness (e.g., Cramer et al., 2013a; Cramer et al., 2015). A considerable body of research shows its benefits as an intervention, primarily focusing on its physical components such as postures and breath (e.g., Field, 2017; Riggins, 2013; Singleton, 2010). However, fewer studies have considered the practices, experiences, and perspectives of regular practitioners (Field, 2011; Riley & Park, 2015). Philosophical frameworks and resulting methodologies used

by contemporary scientific approaches, as well as focusing on yoga as a mainly physical practice, has limited the breadth and depth of yoga research, disregarding its original intention and relevance as a mental and spiritual practice (Salagame, 2011). Exploring yoga as a practice in and of itself, rather than as an intervention, offers opportunities to understand contributions to human functioning and wellbeing that the practice itself offers practitioners.

From a traditional perspective, yoga entails universal moral observances that regulate one's behaviour with others (*yama*), self-discipline and principles by which one lives (*niyama*), the practice of withdrawal and detachment from external objects (*pratyahara*) and a state of higher consciousness achieved when the person becomes one with the object of meditation (*samadhi*) (Iyengar, 2005; Jois, 2016). Combined with physical postures (*asana*), breath techniques (*pranayama*), concentration (*dharana*), and meditation (*dhyana*) (Büssing et al., 2012; Riggins, 2013), these elements conform a philosophical framework known as *The Eight Limbs of Yoga* or *Ashtanga Yoga*, described in the ancient text *The Yoga Sutras of Patanjali* (Iyengar, 2005). The knowledge and application of these elements through a regular yoga practice may provide an internal frame of reference for practitioners to perceive, experience and function.

Ashtanga Yoga

AY can be considered as a system equally comprising Patanjali's philosophical eight-fold framework and the practice known as Ashtanga Vinyasa Yoga (Jois, 2016; Maehle, 2006). Concretely, AY involves a vigorous physical practice characterised by a continuous and synchronous flow of breath and movement (*vinyasa*), which requires

learning and following a series of postures according to each person's needs and expertise, while both concentrating on a particular focal point (*drishti*) and steadying the breath (Jois, 2016; Maehle, 2006; Phillips, 2005). This definition includes several elements of the philosophical framework, such as the physical practice (*asana*), the breathing techniques (*pranayama*), and concentration (*dharana*). The use of a focal point (*drishti*) and the use of the breath (*pranayama*) not only provides an object to place attention to concentrate (*dharana*), but offer the possibility of withdrawing from the senses (*pratyahara*) (Jois, 2016; Maehle, 2006). Since the *vinyasa* practice is a continuous flow of short-lived postures, it may enable a meditative state (*dhyana*), allowing practitioners to engage in meditation on impermanence (Maehle, 2006). Within the practice, moral observances in relation to others and oneself (i.e., *yamas* and *niyamas*) should be practiced alongside with and beyond the physical practice, by applying these behaviours and principles to everyday life (Bhavanani, 2014; Iyengar, 2005; Jois, 2016).

Jois (2016) stressed the importance of understanding each element on its own and in relation to the others. For example, *yama*, *niyama*, *asana*, and *pranayama* are considered external elements that should be cultivated before developing the others, as their practice would enable the development of the other four internal elements (Jois, 2018; 2016). Ivtzan and Papantoniou (2014) contended that elements such as self-discipline, self-awareness, and flow have been studied within wellbeing research, mirroring aspects from *yamas*, *niyamas*, *dharana*, and *pratyahara*. Thus, AY implies conceptualising yoga as an integrative and multi-faceted practice that targets different aspects of wellbeing.

AY is taught in a personalised and progressive manner, for the practitioner to build a self-practice at their own pace, gently building strength, steadiness and health (Jois 2018). AY is characterised by a one-on-one approach within the context of a group class as taught in Mysore, India (ie., Mysore style class), where each practitioner is practising their own set sequence in their own time. As illustrated in Figure 1, the practice starts with Sun Salutations A and B (ie., *Surya Namaskar*) and continues with a set of standing postures, to then continue with primary series and closing postures. Intermediate and then advanced series follow primary series, with each being learnt once the practitioner has completed the previous series (Swenson, 2007).

Each asana is practised with a specific gazing point (*drishti*) and long free breathing with sound (Keen, 2021). The practice of *asana*, *drishti* and breathing simultaneously is known as *trishtana*, meaning three standing places, and is characteristic of the AY method. Another distinctive element is *vinyasa*. Each asana has multiple movements, and each movement corresponds with either an inhalation or an exhalation. This synchronisation is called *vinyasa*, and each asana comprises a set number of *vinyasas*. For example, *Surya Namaskar A* has nine *vinyasas* (Jois, 2016). *Vinyasas* are traditionally counted in Sanskrit by the teacher, either while teaching each movement and breath for a new asana, or when teaching a led-class (Maehle, 2006).

Sanskrit-led classes, Mysore style classes, and self-practice typically include chanting of an opening and closing mantra (Jois, 2016; Jois, 2018). Another element that is applied during AY practice is *bandhas*, usually translated as bonding and understood as energy locks, which consist of a combination of muscle engagement and internal bodily awareness (Maehle, 2006). Finally, within the AY system, resting is encouraged

once a week, during full and new moon days, and during menstruation for women.

Practitioners are encouraged to practice between four and six days a week to experience the benefits from the method (Maehle, 2006).

<https://www.ashtangayogaleeds.com/downloads/ashtanga-primary-series-chart-a4/>. Reprinted with permission.



The Current Study

For the current study, the uniform structure of AY provides consistency of the practice and the teaching methods. A limited number of studies have focused specifically on AY. Quantitative studies have examined the effectiveness of the practice regarding physical health outcomes, suggesting it can contribute to cardiorespiratory fitness (Cowen & Adams, 2007), weight control (Benavides & Caballero, 2009), strength (Gruber, 2008; Kim et al., 2012; Mazor et al., 2018), muscular endurance, flexibility, and cardiovascular health (Gruber, 2008). A few dissertations have studied the effects of AY on established practitioners, focusing on the transformative effects that people experience through their yoga practice, using a qualitative approach in very small sample sizes (Acebedo, 2013; Jones, 2019; LaChiusa, 2016; Werner, 2017). Although some studies have aimed at assessing psychological wellbeing, the measurements used reflect a predominantly deficit standpoint, since they mainly evaluated the impact of yoga on depression and anxiety symptoms (e.g., Benavides & Caballero, 2009; Jarry et al., 2017). No studies have been found on wellbeing using an ideographic approach on a large cross-cultural sample of AYPs.

This study aimed to explore the perceptions of regular AYPs in relation to their wellbeing and to determine in which ways AYPs' perceptions of wellbeing support or differ from existing models of wellbeing. For the purposes of the study, we focus on subjective individual perceptions of wellbeing. Consistent with ideographic approaches and constructivist and phenomenological epistemologies, the wellbeing construct was not defined beforehand. Rather, we sought to understand wellbeing based upon participants' perspectives and lived experiences. We aligned with a mixed methods

paradigm (see (Onwuegbuzie et al, 2009) in terms of our philosophical assumptions and data analytic process, with a greater focus on qualitative elements. Specifically, we were by a Social Constructionist paradigm, with both quantitative and qualitative components in the data collection and analysis stages.

Method

Participants

The present study used a subset of respondents from a larger study focused on AY and wellbeing, which included 352 participants from 42 countries, fluent in English and/or Spanish. Participants were recruited online, including invitations on Facebook and Instagram, postings on social media communities related to AY and/or wellbeing, and emailing information about the study directly to yoga studios and teachers, asking them to share the survey with others. The sample represents a convenience sample of willing volunteers who may not generalise across AYPs, but provides unique and important perspectives in and of themselves.

Here we focus on 166 respondents who regarded themselves as regular AYPs and completed the free-response question to define wellbeing. Both included and excluded participants included a range of demographic characteristics (see Supplement 4.1) and a variety of characteristics of their AY practice (see Supplement 4.2). All procedures were approved by the University of Melbourne's Human Research Ethics Committee (protocol #1955377.1).

Measures

Participants completed an online survey either in English or Spanish between April and August 2020. The survey included a mix of quantitative and qualitative

questions measuring aspects of their yoga practice, wellbeing, personal traits, health, and demographic information. Drawing upon the collected dataset, the current study includes the questions that addressed respondents' AY practice, engagement with yoga philosophy (see Supplement 4.3) and demographic information, along with one question that explored their perception of wellbeing (see Supplement 4.4).

Participants completed a series of closed-ended questions on their AY practice and AY philosophy. Most participants were practising regularly for 1 to 10 years (68.67%) following Mysore style (43.37%) or self-practice (26.51%), and practising between 5 to 6 days a week (59.04%) for 1 to 2 hours (81.33%) per session. The majority were practising primary (46.39%) or intermediate (45.18%) series, and mainly included vinyasa (96.99%) and drishti (95.78%) in their practice. Most considered yoga philosophy relevant (64.46%) and commonly engaging with readings (83.13%) at least once per week (60.84%) (see Supplements 4.1-4.3 for details).

Data Analyses

Participants' responses were recorded using Qualtrics survey software (<https://www.qualtrics.com/au/>) and exported to NVivo (version 12) software for analysis. Responses to open-ended questions exploring AYPs' perceptions of wellbeing were analysed using a sequential mixed-methods approach. We began with a quantitative description of the words that participants used in their definitions. This involved examining the frequency of words used to define wellbeing, creating a word cloud (see Figure 2) and summary tables (see Supplement 5) encapsulating responses. This quantitative component intended to provide an overview and general understanding of the data (Eichstaedt et al., 2021; McNaught & Lam, 2010).

We followed this with an in-depth qualitative exploration using Reflexive Thematic Analysis (RTA; Braun & Clarke, 2012) to systematically identify, organise, and reflect upon patterns of meaning within the data. RTA acknowledges the relevance of the role of the researcher in bringing and reflecting upon their own set of values, beliefs, interests, and background to enlighten and shape the data analysis (Braun & Clarke, 2021; Terry & Hayfield, 2020). We followed the six iterative steps of RTA as proposed by Braun and Clarke (2012; 2021): (1) familiarisation with the data, (2) code generation, (3) construction of potential themes, (4) review of potential themes, (5) definition and naming themes, and (6) generation of a written report. The codes were generated using both a semantic and latent coding approach, meaning that some responses were coded based on the explicit meaning of data, while others were based on the underlying meaning of participants' responses, involving a greater degree of interpretation (Byrne, 2021). Aligned with a constructivist epistemology, we considered meaningfulness of the information as the main guide in the development of codes and themes, using both inductive and deductive approaches (Byrne, 2021).

Research Team and Coding Process

The authors have backgrounds in psychology and wellbeing, and the lead author has an established AY practice and a yoga teaching certification. Consistent with RTA, data analyses were mainly conducted by the lead author due to expertise with both AY and wellbeing, supported by the other authors. Researcher reflexivity was achieved both independently and in collaboration with the other two authors throughout the process (Braun & Clarke, 2021; Byrne, 2021). While we acknowledge the influence that these backgrounds might have had in the creation of the survey and the interpretation of the

results, it also enabled the researchers to use a common language amongst AYPs and within the AY community, and to capture and understand key elements provided by the respondents.

After familiarising with data, a broad range of codes was generated. Codes were grouped into themes that best represented a core concept meaningful across participants. Potential themes were reviewed, and final themes were selected and refined. For instance, “positive relationships” and “high quality connections” were integrated into the sub-theme “harmonious relationships”, which sits under the theme “social dimension of wellbeing”. The preliminary theme “positive emotions” was divided into the sub-themes “low intensity positive emotions” and “high intensity positive emotions”, which are part of the theme “emotional dimension of wellbeing”. These themes were then integrated into the overarching theme “the multidimensional nature of wellbeing”. Sub-themes were grouped into themes, and themes into overarching themes, based on shared meaning to allow a better comprehension and communication of participants’ perspectives. We acknowledge that there are multiple ways to group codes and develop a theme, as this is bounded to the researchers’ perspectives (Byrne, 2021).

Although we primarily used inductive and latent approaches to coding to best represent participants’ perceptions, we also included deductive and semantic coding. An example of the former is considering the presence of positive emotions as a component of wellbeing. An example of the latter is using terms from responses, such as “physical”, “emotional” and “social” for themes composing “the multidimensional nature of wellbeing”. Blending these approaches are acknowledged in RTA (Braun &

Clarke, 2020; Byrne, 2021). Whilst the deductive approach did not involve a-priori coding nor development of a codebook, it did consider a range of wellbeing theories, concepts and ideas while developing codes, aligned with RTA (Braun et al. 2018; Braun & Clarke 2021)

Results

Linguistic Representations of Wellbeing

Figure 2 illustrates the most commonly used words by regular AYPs to describe wellbeing, with larger words reflecting a greater frequency (min = 3, max = 41), with no specific representation for colour. The most frequently used words were “well”, “feeling”, “mental”, “body”, and “physical”. We identified clusters of words representing physical (i.e., body, physical, physically), mental (i.e., mind, mental, mentally), emotional (i.e., emotions, emotional), relational (i.e., others, social, relationships, connections, people), and spiritual (i.e., spirit, spiritual) domains of wellbeing. Wellbeing was also commonly defined by using words such as “good”, “well”, and “positive”. Other frequent words that stood out at this stage included “life”, “able”, “state”, “balance”, “peace”, “harmony”, and “contentment” (see Supplement 5 for details).

Participants’ responses varied in length (min = 1, max = 87) with an average of 16 words (see Supplement 5). RTA involved active reflection and interpretation of codes across the dataset and beyond exact words to develop the final themes. The RTA yielded 4 overarching themes depicting the nature of wellbeing. These overarching themes stemmed from 73 sub-themes within 17 main themes. Table 1 summarises these overarching and main themes with representative quotes for each sub-theme, in

addition to the number of participants mentioning each sub-theme and the equivalent percentage. It is noteworthy that sub-themes and themes contribute to sense-making and the meaning of the overarching theme, and that the number of mentions does not represent their relevance, but rather provides information on the reflexive and interpretative process (see Supplement 6).

Figure 4.2. Words Used by Regular AYPs to Define Wellbeing

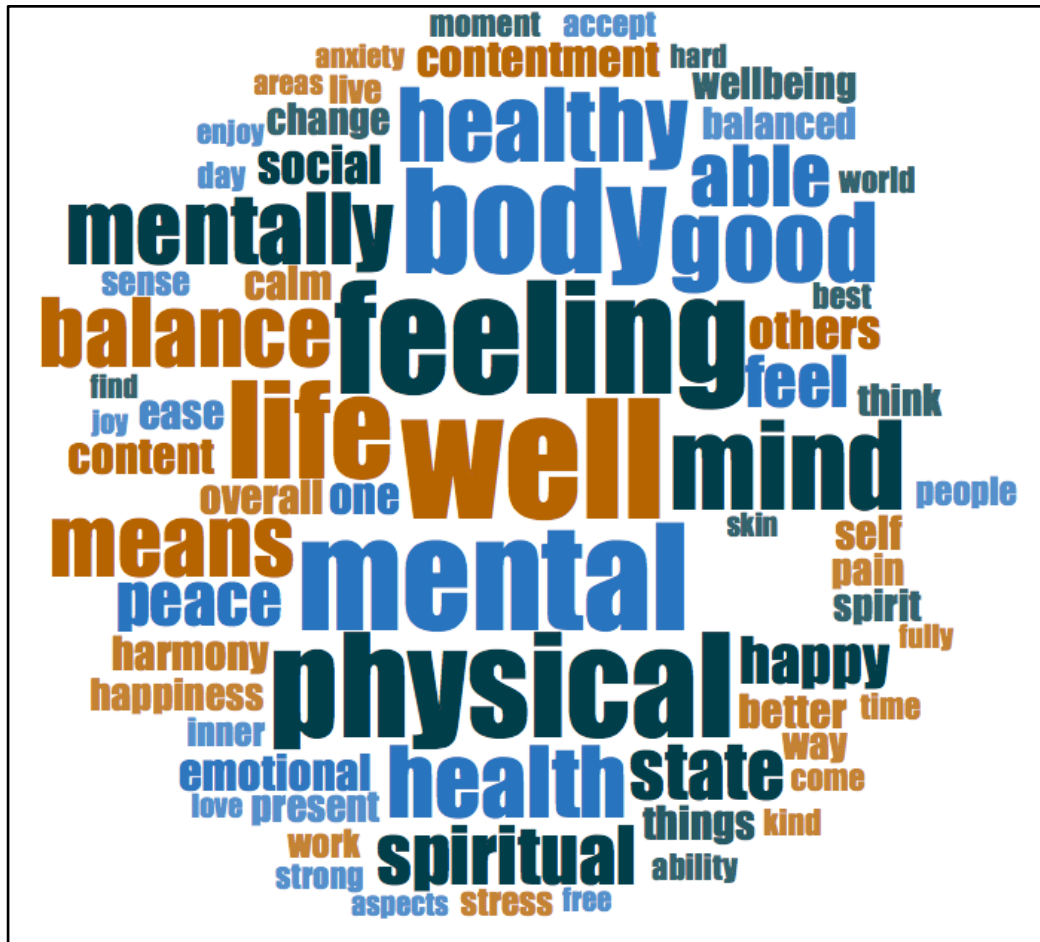


Table 4.1. Regular AYPs' Perceptions of Wellbeing.

Main Themes	Sub-themes	Representative Quotes	N	%
(1) Multidimensional nature of wellbeing				
<i>Wellbeing is comprised of different dimensions</i>				
Emotional 12.25%	Low intensity positive emotions	<i>"Being calm, healthy and content"</i>	84	7.14
	Emotional health	<i>"Physical, emotional and psychological health"</i>	24	2.04
	High intensity positive emotions	<i>"Mental and physical stability combined with a joyful feeling"</i>	21	1.79
	Sense of ease or comfort	<i>"Feeling at ease in own body-mind, as well as with others"</i>	8	0.68
	Sense of enjoyment or pleasure	<i>"Being able to enjoy life"</i>	7	0.60
Psychological 9.20%	Mental health	<i>"Feeling good, mentally healthy"</i>	53	4.51
	Self-acceptance	<i>"That I'm content with myself in every aspect"</i>	20	1.70
	Self-care and support	<i>"It is knowing how to come back to that loving centre of inner support"</i>	12	1.02
	Autonomy	<i>"Capable of doing what I want or need to do it life"</i>	6	0.51
	Equanimity	<i>"Being steady in mind and body"</i>	5	0.43
	Meaning and purpose	<i>"Living out your calling/purpose that not only brings you happiness, but serves others"</i>	5	0.43
	Fulfilment	<i>"Something that underpins fulfilment in all areas of my life"</i>	3	0.26
	Personal growth	<i>"An overall acceptance of my current state of being and the goal of being better"</i>	2	0.17
	Resilience	<i>"The strength to endure difficult situations and the ability to bounce back from adversity. In short, to be resilient."</i>	2	0.17
Physical 8.68%	Physical health	<i>"Healthy body"</i>	86	7.31
	Vitality	<i>"Feeling healthy and energetic"</i>	6	0.51
	Strength	<i>"When the body is able to move the way I like it to and feels strong and full of energy"</i>	4	0.34
	Longevity	<i>"Feeling young"</i>	3	0.26
	Nutrition	<i>"It's important for me to keep moving and eat well"</i>	2	0.17
	Rest	<i>"Making sure you are well rested"</i>	1	0.09

Main Themes	Sub-themes	Representative Quotes	N	%
Spiritual 4.09%	Spiritual health	<i>"Well-being is physical, mental and spiritual"</i>	22	1.87
	Transcendence	<i>"It means I can more fully understand where I stand in relation to everything around me"</i>	15	1.28
	Observance	<i>"Being awake or conscious"</i>	11	0.94
Social 3.85%	Harmonious relationships	<i>"Being a good person to self and others effortlessly"</i>	16	1.36
	Environmental connection	<i>"Feeling connected to the people, nature and the world around me"</i>	7	0.60
	Social connection	<i>"Feeling purposeful and connected to others"</i>	6	0.51
	Social wellbeing	<i>"Physical, mental and social wellbeing"</i>	5	0.43
	Enjoyment of social connections	<i>"Enjoying time with loved ones"</i>	5	0.43
	Boundaries	<i>"Enjoying time with loved ones"</i>	2	0.17
	Social support	<i>"Mental clarity to say no to what doesn't makes you feel good"</i>	2	0.17
	Belongingness	<i>"Being able to ask for and find help"</i>	1	0.09
	Social contribution	<i>"Feeling like I have communities I belong to"</i>	1	0.09
Ethical 0.52%	Ethical behaviours	<i>"Living out your calling/purpose that not only brings you happiness, but serves others"</i>	3	0.26
	Moral principles	<i>"Not harming self as well as others in any way"</i>	3	0.26
		<i>"Have yamas and niyamas in balance"</i>	3	0.26

(2) Holistic Nature of Wellbeing

Dimensions of wellbeing are interconnected and make sense as a whole

Integration of dimensions 9.02%	MB+ emotional and/or social	<i>"Optimal mental, physical, social, emotional, and spiritual health"</i>	43	3.66
	Mind-Body (MB)	<i>"It is a state where in the mind and body are aligned together"</i>	40	3.40
	Mind-Body-Spirit	<i>"A synchronisation of mental, physical and spiritual health"</i>	23	1.96
Balance between dimensions 2.65%	Mental, physical and spiritual	<i>"Body, mind, and spiritual balance and harmony"</i>	10	0.85
	Internal and external	<i>"Being in balance and harmony, internally and with the external world"</i>	7	0.60
	Life balance	<i>"Balance. Mentally, spiritually. Applying this to all aspects of life."</i>	5	0.43
	Mental, physical, and emotional	<i>"The sensation of harmony or balance at a physical, mental and emotional level"</i>	4	0.34
	Mental and physical	<i>"The sensation of harmony or balance at a physical, mental and emotional level"</i>	2	0.17
		<i>"A state of relative balance in all layers and sub-layers of being in one's life (physical/ mental/emotional/spiritual)"</i>	2	0.17
	Mental, physical, and social	<i>(physical/ mental/emotional/spiritual)"</i>	1	0.09

Main Themes	Sub-themes	Representative Quotes	N	%
	Mental and spiritual	<i>"A balance in life of physical, mental, social, family." "Balance. Mentally, spiritually."</i>		
Stability within dimensions 1.45%	Mental stability	<i>"I tend to view well-being holistically--it's hard to be well when not in good</i>	6	0.51
	Physical stability	<i>physical, mental, social, and spiritual shape. Some areas may be better</i>	6	0.51
	Social stability	<i>nurtured at different times in life, but unless all are in proper proportion it's</i>	2	0.17
	Spiritual stability	<i>not easy to say that someone is doing well."</i>	2	0.17
	Emotional stability		1	0.09
(3) Non-Dualistic Nature of Wellbeing				
<i>Wellbeing transcends polarities and dualistic conceptualisations</i>				
Presence of and freedom from 14.63%	Presence of positive attributes	<i>"Have a healthy body and a free mind"</i>	136	11.56
	Freedom from illness and pain	<i>"Health/wellbeing is about freedom; freedom from illness/injury"</i>	21	1.79
	Presence and Freedom	<i>"A state of mind relatively calm and happy (...) to not have pain in body parts and in the mind"</i>	15	1.28
Process and state 10.89%	Internal state	<i>"Being healthy, feeling contentment"</i>	93	7.91
	Ongoing process	<i>"Finding a healthy and sustainable balance in life"</i>	25	2.13
	Process and state	<i>"A state of harmonious interaction between the physical, mental and spiritual aspects of being a human"</i>	10	0.85
Agency and receptiveness 4.51%	Power and motivation to change	<i>"You are at choice to put your best foot forward"</i>	31	2.64
		<i>"Being content, accepting, compassionate and gentle. Of myself, the conditions I live in, other people."</i>	16	1.36
	Accept and embrace change	<i>"Being able to change the things I can change, and being able to accept the things I can't. The balance of change and accepting where I am now."</i>	6	0.51
	Change and embrace			
Coping and thriving 3.24%	Optimal mode	<i>"It means when you can feel the best that you can, it refers to physical, mental and social wellbeing"</i>	17	1.45
	Coping mode	<i>"Being able to have the tools to cope with what life throws at you"</i>	12	1.02
	Coping and thriving	<i>"Feeling good, being balanced physically and mentally, being able to cope"</i>	9	0.77
Enabler and outcome	Enabling higher quality of life	<i>"Wellbeing helps to live better myself and with others"</i>	12	1.02
	A result of actions or mindsets	<i>"It is a measure of my self-esteem"</i>	4	0.34
			4	0.34

Main Themes	Sub-themes	Representative Quotes	N	%
1.70%	Enabler and outcome	<i>"Being well in the mind and that will then make a difference to the physical"</i>		
(4) Dynamic Nature of Wellbeing				
<i>Wellbeing has an ever changing and evolving essence, from one individual to another and throughout the lifespan</i>				
Embodied experience 10.04%	Feeling	<i>"Feeling safe, peaceful and happy"</i>	40	3.40
	Being	<i>"Being at peace"</i>	39	3.32
	Doing	<i>"Keep moving and eat well"</i>	28	2.38
	Having	<i>"Have strong, well-built relationships"</i>	11	0.94
Context 2.04%	Inner dynamic	<i>"It is acknowledging myself as the source of my emotional, mental and physical state"</i>	8	0.68
	Inside-Out	<i>"Hard to explain but when you feel good, you can treat people better in general"</i>	8	0.68
	Outside-In	<i>"Becoming at peace with the challenges that come up in my days and my life"</i>	8	0.68
Time 1.36%	Present moment	<i>"Being conscious and equanimous in the present moment"</i>	10	0.85
	Impermanence	<i>"Acknowledging that the only constant is change"</i>	6	0.51

Overarching Theme 1: The Multidimensional Nature of Wellbeing

The first overarching theme was wellbeing as a multidimensional construct, represented by six main themes – emotional, psychological, physical, spiritual, social, and ethical dimensions – with many of the participants including multiple dimensions in their descriptions. For instance, one participant perceived wellbeing as *“being physically, mentally, spiritually and emotionally balanced”*.

The “emotional” theme included a variety of positive states, ranging from high (e.g., joy, happiness) to low (e.g., peace, contentment) intensity, with the latter more frequently mentioned. Some participants pointed to a sense of enjoyment, noting for instance *“being able to enjoy life”*. Others pointed to a sense of ease, mentioning for example *“feeling at ease in own body-mind, as well as with others”*.

The “psychological” theme captured broader aspects of living well, including general mental health, self-acceptance, and self-care and support. For instance, one participant pointed to *“the capacity of feeling as comfortable as I can with myself”* (self-acceptance), and another spoke about *“health and maintenance of myself”* (self-care). Equanimity appeared as an interesting sub-theme representing a mental state. For instance, one participant described wellbeing as *“being steady in mind and body”*.

The “physical” theme included general mentions of physical health along with aspects of vitality, strength, longevity, nutrition, and the value of rest. For instance, participants spoke about *“when the body is able to move the way I like it to and feels strong and full of energy”*, *“feeling young”*, and *“making sure you are well rested with good food, water and sleep”*.

The “spiritual” theme reflected broad mentions of spiritual health with attitudes towards and beyond the self, such as self-transcendence and observance. Self-transcendence appeared in comments such as *“I can more fully understand where I stand in relation to everything around me”*. Participants pointed to the state of mind towards the self, like being *“aware”*, *“observant”* or *“awake”*, which was represented within the sub-theme observance. For instance, one participant noted *“being observant and compassionate towards one’s own state”*.

The “social” theme captured various interpersonal aspects of life, including from overall mentions of social wellbeing to specific aspects such as the presence, quality, and enjoyment of relationships. For instance, one participant mentioned that wellbeing meant *“connection to others”* and another referred at it as *“enjoying time with loved ones”*. Participants also indicated the quality of those social connections as central to wellbeing, stating for instance *“have strong, well-built relationships with my partner and my friends so I can lean on them and they can lean on me”*. Participants pointed to the importance of harmonious relationships, depicting wellbeing for example as *“being a good person to self and others effortlessly”*. Beyond individual relationships, connection to nature and the surrounding environment was also regarded as an important part of wellbeing, with participants noting *“feeling connected to the people, nature and the world around me”* and *“being content, accepting, compassionate and gentle; of myself, the conditions I live in, other people”*.

The “ethical theme” reflected actions and beliefs avoiding maleficence and seeking beneficence. Participants spoke of ethical behaviours such as *“not harming self as well as others in any way”*, and moral principles such as having *“yamas and niyamas*

in balance". While the latter statement explicitly refers to the espoused principles and values of yoga, the former represents *ahimsa*, one aspect of the *yamas*.

Overarching Theme 2: The Holistic Nature of Wellbeing

The second overarching theme focused on the holistic nature of wellbeing, defined as "the interconnection of wellbeing dimensions and their connection to the whole". This overarching theme can be represented by the following quote: *"well-being is physical, mental and spiritual; it is the full package"*. Within this overarching theme we identified three themes comprised of 15 sub-themes.

The "integration of dimensions" theme represented the connection between different dimensions. Regular AYPs considered that the integration of physical and mental domains was central to wellbeing. For instance, one participant perceived wellbeing as *"a state where in the mind and body are aligned together"*. Furthermore, participants pointed to other dimensions as co-existing in overall wellbeing, for instance defining wellbeing as *"optimal mental, physical, social, emotional, and spiritual health"* and as *"a synchronisation of mental, physical and spiritual health"*.

The "balance between dimensions" theme included seven sub-themes representing the equilibrium between different domains of wellbeing and life. Most sub-themes represented balance between the combination of multiple dimensions of wellbeing. This aligns with findings from the Word Count analysis, which uncovered the use of words such as *"balance"* and *"harmony"*, reflected in comments such as describing wellbeing as *"a state of relative balance in all layers and sub-layers of being in one's life (physical/ mental/ emotional/ spiritual)"* or as *"the sensation of harmony or balance at a physical, mental and emotional level"*. Furthermore, participants alluded to

balance between different elements of life, such as “work” and “time for myself”. For example, participants depicted wellbeing as *“finding a healthy and sustainable balance in life”* including internal-external balance, represented as *“being in balance and harmony, internally and with the external world”*.

The “stability within dimensions” theme reflected a sense of steadiness in each realm (i.e., physical, emotional, mental, social, spiritual, ethical). A participant noted that wellbeing is *“being well deep in my psyche; spiritual, physical, emotional, social stability”*. Another participant commented:

“I tend to view well-being holistically--it's hard to be well when not in good physical, mental, social, and spiritual shape. Some areas may be better nurtured at different times in life, but unless all are in proper proportion it's not easy to say that someone is doing well.”

Overarching Theme 3: The Non-Dualistic Nature of Wellbeing

The third overarching theme reflected an understanding of wellbeing that embraces qualities often considered incommensurable, transcending typical polarities and dualistic conceptualisations. This overarching theme included five main themes representing different categories for seemingly dichotomous concepts, but where participants held conceptions that simultaneously were encompassing both.

“Presence of and freedom from” was the first theme, and it represented wellbeing as having elements regarded as pleasant and the absence of unpleasant states. Most participants (81.93%) mentioned positive states or traits to define wellbeing. For example, one participant noted that wellbeing is to *“have a healthy body and a free mind”*. Other participants defined wellbeing as not experiencing “illness”,

“pain” or “suffering”. For instance, one regular practitioner stated that *“health/wellbeing is about freedom; freedom from illness/injury”*. A subset of participants perceived wellbeing as comprising positive attributes and the lack of negative qualities. One practitioner perceived wellbeing as *“a state of mind relatively calm and happy...to not have pain in body parts and in the mind”*.

A second theme was conceiving wellbeing as a “process and state”. This included perceiving wellbeing as a continuous journey rather than an end destination. This was illustrated in one participant’s statement, referring to wellbeing as *“finding a healthy and sustainable balance in life”*. Wellbeing was also perceived as a state experienced in one point in time. For instance, one regular practitioner spoke about *“being healthy, feeling contentment”*. Regular AYPs also brought these both elements into their definitions. For example, one practitioner defined wellbeing as *“a state of harmonious interaction between the physical, mental and spiritual aspects of being a human”*, reflecting both the fluid (process) and fixed (state) nature of wellbeing.

The third theme, “agency and receptiveness”, represented wellbeing as being able to actively manage or change one’s own state and/or circumstances. For instance, one participant noted *“you are at choice to put your best foot forward”*, reflecting a personal sense of agency. Participants also regarded wellbeing as being receptive, adopting an accepting and embracing attitude toward change. For instance, one regular practitioner defined wellbeing as *“an overall acceptance of my current state of being”*. Participants also mentioned wellbeing as encompassing both the ability to change and to embrace change, noting for instance: *“Being able to change the things I can change,*

and being able to accept the things I can't. The balance of change and accepting where I am now."

The fourth theme, "coping and thriving", reflected the perspective that wellbeing involves simultaneously facing adversities and flourishing. This included having sufficient coping skills, with participants noting for instance: *"being able to have the tools to cope with what life throws at you"*. Participants also pointed to the ability to be at their best. For example, one participant stated that wellbeing *"means when you can feel the best that you can"*. Respondents also regarded wellbeing as simultaneously involving coping and thriving abilities. As one participant described, wellbeing is *"feeling good, being balanced physically and mentally, being able to cope"*.

Finally, conceiving wellbeing as "enabler and outcome" was the fifth theme. This reflected wellbeing as both facilitating other aspects of life, and because of other aspects of life. Participants noted *"wellbeing helps to live better myself and with others"* and *"being well in the mind, and that will then make a difference to the physical"*. Participants also pointed to the role of actions and mindset, seeing *"it is a measure of my self-esteem"*. Other practitioners defined wellbeing as both being a facilitator and a result. One participant, for example, defined wellbeing as *"being well in the mind and that will then make a difference to the physical"*.

Overarching Theme 4: The Dynamic Nature of Wellbeing

The final overarching theme referred to the ever-changing and evolving essence of wellbeing, from one individual to another and throughout their lifespan. Here we identified nine sub-themes, grouped into three key features. This overarching theme

can be exemplified in this practitioner's definition: *"wellbeing means feeling at peace with the current moment, grateful for the past and welcoming the future"*.

Firstly, the "embodied experience" theme accounts for wellbeing being subjectively experienced, not only through the mind, but also with the body. What and how wellbeing is perceived, was represented by verbs used by participants, such as "feeling", "being", "doing", and "having". Some definitions of wellbeing reflecting this embodied experience were *"being at peace"*, *"keep moving and eat well"*, *"feeling safe, peaceful and happy"* and *"have strong, well-built relationships"*.

Secondly, the "context" theme represents wellbeing as in relation to a setting and the influence it may or may not have in people's lived experience. Although environmental factors were mentioned in people's responses, definitions of wellbeing mainly pointed to internal dynamics, excluding external factors. For example, one participant portrayed wellbeing as *"acknowledging myself as the source of my emotional, mental and physical state"*. Practitioners also described wellbeing as being part of a dynamic in which the internal experience is reflected in behaviours impacting in the environment. For instance, one participant stated: *"hard to explain but when you feel good, you can treat people better in general"*. Finally, practitioners mentioned that wellbeing involved a dynamic in which one can find an internal stability during turbulent times. One practitioner, for example, commented that wellbeing is *"becoming at peace with the challenges that come up in my days and my life"*.

Finally, the third theme encompassed wellbeing as being dynamically bounded to time, with two main features: 1) wellbeing as occurring in the present moment, and more specifically, within the current experience, such as *"being conscious and*

equanimous in the present moment"; and 2) impermanence, alluding to the transient nature of existence. This can be exemplified in this practitioner's words: "*acknowledging that the only constant is change*".

Discussion

People can perceive and experience wellbeing in a variety of ways, not necessarily fitting mainstream models proposed by theorists connected to the positive psychology discipline (Bharara et al., 2019; Black & Kern, 2020; Hone et al., 2015; Huang et al., 2020). Alternative research methods such as qualitative and mixed methods approaches offer a deeper and broader understanding of wellbeing, with possibilities of developing either more inclusive, integrative definitions (Hefferon et al., 2017; Kern et al., 2020; Lomas et al., 2020), and more specific definitions that are particularly relevant to certain populations. In the present study, we examined regular AYPs' perceptions of wellbeing, finding definitions and elements that go well beyond the common wellbeing models within the positive psychology literature. Although findings cannot be generalised to other populations, they provide insights into expanded perspectives on wellbeing that may indeed resonate with other populations.

Extending Mainstream and Emerging Conceptualisations of Wellbeing

Aligned with many of the existing models of wellbeing (e.g., Deci & Ryan, 2008; Huppert, 2014; Keyes & Annas, 2009; Ryff & Keyes, 1995; Seligman, 2011), multidimensionality was a core feature in regular AYPs' conceptualisations of wellbeing. This is consistent with findings from recent studies taking ideographic approaches across different groups of people (Black & Kern, 2020; Bourke & Gelden, 2007; Huang et al., 2020), underscoring the importance of including multiple facets when defining,

measuring, and improving wellbeing. Like these other ideographic studies, our findings support the need to identify which dimensions might be relevant to a given population, rather than assuming what dimensions matter. In this case, emotional, psychological, physical, spiritual, social, and ethical dimensions were most relevant.

Several of these dimensions align with existing models. For example, the presence of positive emotions, the sense of enjoyment, and positive relationships appear across various models (e.g., Diener et al., 2009; Keyes, 2007; Ryff & Keyes, 1995; Seligman, 2011), as well as psychological elements mentioned by participants, such as autonomy, meaning, purpose, resilience, self-acceptance, personal growth, and fulfillment (e.g., Ryff, 1989; Seligman, 2011). Unlike these models, participants spoke to spiritual and ethical dimensions.

Within the spiritual side, sub-dimensions aligned with Büssing et al.'s (2007) construct of spirituality, encompassing awareness and connection to oneself and beyond. Interestingly, their conceptualisation also includes compassion, gratitude, equanimity, meaning and conscious interactions, elements that were also noted by regular AYPs in this study, yet classified as part of either emotional, psychological, or social wellbeing. The ethical dimension aligns with studies focused on moral judgements and ethical behaviours (e.g., Hannah et al., 2011). Sustainable behaviour (e.g., pro-ecological, frugal, altruistic behaviours toward the environment) has been linked to increased levels of wellbeing (Corral-Verdugo et al., 2011). This dimension also aligns with the aforementioned conceptualisation of spirituality, where values and ethical norms are described as part of this construct (Büssing et al., 2007). The overlap of

elements from spiritual and ethical dimensions with other wellbeing dimensions and with spirituality point to the need of further exploring and clarifying these areas.

The conceptualisation of wellbeing as the presence of positive attributes was clear, with participants pointing to wellbeing as a state consistent with complete health (Keyes, 2007) or optimal functioning (Deci & Ryan, 2008). However, they also viewed wellbeing as a process that leads to other positive outcomes. That is, participants viewed wellbeing as both an enabler and an outcome. These insights reveal the complexity and dynamism of the construct, which may require novel approaches to articulate the diversity and layers of the properties of wellbeing, rather than linear, reductionistic perspectives across time.

Although the concept of balance has been deemed relevant to wellbeing, it still constitutes an emerging area. Lomas (2021) coined the term balance/harmony to refer to both the relationship between two phenomena (i.e., balance) and the dynamic relationship of these balancing phenomena (i.e., harmony). Consistent with this definition and with previous research on lay conceptualisations of wellbeing (e.g., Delle-Fave 2016), regular AYPs included the concept of balance in their definitions, referring to the relationship held between two or more wellbeing dimensions. Similarly, AYPs described wellbeing in terms of integration of multiple dimensions and stability within each dimension. These definitions also illustrate Lomas' (2021) proposition of balance/harmony as a 'golden thread' or unifying principle underpinning all dimensions of wellbeing.

Knowing About Wellbeing Through Embodied Experience

Interestingly, participants often referred to their embodied experience to conceptualise wellbeing, using words like “feeling”, “being”, and “doing”. This aligns to what Kahneman and Riis (2005) defined as experienced wellbeing, comprising the introspection of moment-to-moment lived experiences. Here, some participants specifically defined wellbeing in terms of the current experience and mentioned the element of impermanence, aligning with the proposition that experienced wellbeing encompasses the present experience as it unfolds. Furthermore, experienced wellbeing is mostly represented in feeling positive emotions, and thus, is linked to hedonic wellbeing (Kahneman & Riis, 2005). Regular AYPs often defined wellbeing in terms of emotional health or experiencing positive emotions. Consistent with findings in other groups of people (e.g., Black & Kern, 2020) and Eastern cultures (Lim, 2016; Lu & Gilmour, 2004), practitioners highlighted the presence of low intensity positive emotions as part of wellbeing. This contrasts with high intensity positive emotions, which were less prominent in this study, but are generally valued in Westernised population (Tsai, 2007). Conceptualisations of wellbeing also involved either experiencing a sense of ease or a sense of enjoyment. While both could be considered a pleasant experience, they differ in the quality of the actual experience, similar to high and low arousal positive emotions. This suggests that hedonic wellbeing is wider and more nuanced than the sole presence of positive emotions and absence of negative emotions (Deci & Ryan, 2008). It also suggests an alignment with a dimensional approach to positive affect comprising different levels of emotional activation and pleasantness (Richardson et al., 2016).

Participants' conceptualisations of wellbeing were described beyond the emotional (i.e., feeling), including other embodied elements (i.e., being, doing), suggesting that practitioners can know about wellbeing through the body. This is consistent with embodiment frameworks stating that "all psychological processes are influenced by body morphology, sensory systems, motor systems, and emotions" (Glenberg, 2010, p. 586). With yoga being a physical practice able to affect the autonomic nervous (Muehsam et al., 2017; Streeter et al., 2012), musculoskeletal (Francis & Beemer, 2019), endocrine, and immune systems (Muehsam et al., 2017), regular practitioners' corporal abilities may differ from other groups of people, thus influencing their mental processes and how they conceptualise wellbeing. For instance, breathing techniques used in yoga can improve the balance of the autonomic nervous system and foster stress resilience and a state of "calm alertness" (Brown & Gerbarg, 2005; 2009). Similarly, practices involving mindfulness meditation such as yoga, have been related to enhanced interoception (Gibson, 2019), the ability to perceive physiological changes in internal organs (Hefferon, 2013).

Beyond emotional elements, practitioners' conceptualisations of wellbeing revealed the relevance and richness of other elements of the internal context, which are more concordant with eudaimonic wellbeing. While the emotional aspects discussed earlier are typically considered as hedonic wellbeing, and more representative of experienced wellbeing, these eudaimonic elements can also be accessible for introspection through people's lived experiences. This was reflected in expressions such as "being able", "being awake", or "living", representing a state of human existence. Kahneman and Riis (2005) refer to this as "experienced eudaimonia", which can provide

a “comprehensive description of internal life” (p. 18). Some elements representing these eudaimonic conceptualisations of wellbeing involved receptiveness, observance, and equanimity, which represent a common thread in contemplative philosophies and practices.

Regular AYPs’ defined wellbeing in experienced eudaimonic terms by underlining not only optimal functioning but also coping abilities. Typically, models of eudaimonic wellbeing include personal attributes considered virtuous, rather than capabilities to accept, deal with and overcome adversity. In contrast, practitioners regarded coping skills as central to dealing with, adapting, and responding to change and life challenges. The resource-congruence model (Wong et al., 2006) highlights the relevance of adaptive coping strategies and the ability to match them to particular contexts to decrease stress and increase wellbeing. For instance, acceptance towards external and internal elements can be considered existential coping strategies, especially when facing uncertainty and change (Wong et al., 2006). Further exploring the notion of experienced wellbeing, both in hedonic and eudaimonic terms, as well as the possibility of embodied wellbeing as ways of knowing about wellbeing, may provide an avenue to understand optimal human functioning through an embodied perspective.

Underlying Philosophical Assumptions in AYPs’ Wellbeing Conceptualisations

Practitioners’ conceptualisations of wellbeing can also be discussed in terms of the implicit assumptions and underpinning worldviews. Potentially anchored in yogic traditions and further elaborated from contemporary philosophical systems, this discussion may provide further insights in the ways wellbeing is conceptualised and studied.

Regular AYPs tended to perceive wellbeing holistically and establish an interconnection between dimensions, emphasising the mind-body connection. Holistic thought has been described as the tendency to perceive phenomena as a whole, focusing on the relationships between an object and the field, and has been related to interdependent self-construals and East-Asian and Aboriginal cultures (Henrich et al., 2010). Holistic thought also underpins non-Western health frameworks, such as traditional Chinese medicine (Chan et al., 2002), and Ayurveda (Chauhan & Maheshwari, 2021), which is intricately connected to yoga. Indian philosophy systems sustaining yoga, such as Samkhya and the Vedas, also take a holistic approach to the study of human existence (Tigunait, 2014). These views contrast with conventional models compartmentalising health into specific silos (Saylor, 2004). Practitioners' conceptualisations reflected a holistic view of health, which may be supported by the aforementioned approaches, providing an internal frame of reference to define wellbeing.

Furthermore, Eastern and Aboriginal models view health as a dynamic interaction between mind and body, as well as with other elements from social, spiritual, and natural environments (Butler et al., 2019; Chauhan & Maheshwari, 2021). This aligns with practitioners' conceptualisations and can be related to philosophical foundations of yoga. For example, traditional texts such as *The Yoga Sutras* highlight yoga as a practice for stilling the mind, with *asana* practice involving the development of both steady body and a calm mind (Iyengar, 2002). Within the Yoga philosophy system, Tigunait (2014) argued that physical calmness and stillness flows into the mental realm, keeping the mind quiet and harmonious, enabling the development of the higher

stages of yoga entailing consciousness. This contrasts to the still prevailing Cartesian view in health sciences, conceptualising body and mind as separate and essentially different entities that are studied by separated fields (Saylor, 2004). New paradigms might be needed to fully understand and explain the mind-body connection, and specifically in relation to wellbeing.

Implications

Most research and models on wellbeing have predominately taken a cognitive approach, mostly assuming that knowledge about wellbeing is accessed through the mind (Hefferon, 2013). Wellbeing conceptualisations from regular AYPs suggest that this knowledge is embodied, meaning that cognitions rely on body structure and functions, which are embedded in a broader psychosocial context (Varela et al., 2016). Following embodiment approaches, symbols such as the construct of wellbeing become meaningful through perception, experience, and interaction with the objects and situations such symbols represent, rooting through emotions, actions, and senses (Glenberg, 2010). An embodied perspective to wellbeing explicitly acknowledges the role of the body to comprehend and generate wellbeing language, for instance linking interoception and the use of metaphors representing wellbeing.

Findings from this study pose the need to consider alternative paradigms to understand how mind and body work together in achieving optimal human functioning. Wellbeing research and practice may benefit from the development of a transdisciplinary and holistic model of wellbeing in which mind and body are acknowledged as an integrated system to experience, comprehend, and nurture wellbeing. Emergent research and models involving the interconnection of biological,

psychological, and social spheres of health are taking an integrative (Kemp et al., 2017; Yang & Immordino-Yang, 2017) and interdisciplinary approach (Mead et al., 2021), providing the foundations to develop more comprehensive wellbeing frameworks.

In moving towards more complex models, applying a systems approach to an individual level may also enhance this understanding (Kern et al., 2020). Current wellbeing models do not explain relationships between nor integrate different individual dimensions. Thayer et al. (2009) argue that an exhaustive wellbeing model should explain the complexity and diversity of physiological, affective, cognitive, and behavioural factors contributing to health and illness. Furthermore, the multidimensional nature of wellbeing also points to the need of progressing towards more sophisticated models conceptualising and addressing wellbeing beyond the individual level. For instance, Mead et al. (2021) propose a model integrating individual (i.e., physical and psychological), relational, community, and environmental spheres to tap into an unacknowledged potential to promote collective wellbeing while also enhancing individual wellbeing.

Limitations and Future Directions

This study explored conceptualisations of wellbeing specifically in regular AYPs. The qualitative approach allowed the perspectives and voices of the participants themselves to come to life. However, several limitations must be acknowledged. Firstly, although RTA does not specify word limit for the analysis, the length of responses in some cases limited the reflection and interpretation of data. Yet, the sample size allowed us to find patterns and shared meaning across participants. Secondly, the tools to collect data and the interpretation of findings were influenced by the backgrounds

and expertise of the authors in the fields of psychology, wellbeing, and yoga. While this allowed researchers to identify, comprehend and synthesise key elements in participants' conceptualisations of wellbeing, interpretations are strongly bounded to knowledge and expertise from those fields. Lastly, this study was exploratory. Associations between yoga and wellbeing have been hypothesised based on previous research, theoretical models and philosophical assumptions coming from a range of fields, and these relationships should be further investigated.

Future studies might examine the different dimensions of wellbeing identified in this study. This would allow a richer comprehension of the type and quality of elements that are relevant to practitioners for each area of wellbeing. A specific area to continue exploring are the spiritual and ethical dimensions. There seems to be an overlap of concepts in the literature between definitions of spirituality and elements traditionally pertaining to psychological or emotional wellbeing. Furthermore, spiritual wellbeing has been mainly studied from different fields, such as nursing and medicine (e.g., Canada et al., 2008), and differences with spirituality are not clear. Future research should address these constructs. Similarly, although the ethical dimension was relevant, it was not represented strongly across participants. Future research examining ethical and moral elements of yoga in more depth may contribute to understand its implications to a further extent.

Conclusion

Regular AYPs provided a dynamic and integrated perspective to wellbeing, supporting and expanding current views on optimal functioning. The combination of the nature of yoga and the devotion to a regular practice may contribute to shaping practitioners'

physical and mental processes. This might influence the ways in which wellbeing is perceived, experienced and conceptualised, through pathways and strategies that naturally arise within AY, but might expand to affect approaches to wellbeing that integrate the body, mind, and soul.

CHAPTER 5: CONCEPTUALISATIONS OF WELLBEING DIMENSIONS

Chapter Synopsis

Chapter 5 is a publication titled 'Going within, between and beyond: An exploration of regular Ashtanga Yoga practitioners' conceptualisations of five dimensions of wellbeing' published in *Frontiers in Psychology* in December, 2022. Extending on findings from the previous chapter, this paper includes the second study of this dissertation, which explores the physical, emotional, psychological, social, and spiritual dimensions of wellbeing by understanding how regular AY practitioners define these dimensions. As with the previous chapter, the data used in this study derived from the online survey, in which participants responded to open-ended questions to define each dimension of wellbeing. Word Count Analysis was embedded in the familiarisation stage of RTA and four themes were created for each dimension of wellbeing. As per RTA guidelines, each theme was defined considering core components according to participants' perspectives, which provided the foundation to define each of the five dimensions. This paper also offers a model of wellbeing emerging from common shared meanings that were identified within and across dimensions. For purposes of consistency in numbering throughout this dissertation I have revised the original manuscript for tables, figures, and supplementary material to match the structure of this thesis. Supplementary material for this chapter has been provided in a separate document and labelled as *Supplement 5*.

Citation

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Authors' Contributions

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	70%	80%	75%	80%	85%	n/a
Kern	15%	10%	10%	5%	5%	30%
Stokes	15%	10%	15%	10%	10%	70%

Going Within, Between, and Beyond: An Exploration of Regular Ashtanga Yoga Practitioners' Conceptualisations of Five Dimensions of Wellbeing

Abstract

Yoga is an embodied practice underpinned by philosophical elements, seeking to evolve different dimensions of human existence for optimal functioning in relation to oneself, others and beyond. This mixed-methods research focused on 137 regular Ashtanga Yoga practitioners (AYPs) by investigating their conceptualisations of five dimensions of wellbeing (i.e., physical, emotional, psychological, social, spiritual). Conceptualisations were analysed through word count analysis and Reflexive Thematic Analysis separately for each dimension, yielding four themes in each case, which partly aligned with existing wellbeing and yoga models, and partly extended on the existing literature. Further higher level analysis identified shared meanings across these five dimensions, expressed in themes grouped within five topics (i.e., freedom from and managing suffering, a positive and integrated sense of self, a sense of equanimity and steadiness, the self in relation to others and the world, meta-awareness). Furthermore, it also portrayed each dimension as multileveled, represented in three levels of human functioning. The *foundational level* encompassed the absence and managing suffering, representing functioning in coping and recovery mode. The *optimal functioning level* included a positive and integrated sense of self, a sense of equanimity and steadiness, and the self in relation to others and the world, representing functioning in personal development and growth mode. The *contemplative and transcendental level* involved meta-awareness in every dimension of wellbeing, representing functioning in

transpersonal mode. As a result, we propose a preliminary model informed both by this empirical work and previous theories. While the continuousness of themes across dimensions reinforces the importance of embodiment and transcendence in wellbeing frameworks, the notion of the self as a multi-level system could be further explored in relation to knowing about and cultivating wellbeing.

Keywords: dimensions of wellbeing, ashtanga yoga, reflexive thematic analysis, self, meta-awareness, equanimity

Introduction

As wellbeing science continues to expand, the vast diversity of theoretical frameworks and self-report measurements on individual subjective wellbeing has paved multiple avenues to understand and measure it (Linton et al., 2016). However, this can pose a significant challenge when choosing what and how to measure wellbeing in particular contexts. Adhering to a specific framework and measurement may lead to a partial and narrow understanding of what wellbeing means for different people across different contexts. Utilising a greater variety of research methods to capture people's perspectives can provide a deeper comprehension of the construct, including different dimensions of wellbeing (Alexandrova & Fabian, 2022; Lomas et al., 2020).

Yoga is an embodied practice looking at the individual through different dimensions of existence, including physical, emotional, mental, social and spiritual, in a holistic way (Ramirez-Duran et al., 2022a; Vivekananda, 2012). Yoga can also entail the evolution of every dimension of the individual where practitioners can express themselves to their optimal potential, in relation to themselves, to others and higher

planes (Vivekananda, 2012). Since yoga involves the development of multiple dimensions of human functioning through a system of practice, regular yoga practitioners' perceptions can offer a finer and more integrated view of wellbeing. Within the array of modern yoga styles, Ashtanga Yoga is a system encompassing a methodical practice underpinned by philosophical elements, thus providing both consistency and the potential to illuminate conceptualisations of different dimensions of wellbeing from an alternate embodied worldview.

Aligned with an ideographic approach and based on constructivism and phenomenology, this article expands on previous research on regular Ashtanga Yoga practitioners' conceptualisations of wellbeing (Ramirez-Duran et al., 2022a) by exploring in greater detail and depth five dimensions of wellbeing (i.e., physical, emotional, psychological, social, spiritual) within the same sample. Here, the main aims were (1) to examine each of these dimensions as perceived by practitioners, (2) to understand the relationship between these dimensions, and (3) to explore how these perceptions contribute to the comprehension of each dimension and wellbeing as a whole. To articulate the latter, we synthesised findings into a preliminary model. While our findings are mostly informed by wellbeing and yoga literature, we also draw upon relevant literature across a range of other disciplines.

Wellbeing Revisited

At an individual and subjective level, wellbeing has been broadly defined as feeling good and functioning well (Adler & Seligman, 2016; Deci & Ryan, 2008; Huppert, 2014; Keyes & Anna, 2009), and has been widely acknowledged as a multidimensional construct (Chia et al., 2020; Friedman & Kern, 2014; Manning & Fleming, 2019).

However, several issues have been raised around the conceptualisation of wellbeing. The vast array of definitions, dimensions, measurement tools, and overlapping terms across disciplines pose a significant challenge to researchers, scholars, and practitioners (Linton et al., 2016; Simons & Baldwin, 2021). Thus, deciding what wellbeing means and how it should be measured in a particular context can become a complex task with far reaching implications (Alexandrova 2017; Alexandrova & Fabian, 2022; Linton et al., 2016; Simons & Baldwin, 2021).

There is an increasing awareness within science and philosophy that the conceptualisation and evaluation of wellbeing can drastically vary depending on the context and the criteria used in each case (Alexandrova, 2017; Hone et al., 2014; Khaw & Kern, 2014). Since the construct of wellbeing simultaneously describes and evaluates what it is, its value is bounded to whom is describing and making that evaluation (Alexandrova & Fabian, 2022). On the one hand, researchers and scholars can adopt particular and often unacknowledged perspectives, priorities and preferences, imbuing their own set values in their approach to wellbeing (Kern et al., 2020). On the other hand, research participants and stakeholders usually assess their own wellbeing using self-reported measures based on elements that not necessarily represent what they value the most (e.g., Black & Kern, 2020; Hone et al., 2015; Khaw & Kern, 2014). Narrowing the measurement of the construct to elements that may be irrelevant or impertinent for people's circumstances can hinder our comprehension of the nuances of wellbeing.

As developing a sound empirical foundation for wellbeing depends on clarifying how it is defined and the type of evaluations that are undertaken, it is essential to tackle

this challenge by acknowledging its evaluative content and involving all participants in the description and evaluation process (Alexandrova & Fabian, 2022). This translates into exploring participants' perceptions about what wellbeing means to them, what are the elements that compose their definition and the criteria to assess its fulfilment. Scholars have recently highlighted the value of diversity emerging from a wide spectrum of conceptualisations and the richness provided by different research methods and interdisciplinarity in wellbeing science (Mitchell & Alexandrova, 2020; Lomas et al., 2020; Kern et al., 2020). Current research is shifting towards this direction. Wellbeing conceptualisation has been studied from the perspective of young people (Bharara et al., 2019) and workers in New Zealand (Hone et al., 2015) using prototype analysis, Aboriginal communities using yarning circles (Garvey et al., 2021), Chinese international students in Australia using a phenomenographic approach (Huang et al., 2020), and regular yoga practitioners' across different countries using reflexive thematic analysis (Ramirez-Duran et al., 2022a). These approaches not only provide a richer and deeper understanding of what wellbeing means, but also confirm what scholars and researchers have proposed: that individual subjective wellbeing is a multidimensional construct.

Dimensions of Wellbeing

Before examining these multiple facets, it is worth clarifying the meaning of the term "dimension" and what it entails. Dimensions have been frequently defined within the literature in terms of variables or "conceptual subscales" included in self-reported measurements, such as self-acceptance, meaning or positive affect (Linton et al., 2016). While some scholars have referred to the term "dimension of wellbeing" as specific elements or variables that compose wellbeing (e.g., Linton et al., 2016; Ryff & Keyes,

1995), others consider it as broader aspect or area of life (e.g., Chia et al., 2020; Keyes & Waterman, 2003; Manning & Fleming, 2019). The first view is illustrated through wellbeing list theories (Alexandrova, 2017), which include a selection of features that create wellbeing, such as the PERMA framework (Seligman, 2011). The second view is represented by facets of individual functioning, such as emotional wellbeing (Diener et al., 1999; Diener et al., 2009), psychological wellbeing (Ryff, 1989; 2014), social wellbeing (Keyes, 1998), or spiritual wellbeing (Fisher, 2011). For purposes of this study, we adopt the latter approach and define the multidimensional nature of wellbeing first in terms of these facets of individual functioning. However, we still acknowledge that each of these facets or dimensions are comprised of specific elements, and thus, are also multidimensional on their own right. Hence, we define the term dimension of wellbeing as a set of variables that can be grouped under one area or domain of individual subjective wellbeing, which may be interrelated to each other to different extents.

When looking at the variety of features across self-report tools and the emerging body of research on lay conceptualisations of wellbeing, the multidimensional nature of wellbeing is evident, including physical, psychological, emotional, social, cultural, economic and spiritual domains (Butler et al., 2019; Chia et al., 2020; Huang, et al., 2020; Linton et al., 2016; Manning & Fleming, 2019; White et al., 2016). This is consistent with recent research on regular yoga practitioners' conceptualisations of wellbeing, unearthing the relevance of physical, emotional, psychological, social, spiritual, and ethical wellbeing as distinct dimensions according to participants' views (Ramirez-Duran et al., 2022a). This is further aligned with a range of wellbeing models focusing on one

or more of these dimensions, such as the Complete Mental Health model (Keyes, 2005) including emotional, psychological and social wellbeing, and the Maori model of health *Te Whare Tapa Whā* (Durie, 1999) encompassing physical, mental, social, and spiritual health. The term social-emotional wellbeing has also been used to describe Aboriginal and Torres Strait islanders' wellbeing as comprising physical, spiritual, mental, emotional and social domains, with mental and emotional composing one domain (Dudgeon et. al., 2017). Noteworthy, labelling wellbeing as emotional, psychological, or mental represent different ways of setting boundaries to conceptualise subjective wellbeing (Ryff et al., 2021). Emotional wellbeing is usually considered as the presence of positive affect and the absence of negative affect (Diener et al., 1999; Diener et al., 2009), while psychological wellbeing is often considered as functioning well (Ryff et al., 2021). Yet, we acknowledge that these distinctions are social constructions and do not imply that dimensions are siloed.

Here, we have chosen five dimensions that focus on subjective individual functioning and that are well documented in the wellbeing literature and in previous research with yoga practitioners. We highlight not only the need to examine wellbeing through a multidimensional lens, but also to further explore dimensions through people's eyes by using a mixed-methods approach. Since yoga is considered a method that binds body, mind, and spirit in ways that can evolve every dimension of an individual (Vivekananda, 2012), exploring regular yoga practitioners' perceptions of wellbeing may provide novel insights and a more detailed understanding about the dimensions of wellbeing.

Yoga, Wellbeing, and Dimensions of Human Existence

Yoga is an integrated system of theory and practice estimated to have been originated in the Hindu Valley sometime between two and five thousand years ago (De Michelis, 2004; Foxen & Kuberry, 2021; Iyengar, 2005). Often conceptualised as mainly a physical practice in the Western world (Singleton, 2010), yoga was originally conceived as a method that can use the body to still the mind and access a higher state of consciousness, where individual and universal consciousness become integrated (Iyengar, 2005; Larson, 2012). Thus, in yoga traditions the physical, mental and spiritual dimensions of the individual are intricately interconnected. According to the Vedic yoga text *Taittirīya Upaniṣad*, human existence encompasses five sheaths known as the *pancha-kosha* model (Feuerstein, 2013; Vivekananda, 2012). These layers are nested into each other ranging from denser (i.e., physical body) to more subtle (i.e., bliss body) levels of being, representing interrelated dimensions of the individual (Feuerstein, 2013). Given that yoga is a system of personal inquiry and experience, a regular practice can facilitate the realisation and evolution of these layers of existence, leading to the awareness of humans' spiritual nature and influencing the relationship with others and the world (Vivekananda, 2012). Therefore, considering the experiences of regular yoga practitioners can be key to understand the benefits of yoga in relation various dimensions of individual wellbeing, including physical, mental, social and spiritual.

Although its betterments are well recognised in its original environment, it was only a century ago that yoga reached Westernised practitioners and researchers (Iltzan & Jegatheeswaran, 2015; Singleton, 2010). Since the year 2000, research on yoga has exponentially grown, with over 4,000 publications documented by 2018 ranging across

a variety of disciplines (Gupta et al., 2018; Gururaja et al., 2020; Poornima & Surulinathi, 2019). With a substantial research output to date, an important number of systematic reviews and meta-analyses have grouped studies investigating the influence of yoga on a range of health and wellbeing outcomes (e.g., Field, 2017; Cramer et al., 2013a; Cramer et al., 2015). However, the empirical literature suggests that yoga has been mainly used and studied as a short-term intervention to improve disease rather than to enhance wellbeing (e.g., Cramer et al., 2014b; Gururaja et al., 2020). Furthermore, only specific dimensions of wellbeing have been addressed, with only a handful of studies investigating multiple dimensions in regular practitioners (e.g., Riley & Park, 2015). Therefore, focusing on yoga as a practice instead of as an intervention in a sample of established practitioners may provide interesting views on the different layers of optimal human functioning.

Ashtanga Yoga (AY) is one specific type of yoga derived from the *Hatha Yoga*, a tradition commonly understood as postural yoga for body and mind purification and vitality (Lieberman, 2008; Jois, 2018). In short, AY can be defined as movement meditation (Maehle, 2006). AY is also defined as a method involving three distinct features known as *trishtana*, meaning “three places”: the practice of physical postures (i.e., *asana*) while directing attention to a specific gazing point (i.e., *drishti*) and using free breathing with sound (Jois, 2016). Another relevant element is *vinyasa*, which refers to the synchronisation of *asana* and breath, as well as threading the *asanas* throughout the practice. AY is also known as *Ashtanga Vinyasa Yoga* to distinguish it from *Patanjali’s Ashtanga Yoga*. The latter is a philosophical framework underpinning the practice of yoga which comprises eight (i.e., *ashta*) limbs (i.e., *anga*). Although different, it has been

argued that these eight elements can be learnt alongside, mirrored and experienced through the yoga practice (Maehle, 2006; Jois, 2016). For purposes of this research, we will use the term AY to refer to the body-mind practice that can be underpinned by Patanjali's philosophical framework.

The AY practice consists of a sequence of postures usually taught progressively and using a one-on-one approach by a teacher in a group setting (i.e., Mysore style class), allowing the practitioner to slowly develop their own practice while building steadiness and strength (Jois, 2018). The AY method includes a set sequence of postures, starting with sun salutations (i.e., *surya namaskar A and B*) and standing postures before starting primary series. Practitioners can move gradually from primary to intermediate to advanced series. The practice typically includes Mysore style classes and Sanskrit-counted led classes four to six days a week, often including chanting of opening and closing mantras, resting days, and the practice of other elements such as energy seals (i.e., *bandhas*) and breathing techniques (i.e., *pranayama*) (Jois, 2016; Jois, 2018). The systematic nature of the AY practice can provide a higher consistency and uniformity across practitioners compared to other styles of yoga, thus addressing some methodological issues raised in previous yoga research (Riley & Park, 2015).

The Current Study

The current study follows up on previous research exploring regular AY practitioners' (AYPs) perceptions of wellbeing in general (Ramirez-Duran et al., 2022a), by diving into their conceptualisations of five different dimensions of wellbeing (i.e., physical, emotional, psychological, social, spiritual). The present study focused firstly on exploring regular AYPs' conceptualisations about these five dimensions of wellbeing,

secondly on how these dimensions are interconnected, and lastly, on how these perceptions can contribute to understanding relevant qualities of each dimension and overall wellbeing. The dimensions included in this study were selected *a priori* both based on the aforementioned research and on existing wellbeing and yoga frameworks and research, that point to the relevance of physical, emotional, psychological, social, and spiritual domains to individual subjective wellbeing. Although defined *a priori*, a set definition of each dimension was not provided to participants. Following an ideographic approach and based on constructivist and phenomenological perspectives, our aim was to understand how each dimension is conceptualised by participants, based on their own experiences and perceptions. We used a predominately qualitative mixed-methods design, integrating quantitative and qualitative elements during data collection and analysis.

Method

Participants

This study utilised a purposeful sample from a broader research project focusing on AY and wellbeing, which involved 352 participants fluent in English and/or Spanish across 42 countries. Data were collected between April and August 2020 using an online survey (see Supplement 1). Here, we included 137 participants who considered themselves regular AYPs and provided their conceptualisations for the dimensions of wellbeing. While the criterion of “regular practice” was deemed by these practitioners themselves (see Supplement 5.1), we further considered frequency (i.e., days per week), expertise (i.e., years of practice and asana sequence), and consistency of the practice (i.e., rated in a scale from one to ten). From this sample, 131 participants provided their

definitions for the five dimensions of wellbeing, four participants described four dimensions and two participants defined three dimensions. Respondents were recruited online through social media platforms (i.e., Facebook, Instagram, Reddit, LinkedIn) and electronic communication from yoga studios and/or teachers. Participants included a diversity of demographic and AY characteristics. All procedures were approved by the University of Melbourne's Human Research Ethics Committee (protocol #1955377.1).

Most participants identified as female (80.59%), Caucasian (56.47%), between 25 and 44 years old (80.59%), living in an urban area (62.94%), and holding a tertiary education or postgraduate degree (85.88%). The majority of respondents had been practising regularly for one to ten years (67.16%) between five to six days a week (54.74%) for one to two hours per session (79.57%), and in a consistent manner (86.13%). Most practitioners followed a Mysore style (91.25%) and practised either primary (48.18%) or intermediate (44.53%) series, typically including *vinyasa* (97.08%), *drishti* (94.89%), *bandhas* (91.97%), and free breathing with sound (89.78%). Most participants considered yoga philosophy relevant (87.60%) and engaged with it by reading books and texts (83.21%), following social media (54.01%), reading blogs (53.28%), and watching videos (51.82%) at least once per week (59.86%). Most practitioners reported the practice or experience of the eight elements from the AY framework to a high extent (i.e., seven or above in a ten-point Likert scale). *Asana* was the element practised to a higher extent by most participants (94.89%), followed by the practice of *yama* (89.05%), *pranayama* (84.67%) and *dharana* (78.83%). The vast majority of practitioners perceived that their AY practice positively contributed to their wellbeing, especially to their physical (93.43%), emotional (92.70%), and psychological

(88.32%) wellbeing, reporting high levels of wellbeing (i.e., scored seven or above in a ten-point Likert scale) in these areas accordingly (see Supplements 5.2 – 5.7 for details).

Measures

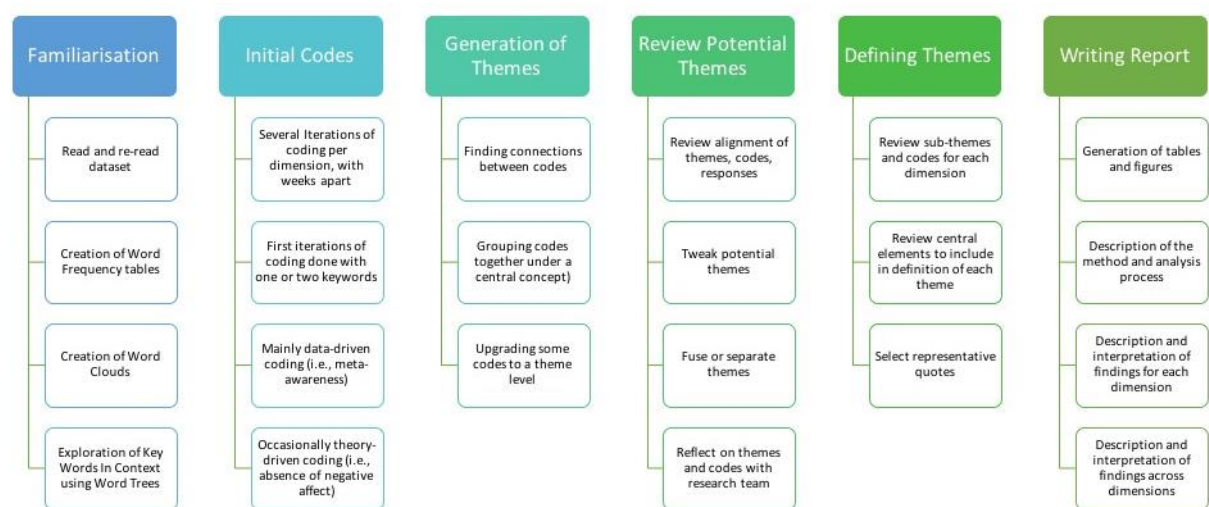
An online survey comprising quantitative and qualitative items was designed to measure aspects of yoga practice, wellbeing, health, personal traits, and demographic information (see Supplement 5.7), with the survey offered in both English and Spanish. The present study incorporated questions about participants' AY practice, demographic information, and six open-ended questions exploring their perceptions of five dimensions of wellbeing (i.e., physical, emotional, psychological, social, spiritual) and other dimensions that they estimated relevant and were not included in the survey (see Supplement 5.1).

Data Analyses

Participants logged their responses using Qualtrics survey software (<https://www.qualtrics.com/au/>), which were then exported to NVivo (version 12) software for analysis. We analysed responses to the six open-ended questions in two stages. The first stage entailed overviewing participants' perceptions by examining word frequency, creating word clouds, word trees, and summary tables (see Supplements 5.8 – 5.13) to capture conceptualisations in their own words for each dimension of wellbeing. While concise, this type of quantitative analysis provides a general understanding of data before diving into a deeper qualitative analysis (Eichstaedt et al., 2021; McNaught & Lam, 2010). This analysis was part of the first step of the next stage, and enabled researchers to familiarise with the data while providing readers with a general impression to better understand the reflexive and interpretative process.

The second stage used Reflexive Thematic Analysis (RTA; Braun & Clarke, 2012; 2021) to identify, reflect on, and interpret meaningful patterns across participants in a systematic manner. Following Braun and Clarke’s (2012; 2021) guidelines, we applied six recursive steps to analyse data, including (1) familiarisation with the data, (2) generation of codes, (3) construction of candidate themes, (4) review of candidate themes, (5) definition and naming final themes, and (6) writing a report. Details about these steps are provided in the next section (see Figure 5.1). This six-fold process was repeated for each dimension of wellbeing, aiming to generate key themes for each one of them. We then mapped themes for each dimension to visualise and identify shared patterns of meaning across the five dimensions.

Figure 5.1. *Application of the Six Steps of RTA in this Study*



Generation of Codes and Definition of Themes

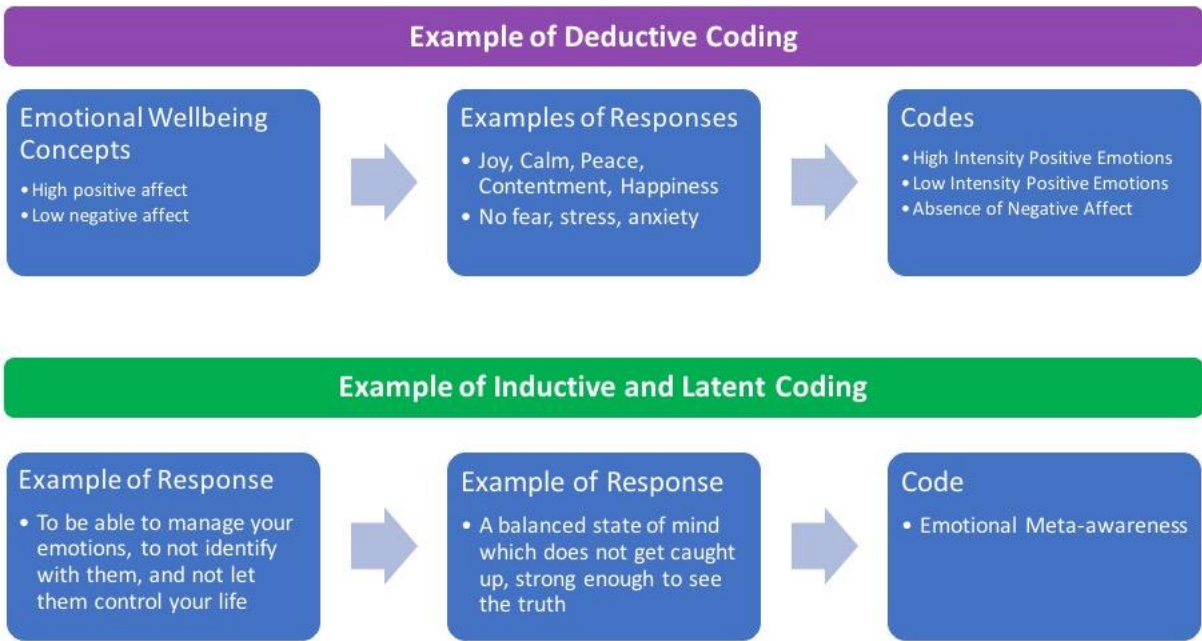
Consistent with a constructivist epistemology, meaningfulness of information across participants was regarded essential to create codes and themes. In RTA, the role of the researcher is central to illuminate and shape the data analysis, with beliefs, values, background, and interests actively informing the analysis (Braun & Clarke, 2021;

Terry & Hayfield, 2020). Aligned with RTA, the analysis was completed by the lead author because of her expertise across psychology, wellbeing, yoga, and AY in particular. Reflexivity was performed throughout the analysis process by the lead author on her own, but also in collaboration with the two other authors to sense-check ideas and explore alternate interpretations of the data (Braun & Clarke, 2021; Byrne, 2021). While the creation of the survey and the interpretation of findings were influenced by our backgrounds, it also allowed us to utilise a common language with AYPs and to identify key elements provided by the respondents.

After familiarising with the data, initial codes were generated using both inductive and deductive approaches, as well as blending latent with semantic coding. These blends are well recognised and used within RTA (Braun & Clarke, 2020; Byrne, 2021). Inductive coding (i.e., data-driven) was the predominant approach used in this study, to best capture the perspectives of participants. Deductive coding (i.e., theoretically-driven) was applied by considering a range of wellbeing theories and yoga philosophical frameworks, yet codes were not created prior to data analysis, consistent with the reflexive approach (Braun & Clarke, 2021). For example, within the emotional dimension, codes such as “Emotional Meta-awareness” and “Emotional Steadiness” represented an inductive process, whereas the codes “Absence of Negative Affect” and “High Intensity Positive Emotions” represented a deductive approach (see Figure 5.2). Latent coding was widely predominant in relation to semantic coding, by actively interpreting relevant shared underlying meanings across participants’ responses. A semantic approach was followed when meaningful semantic information was found across participants. For instance, while the code “Agency and Autonomy over the

Physical Self” in the physical dimension primarily involved interpretation of responses across participants, the code “Acceptance of Pleasant and Unpleasant Emotions” within the emotional dimension was considered at a descriptive and explicit level.

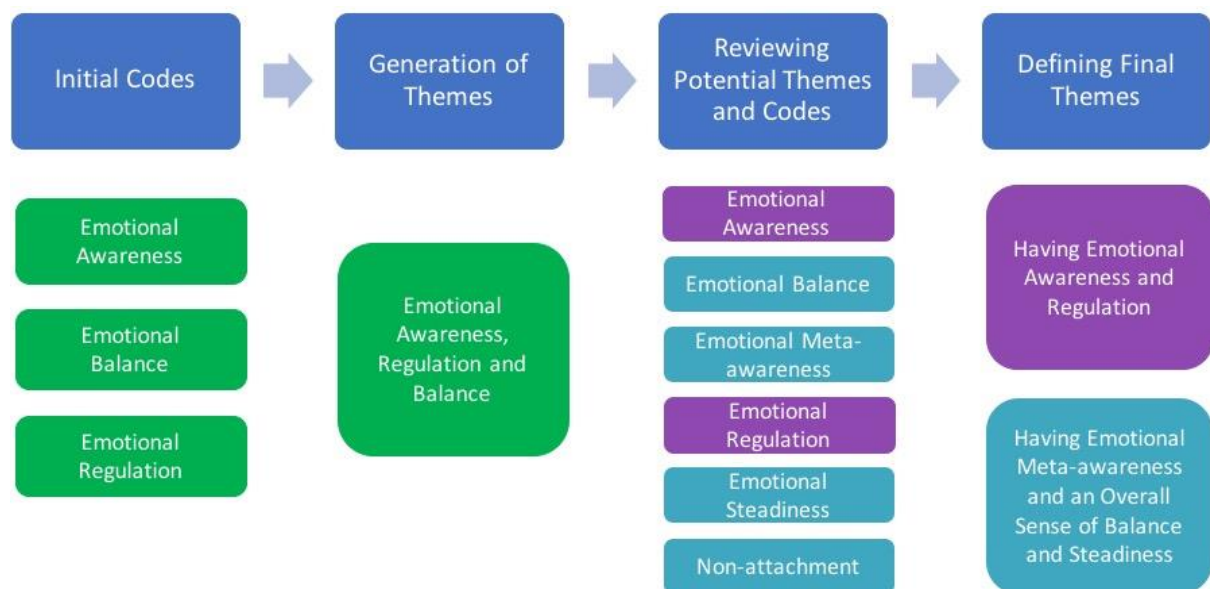
Figure 5.2. *Examples of Deductive and Inductive Coding Process*



After generating codes, candidate themes were constructed and then reviewed before defining the final themes included in this manuscript. An example of this process is provided in Figure 5.3 for two themes from the Emotional Wellbeing dimension. Initially, we created codes to represent the concepts of emotional awareness, emotional regulation, and emotional balance in participants’ responses. A preliminary theme was created to reflect the process of identifying, managing, and balancing emotions as part of emotional wellbeing. After several iterations of coding and reviewing themes, we refined codes to better reflect participants’ perspectives. For example, the existing code

“Emotional Awareness” was defined as “being aware of feeling, of what emotions are being felt, and understand emotions” and the new code “Emotional Meta-awareness” was created to represent perceptions about observing emotional states, processes, and responses. Emotional Awareness and Emotional Regulation were regarded as one theme concerned with knowledge and abilities about emotional states, whereas other themes reflected a more transcendental and holistic perspective about emotions.

Figure 5.3. *Example of the Process to Generate, Review, and Define Themes*



Results

An Overview of the Linguistic Landscape of Wellbeing Dimensions

Before delving into the reflexive analysis of themes for each dimension, we first offer a descriptive analysis of the words used for each dimension of wellbeing. Exploring words and their frequency was incorporated as part of the familiarisation with the data stage of RTA. Typically, familiarisation encompasses reading several times the whole

dataset until the researcher becomes closely related to the data (Byrne, 2021). We argue that exploring word frequencies and key words in context can provide an overview of the dataset when there is a considerable number of responses and responses are not very extensive. We also believe that this approach may provide the reader with a general view of findings and ease them into each theme and their discussion.

Figure 5.4. Word Clouds for Physical, Emotional, Psychological, Social, and Spiritual Dimensions of Wellbeing as Defined by Regular AYPs.



Responses varied in length (min = 1, max = 60) and participants used an average of eight to nine words to define each dimension of wellbeing (see Table 1). The fifty most frequently used words by regular AYPs to define each dimension of wellbeing are depicted in Figure 4. Larger words represent a higher frequency (min = 3, max = 73), without a specific meaning for colour. The frequency and distribution of words across

dimensions varied (see Supplements 5.8 – 5.12 for details), thus producing some word clouds with larger font size (e.g., physical and psychological dimensions) and others with smaller size (e.g., emotional, social and spiritual dimensions).

Table 5.1. *Overview of Regular AYPs’ Responses Word Counts for Each Dimension of Wellbeing*

	Physical	Emotional	Psychological	Social	Spiritual
N	137	136	136	135	133
Min.	1	1	1	1	1
Max.	32	46	39	30	60
Mean	8.4	8.4	8.9	8.3	9.3
Median	7	6	6	6	7

We identified constellations of common words within and across dimensions. For example, words such as “good”, “healthy”, and “well” were commonly used across physical, emotional, psychological and social wellbeing. The use of words referring to impaired health, such as “illness”, “pain”, and “injury” were frequently mentioned across physical and psychological wellbeing. Participants also used words such as “able” and “ability”, as well as “feel” or “feeling” across the five dimensions to conceptualise wellbeing (see Supplements 5.8 – 5.12 for details on each dimension). In general, the term “able” referred to either experiencing something or performing an action, while “feeling” mainly referred to an experience (see word trees in Supplement 5.13).

Table 5.2. Definitions of Wellbeing Dimensions and their Themes, with Quotes from Regular AYPs and Frequencies.

WB Dimensions	Themes	Representative Quotes	N	% (*)
Physical	<i>Being free from and able to manage physical suffering</i>	“Freedom from illness and pain” “Free of disease or illness or at least able to manage any illness or symptoms in a constructive manner” “Managing any medical conditions and staying healthy”	27	15.61%
	<i>Having a functioning body, responsive to internal and external demands</i>	“Able to perform daily tasks fully” “To have a body that is capable of doing the things you need to do to stay connected and in balance” “Well functioning body systems”	25	14.45%
	<i>Having a sense of health and positive physicality</i>	“Feeling fit and strong in my body” “A feeling of wellness within the physical body (i.e., fit, strong)” “Healthy, active, strong, flexible”	81	46.82%
	<i>Consciously and actively inhabiting the body</i>	“Looking to make the best choices and decisions to promote my best physical being” “Being able to do the things I want to do with this body” “Being content in my own skin”	40	23.12%
Emotional	<i>Being able to experience positive affect and the absence of negative affect</i>	“Feeling calm and content” “Feeling safe and at peace” “Having a positive outlook, not feeling down or other negative states of being. Feeling buoyant”	57	30.81%
	<i>Being able to embrace emotions, valuing negative affect and challenges</i>	“An understanding and acceptance of emotions and the importance of both pleasant and unpleasant emotions” “Not necessarily feeling joyful all the time, but being able to appreciate that all emotions, positive and negative, play a role in making life what it is” “Internally balanced and able to cope with external situations”	24	12.97%
	<i>Having emotional awareness and regulation</i>	“Able to feel, understand and process emotions and ability to regulate them when necessary” “Being in touch/aware of your emotions and displaying them in appropriate manners”	51	27.57%

Psychological		"Being able to understand the emotional state you are in, and cope with changes to that in a good way"		
	<i>Having emotional meta-awareness and an overall sense of balance and steadiness</i>	"The state of ones emotions - is there stability? Are they positive/negative? How quickly do they return to homeostasis?" "A balanced state of mind which does not get caught up, strong enough to see the truth" "Being at peace with my emotions, live them and let them go"	53	28.65%
	<i>Being free from and being able to manage mental suffering</i>	"Absence of psychological conditions such as depression and anxiety" "Well in the psyche. Active participation with healing and processing" "Not experiencing the symptoms of mental illness, or being able to monitor and be aware of it."	30	15.31%
	<i>Having a strong sense of identity and self</i>	"Not identifying myself with darkness in my mind, being able to accept the shadows" "Being comfortable with who you are and what you're doing" "Having resilience to deal with the many curveballs that come your way. Never doubting that you are strong enough to deal with them"	62	31.63%
	<i>Experiencing a sense of mental steadiness</i>	"The mind can go towards anxiety and for psychological wellbeing, I believe that is essential to learn how to breath and calm the mind" "Having an even temperament when faced with all of life's offerings" "Being strong and balanced mentally and in my thoughts"	58	29.59%
	<i>Engaging in the contemplation of the self</i>	"How you interpret reality, how you respond to the external world, how you imagine yourself to be in the world" "Working to become the observer. To truly understand where my psychological baseline is and then be the observer of my "psychology" outside of that" "Being able to take the observer's viewpoint when it comes to thoughts, emotions, bodily sensations, events and experiences."	46	23.47%
	<i>Presence of social connections and social competence</i>	"Having people around me" "Friends, family, significant others" "Being able to interact appropriately in a social environment"	38	17.76%
Social				

Spiritual	<i>Feeling connected and attuned to others and to the environment</i>	"Being connected and of service to my community" "Connected with others in meaningful relationships" "Functional and positive interpersonal relationships, connection to a community, contribute to others' welfare, receive help and support"	42	19.63%
	<i>Having high quality interpersonal relationships</i>	"Our capacity to foster meaningful relationships and sense of belonging within a chosen community/society" "Having a strong group of friends that you trust and can rely on, and in return providing the same for them" "The ability to form healthy mutually enriching relationships, altruism, empathy, kindness"	99	46.26%
	<i>Engaging in the contemplation of the social self and relationships</i>	"Actively co-creating with others, using community to mirror back to one's self areas for improvement" "Balancing social life and essential alone time" "Having healthy boundaries"	35	16.36%
	<i>A sense of connection to oneself and to an individual purpose and meaning in life</i>	"Knowing your purpose and living (towards) it" "Feeling your own energy, find calm amidst the ego" "Being able to live a life of grounded ease, comfortable in your own skin. Being accepting of your strengths and weaknesses, but also improving/fine tuning actions as well. This is a constant work in progress, daily honest reflection is required."	81	38.03%
	<i>A sense of connection to others and to the environment</i>	"How I'm connected to the world outside of my mind/body" "Feeling connected to the Earth and all its beings" "Feeling like you belong to a bigger whole than just yourself (nature for me)"	28	13.15%
	<i>Engaging in the contemplation of the self and connection to the transcendental self</i>	"Keeping a strong relationship with my soul, contemplate myself and life itself" "Connection with the higher self" "Connected to what is, not identifying with the ego"	52	24.41%
	<i>A sense of connection to the divine and to a higher purpose and meaning</i>	"Feeling the presence of the Supreme around you" "Our connection with, and awareness of, what exists beyond our individual and collective physical existence" "Able to practice and apply dharma teachings in daily life"	52	24.41%

*percentages were calculated based on the total mentions (N) within each dimension

Shared Meanings Across Regular AYPs Within Wellbeing Dimensions

Applied to each dimension of wellbeing separately, RTA entailed actively reflecting on and interpreting codes across responses by developing themes beyond semantic representations. The reflexive analysis yielded four themes for each wellbeing dimension (see Table 5.2). This section aims to succinctly discuss themes within each wellbeing dimension, highlighting distinctive elements related to yoga, and provides an overall definition for each dimension from regular AYPs' perspectives. For writing purposes, we intentionally organised themes by building upon previously described themes while maintaining their internal consistency and distinct narrative, to create a coherent narrative of the data for each dimension of wellbeing in this report, as suggested by RTA guidelines (Braun & Clarke, 2012; Byrne, 2021). Extending on this analysis, we examined overarching key elements across wellbeing dimensions by identifying common patterns in themes from different dimensions, which will be addressed in more detail in the discussion section.

Physical Dimension of Wellbeing

The first theme was *“being free from and able to manage physical suffering”* and was defined as experiencing the absence of pain, illness, and injuries, and having the ability and capacity to deal with and/or recover from them when they are present. For example, one participant noted physical wellbeing was being “free of disease or illness, or at least able to manage any illness or symptoms in a constructive manner”. This theme may represent a baseline where wellbeing as a positive attribute can emerge from.

The second theme was *“having a functioning body, responsive to internal and external demands”*. This was defined as the capacity to perform basic physiological functions, with bodily organs working properly and a body able to recover and to complete tasks and leisure activities someone needs and wants to do. In words of one participant, physical wellbeing is about “your body and how well it functions in its everyday tasks like activity, fighting infection, digestion, excretion, and so on”. Another participant spoke about being “able to perform daily tasks fully”. This theme extends on the previous one, looking at physical wellbeing as a functioning body rather than only the absence of ailments.

The third theme within this dimension was *“having a sense of health and positive physicality”*, which was defined as experiencing musculoskeletal abilities and features including strength, endurance, flexibility, energy levels, confidence, and balance. One participant illustrated this as “feeling capable and healthy and free in my body”, while another portrayed it as being “healthy, strong, and vital”. This theme encapsulates positive physical attributes as experienced by practitioners, and the elements we identified mirror features of the AY practice.

The fourth theme we identified was *“consciously and actively inhabiting the body”*, defined as having a sense of embodied ownership characterised by a feeling of ease, contentment, autonomy, and agency. This embodied feeling was also characterised as being facilitated by bodily awareness and meta-awareness, and by having the ability to make choices for healthy living. For instance, one participant mentioned “having full command of all body functions”, while others wrote about having a “healthy body with a healthy attachment to what the body presents” and

“eating well, exercising, getting good sleep”. This theme depicts physical wellbeing both as emerging from an embodied experience of physical awareness and as a contemplative attitude for deciding the best choices for the physical body.

From the eyes of regular AYPs, we suggest that physical wellbeing can be defined as a multilayered experience ranging from the absence of physical ailment, the ability to manage and raise above suffering, and the ability to experience positive physicality, while engaging in physical awareness and contemplation to make the best choices for healthy living. Some elements within this dimension can be paralleled to those described in the wellbeing literature, such as autonomy, agency, and competence (Ryan & Deci, 2000) and in the wellness literature, such as strength, illness prevention, physical activity and nutrition (Hettler, 1979). Other elements seem to emerge from the embodied experience of yoga, such as movement, flexibility and physical activity, contentment, and a sense of ease in the body, and awareness and contemplation of the physical self.

Emotional Dimension of Wellbeing

The first theme in this dimension was “*being able to experience positive affect and the absence of negative affect*”. This can be defined as the ability to feel a range of emotions and affects, primarily pleasant with low intensity (i.e., calm, peace, contentment) but also high intensity (i.e., joy, happiness). For instance, one practitioner portrayed emotional wellbeing as “contentment, lack of anxiety, and a sense of compassion” while another spoke about “calmness, happiness, and motivation”. This theme represents emotional wellbeing mainly as the presence of pleasant emotions, which is consistent with existing literature.

The second theme was *“being able to embrace emotions, valuing negative affect and challenges”*, which was defined as having the ability to feel acceptance towards unpleasant affective states and identifying opportunities for growth. For instance, one participant described emotional wellbeing as “an understanding and acceptance of emotions and the importance of both pleasant and unpleasant emotions”. Another practitioner defined it as being “able to be with whatever emotions arise and stay at an even keel”. The ability to accept and positively appraise negative affect and states adds another layer to the conceptualisation of emotional wellbeing, similar to what was proposed in the second wave of positive psychology (Wong, 2011).

The third theme within this dimension was *“having emotional awareness and regulation”*, defined more specifically as having the ability to identify, feel, understand, accept, process, manage and respond to a variety of emotions. For example, one participant spoke about emotional wellbeing as the “awareness of emotions and able to express them freely (to oneself and others)”. Another practitioner perceived it as “being steady, handling feelings/reactions maturely, communicating openly with others”. This theme represents the conscious process by which emotions exist as a lived experience, including sensations, thoughts, and behaviours. Although there is a robust body of literature on emotional literacy and emotion regulation (e.g., Gratz & Roemer, 2004), this has not been explicitly incorporated into subjective wellbeing models.

The fourth theme we identified was *“having emotional meta-awareness and an overall sense of balance and steadiness”*. This was defined as being able to stay emotionally stable and balanced throughout time and to return to balance from oscillating emotional states, by observing ebbs and flows of emotional states and by not

identifying with those emotional states. One practitioner conceptualised emotional wellbeing as being “able to manage your emotions, to not identify with them, and not let them control your life”, while another described it as meaning “that emotions emerge without generating unconscious or automatic reaction”. This theme adds another layer of complexity to the emotional wellbeing dimension by revealing the relevance of a contemplative attitude in the conceptualisation of wellbeing.

According to regular AYPs’, we suggest that emotional wellbeing can be understood as embracing all emotions, being able to experience pleasant affect and positively value unpleasant affect by cultivating emotional awareness, regulation, and meta-awareness. Within this dimension, positive affect is concordant with extensive literature stating that this is an essential part of subjective wellbeing (e.g., Diener et al., 2018). Yet, elements such as low intensity positive emotions, acceptance and equanimity, emotional awareness, and meta-awareness may reflect aspects that emanate from yogic practices and frameworks.

Psychological Dimension of Wellbeing

Similar to the physical dimension, the first theme was “*being free from and being able to manage mental suffering*”. We defined this theme as experiencing the absence of mental illness and having the tools and skills to deal with those conditions and life challenges when they emerge. Participants often mentioned freedom from depression, anxiety, and stress and although managing them was relevant, specific strategies were not specified. One participant spoke about psychological wellbeing as being “free from suffering mental illness”, while another defined it as “mentally healthy enough to cope with the challenges of daily life and to have strategies or treatments to help when

needed". This theme represents a ground-level for wellbeing in this dimension, from which other attributes can take place.

The second theme was *"having an integrated sense of identity and self"*, which we defined as experiencing a clear representation of who one is as well as a coherent and stable perception of that individuality, including traits, skills, and behaviours. Here, we identified three key subthemes: (1) *"knowing and accepting oneself"*, (2) *"regulating oneself"*, and (3) *"having a sense of control and ownership of oneself"*. For instance, one practitioner conceptualised wellbeing as "self-acceptance and self-love", another as "being able to contain myself in moments of crisis and being able to reflect on myself", and another participant as "strength and confidence". This theme speaks about the relevance to cultivate positive attributes to develop a healthy ego and is aligned with wellbeing models including elements such as autonomy, resilience, and self-acceptance.

The third theme within this dimension was *"experiencing a sense of mental steadiness"*, which we defined as being able to direct and focus attention and experience equanimity, balance, and a sense of contentment. For instance, one practitioner described psychological wellbeing as "feeling good and also accepting the bad mood, remaining neutral", while another defined it as having "a clear mind, able to easily focus and be silent whenever I need to". This theme can be viewed as a bridge between the previous and the next theme, where developing a steady mind may play a role in the sense of self and the ability to contemplate the self.

The final theme in this dimension was *"engaging in the contemplation of the self"*. We defined this as consciously practising meta-awareness and meta-cognition on aspects of the self by becoming the observer of states, thoughts, and emotions, and by

understanding the psychology of the self and choosing how to behave. For example, while one practitioner wrote about “understanding what triggers you, what is unhelpful to your mental health, and knowing what tools aid your wellbeing”, another described psychological wellbeing as “being able to see yourself from a distance”. Within this theme, practices such as breathing, yoga, and meditation were mentioned as means to achieve wellbeing. For instance, one participant portrayed wellbeing as the “consciousness of states of mind and the ability to smooth them” and another illustrated through “contemplative practices and community”. Similar to previous dimensions, a contemplative attitude appears to be a key element in wellbeing.

Following regular AYPs’ perceptions, we suggest that psychological wellbeing can be defined as the dynamic interrelation between the absence of mental ailments and the experience of a strong and integrated sense of self. Here, the self is able to direct and still the mind while engaging in contemplation and managing mental suffering and challenges. While elements concerning the freedom from mental illness and its management (Seligman et al., 2004) and the sense of self are well established in the psychology literature (e.g., James, 1890; Kohut, 1971; 1977), other elements may specifically reflect yoga practices. For example, mental concentration and steadiness, are often referred to as developing a “one-pointed mind” in the AY arena, facilitated by drishti and breath. Other elements such as equanimity, inner-work or self-transformation, and contemplation altogether may specifically mirror contemplative aspects of yogic traditions.

Social Dimension of Wellbeing

The first theme we identified in this dimension was the *“presence of social connections and social competence”*. This theme suggests that, at a fundamental level, social wellbeing is about having social connections and experiencing a sense of social competence by having adequate interpersonal skills. For example, one participant spoke about “the ability to form healthy mutually enriching relationships”, while another wrote “having a good social circle, having people to talk to”. This theme may represent the first layer of social wellbeing, where basic elements need to be in place to provide a fertile ground to grow.

The second theme was *“feeling connected and attuned to others and to the environment”*, which we defined as experiencing a sense of pleasant connection to the external world, including other beings and the environment, through a sense of community, contribution, and harmony. For example, one participant conceptualised social wellbeing as “feeling connected to friends/family/communities” and another as being “in harmony with the environment and others”. This theme highlights the feelings that are experienced by an individual when in interaction with their external world.

The third theme was *“having high quality interpersonal relationships”*. We conceptualised this as the experience of meaningful, healthy, and strong interpersonal relationships characterised by a range of reciprocal features such as trust, honesty, acceptance, kindness, love, and compassion. These relationships also featured the ability of engaging in supportive social relationships at a micro (i.e., interpersonal) and macro level (i.e., community and society), finding a healthy balance between giving and taking. One participant defined this dimension as “having a healthy group of people

around you to hear and support you, share and connect with”. Another practitioner spoke about “functional and positive interpersonal relationships, connection to a community, contribute to others’ welfare, receive help and support”. This theme encapsulates the essential qualities of positive relationships through the perspectives of regular AYPs.

The last theme was *“engaging in the contemplation of the social self and relationships”*, which we defined as the ability to observe the quality of interactions and the self in social contexts, cultivating an attitude of acceptance towards others and oneself. This included the ability to draw boundaries and balance social life with alone time. This can be illustrated in statements such as “openness in the way to accept every creature”, “enjoying the company of others while being content with myself” and “using social interactions for knowing ourselves and to control our egos”. This theme emphasises an attitude of observance and suggests a healthy attachment with others while using social interactions as an opportunity for self-knowledge and growth.

From the regular AYPs’ perspectives, we suggest that social wellbeing can be defined as both the objective presence of having social connections and the subjective experience of feeling connected and competent with others and the environment, through stable, nurturing mutual interactions, while developing the capacity of contemplating those interactions and oneself in the social realm. While the relevance of social connections, high quality connections and social support is well documented in the positive psychology literature and included in many wellbeing models (e.g., Keyes, 2007; Ryff, 1989), other features included in this dimension might provide an alternate view. For instance, concepts such as harmony and balance, positively valuing solitude,

experiencing contentment and engaging in contemplation may be related to Eastern frameworks and contemplative practices such as yoga.

Spiritual Dimension of Wellbeing

The first theme we identified in this dimension was *“a sense of connection to oneself and to an individual purpose and meaning in life”*. We defined this as consciously engaging in self-knowledge, self-improvement, and self-growth, exploring personal life purpose, and cultivating positive mental and emotional states, including contentment and equanimity. One practitioner defined spiritual wellbeing as “knowing myself and being in line with my purpose”. Another participant explained it as “feeling at peace within myself”. This theme may reflect that the basis of building spiritual wellbeing, resides within and involves inner work.

The second theme was *“a sense of connection to others and to the environment”*, which we defined as feeling connected to other beings, seeing other beings as oneself, and feeling as part of or as one with nature. For instance, while one participant spoke about “feeling like you belong to a bigger whole than just yourself (nature for me)”, another practitioner mentioned “a state of connection, unification with you, with the earth, with the smiling beings on the planet, and with the galaxy, the universe, and multiverses”. This theme captures the belief that spiritual wellbeing is about the lived experience of interrelatedness and oneness with the external world.

The third theme was *“engaging in the contemplation of the self and connection to the transcendental self”*. This was defined as developing a meta-awareness and meta-cognition of the self by contemplating the self and human existence, not identifying with the ego, and connecting with a higher self, or a higher state of consciousness. Some

statements from participants that define this dimension of wellbeing are “keeping a strong relationship with my soul, contemplate myself and life itself”, “feeling connected to my higher self” and “listening to our spirit through meditation and a life that matches our energy”. This theme may represent a layer bridging the psychological self and the connection to divinity, where a greater or higher awareness emerges by contemplating existence.

The final theme in this dimension was *“a sense of connection to the divine and to a higher purpose and meaning”*. We conceptualised this as experiencing a feeling of connection to a higher realm and believing in a higher purpose, which may guide the personal path. Practising yoga, meditation, chanting, and ethical principles emerged as tools to cultivate spiritual wellbeing. One practitioner defined spiritual wellbeing as “a connection with Oneness – which for me is God”, while another participant spoke about “being aware of a universal energy around us”. Another practitioner wrote about “meditation, chanting and study of yogic scriptures”. This theme highlights an awareness of and the interrelation of human existence with a divine source.

From AYPs’ perspectives, we suggest that spiritual wellbeing can be defined as a lived experience of awareness, connection, meaning, and purpose across different realms, including the individual self, other beings, the environment, and a divine source, along with practices and beliefs that cultivate such connection. The themes identified within this dimension mirror existing conceptualisations of spiritual wellbeing, especially in terms of connection with a divine realm, meaning and purpose (e.g., Fisher, 2011). Specific elements seem closely related to yogic frameworks and may bring further insights into these conceptualisations. For instance, the cultivation of awareness and

contemplation through yoga-related practices and the distinction of the self and a higher self, appear to be central for spiritual wellbeing.

Other Wellbeing Dimensions

Participants also had the opportunity to share their perceptions about other areas of wellbeing that were relevant for them. We identified three main topics across participant responses (n=15). *Intellectual and creative wellbeing* was included by three participants. This dimension was defined in terms of cultivating learning, challenging ways of thinking and fostering creativity. For example, one practitioner wrote about being “engaged in activities in which one can learn and grow, challenge thinking and evolve”. *Environmental wellbeing* was proposed by four participants and it was defined as taking individual and collective action to respect and protect ecosystems, and live in harmony within them. For instance, one participant spoke about “living in harmony with other sentient beings and with your surroundings”. *Moral and ethical wellbeing* was included by five practitioners and was conceptualised as considering and living by principles and beliefs for the common good. This dimension was intertwined with environmental wellbeing and consideration for following a plant-based diet. While one practitioner referred to this as “living your life thinking about what is right for everyone, above personal interests”, another spoke about “veganism is important to me and yoga, as I see them going hand in hand”. Finally, one participant mentioned *energetic wellbeing* as “cultivating the energy body” and two others mentioned *sexual wellbeing* and *personal freedom and autonomy*, but without providing any definition.

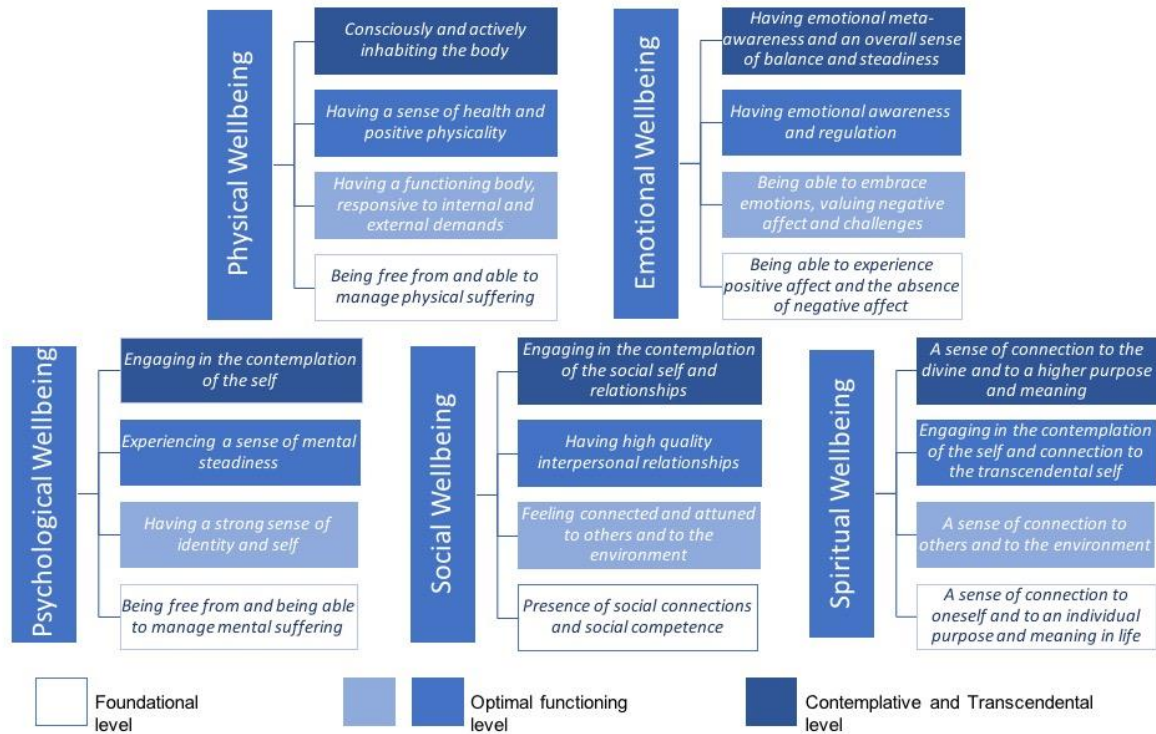
These additional dimensions enrich the perspectives provided for the other five dimensions and may suggest further connections to yoga frameworks. For example,

intellectual wellbeing and energetic wellbeing may reflect two layers of human existence as proposed by yoga traditions, namely the wisdom body and the energy body that are part of the *pancha kosha* model (Feuerstein, 2013). Additionally, *environmental wellbeing* and *moral wellbeing* may be interrelated to aspects of psychological, social and spiritual wellbeing, since it considers ethical principles and behaviours, connection to a larger context, and the integration of the external and the internal world. Furthermore, it can be argued that they also reflect elements contained in yoga traditions. For example, moral wellbeing can be connected to the first two elements of *Patanjali's Eightfold Path*, namely *yamas* and *niyamas*. These represent ethics in relation to relationships with others and individual moral codes for self-improvement (Vivekananda, 2012).

Discussion

Findings from our RTA extend on previous research on lay people's conceptualisations of wellbeing in general, by undertaking an in-depth exploration of five dimensions of wellbeing that have been previously documented in the positive psychology literature. By using alternate research methods (i.e., ideographic, mixed-methods) and drawing upon further literature on wellbeing, psychology, philosophy, yoga traditions, and contemplative practices, as well as using a systems lens to discuss individual functioning (Kern et al., 2020), this article offers a deeper and broader perspective on these five dimensions in particular and of wellbeing in general. This section not only provides further insights about each dimension on its own, but it also extends our understanding of wellbeing by looking at regular AYPs' shared meanings across dimensions.

Figure 5.5. Levels of Wellbeing Dimensions



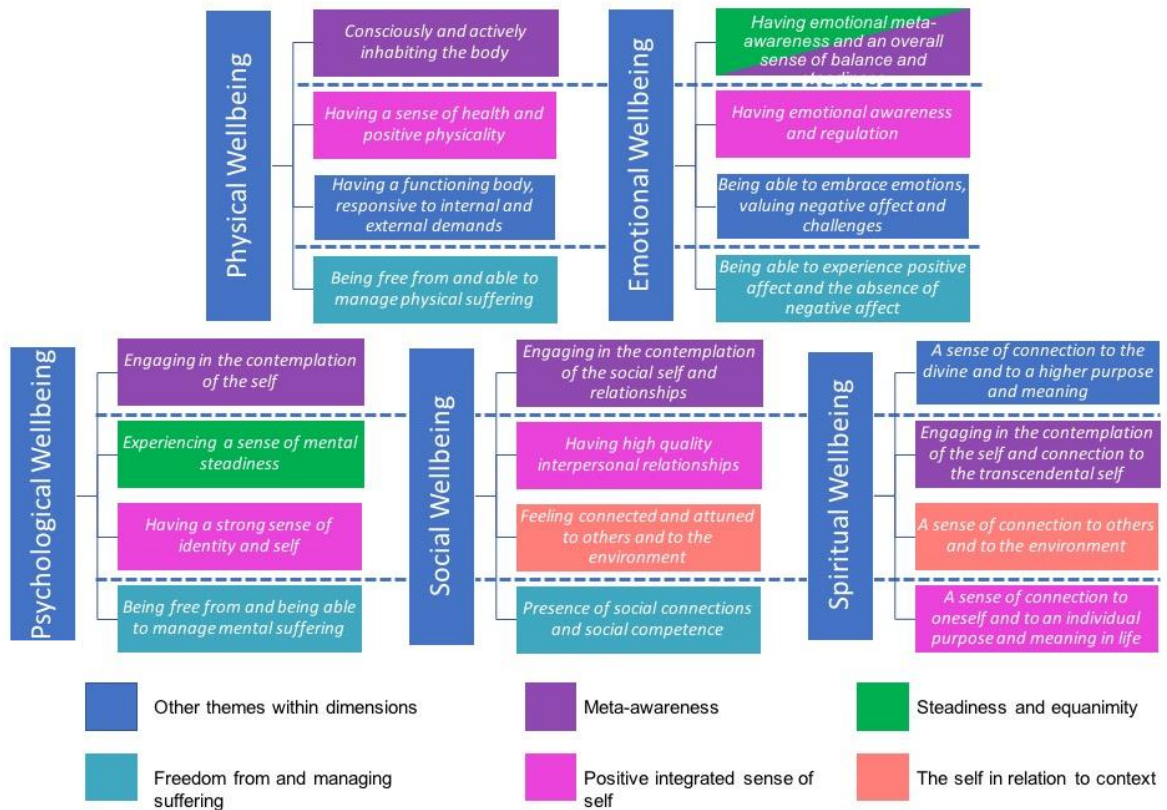
Shared Meanings Within and Across Wellbeing Dimensions

Based on the previous analysis, we identified two main trends in relation to dimensions of wellbeing. One is that each wellbeing dimension can be understood as multileveled, starting from a level comprising basic, ground-level elements (e.g., lack of symptoms) to more complex levels involving different types of functioning and engagement of the self with the internal and external world (e.g., personal growth, transcendence). The other trend is that wellbeing dimensions share common themes, expressed in particular forms depending on the dimension of individual functioning that is being observed, but still reflecting the same core idea. The former trend can be visually represented by using a vertical plane within each dimension to locate each level of functioning, with the foundational level at the base of each dimension (see Figure 5.5).

The latter can be visualised from a horizontal plane by looking at common themes across dimensions that share the same core concept and are represented by using the same colour (see Figure 5.6).

Noteworthily, while other dimensions proposed by a smaller group of participants were highly regarded, we pursued the integration of shared meanings across dimensions within the larger set of participants by mainly considering the five dimensions of wellbeing (i.e., physical, emotional, psychological, social, spiritual). However, our analysis still found links and overlaps between those dimensions proposed by participants and the themes found within the five dimensions of wellbeing. For example, environmental wellbeing was mentioned by participants as part of social and spiritual dimensions (theme 2), moral wellbeing was mentioned as part of spiritual dimension (theme 4), and energetic wellbeing was mentioned as part of physical dimension (theme 3). Sexual, intellectual and creative wellbeing were not identified as themes in any of the five dimensions, and thus may represent aspects of individual functioning that could be further explored on their own in future research. The next sections will discuss key aspects from these trends, by exploring each level and discussing the common themes that we found across dimensions within each level. We then continue to integrate this into an emergent model by looking at these trends in perspective.

Figure 5.6. Common Themes Across Dimensions of Wellbeing



The Levels of Functioning in Wellbeing Dimensions

From our thematic analysis, we found that each dimension of wellbeing included aspects that could be organised by levels or layers of individual functioning. Figure 5 summarises the themes for each dimension of wellbeing while illustrating three layers: a foundational level, an optimal functioning level, and a contemplative and transcendental level. While we have used three levels to broadly group common themes that represent each layer of wellbeing, we acknowledge that there may be other ways to organise and interpret this information. Similarly, we acknowledge that there may be other possible ways of organising, interpreting and integrating the themes found across the five dimensions of wellbeing. Our analysis and integration of information does not

pursue reaching an exact or literal match between the themes across dimensions, but rather seeks to create meaning of common perspectives about what wellbeing encompasses throughout these dimensions. Despite being other plausible ways of organising our findings, we regard this approach as the best fit to synthesise and integrate complex information. For each level of individual functioning, we provide a definition and discuss common themes, along with our interpretation on how and why these themes span across multiple dimensions.

The Foundational Layer of Individual Functioning

This level represents a baseline for individual functioning, where certain issues, barriers or challenges may need to be either resolved or well-managed, as well as having the ability to experience basic positive attributes, to create a fertile ground for wellbeing to grow. While each dimension has a foundational level, this may qualitatively vary when comparing dimensions. Overall, this layer can be seen as comprising two main features. One is freedom from unpleasant or undesirable objective (e.g., injury) and subjective (e.g., negative affect) states. The other is that being able to manage those negative states when they are present, as well as the presence of basic positive attributes to cope and function, are fundamental to wellbeing. To capture the overall meaning of the overarching theme within this level and reduce complexity, we will simply name it *freedom from and managing suffering*.

The absence of illness or unpleasant states was common across physical, emotional, and psychological wellbeing. While this is more aligned with a pathogenic view of health, the absence of negative states in these dimensions indicates that this still appears to be relevant for people to experience wellbeing to a full extent (Keyes,

2014; Weich et al., 2011). While some people may refer to the objective absence of negative states or manifestation of observable symptoms (i.e., “not getting sick often” or “no aches”), others may refer to their subjective experience as being undisturbed (i.e., “not feeling stressed”). This is connected to the other common theme within this layer, which is having tools to manage adversity and being able to experience basic positive attributes. This is aligned with research suggesting that individuals can experience wellbeing even when they experience ailment (Keyes, 2010). While having coping tools was common across physical and psychological dimensions, basic positive attributes were common across emotional, social and spiritual dimensions. This suggests that an internal physical, emotional and psychological balance might be needed (i.e., absence of negatives plus coping skills) in addition to the presence of positive emotions, human connections, and sense of self.

The recurrence of this theme across dimensions suggests that there is an interdependence and continuity between them. This might be explained by three key concepts that are shared by all humans: the experience of suffering, the need for safety, and the need for connection. The concept of human suffering is well acknowledged within Eastern philosophies (e.g., Loy, 2016) and in the compassion literature (e.g., Neff & Davidson, 2016) as an experience shared across humanity that emerges from the attachment to our senses, thoughts and interactions. Having a sense of safety also appears to be fundamental to human functioning. When a threat is perceived, the sense of safety is thwarted. Literature on trauma offers an integrated view of this concept, showing that psychological safety arises when there is a sense of embodied safety signalled by visceral activity associated to emotions (Van Der Kolk, 2017). Furthermore,

while the need for safety can be facilitated or thwarted by significant relationships, the presence of human connections still appears to be fundamental for different levels of individual functioning. For instance, the polyvagal theory proposes that humans are equipped with a social engagement system able to identify safety or threat in the environment to regulate emotional and social behaviour and potentially play a role in the embodied feeling of wellbeing (Porges, 2009; Sullivan et al., 2018b).

Thus, the conceptualisation of wellbeing of regular practitioners as the absence of negative states, the ability to manage them and to experience a baseline of positive attributes may reflect basic human conditions and needs. Furthermore, the recurrent themes also imply a continuum throughout individual dimensions. Since yoga is an embodied and contemplative practice able to regulate the nervous system, it has the potential to provide both a sense of embodied safety and freedom from suffering by acknowledging yet not identifying with the negative states that may arise (Van Der Kolk, 2017).

The Optimal Functioning Level

This represents the level of functioning where the cultivation of positive attributes and states take place and flourishing happens. This level is different from the previous one in that the foundational level implies a deficit viewpoint and here there is a focus on what goes beyond a baseline functioning. In every dimension we identified themes and sub-themes (see Supplement 5.14 for details) comprising elements well documented in the positive psychology literature on individual subjective wellbeing. These include vitality (Huppert & So, 2013), positive emotions (Diener et al., 2020), autonomy (Ryan & Deci, 2006), self-acceptance (Ryff & Keyes, 1995), self-regulation

(Baumeister & Vohs, 2016), meaning and purpose (Steger, 2012), and positive relationships (Heaphy & Dutton, 2008). The acknowledgement of positive qualities as essential to wellbeing from participants' perspectives supports the importance of including a range of attributes that compose and contribute to wellbeing. The range and variety of elements evidences the diversity in which wellbeing can be defined and experienced, the relevance that each individual gives to particular elements, and the combination of elements that they regard as essential to them. This is consistent with what scholars have proposed about the conceptualisation and measurement of wellbeing (e.g., Alexandrova & Fabian, 2022). Furthermore, breaking down wellbeing into dimensions for practitioners to conceptualise them separately provided a richer and finer view of the elements and qualities comprising each facet, as well as commonalities across them. While these elements are not exhaustively addressed in this paper, here we focus on three common themes systematising such elements across dimensions.

One theme that appeared across all five dimensions was a positive and integrated sense of self. This points to the relevance of having an integrated sense of identity grounded in the body and the mind, and in relation to the context and the spiritual world. This suggests that in terms of wellbeing, the traditional Western view of the self as a mainly psychological construct should consider other dimensions and the interaction between them. For instance, from a Western approach it has been proposed that the self can be considered as a multilevel system comprising components, interconnections and processes at a physical, psychological and social levels (Thagard, 2012). This is consistent with views of regular AYPs that perceptions of wellbeing involve the development of the self in relation to the physical, emotional, psychological, and

social realms. However, practitioners' views extend on this by considering the self in spiritual terms, as a deep connection with all elements of the self. The above is aligned with the *pancha kosha* model rooted in yoga traditions, that considers the self in terms of sheaths and in terms of its spiritual nature (Vivekananda, 2012). The recurrence of this theme across all dimensions reflects the relevance of the development of the self in a holistic way for optimal levels of functioning.

Another shared theme at this layer was experiencing steadiness or equanimity. This was found across three wellbeing dimensions. Within the emotional dimension, equanimity was found in the shape of experiencing low intensity emotions and as acceptance of all emotions. In the psychological dimension it was found as part of mental steadiness. And in the spiritual dimension, it emerged as part of the cultivation of positive states within the self (see Supplement 14). This implies that equanimity is relevant for wellbeing, that it can be experienced as impacting different human dimensions and thus not only a purely psychological phenomenon. This is in line with Western scholars who have argued that equanimity is an emotional regulation strategy (Wojnarowska et al., 2020; Juneau et al., 2020), and with an Eastern perspective bounding this even-minded state to spiritual and contemplative philosophies and practices (Desbordes et al., 2015). Furthermore, recent research has shown that equanimity can be considered a wellbeing outcome (Desbordes et al., 2015) and that people with less barriers to experience equanimity are more likely to have higher levels of mental wellbeing, mindfulness, self-compassion, and better emotional regulation (Weber, 2020). Thus, the integration of literature on equanimity with views of regular

AYPs suggests that equanimity can be experienced across and play a key role in emotional, psychological, and spiritual wellbeing.

The third common theme was the self in relation to others and to the world. This was observed mainly across the social and spiritual dimensions, but also to some extent in the psychological dimension. This took the common shape of the presence of relationships and feeling a sense of connection to other beings and to the environment. Both relatedness and belongingness have been widely studied across various disciplines. Relatedness has been found as a central component of human motivation and essential for individual wellbeing (Ryan & Deci, 2000). The motivation for belonging has been deemed unescapable and innate to humans, with positive, lasting and significant relationships being fundamental for human wellbeing (Baumeister & Leary, 1995; Leary & Cox, 2008). Moreover, the underlying meaning of terms such as “feeling connected” or “having a sense of connection” speaks to an embodied perception that can be related to yoga. This is aligned with previous research on perceptions of outcomes of the yoga practice in regular practitioners suggesting that this feeling of connectedness may flow from the intrapersonal development attributed to the practice (Kishida et al. 2018; Kishida et al, 2019a). Therefore, the commonality of this theme across dimensions may indicate not only the relevance of others for wellbeing in these areas, but also how connectedness can potentially be experienced qualitatively different and flow from one dimension to another.

The Contemplative and Transcendental Level of Human Functioning

This represents a level of individual functioning where individuals are able to observe and take perspective about themselves and their internal and external

functioning. This level is distinct from the previous ones, since there is a different type of engagement of the self regarding human existence. This layer suggests the importance of contemplation upon elements that are contained in the previous layers across different dimensions, while adopting an embracing attitude towards these elements and developing higher states of consciousness.

Although there is a considerable body of literature about this level of functioning within areas such as transpersonal psychology (Maslow, 1969) and Eastern philosophies, this has been far less addressed in contemporary wellbeing models. Usually, individual subjective wellbeing frameworks are focused on the previous layer, where the psychological self or ego operates (e.g., Ryff, 1989; Seligman, 2011). This layer, however, functions beyond this view of the self. Here, the observer or the transcendental self comes in, functioning in a higher level of human consciousness. This was reflected as a common theme across the five dimensions of wellbeing in the shape of meta-awareness, or the ability to contemplate the body, emotions, thoughts, oneself, social relationships and elements beyond the self. Interestingly, the spiritual dimension also mirrored this on its own, with its different levels representing the contemplation of different dimensions of existence.

Meta-awareness may explain why practices involving mindfulness, including yoga, can promote wellbeing (Gard et al., 2014; Hussain, 2015). Research suggests that meta-awareness seems to play a key role in health and wellbeing in terms of identifying symptoms and preventing illness (e.g., Hargus et al., 2010), becoming aware of the experience of hedonic wellbeing (Schooler & Mauss, 2009), and experiencing a connection beyond human existence (Dambrum et al., 2019). Yoga can promote self-

regulation through meta-awareness of bodily and mental signals and processes, thus integrating information from different sources and facilitating wellbeing at different levels of functioning (Gard, et al., 2014). Conceptualisations of wellbeing provided by regular practitioners are aligned with this evidence, reinforcing the notion that meta-awareness occurs at different levels of individual functioning and is relevant to wellbeing.

The Levels in Perspective: Integrating Western and Eastern Views on Human Functioning

Based on regular AYPs' conceptualisations of the dimensions of wellbeing, we have identified three levels of individual functioning offering a novel perspective on wellbeing and the interrelation between dimensions through five common themes. These common themes found throughout dimensions representing shared meanings across practitioners, were interpreted and integrated using an interdisciplinary lens. In this section, we aim to discuss the levels of individual functioning in relation to the concept of the self and wellbeing integrating Western and Eastern theoretical frameworks.

The three levels identified across dimensions in this study are consistent with Abraham Maslow's Theory Z (Maslow, 1971), which posits that there are three levels of human functioning. The first level is defined as security and includes the deficiency needs (D-needs) of safety, connection, and self-esteem. The second level is defined as growth, contains the being needs (B-needs) of exploration, love and purpose. The balance between these two levels would lead to self-realisation or optimal human functioning. Finally, the third level is defined as transcendence, which goes beyond self-

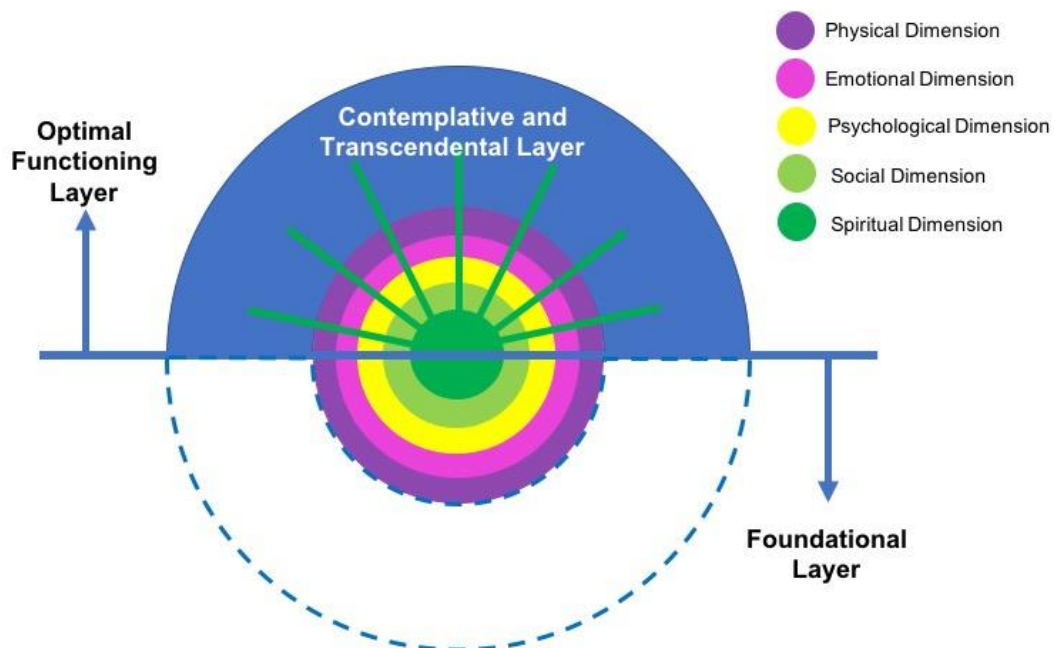
realisation (Kaufman, 2020; Maslow, 1971). The theory proposes that needs are interrelated, able to be achieved simultaneously and work together towards a higher purpose (Kaufman, 2020). This is similar to the first two layers that we found in our analysis, with the foundational layer mirroring a deficit realm and the optimal functioning layer reflecting a personal growth realm. Since the foundational and optimal functioning layers were represented within each wellbeing dimension and shared meanings were identified across dimensions, our view can provide a broader understanding on individual functioning in terms of deficiency and growth needs within each dimension of wellbeing.

In addition to the interplay between these two layers, we also found a higher level of human functioning that was regarded relevant for wellbeing from practitioners' perspectives. This evolution towards a higher level of functioning, is both consistent with what is proposed in Theory Z (Kaufman, 2020; Maslow, 1971) and in the *pancha kosha* model (Vivekananda, 2012). Maslow (1967) suggested that self-actualisers were more likely to transcend, since they would have fulfilled D-needs and lived most of the time in the B-realm, working on personal development. This is aligned with the yoga perspective on the evolution of the self that leads to higher states of consciousness to ultimately transcend the self (Vivekananda, 2012).

Figure 5.7 synthesises these planes of individual functioning along with the different dimensions of wellbeing that we explored in this study. The concentric circles represent the dimensions of individual subjective wellbeing. Dimensions have been nested within each other similar to what is proposed in the *pancha kosha* model with the five bodies and in systems literature (e.g., Bronfrenbrenner, 1995; Bronfrenbrenner

& Ceci, 1994; Thagard, 2012). Here, we suggest this concentric representation reflects the interrelation and interdependence of dimensions rather than a hierarchal, linear or siloed perspective. The bottom half of the figure represents the foundational layer of functioning, while the top half represents the optimal layer of functioning. Each dimension can be represented at both these levels depending on whether wellbeing is being considered from a deficit or a growth point of view. This part of the graph represents the self. The arc represents the third layer, where the self is evolved or transcended. We have located the spiritual dimension at the core and extending towards the transcendental layer due to its presence in relation to all the other dimensions and its relevance to contemplation and transcendence. This view considers the self, and thus wellbeing, as an embodied and as a multifaceted construct.

Figure 5.7. *Levels of Functioning in Relation to Dimensions of Wellbeing*



Implications and Future Directions

We explored five dimensions of wellbeing through the eyes of regular AYPs. While this sample predominately represented highly educated middle-aged women living in Westernised cultures, their views have provided a rich description of how each dimension of wellbeing can be defined and what elements may be central to their composition. Furthermore, shared meanings across dimensions provided a broader perspective on how these dimensions relate to each other and how they can be seen separately and holistically. This also allowed us to organise participants' shared meanings in layers of individual functioning, represented by different activities and types of engagement of the self. This approach to wellbeing involves dynamism and complexity that might be better understood by looking at the self as a system in and of itself.

Although including elements from other dimensions such as emotional and relational, individual subjective wellbeing frameworks tend to use a psychological or mental approach to understand human functioning. While previous research with regular AYPs has highlighted the multidimensional, holistic, and embodied nature of wellbeing (Ramirez-Duran et al., 2022a), the exploration of different dimensions revealed continuity of themes across dimensions. This reinforces the importance of embodiment and transcendence in wellbeing frameworks, with the implication of further exploring the self as an integrated system with different levels of functioning.

On the one hand, this might mean further investigating dimensions as nested cases from the physical to the spiritual realm, and what are the connections across. For example, we could define the self as a multilayered or multilevel system, comprised by

different elements that exist on their own, in interaction with each other and with an external environment. Depending on which boundaries we use to define the self, we can look at different areas as a whole, and also in interaction with other areas of the self. Furthermore, considering elements such as meta-awareness and equanimity as central to wellbeing and to the evolution of the self may provide further insights about these connections.

On the other hand, this may imply exploring in more detail the levels of the self in terms of ways of knowing about the self and about wellbeing. We could define the self at the level of the experience and directly involving bodily systems such as sensorimotor, proprioceptive, and interoceptive systems. We could also define the self at the level of reflection and mental processes involving the ego. And finally, we could define the self in transcendental terms, as the witnessing self, which is usually addressed in contemplative practices. These selves may be seen separately and in relation to each other. Thus, including an embodied approach and a system lens to individual functioning and wellbeing, along with the exploration of key elements permeating different dimensions of wellbeing can offer a potential contribution to wellbeing models.

Limitations

Participants included in this study were self-selected, and thus were likely to represent practitioners who were highly motivated and interested in providing their insights on yoga and wellbeing. Similar to previous research on yoga practitioners (e.g., Cartwright et al., 2020; Kishida et al., 2018), participants were mostly highly educated and middle-aged females who identified as Caucasian living in Westernised countries.

These factors need to be taken into consideration as they might have influenced to some extent the content of responses and themes we identified.

Due to the methodology used in this study, we cannot and do not claim causality between the AY practice or any aspect of the practice and the themes that emerged within each dimension of wellbeing. Similarly, we cannot and do not claim that these themes are exclusive to regular AY practitioners. While the themes within each dimension may be unique to this sample, some overlaps may exist with other populations. Our study did not focus on the comparison of our group of practitioners with other groups. However, identifying what arose from their perspectives might give insights into dimensions that could be relevant for other populations as well, and could be considered in future research.

Finally, we reiterate our acknowledgement that our analysis and generation of the emergent model represent one way of organising, interpreting, and integrating information provided by a particular group of people in a specific timepoint, according to our backgrounds, experiences, and expertise. Although these elements may be considered a limitation, they also allowed us to synthesise complex information using an interdisciplinary perspective to provide, what we believe, is the most appropriate and cohesive framework for this case.

Conclusion

Conceptualisations of regular AYPs about the physical, emotional, psychological, social, and spiritual dimensions of wellbeing unearthed elements supporting the current wellbeing literature. Other elements going beyond mainstream subjective wellbeing frameworks were also revealed and interpreted through additional theoretical

perspectives. Whilst providing a definition for each dimension can be considered a relevant contribution in and of itself, further analysis of the five dimensions allowed us to decipher connections within each and amongst the five dimensions. This meta-reflexive analysis offered a multileveled view of the self in relation to wellbeing, as a system operating at a foundational, optimal functioning, and contemplative and transcendental level. Shared meanings across dimensions and within each level signify different ways of knowing about wellbeing, whether it is about the absence and management of suffering, personal development and growth, or meta-awareness across planes of existence.

Findings from this study and the resulting preliminary model point to the relevance of understanding wellbeing according to different levels in which the self functions and engages with themselves, with others, the world, and beyond. This translates into grappling with complexity and integrating multiple disciplines and lenses in wellbeing theory and research, rather than reducing the construct to isolated parts or to only a few components. This implies the use of alternate paradigms and the development of integrative models to understand how mind and body can work together towards wellbeing.

CHAPTER 6: CONCEPTUALISATIONS OF YOGA

Chapter Synopsis

Chapter 6 is a manuscript entitled 'From practice to lifestyle: Conceptualisations of yoga in regular Ashtanga Yoga practitioners' submitted for publication in January 2023 and currently under review in the journal *Psychology of Consciousness: Theory, Research, and Practice*. The chapter includes the third study of this dissertation, which uses the same method as chapter 4 and 5 to examine regular practitioners' perceptions of yoga, yoga philosophy, and their yoga practice. By doing so, it builds on these previous chapters. In conjunction with chapters 4 and 5, this paper contributes to providing a comprehensive and contextualised understanding of the key elements addressed in this thesis: yoga and wellbeing. In addition to provide definitions for each aspect of yoga, this chapter highlights the intertwinement of the formal asana practice with philosophy, spirituality, and ethical principles and behaviours in practitioners' conceptualisations. The main contribution of this chapter is empirical, as there are no previous published studies on lay conceptualisations of yoga in regular practitioners. For purposes of consistency within the format of this dissertation, I have edited the original manuscript for tables, figures, and supplementary material to match the thesis structure. Supplementary material for this chapter has been provided in a separate document and labelled as *Supplement 6*.

Citation

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Authors’ Contributions

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	70%	90%	80%	90%	90%	n/a
Kern	15%	5%	10%	5%	5%	50%
Stokes	15%	5%	10%	5%	5%	50%

From Practice to Lifestyle: Conceptualisations of Yoga in Regular Ashtanga Yoga

Practitioners

Abstract

Yoga has evolved throughout centuries since its inception. Nowadays, yoga is usually defined and researched as a mind-body practice involving physical postures, breathing techniques, meditation and relaxation used mainly for stress reduction, fitness and general health and wellbeing. However, less is known about how regular yoga practitioners perceive, experience, and define yoga. This study focused on a group of regular Ashtanga yoga (AY) practitioners (n=200) to explore their conceptualisations of yoga in general, yoga philosophy, and their yoga practice using Reflexive Thematic Analysis (RTA). Yoga was defined as a practice for health and wellbeing, a method for personal inquiry and growth, a way of living, and a spiritual quest. Yoga philosophy was defined as the collection of ancient teachings for understanding human functioning and consciousness, providing a foundation for the yoga practice and living life. Yoga practice was defined as the formal daily yoga practice, adaptable, ever-changing, and permeable to other complementary practices while permeating into daily life. The entanglement of philosophical, spiritual and ethical underpinnings with the formal practice was identified in three common threads revealing the significance of yoga as (1) an embodied integrated practice, (2) an embodied path for self-knowledge, and (3) a path for spiritual development. This entanglement and shared meanings underscore the relevance of considering participants' perspectives of yoga in research and applied settings to challenge assumptions and the prevailing image of yoga as mainly physical activity.

Keywords: yoga, ashtanga yoga, regular yoga practitioners, reflexive thematic analysis

Introduction

Conceptualising yoga can be a challenging task. Though there are some widely accepted definitions included in traditional texts, perceptions about the modern ways of practising yoga can lead to different interpretations. As a millennial tradition rooted in India, yoga has evolved throughout time and context. Instead of remaining fixed, it has been permeable, through the exposure of various cultures, religions, and social-historical-political circumstances. While traditional and scholarly definitions can be identified when taking all these elements into consideration, lay people's perceptions of yoga in our globalised and digitalised world have also been documented. However, less is known about how long-term yoga practitioners conceptualise yoga according to their lived experience of engaging with different dimensions of the practice. Giving voice to people who have a dedicated yoga practice can provide yoga scholars, researchers and teachers new insights about what yoga means in the context of our current modern world, as well as challenge certain biases that are being communicated to a broader audience. Here, we focus on examining how regular Ashtanga Yoga (AY) practitioners conceptualise yoga, as well as yoga philosophy and their yoga practice.

In this article, we first explore traditional conceptualisations of yoga, how these may be perceived as fixed or as ultimate truths, and how we can gain a broader understanding of yoga by looking at these conceptualisations as situated in evolving contexts. Next, we discuss the emergence of modern postural yoga and the evolution of teachings over the last century to understand the main elements that have been

highlighted and embraced by relevant teachers into yoga traditions that are being practised today. We also briefly address the phenomenon of the science of yoga and yoga researchers/practitioners. Focusing specifically on a group of regular AY practitioners, we investigate their conceptualisations of yoga in general, yoga philosophy, and yoga practice using Reflexive Thematic Analysis. We discuss the main themes for each aspect of yoga, and then focus on the overarching themes across these three aspects of yoga. We end with a consideration of implications and applications of the research findings.

From Traditional to Modern Conceptualisations of Yoga

Yoga is a Sanskrit word that has a wide range of translations, including “yoking”, “remedy”, “union”, “fitness” and “meditation” (Monier-Williams, 1997). By using the term ‘traditional conceptualisations’, here we refer to definitions provided in the currently available traditional yoga literature. Before diving into how yoga is defined according to ancient texts, it is noteworthy that this review is not exhaustive, as yoga tradition is broad and extensive. Instead, our aim here is to provide a brief overview to understand that definitions contained in these texts are largely a product of different eras. According to Feuerstein (2003), yoga can be situated in a timeline containing different periods, including Vedic or Pre-Classical (3,000 BCE to 500 BCE), Classical (500 BCE to 800 CE), Post-Classical (800 CE to 1,500CE) and Modern (1,500 CE to present). Each of these eras can be associated with particular worldviews and diverse contextual influences that shaped the way in which yoga was perceived (De Michelis, 2008; Jain, 2014a). Furthermore, it is important to consider that many early yoga texts including the wide-spread *Yoga Sutras of Patanjali* were transmitted orally and were written,

interpreted and translated at later times (Bryant, 2015; Devi, 2010). Thus, there is no universal definition of yoga.

Early traditional yoga definitions seem to mainly focus on describing the mechanisms of the mind and consciousness, specifically in terms of how the mind functions and how it can be stilled (Foxen & Kuberry, 2021). For instance, the *Katha Upanishad* (6.11) is a text from the Vedic era considering yoga to be “the firm restraint of the senses”, and the *Maitri Upanishad* (6.25) from the same period, states that yoga is “the unity of breath, mind and senses, and the abandonment of distracting thought” (Easwaran, 2007). Similarly, the Classical text *The Yoga Sutras of Patanjali* (1.2) defines yoga as “the cessation of the fluctuations of the mind” (Iyengar, 2005). The Post-Classical text *Yogabija* (89-90) estimates that yoga is “joining and therefore collapsing of all dualities until all that remains is oneness” (Mallinson & Singleton, 2016). It is believed that a range of philosophies influenced these ancient texts and the *Yoga Sutras* in particular, including Samkhya, Jain, Vedanta and Buddhism, all of which share the phenomenological inquiry about human suffering and its liberation through heightened levels of consciousness (Chapple, 2008; Vivekananda, 2012). According to Foxen and Kuberry (2021), these traditional definitions underscore the goal of reaching a particular state rather than detailing specific methods to reach such goal. The methods for practising yoga have also been varied, and reflective of different religious, mystical and philosophical stances (Lieberman, 2008).

Foxen and Kuberry (2021) provide a classification of yoga that synthesises the meaning of yoga, the underpinning worldview and associated practices. The earliest stages of yoga can be understood as the “yoga of going”. Conceptualised as a spiritual

practice, it was about transcending human experience and suffering in this world by going “upwards”, to a celestial plane. The evolution of yoga then led to the conceptualisation of the human body as a scaled representation of the universe, which implied that the spiritual journey is not literal nor external. This is the “yoga of knowing” and represents an inner journey in which consciousness is transformed. This way of conceptualising yoga can be associated with medieval traditions. Finally, the “yoga of doing” represents a collection of mind and body techniques primarily used by ascetics to control the mind through the control of the body to escape the cycle of rebirth and attain liberation. Furthermore, these ideas of going, knowing and doing have been interwoven with other South Asian traditions and with other cultures as yoga kept evolving into the modern world (Foxen & Kuberry, 2021; Sarbacker, 2014; Singleton, 2010).

Hence, to understand modern yoga, it is relevant to consider not only the range of South Asian traditions in which it was conceived, but also the numerous formal and informal cultural exchanges between Eastern and Western traditions, worldviews and practices shaping the way in which yoga is perceived and practised today as predominately postural (Brown & Leledaki, 2010; De Michelis, 2005; Jain, 2014b). Several scholars posit that modern yoga is the result of an historical period with particular elements interacting and reaching their maximum expression during the twentieth century (e.g., Singleton, 2010; Sjoman, 1999). *Hatha yoga* was being widely practiced during the Middle Ages and Early Modern era in India, placing its focus on the use of physical postures and breathing techniques (Lieberman, 2008; Sarbacker, 2014). It has been argued that this yoga system deeply resonated with the physical culture

movement that was emerging not only in India, but around the globe during the beginning of the twentieth century (Alter, 2004; Sarbacker, 2014). This way, modern postural yoga originated as “as a hybridized product of colonial India’s dialogical encounter with the worldwide physical culture movement” (Singleton, 2010, p.80). In other words, with the migration of yoga to the Western world in the late nineteenth and during the twentieth centuries, yoga seemed to have circled from India to other parts of the world, to then return to India re-constructed, amplified and validated as an Indian tradition, transforming its original understanding and practice (Samuel, 2008; Sarbacker, 2014).

Thus, it seems evident that there is no fixed, intact, or single universal conceptualisation of yoga (Maddox, 2015). Although some would argue otherwise (cf. Jain, 2014b), yoga has not been literally transmitted from a single tradition and regardless of the evolving social, cultural and historical contexts throughout centuries from its inception until today. Nowadays it seems that the yoga practice is the goal in and of itself, and that the physical practice in particular has become a way of “doing” as well as “knowing” an enhanced version of oneself (Foxen & Kuberry, 2021). Yet, the question around how yoga is conceptualised today remains.

Defining Yoga in a Globalised World

Yoga has continued to evolve in a highly urbanised, globalised and digitalised world where capitalism and healthy lifestyles paradoxically co-exist (Burley, 2008; Jain, 2014a). As a product of the twentieth century, yoga is commonly defined as a mind-body practice or the combination of physical postures, breathing techniques, meditation and relaxation, which are mainly used for stress management, physical fitness,

wellbeing and overall health (Alter, 2004; De Michelis, 2005; Jain, 2014a; Singleton, 2010). Yoga has also been advertised as an essential element of a healthy lifestyle, often being portrayed as being practised by athletic slim young women with particular lifestyle choices (Hinz et al., 2021; Jeffrey, 2020), and thus making it more appealing particularly to highly educated middle-class women (Burley, 2008; Jain, 2014a, Park et al., 2019). Notably, the yoga industry seems to help in perpetuating these stereotypes. Miller (2016) defines the term “yoga industrial complex” coined by Broad (2012) as “the web of relationships between studio systems, yoga celebrities, certifying agencies, and large yoga businesses or industry including yoga product companies (...) as well as cultural producers” (p.2). People engaging in professional activities within this complex contribute to the current representation of yoga, which can often marginalise and exclude certain types of yogis and make it accessible only to a particular group of people, namely white, young, well-educated females (Miller, 2016).

Within the complexity of defining yoga due to its meaning being inherently bounded to social, cultural, and historical elements (Foxen & Kuberry, 2021; Jain, 2014), contemporary scholars have generated a number of modern definitions. Probably, the definition of modern yoga scholar Andrea Jain (2014a) comprehensively articulates the breadth and entanglement of the elements of the practice as situated in the current world. She defines yoga as:

“a collection of complex data made up of a congeries of figures, institutions, ideas, and practical paths involving mental or physical techniques – most commonly meditative, breathing, or postural exercises. It is believed to resolve the problem of suffering and to improve health, both defined in modern terms.

Postural yoga often betrays a desire to repair what is perceived as an imbalance of “body-mind-soul”. Finally, it is tied to mythologies about the historical transmission of yogic knowledge, accumulating around a transnational community that has engaged in and transmitted what participants call yoga – and sometimes refuse to call yoga – since the twentieth century” (Jain, 2014, p.172)

Importantly, while integrating key aspects into a comprehensive definition, the question on “what participants call yoga” and how the philosophical underpinnings interact with their understandings and practice, remains unclear. To our knowledge, there are no studies investigating how regular yoga practitioners conceptualise yoga.

In the emergence and evolution of yoga, it is important to consider not only the philosophical context in which it sprouted, but also the relevant religious and scientific contexts. While the physical, mental, and spiritual were never considered to be siloed, the relevance of medical science as source of knowledge, with the subsequent emphasis on the physical body, has also contributed to the popularisation of yoga as a mainly physical practice (Foxen & Kuberry, 2021). Notably, the ‘scholar-practitioner’ phenomenon in Western academia has emerged alongside the evolution and globalisation of yoga in the past couple of centuries (Singleton & Larios, 2020). This phenomenon is critical to acknowledge when understanding what scholars decide to spotlight as an object of inquiry in their research and how they conceptualise yoga. As Singleton and Larios (2020) contend, yoga scholar-practitioners are in a unique historical position where the knowledge about yoga emerges both from traditional sources and from empirical scholarship, and in which the academic and scientific circles tend to

prevail as a valid form of advancing knowledge (cf. Atkinson, 2010; 2017; Jeffrey, 2020; Miller, 2016).

Regular Yoga Practitioners and The Ashtanga Yoga Method

Historically, the typical representation of the ancient yoga practitioner was of a male ascetic secluded and devotedly living according to yogic principles and spiritual practices (Singleton, 2010). Although tantric yoga texts mention female practitioners embodying mystical powers, they were usually from low casts, and thus less accepted compared to renounced yogis (White, 2012). Similarly, householder yogis, or those holding family, work, and social responsibilities, were perceived as less accepted due to socio-cultural-historical influences of their time (Jain, 2017). As yoga evolved, and only until fairly recently, the practice became more open and accessible to a wider range of people, including women and householders, or people holding family and social responsibilities (Jain, 2017; Jeffrey, 2020). This can be largely attributed to yoga teacher Tiramulai Krishnamacharya, who relived and adapted yoga teachings following systematic methods while considering contextual elements of the modern world, and to his students who continued disseminating his teachings across the globe (Jain, 2017).

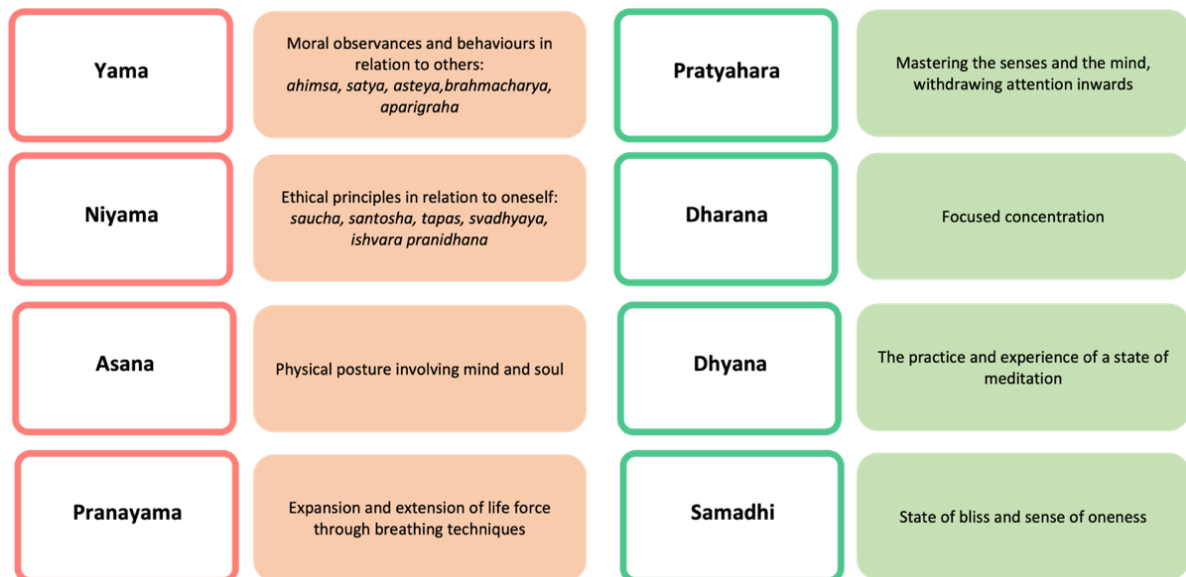
Krishnamacharya's experience and legacy embody the influence of contextual factors and evolution of yoga. He travelled extensively, with one remarkable journey to the Himalayan caves of Tibet to learn from his teacher Rama Mohana Brahmachari, a householder yogi (Desikachar, 2005; Jain, 2017). Krishnamacharya adhered to *parampara*, or a tradition in which teachings are passed on from *guru* (i.e., teacher) to *sisya* (i.e., student) with the expectation of the student showing discipline and respect towards their teacher (Jain, 2017; Singleton & Byrne, 2008). Renowned contemporary

yoga teachers who have had great influence in modern yoga practice around the world learnt under his wing, including B.K.S. Iyengar, Indra Devi, T.K.V. Desikachar, and Pattabhi Jois. Many consider Krishnamacharya as the father of modern yoga, due to his key role in devising systematised movement-based practices with far reaching influences into our current knowledge and experience of yoga (Sarbacker, 2014; Singleton & Fraser, 2014). As Jain (2017) points out, the way in which these teachers lived their lives uncovered the possibility for contemporary practitioners to pursue a yogic lifestyle along with householder responsibilities.

Krishnamacharya taught yoga extensively under the support of the Maharaja of Mysore at a *yoga shala* (i.e., studio) in the palace, while also travelling across India disseminating the benefits of postural yoga with his students. From his perspective, the body was a place of inquiry and experience rather than being an object to be externally examined (Jain, 2017; Nevrin, 2008). These practices were passed onto Jois, who developed a particular method focused on specific elements of practice and teaching (Sarbacker, 2014). This method is known as *Ashtanga vinyasa yoga*, or simply Ashtanga yoga (AY), and it is characterised by sequences of asanas or postures that are taught progressively to students, usually within a group setting using a one-on-one approach. Students are encouraged to develop a daily self-practice at their own pace, following the principles of *tristhana*, which means three places in Sanskrit. This means performing *asanas* while directing attention to a particular *drishti* or gazing point, and with a continuous smooth flow of breath through the nose. Additionally, *asanas* are threaded with *vinyasa*, a system of moving and breathing in which each inhalation or exhalation is corresponded with one specific movement (Jois, 2016).

While the AY method is largely considered a system of physical discipline, Pattabhi Jois (2018) conceptualised yoga as *upaya*, or a path towards the realisation of the true nature of oneself. Moreover, Jois (2018) and his grandson Sharath Jois (2016) stress the importance of ethical principles and behaviours, as well as on meditative components, pointing out that without these elements, the yoga practice is merely a physical activity. In the AY tradition, the emphasis has been placed on the “inner practice of concentration and energy control”, framing the practice within Patanjali’s eightfold path, also known as *Ashtanga Yoga* (Sarbacker, 2014, p.104). Here, the physical body is seen as a gateway and a vehicle by which yoga is practised and spirituality is experienced (Sarbacker, 2014), and where the eightfold path offers a guide to an integrated practice (see Figure 6.1).

Figure 6.1. *Ashtanga Yoga, the Eightfold Path of Patanjali*



(Bennett, 2002; Iyengar, 2005; Jois, 2016)

As the meaning of yoga has varied throughout contexts and that yoga practice is closely intertwined with traditions and philosophical frameworks, we aimed to investigate the conceptualisations of yoga in general, as well as of yoga philosophy and yoga practice in particular. As conceptualisations of yoga according to regular practitioners have not been reported in previous research, our study seeks to explore these facets of yoga as experienced by practitioners and informed by academic literature. We believe that giving voice to practitioners' perspectives can expand the representation of yoga within and outside academia, providing insightful views.

The Current Study

This study follows up on previous studies investigating regular AY practitioners' (AYPs) perceptions of wellbeing (Ramirez-Duran et al., 2022a) and the dimensions of wellbeing (Ramirez-Duran et al., 2022b), by examining their conceptualisations of yoga in general, yoga philosophy and yoga practice. Along with the previous studies, this study is part of a broader research project examining the connections between yoga and wellbeing in regular AYPs, according to their own perceptions and experiences. The current study specifically focuses on examining regular AYPs' conceptualisations about these aspects of yoga separately, how these are interconnected, and how these perceptions can contribute to contemporary understandings of yoga.

To our knowledge, there are no studies about the conceptualisations of yoga from the perspective of regular practitioners. Since we aimed to understand how yoga is conceptualised by participants based on their own experiences and perceptions, our research inquiry was guided by a constructivist and phenomenological worldviews. For this, we utilised an ideographic approach with a predominately qualitative mixed-

methods design, integrating quantitative and qualitative elements during data collection and analysis.

Method

Participants

This study used a purposeful sample from the larger project which focused on AY and wellbeing, with 352 participants fluent in English and/or Spanish across 42 countries. Data were collected between April and August 2020 through an online survey (see Supplement 6.1). From the 352 participants who completed the online survey, 235 participants declared themselves as regular AYPs. A subset of 200 participants were included in this study, who met the criteria of being a regular AYP and completed at least one of three open-ended questions about yoga (see Supplement 6.1). From this sample, 188 participants described the meaning of yoga philosophy, 187 described the meaning of yoga, and 174 described their yoga practice. All participants were recruited online through social media platforms (i.e., Facebook, Instagram, Reddit, LinkedIn) and electronic communication from yoga studios and/or teachers. Participants comprised a diversity of demographic and AY characteristics. All procedures were approved by the University of Melbourne's Human Research Ethics Committee (protocol #1955377.1).

The majority of practitioners identified themselves as female (79.50%), Caucasian (57.50%), between 25 and 44 years old (59.50%), declared living in the Americas (32.50%) or Europe (26%), held a higher education degree (85.50%), and did not follow nor identify with any specific spiritual tradition (41.00%). Most participants had been practising AY regularly for one to ten years (68.00%), between three to six days a week (78.50%) for one to two hours each session (80.50%). The majority of

practitioners followed an only Mysore format (44.50%) or combined it with traditional Sanskrit led classes (24.50%), and their practice mostly involved full primary series up to intermediate series (62.00%). The vast majority of practitioners stated that their practice included *vinyasa* (96.00%), *drishti* (93.50%), free breathing with sound (91.00%), the use of *bandhas* (90.50%), and chanting of opening and closing *mantras* (86.50%).

The majority of this sample of regular practitioners considered yoga philosophy relevant (74.50%) and engaged with it at least once a month (79.50%) by reading books and texts (81.00%), undertaking online courses (54.50%), following social media (54.01%), reading blogs (53.28%), and watching videos (49.00%). Most practitioners (at least 73.50%) estimated to practice the four external limbs of yoga (i.e., *yama*, *niyama*, *asana*, *pranayama*) to a high extent (i.e., seven or above on a 11-point Likert scale). Finally, most participants perceived that their AY practice positively contributed to their wellbeing (i.e., seven or above in a 11-point Likert scale), especially to their physical (69.50%), emotional (68.50%), and psychological (65.50%) wellbeing (see Supplements 6.2 – 6.6 for details).

Measures

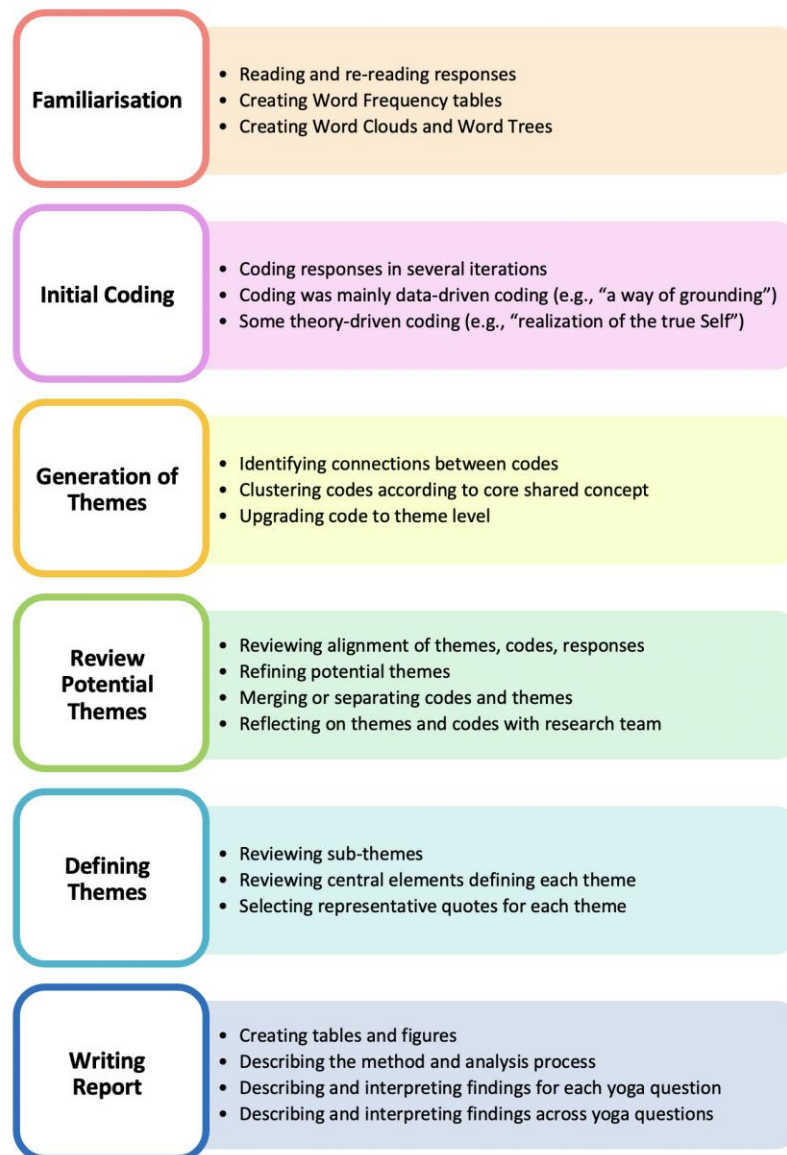
The online survey encompassed qualitative and quantitative items and was designed to assess an array of elements from yoga, wellbeing, health, personal traits, and demographic information. The survey was offered in both English and Spanish, with participants able to choose which language to complete the survey in. The current study incorporated questions about participants' AY practice, demographic information, and

three open-ended questions exploring their perceptions of yoga in general, yoga philosophy, and their yoga practice (see Supplement 6.1).

Data Analyses

Participants logged their responses using Qualtrics survey software (<https://www.qualtrics.com/au/>), which were then exported to NVivo (version 12) software for analysis. We analysed responses to the three open-ended questions in two phases. The first phase consisted of an overview of participants' perceptions by examining word frequency and creating word clouds and summary tables (see Supplements 6.7 – 6.9). This type of quantitative analysis allowed us to capture conceptualisations in their own words for each aspect of yoga, thus providing a general understanding of data before diving into a deeper qualitative analysis (Eichstaedt et al., 2021; McNaught & Lam, 2010). This analysis was also regarded as the first step of the second phase, enabling familiarisation with the data. Furthermore, this first phase also offers a broad perspective for readers to better understand the reflexive and interpretative process.

Figure 6.2. *Application of the Six Steps of RTA in this Study*



The second phase consisted of using Reflexive Thematic Analysis (RTA; Braun & Clarke, 2012; 2021) to systematically identify, reflect on, and interpret meaningful patterns across participants. We followed Braun and Clarke’s (2012; 2021) guidelines, and applied six iterative steps to analyse data, which comprised (1) familiarisation with the data, (2) generation of codes, (3) construction of candidate themes, (4) review of candidate themes, (5) definition and naming final themes, and (6) writing a report. More

details about these steps are provided in the next section (also see Figure 6.2). This six-step process was undertaken for each aspect of yoga separately (i.e., yoga, yoga philosophy, yoga practice), aiming to create core themes for each one of them. We then mapped themes across these aspects of yoga to visualise and identify any shared patterns of meaning and offer a general interpretation of the conceptualisation of yoga according to this sample of regular AYPs.

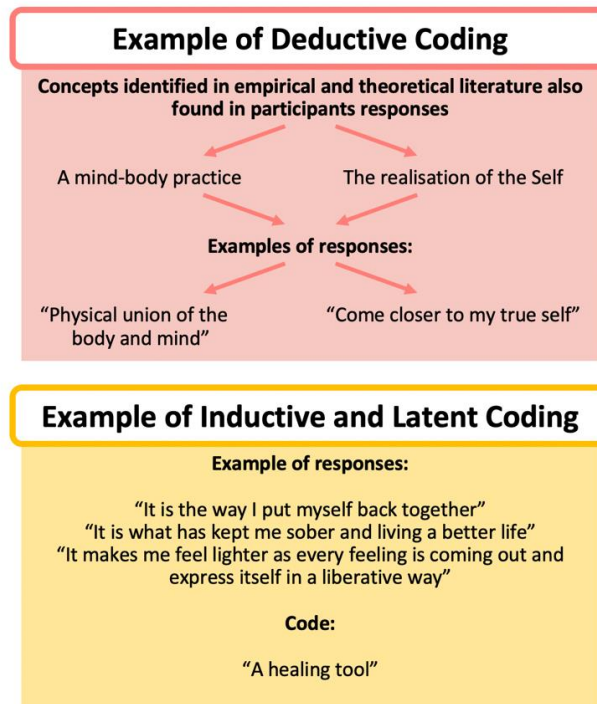
The Process of Generating and Defining Codes and Themes

For the creation of codes and themes, we estimated the relevance of the content shared by and across participants as core. This is aligned with the constructivist epistemology used for this study. Following RTA, the data analysis was undertaken by the lead author, due to her expertise with psychology, yoga, wellbeing, and AY in particular. RTA acknowledges the researchers' role in shedding light, shaping and informing the data analysis from their own values, background, and interests, while spotlighting participants' voices (Braun & Clarke, 2021; Terry & Hayfield, 2020). Reflexivity is a central part of this type of thematic analysis, and in this case, was achieved during the whole analysis process both by the lead author on her own and in collaboration with the other authors to sense-check thought processes and find alternate interpretations of the data (Braun & Clarke, 2021; Byrne, 2021). We acknowledge that the creation of the survey and the interpretation of results were influenced by our backgrounds. Nonetheless, this also enabled us to employ a common language with AYPs and to identify essential elements provided by participants.

The initial coding stage started after familiarising with data, as detailed above. Preliminary codes were created by utilising both an inductive and deductive approach,

and blending latent with semantic coding, a technique often used in RTA (Braun & Clarke, 2020; Byrne, 2021). The predominant approach for coding was data-driven (i.e., inductive) to best reflect participants' viewpoints. While theoretically-driven coding (i.e., deductive) was used by considering yoga literature and frameworks and consistent with RTA, codes were not pre-defined for data analysis (Braun & Clarke, 2021). For instance, for the analysis of the conceptualisation of yoga in general, the codes "A mind-body practice" and "The realisation of the true Self" represented a deductive approach, while the codes "A healing tool" and "A system of self-care and self-discipline" reflected an inductive approach (see Figure 6.3). The combination of latent coding with semantic coding was achieved through active interpretation of underlying meanings shared across participants while considering the significance of literal meaning in their choice of words. For example, while the code "A way of grounding, centring and calming" captured descriptions of participants' views at an explicit level, the code "A healing tool" often entailed interpretation beyond a semantic level.

Figure 6.3. *Examples of the RTA Coding Process*

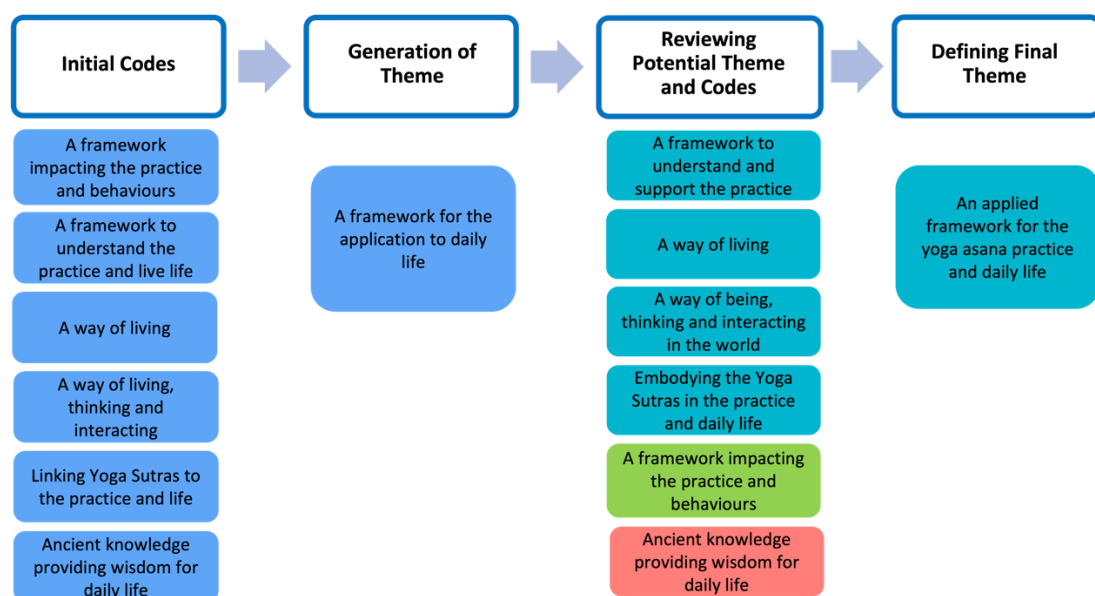


After coding was finalised for each aspect of yoga, potential themes were created and revised along with subsequent iterations of coding to refine both codes and themes to best represent the meaning conveyed by participants. Then, final themes were defined and included in this written piece, which represents the final stage of the RTA process. Figure 4 illustrates this process using a theme from yoga philosophy. During the initial coding stage, we created codes to represent participants' voices and then grouped six of these codes under the potential theme "A framework for the application to daily life" to represent different ways in which the philosophical framework of yoga was applied or was influencing participants.

We then continued refining the codes and reviewing the theme, repeating this process with other codes and themes, aiming to capture participant' views more accurately while comprehensively communicating their shared meanings through

coherent themes. For example, the preliminary code “A way of living” was created from semantic coding and separate from the preliminary code “A way of living, thinking and interacting” that involved latent coding. Upon close inspection, we changed the name of the latter to avoid confusion and best represent the meaning of the code by naming it “A way of being, thinking and interacting in the world”. The code “A framework that impacts the practice and behaviours” was merged with the aforementioned code and with the code “A framework to understand and support the practice”. The code “Ancient knowledge providing wisdom for life” was moved to another theme as we deemed that it best captured the shared meaning of yoga philosophy as a framework to understand the origins and background of the practice. Finally, when refinement and review of final codes and themes was completed, we defined each theme, selected representative quotes, and developed a summary table including word frequencies for transparency.

Figure 6.4. *Example of RTA Stages for Creating, Reviewing and Defining Codes and Themes*



Results

We first provide a descriptive analysis of the words used by participants to describe yoga, yoga philosophy, and yoga practice, and then turn our focus onto the reflexive analysis of themes for each of these aspects of yoga. This exploration of words and their frequency was considered a key element in the familiarisation phase of RTA, complementing the typical practice of reading responses in multiple occasions, with the aim of becoming closely interconnected to the data (Byrne, 2021). As stated in our previous studies (Ramirez-Duran et al., 2022a; Ramirez-Duran et al., 2022b), we contend that the exploration of word frequencies offers a landscape of the dataset when using large datasets and when responses vary in length, and provides the reader a clear illustration of findings to follow the description, interpretation and discussion of each theme.

Figure 6.5. Word Clouds of the Conceptualisation of Yoga, Yoga Philosophy and Yoga Practice



Participants' responses considerably varied in length (min = 1, max = 1,032), with an average of 30 words to describe each element of yoga (see Table 6.1). The word clouds in Figure 5 comprise the one hundred most frequently used words by yoga practitioners to define yoga, yoga philosophy, and their yoga practice. Words using a larger font represent a higher frequency (min = 4, max = 225), with no specific meaning for colour. Some word clouds contain more words with a larger font size, which is explained by the variation of word frequency and distribution of words (see Supplements 6.7 – 6.9 for details).

Table 6.1. *Overview of Regular AYPs' Responses Word Counts for each aspect of Yoga*

	Yoga	Yoga Philosophy	Yoga Practice
N	187	188	174
Min.	1	1	1
Max.	262	1,032	297
Mean	24.25	27.78	38.02
Median	14	13	26

We identified clusters of similar words within each aspect of yoga, as well as similarities across the three aspects that we investigated. For example, words such as “life” and “living”, “physical” and “body”, “mind” and “mental”, in addition to “self”, “peace” and “connection” were commonly employed across yoga in general and yoga philosophy. The yoga practice aspect was commonly depicted by the use of words reflecting the asana sequence and additional practices, such as “day”, “weekly” and “time”, “primary”, “intermediate” and “series”, and “asana”, “meditation”, “pranayama” and “breathing” (see Supplements 7-9 for details). Across the three

aspects of yoga, it was also common to find the word “feel”, which was mainly used to describe an emotion, a sensation or an experience (see Supplements 6.10 – 6.12 for word trees).

Table 6.2. *Conceptualisations of Yoga, Yoga Philosophy and Yoga Practice with Themes and Quotes from Regular AYPs (*)*

WB Dimensions	Themes	Representative Quotes	N	% (**)
Yoga	<i>Yoga is a holistic and multidimensional practice</i>	"A method for improving the physical part of myself and eventually influence the spiritual part" "To me yoga means that I can explore the relationship between my body and mind" "It is a door into looking at your life from a different place, to expand the perspective about existence and our human abilities, it is an opening into love in all its shapes and manifestations"	116	10.55%
	<i>Yoga is a tool for healing, coping and cultivating health and wellbeing</i>	"Before I practised Ashtanga I had physical pain walking and so it helped me alleviate that" "A tool to feel better, to cope with life, a belief, a lifestyle" "Yoga is a way I balance both my mental and physical health, and has become the dominant method I use for both"	54	5.91%
	<i>Yoga is a method for knowing, accepting and developing the self</i>	"Getting to know myself and break free from my own limitations" "For me yoga is the sum of tools, practices, perspectives, inner and external states that facilitate and drive self-knowledge, liberation of imposed and pre-established patterns" "For me it is a path for self-knowledge and personal realisation"	74	6.73%
	<i>Yoga us a way of being, living and seeing the world</i>	"It's a way of life and I find is very grounding and calming" "A philosophical system that provides a framework for navigating life as a human" "It's my lifestyle, it's the way I connect to myself and to others" "To be in tune with yourself and with the world"	108	9.82%
	<i>Yoga is the journey towards the realisation of the Self</i>	"Freedom from the suffering caused by my mind" "Calming the mind and the union with everything" "I see yoga as a collection of meditative practices designed to unite the conscious experienter with their truest nature"	76	6.91%
	<i>A collection of teachings for the knowledge and evolution of the self</i>	"An ongoing journey of bettering life and self" "Yoga philosophy means learning to know and love thyself. Trust and be kind. Shape, learn and evolve" "Self-discovery and acceptance"	43	3.91%

Yoga Practice	<i>An applied framework for the yoga asana practice and daily life</i>	“Yoga philosophy is the knowledge that has been gathered over thousands of years that explains the system of yoga and puts some reasoning behind why we do what we do” “I guess it provides a way of being in the world and guidance around how to behave and consider oneself and others”	112	10.18%
	<i>A spiritual path towards the understanding of reality, human nature and beyond</i>	“Yoga philosophy for me means getting in touch with my true nature and being reflective on where I am in my spiritual journey” “An inner work/journey while learning to trust forces beyond my existence”	39	3.55%
	<i>A framework to understand the foundations and origins of the practice</i>	“The tradition and the spiritual aspects of my practice” “The history and theory yoga is based on” “The root and core of the practice. Without yoga philosophy my practice would feel more like stretching or exercise without any deeper aspirations.”	46	4.18%
	<i>Attitudes and engagement towards Yoga Philosophy</i>	“It is not very important” “It still seems really complex to me, but I always try to learn more” “The study of the Yoga Sutras”	31	2.82%
	<i>Description of the elements included in the yoga practice</i>	“I do my full primary practice almost 6 days a week right after waking up in the morning” “Mostly Mysore for asana 5 or 6 days a week. Pranayama practice at same frequency. Mindful meditation 4 days a week” “My practice starts with 20 minutes of meditation, followed by 90 minutes of asana, and finishes with 30 minutes of pranayama”	260	23.64%
	<i>Outcomes and applications of the yoga practice</i>	“Yoga threads through everything. Thoughts, words, actions, re-actions, state of consciousness, understanding life, health of the body and the mind” “I do my best to be introspective and ethical in action” “It always makes me feel good. Despite the mental and physical discomfort, everything keeps healing.”	37	3.36%
	<i>Adapting the practice and learning from challenges</i>	“I struggle with some physical disabilities/injuries, so I have to practice very carefully. I’m not looking for getting new poses also because of I see how strong the simplest practice can be” “Will perform the sun salutations and finishing postures as a bare minimum and if I’m pushed for time”	69	6.27%

<i>Expanding the yoga practice through additional elements</i>	"I have lost flexibility over the years. I added a yin yoga practice several times a week, and that seems to be helping a great deal." "Daily chanting of Bhagavad Gita and Patanjali's Yoga Sutras. Reading of Vedas, Upanishads, Puranas, Epics"	35	3.18%
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* see supplement 13 for details of sub-themes

** percentages were calculated based on the total mentions (N) within each of the three aspects of yoga

Conceptualisations of Yoga in General

The first theme was *“Yoga is a holistic and multidimensional practice”* and was defined as representing a multifaceted practice entailing physical, mental, and spiritual components, which can be experienced on their own or as intertwined with others. For example, for some participants, yoga was only experienced as a physical exercise, noting for example that yoga was *“a form or exercise that I enjoy, calling it anything more than that would be problematic”*. Other participants specifically identified yoga as a form of mind-body practice by referring to it as *“a form of exercise, not only physical, but also psychological and spiritual”*. For other practitioners, yoga represented purely a spiritual practice, for instance writing that *“yoga is divine connection, discipline and evolution”*. Others focused on yoga as a contemplative practice, perceiving yoga as *“moving meditation”*. Or in words of another practitioner, yoga *“provides a constant platform from which I can observe how my body and mind are feeling in that particular moment; it serves to remind me each time I practise to be more humble and forgiving of myself and to keep things in perspective”*. This theme reflects the nature of yoga as offering different avenues for practitioners to engage with, and addressing physical, mental and spiritual dimensions separately and as a whole.

The second theme was *“Yoga is a tool for healing, coping and cultivating health and wellbeing”* which defines yoga as a tool that practitioners use for healing at a physical and/or a mental level, for coping with challenges and navigating life, and for fostering, improving and balancing health and wellbeing. Some participants specifically referred to healing effects. For example, one participant spoke about yoga as *“a way of healing ourselves”*, while another asserted that *“yoga has provided a physical avenue to*

processing complex childhood trauma". Other participants emphasised the coping skills and resilience that yoga can provide. For instance, one practitioner said, *"I strongly believe that my yoga practice makes me a better person and more equipped to deal with the challenges that life throws at us"*. Participants also perceived yoga as a health and wellbeing tool. One practitioner spoke about yoga as *"a way to maintain my mental health"*, while another said that *"yoga is a way to nourish my mind and body, I have dealt with anxiety and depression for years, but the method of breathing and physical activity of yoga have helped me cope"*. This theme represents the relevance of yoga as a set of skills that can assist practitioners not only to deal with and recover from health conditions and trauma, but also to foster and maintain health and wellbeing.

The third theme was *"Yoga is a method for knowing, accepting and developing the self"* and was defined as a system that promotes self-care and self-discipline, that enables a process of self-inquiry and self-discovery, and can lead towards the development and transformation of oneself. For instance, the concept of discipline and care towards oneself is reflected in the word of one participant who stated, *"yoga means commitment, to myself and the practice, showing up every day and constantly finding ways to improve my practice and myself"*. Other participants highlighted aspects of reflection, inquiry and understanding of oneself. For example, one participant spoke about *"the equilibrium and the self-knowledge that allows me to connect with my own being; transformation and growth"*, while another described it as *"a way of knowing my body and its limitations, as well as of my mind, it is a constant learning about my being and acceptance of life"*. In terms of development and transformation of the self, some participants pointed out more egotistic elements, while others identified more

transcendental elements. For example, the former was captured by a participant who expressed that *“yoga makes me feel proud of myself, every time that I improve on my asanas”*, and the latter is reflected in a practitioner who defined yoga as *“a tool for self-knowledge and that gives me the possibility to observe myself and motivates me to want to evolve as a human being”*. This theme seems to encapsulate one main purpose of yoga from different perspectives, which is related to the understanding and the evolution of the self.

The fourth theme was *“Yoga is a way of being, living and seeing the world”* and it was defined as the internal lens to perceive and connect with oneself, the principles and guidelines by which one lives life, and the external lens to perceive and connect to others and with the world as an extension of oneself. One aspect of this theme was the perception of yoga as a way of being more grounded, centred and calmed. For example, one practitioner spoke about yoga as *“a way for me to be better to others, and in return, I feel more grounded and able to deal with stress”*, and another said that it *“helps to ground me and gives a lot of meaning to my life”*. Another essential aspect of this theme was the perception of yoga as a way of living. In words of one practitioner, *“it means a way of life that helps me deal with all that is happening in the world and how to appreciate everything we have, even our negative feelings”*. Another practitioner described it as *“a way of life, it means to practice awareness and to be fully present in my life”*. Some participants also highlighted the aspect of connecting with others and having a sense of community. For instance, one practitioner noted *“it is a way of living, which rules the way you relate with others”*, while another spoke about yoga as *“a wonderful anchor that helps me stay grounded, centred and mindful; it provides me with*

a sense of wellbeing, curiosity, community and safety". This theme depicts yoga as transcending the practice level and positioning itself as an embedded framework that can influence practitioners' perceptions and experiences of themselves, of others, and the world, and guide their behaviours.

The fifth theme was *"Yoga is the journey towards the realisation of the true Self"* and was defined as looking beyond the nature of the human mind by gaining stillness and clarity to see oneself and the true nature of the Self. Some practitioners highlighted yoga as *"a way to calm the mind"* or as *"stilling the mind and living in equanimity"*. Stilling the mind and seeing clearly entails the acknowledgement of the nature of the human mind before recognising and tapping into the true nature of the Self. This ulterior form of awareness was expressed through two ideas. One was the experience and practice of a state of union or oneness. In words of one practitioner, yoga *"is the union of the body, mind and spirit. It is a method for calming the mind, for observing myself and get to know my own essence, for connecting with my soul and with what unites me with everything in this physical plane and in a universal plane, which transcends the physical"*. The other core idea was the realisation of the Self, which was portrayed by one practitioner as *"the state of consciousness, union, oneness with the Self"*, and by another as *"discovering the true nature of oneself"*. This theme conceptualises yoga as a path or a process in which the practitioner is able to observe and embrace the nature of the human mind, developing higher levels of awareness that lead to the realisation of the connection of the individual consciousness (i.e., self) with the universal consciousness (i.e., Self).

Thus, yoga was conceptualised as a practice that practitioners do, as a tool that practitioners use to improve health and wellbeing, as a method for personal growth, as a lifestyle and worldview, and as a spiritual journey. These forms of conceptualising yoga are consistent with empirical and scientific literature where practitioners have been found to engage with yoga in one or more dimensions (Iltzan & Jegatheeswaran, 2015) and the use of yoga as therapy (Bennett, 2022; Van der Kolk, 2017) and for wellbeing (Gaiswinkler & Unterrainer, 2016; Iltzan & Papantoniou, 2014). Conceptualising yoga as a practice including physical, mental, spiritual, and contemplative elements as well as encompassing particular worldviews and behaviours encapsulates the evolution of yoga into a hybrid modern practice (Singleton, 2010). It also aligns with the yoga literature conceptualising yoga as a practice fostering self-knowledge and transformation (Vivekananda, 2012), cultivation of higher levels of awareness and realisation of the Self (Kidd & Eatough, 2017).

Conceptualisations of Yoga Philosophy

For conceptualisations of yoga philosophy, the first identified theme was “*A collection of teachings for the knowledge and evolution of the self*” and depicted yoga philosophy as a set of teachings involving the cultivation of self-awareness and observance, and providing an avenue for the reflection, discovery, understanding and evolution of oneself. Some participants highlighted the contemplative teachings. For instance, one participant spoke about “*the self-understanding of life experience and the process of thoughts in the mind*”. Other participants perceived yoga philosophy as a way to connect with, accept, and understand oneself, while for others it also meant a path

towards self-evolution and transformation. The following description provided by a practitioner encapsulates all these elements:

“It is a very beautiful and loving way of looking at human existence, the processes of evolution and growth. It helps me to understand my deepest feelings and to accept the temporary transit called life, fostering self-love and it has helped me to find a sacred place, time and space for myself. Without a doubt the practice opened internal portals that nowadays make me feel more conscious and in synch with how my soul and humanity feel.”

This theme suggests that yoga philosophy can allow a deeper understanding of practitioners, as well as promote personal growth and transformation when they engage with its teachings.

The second theme was *“An applied framework for the yoga asana practice and daily life”*, defining yoga philosophy as applied knowledge that enables a better understanding of the yoga practice and permeates into practitioners lives by influencing their lifestyles and ways of being, thinking and interacting with the world. For some practitioners, yoga philosophy was considered a fundamental component for supporting and deepening the practice. For instance, one practitioner stated that *“yoga philosophy adds another level to the Ashtanga method, it is essential to deepen the understanding of the practice”*. Other practitioners stressed the role that principles and values play in their lives. For example, one participant referred to yoga philosophy as:

“the mindset/values by which I practice, and the intention to carry that mindset/values off my mat. The more I practice yoga, the more those values are

engrained in who I am. I learn what I need to focus on or change as I practice.

These lessons on my mat reveal truths about my life off the mat.”

A subset of practitioners specifically mentioned elements from the Yoga Sutras in their conceptualisations, for example:

“For me, the Ashtanga method provides a clear path for applications of the yamas and niyamas in everyday life. I find that the asana practice prescribed by Ashtanga provides experience of non-violence, truthfulness, non-stealing, moderation, forgiveness and compassion (ahimsa, staya, asteya, mitahara, ksama and daya)”.

This theme represents the embodiment of principles and teachings contained in the philosophical sphere of yoga both during the daily practice and in daily life, as well as the dynamic interconnection between philosophy and practice.

The third theme framed yoga philosophy as *“A spiritual path towards the understanding of reality, human nature and beyond”*, representing existential and spiritual reflections and connections within oneself, with others, and a divine plane. Some participants underscored the premise of stilling the mind and embracing impermanence as essential to understand reality. For example, one practitioner said that *“yoga philosophy is a structured and well researched method to create clarity within the mind and enable true insight into the nature of reality”*. Other practitioners referred to the interconnection between body, mind and spirit as one core principle of yoga philosophy. One participant spoke about *“the combination of breath and movement to unite the body, mind and spirit; the deepening of a spiritual flexibility and spiritual awakening so that one can navigate through life with grace, integrity and peace”*. Some

participants specifically addressed the issue of realising the true nature of oneself, as being one with a universal consciousness. In words of one practitioner: *“Yoga is a roadmap to liberation. It is the path to self-knowledge, to the re-encounter with our essence and recognise ourselves with divinity. For awakening from our spiritual amnesia and remind us of our natural state: love”*. This theme represents the spiritual quest in which participants may embark through the engagement with yoga philosophy, whether that represents developing a deeper connection to oneself and achieving mental steadiness and clarity, or with everything surrounding oneself, including the divine.

The fourth theme was *“A framework to understand the foundations and origins of the practice”* and was defined as perceiving yoga philosophy as an ancient cosmovision that needs to be acknowledged and provides a foundation for the contemporary practice. For one practitioner, yoga philosophy *“is the understanding where yoga came from, what a yoga practice is all about and what benefits can provide the mind and the body”*. Another participant noted that *“I like knowing as much about the philosophy underlying yoga as I can [...] because I feel that taking the time to understand it is the most respectful way to engage with a culture and tradition that are not originally my own”*. Other participants also pointed out similarities with other philosophical or spiritual traditions that were relevant to them and connected with their understanding of yoga. For example, one practitioner stated that *“I can relate parts of yoga to Buddhism, and being with the breath is the same as trying to live in the moment, which you can find in Buddhism”*. Another aspect that was spotlighted by some participants was the way in which yogic worldviews are closely intertwined with yoga practices. In the words of one practitioner, yoga philosophy was depicted as it follows:

“It’s a way of life... and we cannot become sages overnight... so I personally believe that every day we work on ourselves. May it be on the mat or in situations or reacting to unwanted things... I find yogic philosophy in it, some way or the other it is related to everything we think, feel and do in life.”

This theme seems to reflect the importance of acknowledging the heritage and understanding the worldviews that gave birth to yoga as a comprehensive system of philosophy and practice, which may resonate in particular ways due to the practitioners’ belief system and life experiences.

The fifth theme was *“Attitudes and engagement with Yoga Philosophy”* and represented the range of attitudes and behaviours held by participants in regard to yoga philosophy. A number of practitioners explicitly reported having minimal engagement with yoga philosophy or considering it as not relevant. For example, one practitioner said that *“I don’t pay much attention to the philosophy”*, while another mentioned that *“I’m not particularly affiliated with any yoga philosophy, as I don’t think about it often when I practice”*. Other practitioners expressed the feelings that it evoked, such as *“overwhelmed”*, *“inspirational”* or *“humbled”*. Participants also referred to the importance of self-study and to acquiring their own understanding of aspects of philosophy that could resonate with them and thus, apply to their lives. For instance, one participant noted that *“I started studying [yoga philosophy] because I started to see certain relationships between meditation, yoga and Buddhism”*, while another stated that *“I am rather not dogmatic [...], my philosophy covers several fields and would not only refer to a single discipline”*. This theme represents the diversity of views and

complexities in understanding and relating with yoga philosophy as a broad umbrella term gathering different teachings that can be connected to other fields.

In summary, yoga philosophy was conceptualised as a collection of ancient teachings reflecting ways of understanding human nature and higher levels of consciousness, organised into an applied framework that serves yoga asana practice, guides ways of living, and supports personal and spiritual development. Consistent with previous research on yoga practitioners, attitudes towards philosophy and immersion in yoga as a broader system are varied, which relates to different experiences regarding the practice and its benefits (Gaiswinkler & Unterrainer, 2016). Although some may argue that AY is mostly a physical practice (Sarbacker, 2014), it seems that regular practitioners value traditional teachings about spirituality, the nature of reality, and ethical principles.

Conceptualisations of Yoga Practice

For conceptualisations of yoga practice, the first identified theme was “*A description of the elements of the yoga practice*” and reflected the most representative set of features that are usually practised. It mainly reflected descriptions of the asana sequence, the modality of the practice, the frequency and time dedication, as well as chanting, meditation and pranayama at the beginning and/or at the end of the practice. For example, one practitioner described their practice as “*I go to a shala about 3 to 4 times a week for Mysore style practice, plus led class once a week*”. Another practitioner said:

“My asana practice consists of surya namaskar A and B, standing poses, full or half primary and second until dwipada, urva dhanurasana plus drop backs and

closing [...] In addition to my asana practice I do alternate nostril breathing, try living my life being kind towards myself and others, and try observing my mind and not grasping onto my emotions.”

This theme seemed to reflect and expand on what participants had previously reported in the online survey by completing closed ended questions, occasionally providing further details that were not captured in the survey.

The second theme was “*Outcomes and applications of the yoga practice*” and reflected the benefits practitioners experience from the practice as well as the applications off the mat and into daily life. This was comprehensively expressed by one practitioner:

“I practice on my own, in my lounge room, as I live in a regional area without an Ashtanga yoga teacher. I attend classes or workshops when I can, or if I’m visiting the city. I have young children, so my practice often occurs alongside someone asking where their socks are, what’s for lunch or to tell me that their brother hit them! I consider this to be part of my practice. Nothing is perfect. The idea of always practising in a perfect, quiet yoga shala rarely occurs for me! If I want to practice yoga, I need to choose to accept that my environment is not always the stereotypically perfect yoga environment. But it’s perfect to me.”

Another practitioner spoke about the practice in terms of the benefits, saying “*I’m less concerned about the physical aspect, although it has been incredible, and more about what the practice brings me mentally and spiritually*”. This theme reflects how the practice is lived by practitioners beyond the formal asana practice, how it is carried out

in real life settings and the benefits that they perceive that they are gaining from having that regular practice.

The third theme was *“Adapting the Ashtanga Yoga practice and learning from challenges”*, which was defined as tailoring the yoga practice to the practitioner’s personal needs and circumstances and learning from the challenges that may lead to such adaptations. While practitioners described how they would modify their practice, they still recognised following the foundations of the AY method. For some practitioners, these adaptations were directly related to the COVID-19 pandemic, in terms of shifting to a home practice, online practice, or due to mental challenges related to lockdowns. For example, one practitioner spoke about *“After COVID my practice has been a home practice, I struggle without having the environment of teacher and other students to inspire me to stay present for the entire practice”*. Other participants described the way in which they navigated changes and adapted the practice accordingly, due to injuries, motherhood, time, work commitments, or other constraints. In words of one practitioner: *“Now that I’m in my late 50’s, it is more challenging with aches and pains, but I can feel how good it is for me. I’m steady but the energy levels shift a lot. I just show up and do what I can”*. Other practitioners specifically referred to how they were challenged by the practice or how they struggled while practising. For example, one practitioner mentioned *“It is quite challenging physically and mentally. Some postures are very demanding, and I work a lot to get better in them.”* This theme represented how practitioners at different times in their life may encounter obstacles to practice the way in which they were once able to do so, representing an opportunity for growth and learning, with many persevering through and adapting to the challenge.

The fourth theme was *“Expanding the Ashtanga yoga practice through additional elements”* and was defined as complementing the AY method with other practices that help to bring a balance or enhance the experience of the practitioner. For example, some practitioners referred to incorporate another asana practice alongside the AY practice. One practitioner mentioned that *“two to three times a week I will practice Yin/restorative yoga in the evenings as I find this helps to balance out the Yang nature of the Ashtanga Yoga practice”*. Other participants stated that studying yogic texts and yoga philosophy was part of their practice. For instance, one participant said that *“I read philosophy and writings on philosophy daily, I try to incorporate mindfulness into my daily life”*. Other practitioners mentioned the relevance of their teacher in supporting them to find ways to adapt or balance their practice. For example, one practitioner expressed that *“I have in the past modified my practice alongside the advice of my teacher to make it easier to manage in times of stress to remove the thinking element of whether I should show up or not”*. Similar to the prior theme, this theme speaks about building a personal practice by seeking elements, not only within, but also outside the AY method to support, deepen and expand the yoga practice.

Overall, the yoga practice was conceptualised not only in terms of the elements and features contained in the daily AY asana practice, but also in terms of how the practice is malleable and evolving according to particular circumstances and needs, how it can draw upon wisdom from other practices and how the practice permeates into daily life. Although most of the aspects contained in this general conceptualisation of yoga practice have not been reported in studies, it seems to match anecdotal evidence on what happens in AY studios. It also seems to represent the constant evolution of the

yoga practice through various contextual influences (Jain, 2014). Importantly, the applied aspect of the practice onto daily life is aligned with the argument that the AY practice was developed and intended to be practised by people with social and family commitments (Maehle, 2006).

Discussion

Findings from our RTA yielded between four and five themes for each of the three aspects of yoga that we focused on for this study. In this section, we further analyse, synthesise, and integrate the themes we identified in yoga, yoga philosophy and yoga practice by looking across them in more detail and discussing shared perspectives amongst participants, to extend our current understanding of yoga from regular AY practitioners' viewpoints.

Shared Meanings Across Yoga, Yoga Philosophy and Yoga Practice

After conceptualising each aspect of yoga according to practitioners' perspectives, we examined themes across yoga, yoga philosophy, and yoga practice. When further analysing these themes, we identified three common threads that depict yoga as intertwining theoretical and philosophical aspects with traditional and contextual practices that practitioners adopt according to their own lived experiences and belief systems. We have grouped these common threads into three overarching themes, which are discussed in the next sections and illustrated in Figure 6.6 (also see Supplements 6.14 – 6.16 for examples).

Figure 6.6. Overarching Themes Across Yoga, Yoga Philosophy and Yoga Practice



Yoga as an Embodied Framework to be Used On and Off the Mat

The first common thread across the yoga aspects that we examined, was found amongst the themes “*Yoga is a way of being, living and seeing the world*” from yoga in general (fourth theme), “*An applied framework for the yoga asana practice and daily life*” from yoga philosophy (second theme), and “*Outcomes and applications of the yoga practice*” from yoga practice (second theme). We synthesised this common thread into the overarching theme “*Yoga as an embodied framework to be used on and off the mat*”, which conceptualises yoga as a worldview that imbues not only the formal practice, but also the way in which practitioners lead and live their lives. By embodied, here we refer

to both the embodied practice that usually takes place on the mat in the form of *asana* practice combined with other elements (e.g., *pranayama*, meditation), and to the embodiment of values, principles and beliefs connected to the yoga tradition (e.g., *yama*, *niyama*) through the enactment of habits and behaviours in real life and beyond the formal practice. Within this overarching theme, participants often referred to yoga and yoga philosophy as “*a way of life*”, and their descriptions provided details of how this was enacted through the application of the practice to thoughts, emotions and behaviours, or experienced via mental and spiritual benefits. Aligned with contemporary yoga literature, yoga is conceptualised beyond the physical practice, as a lifestyle system sustained in philosophical and ethical guidelines emanating from diverse sources of teachings (Feuerstein & Wilber, 1998; Jain, 2014; Jeffrey, 2020).

What practitioners eloquently expressed in terms of lifestyle and ethical practice is consistent with both traditional and contemporary literature. For instance, Jeffrey (2020) argues that yoga has been referred to as a way of living as early as in pre-classical and classical yoga texts, such as the *Rig Veda* (1,500 – 1,000 BCE) and the *Yoga Sutras of Patanjali* (200 – 400 BCE), evolving ever since into contemporary embodiments of yoga practices and worldviews by regular practitioners. In this study, the most cited text was the *Yoga Sutras*, with some practitioners referring to the *Vedas* or other traditional texts as ethical guidelines for a way of living. Besides practitioners referring to what can arguably represent some of the eight limbs of yoga when describing the yoga practice (i.e., *asana*, *pranayama*, *pratyahara*, *dharana*, *dhyana*), they mentioned qualities that explicitly or implicitly represented aspects of *yama* and *niyama*. These principles that apply to the attitudes and behaviours towards others and to oneself and have been

encouraged to be followed within and outside the AY tradition (Iyengar, 2005; Jois, 2016). Similar to our research, Jeffrey (2020) also noted how long-term yoga practitioners adopted and adapted ancient and traditional ethical teachings into their own lives and contexts in their own meaningful ways. These yogic ethical adoptions and adaptations offer the opportunity to reconsider what is the purpose of yoga in our current day and age, and the influence that yoga practitioners' viewpoint can bring to the table.

This overarching theme also indicates that this group of regular AY practitioners have what Buckingham (2017) refer to as an “integrated practice”, or the postural practice underpinned by the ethical practice. As discussed in the previous sections, this lifestyle can take manifold shapes according to participants' perspectives, including aspects concerning health and wellbeing, personal environment, interactions with others, patterns of thoughts and behaviours, and the relationship to higher consciousness (Vivekananda, 2012). Adaptations to the applications of traditional yoga teachings with the evolution of modern yoga as experienced by practitioners has its counterpart in the scholarly world. For instance, the interpretations of the *Yoga Sutras*, and thus the eightfold path of Patanjali across time and place, have multiple views that can vary significantly depending on the author and their context (Jeffrey, 2020). Additionally, some scholars interpret both *yama* and *niyama* as principles that can be applied simultaneously to oneself and others (e.g., Bennett, 2022). For example, *ahimsa* traditionally speaks about no harm, yet recent literature speaks about embodying positive qualities such as kindness, empathy, and compassion, not only in regard to others, but also towards oneself (Desikashar, 1995; Bennetts, 2022). Thus, how yoga

practitioners interpret and use these teachings can influence contemporary conceptualisations of yoga as much as what yoga scholars and teachers interpret and communicate about the theory and the practice.

Yoga as an Embodied Path for Self-Knowledge

The second common thread was identified between the themes “*Yoga is a way of knowing and developing the self*” from yoga in general (theme 3), “*A collection of teachings for the knowledge and the evolution of the self*” from yoga philosophy (theme 1), and “*Adapting the practice and learning from challenges*” from yoga practice (theme 3). We integrated these themes into the overarching theme “*Yoga as an embodied path for self-knowledge*”, which conceptualises yoga as a system comprising both a framework with teachings and insights into human nature and its evolution, and the set of practices that enable the experience and application of such framework in the formal yoga practice and in daily life. The core idea of this overarching theme is the embodied understanding and development of oneself. This means that self-knowledge occurs not only as cognitive and meta-cognitive processes by reflecting upon and observing oneself, but also occurs at an experiential level by feeling body sensations, abilities and limitations, and by enacting self-caring lifestyle behaviours and mindful interactions with others. This further implies that self-knowledge and self-transformation can take place both during the formal practice and the lifestyle practice.

While this overarching theme illustrates what has been documented in modern yoga literature as representing yoga as “a system of personal inquiry and experience” (Vivekananda, 2012, p.11), it also resonates with Krishnamacharya’s and Jois’ view of the physical body as a place of attention, observation, and experimentation (Sarbakar,

2014). Here, however, practitioners have highlighted that this personal inquiry and experience transcends the physical practice, and flows into daily life, either as an intentional practice or as a state. Fiori and colleagues propose that since the practice of AY is personal and often embedded as a lifestyle, the increased dedication and immersion may lead to an enhanced level of self-awareness, self-compassion, and a greater focus on self-realisation (Fiori et al., 2017). Although we cannot draw casual relationships in this study, this might be the case for this group of practitioners. In a previous study with the same group of regular practitioners, participants' embodied perceptions of wellbeing spoke about heightened levels of self-awareness through the body (Ramirez-Duran et al., 2022a). Their conceptualisations of yoga as an embodied path for self-knowledge also speaks about this continuum between increased awareness of external and internal body sensations, emotions, thought patterns and behaviours, leading to increased consciousness of how oneself operates in and relates with the world. Thus, this path of self-knowledge may have ripple effects from within oneself, to social relationships, to the environment.

This further echoes Buckingham's conceptualisation of yoga as a "technology of the self" (2017, p.144), which is defined as "a microprocess, an ethical and aesthetic practice, a practice of the self [...], a way of acting with faithfulness to oneself" (2017, p.143). Here, practitioners articulated how yoga in general terms, and its philosophical and practical elements encompass methods to constantly calibrate and re-calibrate oneself through observation, acceptance, and actions. These actions can be seen as dynamic entangled processes involving what Barad (2007) calls intra-actions (i.e., in relation to oneself) and inter-actions (i.e., in relation to others). As argued by

Buckingham (2017), the integrated yoga practice (i.e., on- and off-the-mat) seems to interweave the personal work practitioners do on themselves with their relationship with others and the world around them. By integrated, she refers to the personal, social and political practice, entailing an embodied, ethical, and ecological approach (Buckingham, 2017).

On the one hand and at a personal level, this common thread conceptualises yoga as a path for developing an enhanced version of oneself, equipped with tools to navigate life. This speaks to recent research looking at postural yoga as contributing to self-regulation and resilience in regular practitioners (Sullivan et al., 2018b; Tyagi et al., 2016; Upadhyay et al., 2022). On the other hand, the ethical framework of yoga (i.e., *yama* and *niyama*) may support practitioners into a constructive engagement with themselves, others, and their environment. *Satya*, one element of *yama*, is closely intertwined with this, as it speaks to truthfulness and integrity in the relationship with oneself, others, and every other aspect of life (Bennetts, 2022). Elements from *niyama* are also represented in this overarching theme. While references to self-acceptance can arguably represent *saucha*, which has been interpreted as honesty, forgiveness, and self-compassion; self-discipline can be seen as *tapas*, which has been interpreted as determination, consistency, regular practice and mindful decision making (Bennetts, 2022). Hence, self-knowledge arises from within and from the relationships we establish in our worlds.

Yoga as a Path for Spiritual Awakening and Connection

The third common thread was found across the themes “*Yoga is a journey towards the realisation of the Self*” from yoga in general (theme 5), “*A spiritual path*

towards the understanding of reality, human nature and beyond” from yoga philosophy (theme 3), and *“Expanding the yoga practice through additional elements”* from yoga practice (theme 4), in particular the sub-themes related to the study of texts and yoga philosophy and to the connection to other belief systems. This thread was synthesised into the overarching theme *“Yoga as a path for spiritual awakening and connection”*, which defines yoga as an avenue that practitioners may choose to further develop themselves in terms of spirituality and transcendence. This spiritual journey can take diverse shapes according to each practitioners’ belief system, context and experiences. The central idea shared by participants here is the relevance of the practice and state of mental steadiness and clarity as a steppingstone into the experience of union and oneness within oneself, with others, and a divine plane, and into the awareness of the true nature of reality and being. This eventually encompasses the realisation of the Self as the true nature of being and a broadened or heightened consciousness, which may be facilitated not only through the formal practice, but by the engagement with the spiritual and philosophical foundations.

Within this overarching theme we can see what Sarbacker (2014) refers to as spiritual development collapsing into physical development in different modern postural yoga traditions, including AY. Through this knowledge, the links to spiritual and physical foundations are made visible and coherent (meaning making) for practitioners. Here, participants’ conceptualisations account their lived experiences through the practice with links to the meta-physical elements of yoga-related frameworks. While considering yoga as the evolution of the self, this spiritual-physical collapse can be interpreted in relation to the *pancha kosha* (i.e., five sheaths) framework conceived

within Vedantic philosophy. This model encompasses five levels of awareness in human existence, from gross to subtle: the physical body, the vitality body, the mental body, the wisdom body, and the bliss body, leading to the realisation of our spiritual nature at the core (Feuerstein, 2013; Vivekananda, 2012). Through the expansion of awareness through each of these layers, yoga practitioners would be able to embark in the quest towards the realisation of the true self, pure awareness or Self, which in Vedantic philosophy is the *Atman*. Noteworthy, this concept is also acknowledged in other yoga-related frameworks such as *Samkhya* and *The Yoga Sutras of Patanjali*, as well as in forms of Buddhism and Jewish mysticism (Feuerstein, 2013), which might explain how this state of oneness and higher consciousness resonates with practitioners from diverse backgrounds and beliefs.

It has been argued that modern postural yoga has gained greater popularisation due to meeting the expectations around physicality and remaining secular yet mystical and spiritual enough to be appealing for practitioners seeking personal and spiritual development (Sarbacker, 2014). This seems to be the case for this group of practitioners. Indeed, the philosophical and spiritual underpinnings of yoga combined with its physicality is what distinguishes it from other forms of purely physical or purely spiritual practices (Jeffrey, 2020). What practitioners reported in this study also speak about what the main proponents of modern postural yoga, and AY in particular, envisioned and underscored: the relevance of spiritual development through the physical practice (Sarbacker, 2014). While embodying these teachings, still some practitioners conceptualised yoga as an either purely physical or mental practice. This aligns with previous research showing that practitioners may start a regular practice for physical

and/or mental health reasons, developing spiritual motivations as they deepen their practice (Büssing et al., 2012b; Ivtzan & Jegatheeswaran, 2015; Park et al., 2014; Park et al., 2019). This goes back to *hatha* yoga and the idea that the physical practice brings about mental and spiritual benefits, irrespectively of which is the underlying motivation for practising (Sarbacker, 2014).

Finally, linking back this overarching theme to the ethical framework and practice of *niyama* in particular, key elements shared by practitioners reflect how these teachings permeate their experiences and perceptions of yoga. For example, *santosha* can be understood as contentment or equanimity, involving the acceptance of internal and external circumstances, and thus mental steadiness (Bennetts, 2022; Jois, 2016). *Svadhyaya* is interpreted as self-study leading to self-knowledge, which may entail personal habits, as well as thought and behavioural patterns, implying the ability to observe and accept oneself before being able to transform aspects of oneself (Bennetts, 2022; Jois, 2016). *Isvara pranidhana* means surrendering and devoting oneself to the divine or to a higher purpose, being able to transcend the ego, often implying a spiritual devotion, which from a psychological point of view can be considered as relevant for building resilience (Bennetts, 2022; Jois, 2016). These aspects seem to summarise what has been previously interpreted and articulated throughout this common overarching theme.

Integration of Common Threads

These three common threads represent the interconnection or entanglement of philosophy, theory, and practice in yoga as experienced and perceived by this group of regular AY practitioners. These threads reveal that themes and aspects of yoga cannot

be viewed entirely siloed and separate from one another. This entanglement truly represents yoga as a system of philosophies and practices that are in constant interaction with the context in which they continuously emerge, evolve, and become, as experienced, interpreted, and communicated by regular practitioners, scholars, teachers, and communities. In this group of regular practitioners, it seems that perceiving yoga as a firmly embedded lifestyle encompassing the formal AY practice (i.e., on-the-mat) as well as embodied adoptions and adaptations of traditional teachings, creates a fertile ground for an inner journey towards self-knowledge and spiritual growth. The “*practice of the self*” seems to happen in the space between where the physical and the spiritual collapse. Through micro-processes or intra-actions, practitioners gain an increased understanding of themselves, allowing them to transform aspects within themselves and in their relationships with the outer world. This might lead to heightened levels of awareness and into spiritual journey towards the realisation of their true self. Hence, similar to what has been reported in the mindfulness literature, yoga may be considered both a practice that can be performed and a state that practitioners can experience occasionally, as well as a way of being.

Implications and Future Directions

Conceptualisations of yoga by this group of regular AY practitioners reveal the entanglement of philosophical, ethical, and spiritual elements along with the formal postural practice, usually comprising *asana*, *pranayama*, and meditation. This suggests that scholars and researchers should not precipitate drawing assumptions about how practitioners perceive yoga as essentially a physical activity for physical fitness, health, or wellbeing. While this still might be true to many practitioners, it seems that higher

levels of immersion with yoga (i.e., moving from practice to lifestyle) bring about an integrated practice that is experienced as a state of being-in-the-world. Thus, future research could focus on longitudinal investigations on yoga practitioners to further understand the perception, evolution and entanglement of these elements, as well as the experienced pathways in which yoga provides benefits.

Furthermore, as an ancient tradition that has interacted in various contexts and with diverse cultures, worldviews, and practices, yoga keeps evolving within the modern world. While practitioners and scholars invest their efforts in acknowledging and understanding its roots, it seems necessary to also embrace the process of continuous de-construction and construction of yoga philosophy and practice as experienced by practitioners and scholars today. This implies incorporating practitioners' and research participants' viewpoints on what yoga means to them, before imposing a pre-determined conceptualisation devised unilaterally by researchers. These pre-determined definitions suggest the fixed nature of yoga, assuming that it only entails a few elements that might not be completely relevant to all practitioners. Similar to recent research on lay conceptualisations of wellbeing, applying a participatory lens in yoga research can contribute to the design of more inclusive and more accessible yoga programs and sessions.

Another important implication is the dissemination of research to a broader audience. Learning about what do long-term practitioners perceive and experience in relation to yoga may help in debunking myths set by mass media and popular beliefs. This means moving away from yoga stereotypes in which only few people with certain attributes (e.g., healthy, fit, flexible, young women) are improperly perceived as able to

practice or to benefit from the practice. In doing so, there is an opportunity to broaden the scope and attract the attention of a wider range of practitioners. The “scholar-practitioner” may play a key role in shifting paradigms in terms of yoga research and practice, contributing in different ways of generating knowledge in the field and making it more accessible.

Limitations

There are several limitations in this study that need to be acknowledged. Participants in this study were self-selected, which means that practitioners that were motivated to take part in the research and had access to digital platforms were included in the survey. This might have affected their responses as well as the variety in characteristics of the sample. Most of the participants included identified as middle-aged females, Caucasian, and well-educated, which also might have influenced the content of the responses. Another limitation is that findings from this study are not generalisable to other regular yoga practitioners, or to other groups of regular AY practitioners. Additionally, the nature of this study is mostly qualitative and followed an interpretative approach. While we estimate that our backgrounds and experience with yoga and wellbeing science were central in shaping the findings from this study, we also acknowledge that there might be other ways of organising and interpreting the information gathered in this investigation. Finally, our review of the yoga traditional and empirical literature, although thorough and rigorous, was not exhaustive by any means. We recognise the complexity of the history and roots of yoga, and have humbly synthesised the most relevant information to provide both breadth and depth to the background, analysis and discussion sections of this article.

Conclusion

Regular yoga practitioners have a complex and nuanced understanding of what yoga means to them, which can open up avenues for discussion, investigation and practice. Yoga was defined as a practice for health and wellbeing, a method for personal inquiry and growth, a way of living, and a spiritual quest. Yoga philosophy definitions intertwined with overall conceptualisations of yoga, and with perceptions of the yoga practice in particular. Yoga philosophy was defined as the collection of ancient teachings to understand human functioning and levels of consciousness, which offered a foundation and support for the yoga practice and living life. Yoga practice was defined as the formal daily AY practice, adaptable, ever-changing, and both permeable to other complementary practices and permeating into daily life. The entanglement of philosophical, spiritual and ethical underpinnings with the practice was noted in three common threads revealing the significance of yoga as an integrated practice, as an embodied path for self-knowledge, and as a path for spiritual development. Thus, yoga appears to be a *“practice of the self”* in which regular practitioners can enhance their understanding of themselves through intra-actions, evolving intrapersonal and inter-relational aspects within themselves, with others, and the world. The prevailing image of yoga as a physical practice for fitness, health and wellbeing seems to be more reflective of societal and scientific trends rather than being representative of regular yoga practitioners. Giving voice to them can contribute in continue shaping the everchanging yoga landscape in our current globalised world.

CHAPTER 7: PRACTITIONERS' WELLBEING AND YOGA PROFILES

Chapter Synopsis

Chapter 7 is a manuscript entitled 'Exploring wellbeing profiles, mindfulness, compassion, and personality traits in regular Ashtanga Yoga practitioners: A cluster analysis' submitted in January 2023 and currently under review in the journal *Mindfulness*. The purpose of this chapter, which comprises the fourth study of the thesis, was to explore similarities and differences in personal characteristics of regular AY practitioners in terms of their wellbeing, yoga practice, and traits like mindfulness, self-compassion, compassion, gratitude, quiet ego, extraversion, openness to experience, conscientiousness, emotional stability, and agreeableness. The chapter draws upon the quantitative data collected as part of this thesis. This chapter adds to the incipient empirical literature on profiles of regular yoga practitioners by specifically looking at wellbeing and a range of personal traits, and how different aspects of the AY practice relate to different dimensions of wellbeing and such traits. By using cluster analysis, it provides a different approach to the understanding of yoga and wellbeing and their connections. As with previous chapters, I have revised the numbering of tables, figures, and supplements contained in the original paper with the aim of maintaining consistency throughout this dissertation. Supplementary material for this chapter has been provided in a separate document and labelled as *Supplement 7*.

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Authors' Contributions

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	60%	80%	60%	80%	90%	n/a
Kern	40%	20%	40%	20%	10%	100%

Exploring Wellbeing Profiles, Mindfulness, Compassion and Personality Traits in Regular Ashtanga Yoga Practitioners: A Cluster Analysis

Abstract

Objective: Studies describing wellbeing, mindfulness, and personal characteristics of long-term yoga practitioners are uncommon, yet helpful for understanding the benefits stemming from yoga. This study investigates Ashtanga Yoga practitioners' (AYPs) wellbeing profiles to identify potential similarities and differences depending on practitioners' personal characteristics and their level of expertise with yoga.

Method: A purposeful sample (n=235) of regular AYPs was selected from a broader survey assessing wellbeing, health, yoga, and personal traits. Hierarchical and partitional clustering were used to explore and define clusters.

Results: K-means cluster analysis revealed six types of AYPs: (1) *The Mind Tamers*; (2) *The Not Too Bad*; (3) *The Into Philosophy*; (4) *The Into The Inner World And Beyond*; (5) *The Critical Ashtangis*; and (6) *The Average Autonomous Ashtangis*. All groups experienced high levels of wellbeing, believing that physical, emotional, and psychological wellbeing were positively impacted by their yoga practice. Groups differed in levels of wellbeing and which dimensions were perceived as being most influenced by their yoga practice, and different types of engagement with physical, mental, and spiritual aspects of the Ashtanga yoga practice related differently to wellbeing outcomes. Physical wellbeing is a common entry point for practitioners. Gratitude, self-compassion, and emotion regulation are relevant for emotional wellbeing, and long-

term practice combined with positive traits such as mindfulness and philosophy engagement appear central for psychological wellbeing.

Conclusions: Differences in AYPs illuminate ways of prioritising, amplifying, and consolidating changes in wellbeing. Further examination of the mechanisms of yoga is needed for more inclusive and holistic wellbeing research.

Keywords: Ashtanga yoga, yoga practitioners, wellbeing, cluster analysis, wellbeing dimensions, personality traits

Introduction

Health and wellbeing benefits of yoga that arise through participation in short-term interventions has been well documented in the academic literature (e.g., Cramer et al., 2013a; Hagins et al., 2013; Hendricks et al. 2017). However, studies describing yoga practice, motivations and other characteristics of long-term practitioners are less common, yet highly relevant to understand such benefits. While several studies describe the overall profile of a yoga practitioner (e.g., Cramer et al., 2019; Park et al., 2016; Penman et al., 2012), fewer studies have explored the profiles of different types of yoga practitioners in relation to wellbeing and the extent to which practitioners perceive that health and wellbeing benefits are due to their practice. Here, we focus on wellbeing and yoga profiles of regular yoga practitioners within a specific yoga tradition: Ashtanga yoga (AY). In this article, we first provide an overview of yoga and its relation to health and wellbeing outcomes, and then describe overall yoga practitioners' profiles and discuss research identifying specific groups of practitioners. We use a non-parametrical cluster analysis to explore wellbeing and yoga profiles, identifying and describing six groups of

practitioners. Finally, we discuss the findings and implications, limitations, and future directions.

Yoga Practice, Health and Wellbeing

Yoga is often defined as a holistic practice involving the physical, mental, and spiritual dimensions of the individual, evolving individual consciousness and connecting it with universal consciousness (Iyengar, 2005; Vivekananda, 2012). Emanating from Eastern philosophies, yoga philosophy provides a foundation for yoga practice. One widely disseminated philosophical framework is the *Yoga Sutras of Patanjali*, which describes yoga as the stillness of mental fluctuations (*Yoga Sutra 1.2*, Iyengar, 2005). Furthermore, the ancient text describes eight elements that should be practised and/or experienced throughout time by those who embark in the yoga path. These comprise *yama* and *niyama* (universal moral principles and behaviours with others and oneself), *asana* (physical postures), *pranayama* (breathing techniques), *pratyahara* (shifting attention inwards), *dharana* (concentration of attention), *dhyana* (meditation), and *samadhi* (a state of bliss and sense of oneness) (Iyengar, 2005).

Originated in the Hindu valley thousands of years ago, yoga arrived in Westernised countries about a century ago (De Michelis, 2005), and has often been practiced by focusing on physical postures, breathing exercises, and meditation (Büssing et al., 2012; Riggins, 2013). Yoga has had exponential growth in the past two decades, with millions of practitioners around the world practising a range of styles offered in different settings (McCrary, 2013). Research on yoga has also proliferated and significantly expanded over the last two decades, recently positioning itself as an established field of research (Poornima & Surulathi, 2018; O'Brien-Kop & Newcombe,

2021). Studies have examined the benefits of yoga, with a considerable body of research supporting the use of yoga for improvements of ill-health conditions including asthma (Cramer et al., 2014b), high blood pressure (Hagins et al., 2013), chronic neck pain (Cramer et al., 2017a), chronic low back pain (Holtzman & Beggs, 2013), and depression (Cramer et al., 2013a), amongst others. Evidence suggests that yoga can promote increases in subjective wellbeing both in clinical and general populations (Cramer et al., 2012a; Cramer et al., 2013a, Hendricks et al., 2017; Ivtzan & Papantoniou, 2014).

However, much of this evidence is based on the use of yoga as a short-term intervention rather than a long-term practice. According to the *Yoga Sutras*, the understanding of yoga and related benefits emerges and is experienced after long-term dedicated practice (*Yoga Sutra I.14*; Iyengar, 2005). Thus, focusing research on regular yoga practitioners allows the examination of trends in terms of health and wellbeing outcomes that people experience through a sustained practice. Studies suggest that long-term practitioners have distinct bio-physiological features (Tyagi et al., 2016; Vera et al. 2009) and experience enhanced levels of emotional and psychological wellbeing, with greater frequency and regularity of the practice related to greater benefits (Brisbon & Lowery, 2011; Ivtzan & Papantoniou, 2014; Moliver et al, 2013). Furthermore, research focusing on the differences between yoga practitioners and non-practitioners finds favourable health and wellbeing outcomes associated with regular yoga practice (Afonso et al., 2017; Krishna et al., 2015; Yoshihara et al., 2011). Hence, it seems relevant to further understand how people practice yoga, what drives them to begin and maintain a regular practice, and what personal attributes are involved in the yoga practice.

The Yoga Practitioner Profile

Numerous studies have described yoga practitioners around the world, mainly through different cross-sectional national surveys in the US, UK, Germany, Brazil, India, and Australia (Cagas et al., 2022a; Cramer et al., 2017b; Cramer et al., 2019; Dos Santos et al., 2022; Park et al., 2014; Park et al., 2016; Park et al., 2019; Penman et al., 2012; Ross et al., 2012; Ross et al., 2013; Telles et al., 2017; Schröter & Cramer, 2021; see Supplement 7.1 for a summary of relevant studies). Across these studies, several trends emerge. In general, yoga practitioners are primarily middle-aged and highly educated women living in urbanised areas in Westernised countries, who identify as Caucasian. One exception is a survey conducted in India, in which most participants were young high-school educated males (Telles et al., 2017). However, research in Chile and Cuba also suggests that yoga is mostly being practised by middle-class educated mid-aged women (Lizama, 2015). Practitioners tend to initiate a yoga practice mainly for physical and mental health reasons, and while maintaining physical benefits, they seem to shift towards more psycho-spiritual motivations as they develop a long-term practice (Park et al., 2014; Park et al., 2019). These findings are consistent with other research suggesting that practitioners' motivations evolve through practice and that they develop spiritual intentions as their practice becomes more established (e.g., Büssing et al., 2012; Iltzan & Jegatheeswaran, 2015). When comparing motivations by gender, Cagas and colleagues (2022a) found that men were mainly driven by physical activity, competition and social recognition, whereas women were motivated by physical, emotional and mental wellbeing.

Overall, studies reveal that yoga practitioners report high levels of wellbeing, which appear to be higher when compared to non-practitioners or general populations, even when practitioners may display high levels of mental health symptoms (Cramer et al., 2019; Dos Santos et al., 2022; Ross et al., 2013). The frequency and the longevity of the yoga practice appears to be intricately related to perceptions of health and wellbeing benefits (Park et al., 2019; Ross et al., 2012; Ross et al., 2013) as well as healthier lifestyles (Cramer et al., 2017b; Cramer et al., 2019; Penman et al., 2012). People also perceive positive changes in different life domains due to their yoga practice, including specific health conditions (Penman et al., 2012); vitality, happiness, relationships, and sleep (Ross et al., 2013); and general health, fitness, and relaxation (Park et al., 2014; Park et al., 2016). Notably, some surveys found that physical health variables were associated with the asana practice (Cramer et al., 2019; Ross et al., 2012), whereas *pranayama* and meditation were linked to mindfulness and subjective wellbeing (Ross et al., 2012). The implications of yoga philosophy have been less studied in yoga practitioners, but some evidence suggests that the inclusion of philosophical aspects in the practice may contribute to enhanced health (Ross et al., 2012). Thus, different elements of the practice seem to contribute to specific benefits.

These surveys provide a general picture of how people practice yoga and why they engage with and sustain a yoga practice throughout time, which contributes to the understanding of an overall profile of yoga practitioners across different contexts. However, few studies have investigated the extent to which practitioners endorse health and wellbeing benefits to their yoga practice. Additionally, frequency and years of practice seem to indicate differences across practitioners in their perceptions around

motivations, and potentially about health and wellbeing outcomes, yet studies have not looked at different types of yoga practitioners, nor explored specific yoga traditions separately. Thus, the question about profiles of different subgroups of practitioners has not been fully addressed.

Types of Yoga Practitioners

Notably, several recent studies have moved beyond basic descriptives to examine yoga practitioners' profiles (see Table 7.1). Kramer-Kostecka and collaborators (2022) investigated practitioners' motivational profiles and their associations with physical and psychological health using latent class analysis. Practitioners with high levels of mindfulness and low levels of motivations towards physical appearance were more likely to display higher levels of physical and psychological health. While this reinforces the relevance of cultivating an internal focus through the yoga practice, these profiles were limited to psychological variables mostly related to eating behaviours and ill-health.

Henrichsen-Schrembs and Versteeg (2011) used a grounded theory approach to study types of yoga practitioners in relation to motivations to practice, including physical and mental wellbeing, and their life course, identifying four groups: the pragmatists, the explorers, the self-helpers, and the mystics. The groups differed in terms of experiencing major disruptive life events and whether they mainly practised for wellbeing, personal growth, healing trauma, or as a lifestyle. These findings suggest that life circumstances may influence practitioners' intentions for practising yoga. Nevertheless, associations with health and wellbeing outcomes were not explored.

Two studies have looked at yoga practitioners' profiles using cluster analysis. Genovese and Fondran (2017) analysed yoga practitioners' psychological profiles by examining their spiritual and bodily perceptions. Using non-parametrical cluster analysis, they identified three groups of practitioners. More seasoned practitioners were more likely to value both the physical and spiritual aspects of the practice, while less experienced practitioners were more likely to be physically oriented and hold negative perceptions of their physical self. Interestingly, differences in terms of years of practice imply a trajectory occurs across various stages of yoga practice. However, differences might also be explained by the level of immersion with yoga. Using two-step cluster analysis, Cagas and colleagues (2022b) assessed perceptions of yoga, motivations for practice, yoga immersion, and practice characteristics amongst regular yoga practitioners. They identified three clusters: the exercisers, the yogis, and the postural yogis. They found that perceiving yoga as a psycho-spiritual practice was related to the level of yoga immersion, and not necessarily with years of practice.

Despite the valuable contributions of these studies, more research is required to understand the profiles and trajectories of yoga practitioners (Cagas et al., 2022; Genovese & Fondran, 2017), especially for different types of yoga practice. Previous research looking at yoga practitioners' profiles has mostly included a range of yoga styles. While focusing on a wider diversity may enable generalisations about yoga and the people who practice, the heterogeneity of styles can undermine more specific conclusions. Focusing on one particular yoga tradition as well as on regular practitioners can provide additional insights to the existing literature on practitioners' profiles.

Furthermore, a significant number of studies has looked at groups of practitioners as a whole, with fewer studies focusing on how sub-groups of practitioners share certain characteristics about their yoga practice, motivations, wellbeing, and personality. Wellbeing and personal traits have been under-studied for yoga practitioners' profiles (e.g., Bright et al., 2020; Yadav et al., 2015). While the current understanding is that practitioners tend to report high levels of wellbeing and to endorse positive changes in health and wellbeing to their yoga practice, there is less clarity about which dimensions of wellbeing are influenced in different types of practitioners. Moreover, selecting a range of variables beforehand without enforcing the clustering process on high or low levels of a couple of variables would allow exploring and describing what emerges from participants, rather than setting pre-existing boundaries. Thus, a non-parametrical cluster analysis including perceptions of different dimensions of wellbeing in practitioners following a specific yoga tradition could offer additional insights the studies described above.

The Ashtanga Yoga Practice

Here, we focus on Ashtanga Yoga practitioners (AYPs). Ashtanga yoga (AY), also known as Ashtanga Vinyasa yoga, is a method for practising yoga that distinguishes itself from other styles in the way in which is taught and practised. AY is usually taught individually within a group setting (i.e., Mysore style), where the teacher gradually guides the student through a sequence of postures according to their needs and context, while supporting their own practice. The progressive nature of the *asana* practice enables the cultivation of strength, mental steadiness and health over time (Jois, 2016). The focus on a particular *drishti* or gazing point with each *asana* allows the direction of

attention and concentration during the practice, facilitating a meditative state (Maehle, 2006). The continuous flow and lengthening of the breath with a gentle sound while moving through the sequence of postures is another feature of the practice. Breathing, *asana* and *drishti* are known as *tristhana*, which are the three pillars of the practice. Additionally, *vinyasa* or the synchronisation of breath and movement is threaded throughout the practice (Jois, 2018).

Maehle (2006) argues that the AY method may condense the eight limbs of the *Yoga Sutras of Patanjali* into one complete practice. By performing *asana* while using long and steady breath (*pranayama*) and *drishti*, the mind is able to focus (*dharana*), go inwards (*pratyahara*) and thus, cultivate meditation in movement (*dhyana*). Furthermore, Jois (2018) asserts that the *asana* practice can promote the dissolution of impurities, foster engagement with moral principles and behaviours (*yamas* and *niyamas*), and nurture self-transcendence (*samadhi*). The practice may also involve other elements such as chanting opening and closing *mantras*, use of energy seals or *bandhas*, and resting during certain days of the month. In general terms, AY is a systematised practice that encourages a regular and long-term practice.

Previous research on AYPs has looked at health and wellbeing outcomes (cf. van Aalst et al., 2020; Phillips, 2015), as well as their conceptualisations of overall wellbeing and different dimensions of wellbeing, identifying physical, emotional, psychological, social, and spiritual domains as relevant and interrelated to the practice (cf. Ramirez-Duran et al. 2022a; Ramirez-Duran et al., 2022b). Here, we consider wellbeing broadly defined as feeling good and functioning well (Deci & Ryan, 2008; Huppert, 2014). Yet, aligned with previous research using a social-constructivist paradigm and an ideographic

approach, we deem wellbeing as conceptualised by AYPs without imposing a specific self-report measurement, since the evaluation of wellbeing depends on such conceptualisations (Mitchell & Alexandrova, 2020). Thus, we propose a participatory approach where participants can quantitatively evaluate their wellbeing in different dimensions considering their own definitions.

The Present Study

The current study focused on exploring regular AYPs' wellbeing and AY practice profiles. The study aimed to investigate: (1) how perceptions of wellbeing varied across regular AYPs, depending on the characteristics of the practitioner, and (2) whether regular AYPs have distinctive profiles according to their expertise with yoga. The study employed a quantitative research design, complementing previous studies on regular AYPs, which have mainly used qualitative approaches to examine perceptions of wellbeing.

Table 7.1. Summary of Studies Examining Yoga Practitioners' Profiles

Authors	Study Aim	Type of Study	Variables Included	Yoga Styles	Key Findings
Cagas et al. (2022b)	Perceptions of yoga, motivations for practice, yoga immersion, and practice characteristics amongst yoga practitioners	<i>Two-step Cluster Analysis</i> (profiles based on perception of yoga and yoga immersion) (n=546)	- Socio-demographics - Perceptions of yoga (i.e., physical, psycho-spiritual and lifestyle) - Yoga immersion (e.g., years, frequency, supervision, style) - Motivation for practising (e.g., positive affect, fitness, nimbleness, mind-body integration, coping stress, health, spirituality)	- Ashtanga yoga - Hatha yoga - Hot yoga - Jivamukti yoga - Iyengar yoga - Power yoga - Sivananda yoga - Vinyasa yoga - Yin yoga	The Exercisers: perceived yoga more as a physical practice than a psycho-spiritual practice, and had low levels of yoga immersion. The Yogis: perceived yoga more as a psycho-spiritual practice rather than a physical practice, and had high levels of yoga immersion. The Postural Yogis: perceived the practice as both physical and psycho-spiritual, and had high levels of yoga immersion
		<i>MANCOVA</i> (differences in motivations for practising) (n=530)			
Genovese and Fondran (2017)	Practitioners' psychological profiles by examining their spiritual and bodily perceptions	<i>Non-parametrical Cluster Analysis</i> (k-means) (n=261)	- Socio-demographics - Spirituality (e.g., cognitive, orientation, experience, existential wellbeing) - Body image (e.g., appearance, fitness, health, illness)	- Anusara yoga - Ashtanga yoga - Baptiste yoga - Hatha yoga - Integral yoga - Iyengar yoga - Kripalu yoga - Kriya yoga - Kundalini yoga - Restorative yoga - Satyananda yoga - Sivananda yoga	Cluster A: highly valued spirituality and the physicality of the practice, and while holding positive evaluations of their appearance, they were less physically orientated. Cluster B: similar perceptions in terms of physical aspects, but were less spiritually inclined. Cluster C: more physically oriented while holding more negative perceptions about their appearance.

- Viniyoga yoga
- Vinyasa yoga

Henrichsen-Schrembes (2008)

Develop a typology of yoga practitioners in relation to the motivations for practising yoga and their life course

Grounded Theory
(n=27)

- Motives of yoga practice
- Integration of yoga into one's life
- Subjective wellbeing experienced through practising yoga
- Perceptions of oneself and life
- Self-development as part of the yoga practice

- Hatha yoga
- Iyengar yoga
- Kundalini yoga
- Vini yoga

The Pragmatists: no major disruptive life events and practised yoga for physical and mental wellbeing.

The Explorers: no major adverse life event, but in addition to physical and mental benefits, they also practised for self-exploration and growth.

The Self-Helpers: experienced a traumatic event in the past and tended to practice for therapeutic reasons and as a way of personal growth.

The Mystics: fully embraced yoga philosophy and spirituality, and practised yoga as a lifestyle by following physical and mental practices, as well as ethical principles.

Kramer-Kostecka et al. (2022)	Identifying motivational profiles in yoga practitioners and their associations with physical and psychological health	<i>Latent Class Analysis</i> (motivation profiles) <i>Multinomial Logistic and General Linear Models</i> (associations between profiles, physical health and psychological health) (n=297)	• Socio-demographics • Motivation for practising yoga (e.g., fitness, stress, appearance, awareness, spirituality) • Physical health behaviours (i.e., hours of physical activity and yoga) • Psychological factors (e.g., self-esteem, depression, stress)	• Not specified	High levels of mindfulness and low levels of motivations towards physical appearance were associated to higher levels of physical and psychological health
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Methods

Participants

The study used an intentional sample from a broader survey focusing on AY and wellbeing comprising 352 participants across 42 countries. Participants were fluent in English and/or Spanish. Of the larger sample, 235 participants considered themselves to be regular AYPs, and were used for the analysis here. Participants had a range of demographic and AY characteristics, which are explored in more detail below. Practitioners were recruited online using social media platforms (i.e., Facebook, Instagram, Reddit, LinkedIn) and via electronic communication from yoga studios and/or teachers. This research was approved by the University of Melbourne Human Research Ethics Committee (protocol #1955377.1).

Most participants identified as female (80%) and Caucasian (57.02%), ranged from 25 to 44 years old (61.71%), held a tertiary education or post-graduate degree (85.54%) and were located in either the Americas or Europe (61.70%). The majority did not identify with any spiritual tradition (26.81%), or defined themselves as atheist or agnostic (25.10%). Most of this group had practiced regularly for 1 to 10 years (66.81%), typically consisting of early morning sessions (62.98%) 5 to 6 days per week (53.19%), lasting about 60 to 80 minutes (60.85%). Most practitioners were practising from full primary series up to the first half of intermediate series (59.58%) in either a Mysore-only style class or a combination of Mysore and Traditional Sanskrit-counted led classes (68.94%). Their practice usually included *vinyasa* (96.17%), *drishti* (93.19%) and free breathing with sound (90.64%). In terms of the eightfold path framework, participants were more likely to include *asana* and *pranayama*, and to experience *dhyana* to a

greater extent compared to the other elements. They generally considered yoga philosophy relevant to their lives (78.72%) and engaged with related activities such as reading texts and books (74.04%) or attending online courses (48.94%) at least once per month (72.34%) (see Supplement 7.2 – 7.4 for a detailed description of demographic characteristics and AY practice).

Measures

We launched an online survey in April 2020 encompassing quantitative and qualitative items assessing aspects of wellbeing, health, yoga practice, personality traits, and demographic information. Participants could access the survey in English or Spanish until August 2020. All questions from the survey were translated into Spanish by the lead author, who is bilingual and native Spanish speaker. All questions were then back-translated by another bilingual speaker.

Questions about wellbeing and AY were devised specifically for this study, including categorical questions with multiple and single choices, as well as quantitative questions using an 11-point Likert scale (i.e., 0 to 10). We included six questionnaires to measure different personal traits, all of which used either a 5-point or a 7-point Likert scale: the *Ten Item Personality Inventory* (TIPI; Gosling et al., 2003), the *Gratitude Questionnaire Six-Item Form* (GS-6; McCullough et al., 2001), the *Freiburg Mindfulness Inventory Short Form* (FMI-SC; Walach et al., 2006), the Santa Clara Brief Compassion Scale (SCBCS; Hwang et al., 2008); the *Self-compassion Scale Short Form* (SCS-SF; Raes et al., 2011), and the *Quiet Ego Scale* (Wayment et al., 2015). For this study, we included a selection of questions from the online survey that were used for either clustering or for subsequent description of clusters (see Supplements 7.5 and 7.6 for details).

Data Analyses

Cluster analysis. Clustering is a set of data mining techniques that is used to identify, classify, and group patterns of data. These patterns (i.e., datapoints) within a cluster are more similar than those in other groups, thus representing cluster membership (Frades & Matthiesen, 2010). For purposes of this study, we used hierarchical and partitional clustering (i.e., *k*-means). We followed the five steps proposed by Frades and Matthiesen (2010) to guide our cluster analyses: (1) sequentially represent patterns, (2) determine similarity measure, (3) choose a clustering algorithm, (4) assess the output, and (5) create graphical representations of clusters.

The first step was to sequentially represent patterns, which was completed by selecting and then extracting the variables and features for clustering. In this study, we selected 16 variables across three categories. This included (1) demographics: age, gender, ethnicity, education, spiritual tradition; (2) AY practice expertise: years of regular AY practice, AY practice modality, AY elements included in the practice, time of practice, frequency of practice, duration of practice, consistency of the practice, asana sequence, and AY teacher; and (3) AY Philosophy: relevance of philosophy, frequency of engagement with philosophy). Participants' responses on each item were used as features, which were used by the chosen algorithms for clustering. Table 7.2 illustrates examples of continuous and categorical variables selected for clustering (see Supplement 7.5 for more details).

Table 7.2. *Sample of Categorical and Continuous Variables Selected for Clustering*

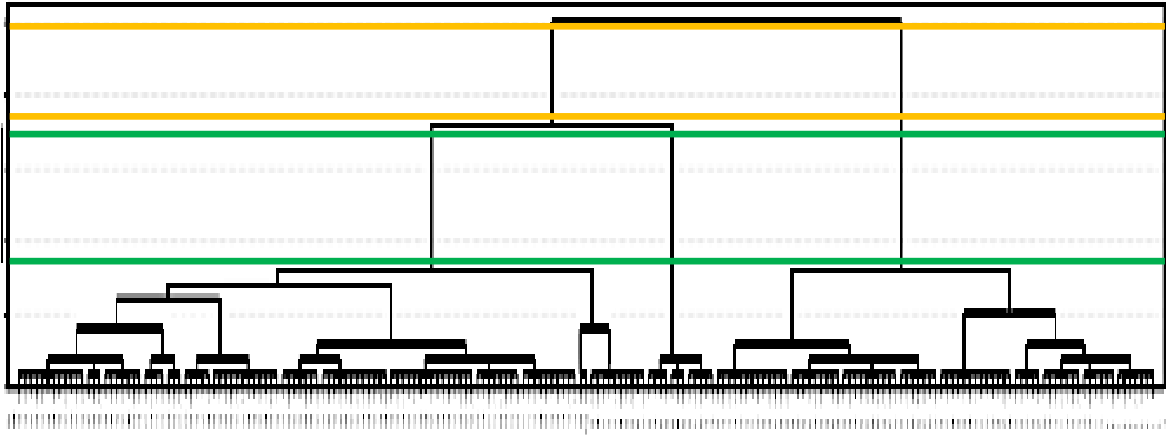
Type of variable	Survey item	Values
Categorical	What elements does your Ashtanga Yoga practice include? Select all that apply	Free breathing with sound
		Use of <i>bandhas</i>
		Use of <i>drishti</i>
		Chanting opening and closing mantras
		Meditation before or after practice
		Pranayama before or after practice
		Resting on moon days
		<i>Vinyasa</i> throughout practice
Continuous	In a scale from 0 to 10, with 0 being not at all and 10 being completely influenced, to what extent each of the following areas of wellbeing have been positively influenced by your yoga practice? Physical wellbeing	0 – 10 (0 = not at all, 10 = completely)

Next, we determined the similarity measures and chose two clustering algorithms (hierarchical and *k*-means). Both of the chosen algorithms use metrics that are based on the distance between two values to then classify values as belonging to a particular cluster. We first used hierarchical clustering as an exploratory analysis to identify the possible number of clusters. This was done by generating a dendrogram and observing at the largest differences of height in the vertical lines representing each cluster. Hierarchical clustering uses the distance between data points as the criterion to determine similarity between other members of the cluster and differentiation from others (i.e., cluster membership). This method generated a tree of groups that were subdivided into smaller clusters by iteratively splitting and merging data points. This resulted in a dendrogram (see Figure 7.1). Here, clusters were created by single-linkage clustering, where the distance between clusters is represented by the shortest distance between any members of those clusters. In this case, the best number of clusters

suggested by the technique was three, represented by the section between the green lines in Figure 7.1.

We then assessed this output to determine whether the clustering scheme was the best solution for our dataset, using the *k*-means cluster analysis, testing two to ten clusters in addition to the three-cluster solution suggested by the dendrogram. As a partitional clustering method, *k*-means analysis uses these pre-determined numbers of clusters and a fixed parameter *k* to iteratively assign members to the closest cluster centre and determine their membership to a given cluster. We identified significant differences between clusters with the three-cluster and six-cluster solution. Using SPSS (version 28), we subsequently extracted solutions for three and six clusters. After analysing each solution, we determined that the six clusters provided greater depth to the analysis and the clearest solution.

Figure 7.1. *Dendrogram Generated from Hierarchical Clustering*



Using the six-cluster solution, we then conducted a descriptive analysis using a second set of variables to identify distinctive elements within clusters and characterise each of the six groups. We used one-way ANOVA and Chi-square for continuous and categorical variables respectively. Variables included scores for each wellbeing dimension, relevance of each wellbeing dimension, influence of the yoga practice on each dimension of wellbeing, perceptions of general health, motivation to start, keep and stop practising yoga, and the traits of personality, gratitude, mindfulness, compassion, self-compassion, and quiet ego (see Supplement 7.6 for details). Finally, we generated a histogram to visualise key differences between clusters (see Figure 7.2).

Results

Overview of Regular AYPs

In general, regular AYPs maintained a highly consistent practice (i.e., 7 and above). Overall, they considered AY philosophy highly relevant (i.e., 7 and above) and reported to practice and/or experience the eight elements of the philosophical framework to a considerable degree (i.e., 5 and above). *Asana* and *pranayama* were

practised to a greater extent, whereas *pratyahara* and *samadhi* were practised to a lesser extent. The main motivation to start practising yoga was to improve physical and mental wellbeing and curiosity. While the main reasons why practitioners have kept practising yoga were mental wellbeing, physical wellbeing and spiritual wellbeing, the main barriers to keep practising were work commitments, followed by lack of time and experiencing acute injury.

All wellbeing dimensions were regarded as highly relevant, especially emotional, psychological, and physical wellbeing. On average, practitioners reported high levels of wellbeing (i.e., 7 and above) when considering their own definition for each dimension, with physical wellbeing being the highest and followed by emotional and psychological wellbeing. Participants reported that their practice greatly influenced their wellbeing, with the largest impact being reported on physical wellbeing, followed by emotional and psychological wellbeing. Overall, participants reported high levels of general health. In terms of personal traits, the group specially recorded high levels of conscientiousness and openness to experience, along with high levels of compassion, mindfulness, quiet ego and gratitude (see Table 7.3 and Supplements 7.8 – 7.10 for more details).

Table 7.3. Characteristics of Regular AYPs

Variable	N	Mean	SD	Min	Max
Consistency of AY practice	231	7.76	1.45	2.00	10.00
AY philosophy					
Yama	213	7.59	1.63	0.00	10.00
Niyama	212	7.21	1.62	0.00	10.00
Asana	212	8.87	1.50	1.00	10.00
Pranayama	213	8.15	1.82	1.00	10.00
Pratyahara	208	6.05	2.27	0.00	10.00
Dharana	211	7.38	1.41	3.00	10.00
Dhyana	210	6.50	2.01	0.00	10.00
Samadhi	211	5.91	2.38	0.00	10.00
Relevance of AY philosophy	212	7.78	2.26	0.00	10.00
Relevance of wellbeing dimensions					
Physical	159	9.05	1.70	0.00	10.00
Emotional	158	9.23	1.08	5.00	10.00
Psychological	157	9.23	1.15	5.00	10.00
Social	158	8.47	1.87	0.00	10.00
Spiritual	152	8.57	2.05	0.00	10.00
Wellbeing dimensions scores					
Physical	154	8.15	1.39	0.00	10.00
Emotional	154	7.52	1.46	2.00	10.00
Psychological	151	7.46	1.55	2.00	10.00
Social	151	7.15	1.95	0.00	10.00
Spiritual	147	7.56	1.80	0.00	10.00
Influence of AY on wellbeing					
Physical	153	9.31	1.33	0.00	10.00
Emotional	152	8.86	1.49	0.00	10.00
Psychological	150	8.86	1.61	0.00	10.00
Social	148	7.49	2.19	0.00	10.00
Spiritual	146	8.69	1.88	0.00	10.00
General health	137	4.16	0.72	2.00	5.00
Personal characteristics					
Big Five Personality Traits					
Extraversion	143	4.22	1.40	1.00	7.00
Agreeableness	142	4.82	1.08	1.00	7.00
Conscientiousness	142	5.64	1.08	1.50	7.00
Emotional stability	142	4.69	1.37	1.50	7.00
Openness	142	5.69	0.96	3.00	7.00
Gratitude	142	6.09	0.86	1.00	7.00
Mindfulness	142	3.59	0.49	2.29	4.64
Compassion	136	3.91	0.61	1.60	5.00
Self-compassion	137	3.31	0.58	1.42	4.67
Quiet Ego*	138	3.89	0.48	2.23	5.00

* We used a modified version including 13 of the 14 items

General Overview of Clusters

Here we focus on key differences between the six groups of practitioners to provide a general overview before delving into descriptions of each cluster (see Table 7.4). Cluster five was markedly distinct from the others, revealing the largest differences in several aspects from every other cluster. The main differences that we identified between clusters in terms of wellbeing were levels of spiritual wellbeing (cluster one with cluster five), relevance of spiritual wellbeing (cluster two with cluster five), and influence of the yoga practice on spiritual wellbeing (cluster four with cluster five), with cluster five, two and four being higher on these variables, respectively.

In relation to general health, the main difference was found between cluster two and cluster three. In terms of AY philosophy, the largest differences were between cluster three and cluster five in the relevance of yoga philosophy for practitioners, the experience of *pratyahara*, the practice of *pranayama*, and the experience of *samadhi*, with cluster six being higher on these variables. For personal traits, the main differences between clusters were in agreeableness (cluster one with cluster five), compassion (cluster three with cluster five), emotional stability (cluster four with cluster three) and openness (cluster three with cluster five), with clusters one, three, four and three being higher on these characteristics, respectively.

Next, we present the six clusters by analysing their key features, and we provide a visual representation of their profiles (see Figure 7.2 and Supplements 7.11 – 7.16 for more details). While the labels provided are arbitrary, they provide our interpretation of the dominant profile of each cluster. By using these labels, our aim is not to confine

practitioners to a reductionistic classification, but rather organise and synthesise relevant information to illustrate different possible profiles.

Figure 7.2. *Differences Between Clusters in Terms of Wellbeing, Health, AY Philosophy, and Personal Traits*

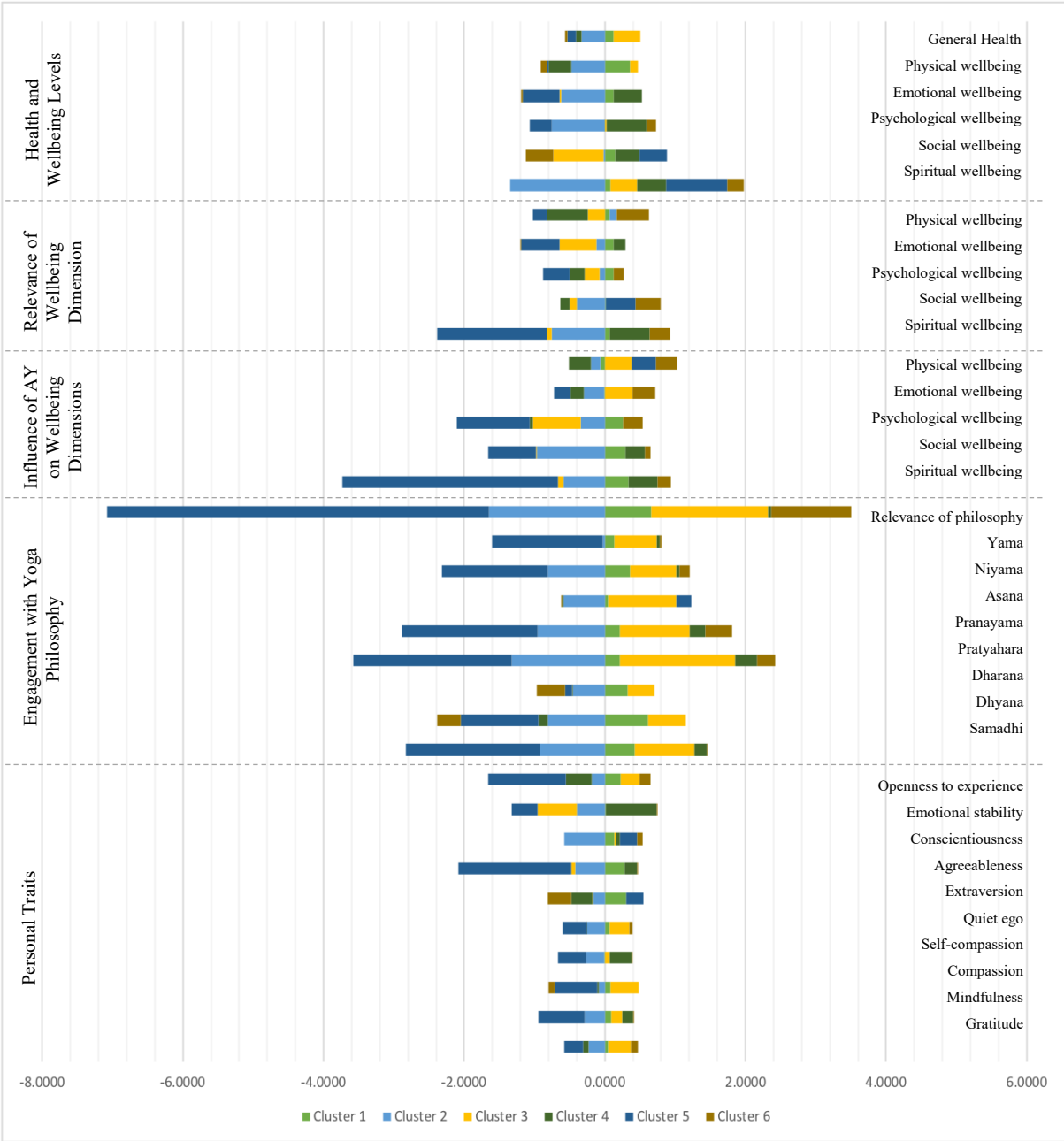


Table 7.4. Continuous Variables Descriptive Statistics by Cluster Group

Variable	Cluster 1 Mind Tamers N=74		Cluster 2 Not Too Bad N=28		Cluster 3 Into Philosophy N=12		Cluster 4 Inner World N=37		Cluster 5 Critical N=12		Cluster 6 Average N=36	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Consistency of AY practice	8.12	1.24	6.57	1.75	8.25	1.06	7.68	1.42	8.33	1.50	7.61	1.36
AY philosophy												
<i>Yama</i>	7.70	1.42	7.54	1.75	8.17	1.85	7.62	1.55	6.00	2.41	7.58	1.63
<i>Niyama</i>	7.53	1.23	6.36	1.64	7.83	1.64	7.22	1.84	5.67	2.06	7.31	1.55
<i>Asana</i>	8.92	1.53	8.29	1.56	9.83	0.58	8.84	1.55	9.08	1.78	8.86	1.42
<i>Pranayama</i>	8.31	1.66	7.14	2.05	9.08	1.08	8.32	1.62	6.17	2.62	8.47	1.61
<i>Pratyahara</i>	6.25	2.22	4.70	2.63	7.67	1.56	6.35	1.95	3.78	2.68	6.28	2.08
<i>Dharana</i>	7.78	1.24	7.00	1.28	7.83	1.70	7.44	1.11	7.36	1.50	7.06	1.71
<i>Dhyana</i>	7.18	1.48	5.75	2.41	7.08	2.27	6.42	2.06	5.45	2.16	6.22	2.11
<i>Samadhi</i>	6.42	2.14	5.07	2.24	6.83	2.69	6.17	2.19	4.08	2.78	6.00	2.54
Relevance of AY philosophy	8.42	1.43	6.11	1.79	9.42	1.24	7.81	0.33	2.33	1.50	8.89	1.39
Relevance of WB dimensions												
Physical	9.11	1.61	9.14	1.31	8.80	1.48	8.46	2.58	8.83	2.04	9.50	1.11
Emotional	9.34	0.98	9.10	0.94	8.70	1.70	9.38	0.80	8.67	1.97	9.21	1.23
Psychological	9.34	1.03	9.14	1.06	9.00	1.41	9.00	1.26	8.83	1.94	9.36	1.25
Social	8.41	2.05	8.00	2.35	8.30	1.95	8.27	1.69	8.83	1.17	8.75	1.70
Spiritual	8.63	1.91	7.80	2.02	8.50	1.90	9.13	1.94	7.00	3.35	8.85	1.75
WB* dimensions scores												
Physical	8.56	1.09	7.71	1.06	8.30	0.68	7.88	1.33	8.17	0.98	8.11	1.40
Emotional	7.65	1.56	6.91	1.48	7.50	0.85	7.92	1.32	7.00	2.00	7.50	1.32
Psychological	7.47	1.71	6.71	1.45	7.50	0.71	8.04	1.20	7.17	2.14	7.61	7.61
Social	7.26	2.07	7.10	1.89	6.40	2.50	7.46	1.69	7.50	1.76	6.71	6.71
Spiritual	7.71	1.54	6.29	1.74	8.00	1.56	8.05	1.66	8.50	1.05	7.85	7.85

Influence of AY on WB

Physical	9.26	1.67	9.19	0.93	9.70	0.68	9.00	1.66	9.67	0.52	9.63	0.88
Emotional	8.89	1.73	8.62	1.20	9.30	1.06	8.71	1.57	8.67	1.75	9.22	1.34
Psychological	9.13	1.26	8.52	1.25	8.20	3.19	8.83	1.80	7.83	3.25	9.15	0.99
Social	7.80	1.89	6.55	2.87	7.50	2.32	7.79	2.11	6.83	1.60	7.59	2.47
Spiritual	9.08	1.21	8.14	2.23	8.67	2.35	9.14	1.35	5.67	2.66	8.93	2.24
General health	4.26	0.68	3.80	0.62	4.50	0.53	4.05	0.84	4.00	0.89	4.09	0.75

Personal characteristics**Big Five Personality Traits**

Extraversion	4.57	1.43	4.10	1.29	4.25	1.42	3.96	1.37	4.50	1.61	3.93	1.37
Agreeableness	5.14	1.05	4.43	0.91	4.80	0.75	5.02	0.96	3.25	1.70	4.86	0.93
Conscientiousness	5.81	0.95	5.10	1.26	5.70	0.92	5.74	1.23	5.92	0.74	5.75	1.02
Emotional stability	4.71	1.38	4.30	1.21	4.15	1.06	5.43	1.11	4.33	2.07	4.71	1.49
Openness	5.91	0.82	5.50	0.97	5.95	1.01	5.31	0.93	4.58	1.16	5.84	0.96
Gratitude	6.17	0.74	5.89	0.91	6.45	0.57	6.05	0.86	5.86	0.63	6.23	0.47
Mindfulness	3.78	0.50	3.41	0.44	3.86	0.55	3.86	0.62	3.04	0.38	3.70	0.47
Compassion	3.99	0.45	3.82	0.73	4.32	0.46	3.89	0.74	3.30	0.96	3.83	0.60
Self-compassion	3.32	0.53	3.07	0.52	3.39	0.47	3.64	0.53	2.91	0.77	3.33	0.66
Quiet Ego	3.98	0.41	3.65	0.31	4.18	0.46	3.90	0.60	3.55	0.68	3.94	0.39

*WB = wellbeing

Cluster 1: The Mind Tamers

Cluster 1 was the largest cluster, including 74 regular AYPs. They were more likely to have a regular practice ranging from three to fifteen years. Most practiced at the *shala* with a teacher or by themselves at home. They typically practiced for 80 to 120 minutes, full primary series up to half intermediate series. They were also more likely to include resting days following AY tradition, chant opening and closing mantras as part of their practice and doing *pranayama* at the beginning or end of the practice. From the eight limbs of yoga, they reported experiencing *dhyana* (meditation) to a greater extent. They regarded yoga philosophy as relevant and tended to either not identify strongly with any spiritual tradition or deemed themselves as atheist or agnostic.

This group of regular practitioners tended to regard psychological wellbeing as highly relevant and reported the highest scores of physical wellbeing amongst the group of practitioners. They estimated that their yoga practice particularly influenced their psychological and social wellbeing. Interestingly, they presented lower levels of spiritual wellbeing, but estimated that their yoga practice had a positive influence in that dimension. They also had the highest scores in extraversion and agreeableness, and were more likely to have experienced depression in the past.

This group appeared to represent seasoned practitioners with an established asana practice who had been able to overcome mental health challenges, and steady their mind through practising or experiencing meditation. Their psychological functioning appeared to be fundamental to them, and although they experienced the highest levels of physical wellbeing compared to other clusters, they noted that the practice had a larger contribution to their psychological wellbeing. Their extraverted and

agreeable nature may relate in some way to their perception of the yoga practice contributing to their social wellbeing.

Cluster 2: Not Too Bad

A total of 28 regular AYPs appeared in Cluster 2. They were more likely to practise to a lesser extent and were less consistent compared to the other groups. They had a regular practice for less than three years and typically practised half to full primary series between 3 to 4 days for sessions of 40 to 80 minutes. Compared to other clusters, they were less likely to practice in the Mysore style format, to attend traditional Sanskrit-counted led classes, less likely to rest as per AY tradition, and more likely to be practising with three or more teachers. They were also less prone to use free breathing with sound throughout the practice or to include pranayama at the start or end of the practice. Their engagement with yoga philosophy was lower than other groups, investing time for it once a month or less. They were prone to identify themselves as atheists or to not identify with any particular spiritual tradition.

They reported the lowest general health score and although they scored less than average on every wellbeing, health, and personal traits measure, they were not at the bottom end. They reported the lowest wellbeing scores in all dimensions when compared to the other groups, except social wellbeing, in which they were the highest levels amongst practitioners. They were also more likely to have experienced or being experiencing anxiety and depression. They were more likely to be motivated to start practising to improve mental wellbeing and physical wellness, as well as for curiosity, and more likely to stop practising because of lack of motivation, time or work commitments.

This cluster appeared to represent a group of less experienced practitioners who practised less frequently and probably likely struggled with motivation and time to sustain the practice. Their perception of lower levels of health and wellbeing as well as being experiencing mental distress seemed to align with their motivation to improve those areas through the practice. The seemingly disengagement with yoga philosophy, the low frequency of practice, and the less likelihood of including breathing techniques and resting may relate to their perceptions of lower levels of health and wellbeing.

Cluster 3: Into Philosophy

Cluster 3 grouped 12 regular AYPs who were likely to identify with Hinduism as a spiritual tradition. They considered yoga philosophy as more relevant than the other groups and tended to engage almost daily with it, practising to a greater extent seven of the eight limbs of Patanjali's yoga. Practitioners in this cluster were more likely to practice at home a modified *asana* sequence, engage in AY-based guided classes, and to practice another type of yoga alongside AY. They also tended to include more *pranayama* and meditation at the start and/or at the end of their practice, and all of them included *drishti* and *bandhas* during their practice. From the eight limbs, they were more likely to experience *pratyahara* and *samadhi* to a higher extent when compared to other clusters.

They reported the lowest scores on social wellbeing, reported higher levels of physical and emotional wellbeing (after cluster 1 and 4 respectively), and estimated that the practice has positively influenced their emotional and physical wellbeing to a great extent. They tended to have the highest levels of general health, gratitude, mindfulness, compassion, quiet ego, and openness. They were more likely to have experienced

anxiety in the past and also more likely to have started practising yoga for mental wellbeing and healing trauma.

While more aligned with yoga philosophy compared to other clusters, this group appeared to represent less dogmatic practitioners, who were more flexible with the asana practice and more open to engage in a range of yoga philosophy activities. Their perception of the positive influence that the yoga practice has had on their emotional and physical wellbeing seemed to be aligned with positive personality traits and overall health. These positive traits (i.e., gratitude, mindfulness, compassion, quiet ego) could relate to some extent to their exposure to yoga philosophy and Hinduism.

Cluster 4. Into the Inner World and Beyond

Cluster 4 included 37 regular AYPs who tended to practice full primary series following a Mysore style format and attending traditional Sanskrit-counted led classes. Along with Cluster 1, they were more likely to include chanting of opening and closing mantras as part of their practice. They were more prone to identify with Christianity or Buddhism as a spiritual tradition. They were very likely to engage with chanting mantras as a way to practice yoga philosophy, as well as more likely to attend after-class conferences with their yoga teacher. They tended to practice at a *shala* with one main teacher and other teacher.

This group highly regarded emotional and spiritual wellbeing, and had the highest levels of emotional and psychological wellbeing. They also had the highest levels of social and spiritual wellbeing after cluster 5. They tended to estimate that the practice positively influenced their spiritual wellbeing to a greater extent in comparison with other groups, and were more likely to have started practising yoga for spiritual

wellbeing. This group displayed the highest scores in self-compassion and emotional stability. Interestingly, they were also more prone to have experienced allergies and asthma.

This group appeared to present alignment and coherence within the spiritual dimension, in terms of perceiving high levels of spiritual wellbeing, being highly relevant to their lives, and perceiving it as the main driver and outcome of the practice. This cluster also seemed to have defined their spiritual path by aligning with specific spiritual and religious traditions, and by seeking and cultivating spiritual wellbeing through a yoga practice clearly grounded in the traditional AY method with one main teacher. Their engagement with chanting mantras inside and outside the practice may be a way of connecting with themselves and their spiritual dimension. The traits of emotional stability and self-compassion may indicate their connection to their inner world and their perception of the relevance of emotional wellbeing, as well as the experience of high levels in this dimension.

Cluster 5: The Critical Ashtangis

Cluster 5 grouped 12 regular AYPs who were highly likely to only practice Mysore style and/or traditional Sanskrit-counted led classes in an AY *shala*, with one or two teachers. Their practice tended to include longer sessions (i.e., up to 120 minutes), more likely to comprise both full primary and intermediate series. Compared to other groups, they reported the highest levels of consistency in their practice. All practitioners from this group included *vinyasa*, free breathing with sound and *bandhas* throughout their practice. They did not regard yoga philosophy relevant and tended to practice five out of the eight limbs (i.e., *yama*, *niyama*, *pratyahara*, *dhyana*, *samadhi*) to the lesser

extent. They were less prone to engage with yoga philosophy, especially in the forms of yoga teacher training or online yoga courses. They were less likely to engage in chanting mantras and practice meditation before or after the practice. They identified as either atheist or agnostic, or did not identify with any spiritual tradition.

Although they considered that the practice did not influence spiritual or social wellbeing to a significant extent and that it was unlikely to keep practising for spiritual reasons, they had the highest levels of spiritual and social wellbeing across clusters. While they considered emotional, psychological, and spiritual wellbeing less relevant compared to other groups, they highly valued social wellbeing. The Critical Ashtangis had the lowest levels of gratitude, mindfulness, compassion, self-compassion, quiet ego, agreeableness, and openness to experience amongst practitioners. Interestingly, they also had the highest levels of conscientiousness.

This group of practitioners appeared to be more critical, practical, self-centred, and asana oriented compared to the other clusters. Their high levels of conscientiousness may be expressed in their perseverance, adherence, and dedication with their yoga practice. The high levels of conscientiousness and the long-term established practice, along with the lack of engagement with yoga philosophy may speak to yoga being practised as a healthy habit rather than a lifestyle underpinned by yoga principles.

Cluster 6: The Average Autonomous Ashtangis

The 36 regular AYPs included in cluster 6 were more likely to practice on their own or in a Mysore style format when they were able to travel and practice with their teacher. Their practice typically consisted of full primary up to half of intermediate series

during sessions of 60 to 80 minutes. They were more likely to include chanting at the start and end of the practice, engage in yoga philosophy daily, and include a greater variety of ways to learn about yoga philosophy, particularly reading books, chanting other mantras and texts, watching videos online, reading blogs, and following social media. In terms of the extent of the practice or experience of the eight limbs of yoga, they were closer to the average of the sample.

They tended to regard physical and psychological wellbeing as extremely relevant and considered that their yoga practice positively contributed to their psychological wellbeing. After cluster 4, they presented the highest levels of emotional and psychological wellbeing. This group tended to revolve around the average scores within the sample included in this study, reporting average scores across the dimensions of wellbeing and in general health. Similar to the *Into Philosophy* group, they considered philosophy highly relevant, and similar to the *Not Too Bad* group, they also tended to consider social and spiritual wellbeing more relevant compared to other clusters. Interestingly, they reported higher levels of introversion and were more likely to identify with Christianity or Buddhism as spiritual traditions. They also were more likely to keep practising in the future due to a calling and to consider stopping their practice because of experiencing an acute injury.

This group appeared to represent seasoned and more autonomous practitioners who valued the physicality of the practice as well as physical wellbeing. Still, they seemed to highly regard philosophical elements and to acknowledge the positive impact that the practice had in terms of psychological wellbeing. The fact that their scores were

closer to the average of the group might mean that their evaluations were more balanced and less extreme across the various domains assessed.

Discussion

We examined regular AY practitioners' profiles and explored potential differences in terms of health and wellbeing, personal traits, and yoga practice. We have argued that knowing about these differences between groups of practitioners can benefit yoga researchers, practitioners and facilitators to better understand yoga practitioners' characteristics and needs to foster meaningful areas of wellbeing while supporting and sustaining their practice. Next, we discuss our findings in terms of the common patterns across the sample, and then consider the wellbeing patterns across groups of practitioners, before turning to implications, limitations and future directions.

Common Patterns Across Regular AY Practitioners

Findings suggest that participants shared many similarities and represented a mostly homogeneous group. Many of the characteristics align with other groups of yoga practitioners. Demographics were similar to those of practitioners from other studies, namely middle-aged highly educated Caucasian females mostly living in urban areas and Westernised countries (Cartwright et al., 2020; Cramer et al., 2019, Park et al., 2019; Penman et al., 2012). While this may reflect that yoga is mostly practised by people with such characteristics, it can also mean that it has been more accessible to this type of population, or that studies have failed to include a broader variety of practitioners, mainly due to self-selection reasons.

Regular AY practitioners generally had high levels of general health and of physical, emotional, and psychological wellbeing. Furthermore, they deemed these

wellbeing dimensions as the most relevant and the most positively influenced by their yoga practice. These findings are consistent with research showing that yoga practitioners tend to report higher levels of wellbeing compared to the general population and to endorse positive impacts of yoga on health and wellbeing (Cartwright et al., 2020; Cramer et al., 2019; Penman et al., 2012; Ross et al., 2013). They were likely to practice frequently and consistently, within an autonomous setting (i.e., Mysore style, home practice). Past research suggests that the frequency of autonomous practice predicts subjective wellbeing (including emotional, psychological and social dimensions) and healthier lifestyles, as well as physical and mental health (Cartwright et al., 2019; Cramer et al., 2017b; Ross et al., 2012; Sibbritt et al., 2011). It is possible that the autonomy fostered by the AY method, a distinctive feature of this yoga style, may play a key role in sustaining a self-practice and cultivating wellbeing. Autonomy and autonomy support are widely acknowledged in the academic literature as essential for promoting intrinsic motivation, self-determination, behaviour change, and wellbeing (Mossman et al., 2022; Pérez-González et al., 2019). Furthermore, individuality of the yoga practice has been considered a potential mechanism of change in the context of yoga therapy (Harvey et al., 2019). Thus, the AY method might hold a key element that can be relevant for other forms and contexts of yoga.

In terms of personality traits, regular AY practitioners had high levels of conscientiousness and openness to experience. This aligns with studies finding associations between conscientiousness and the openness facets of need for cognition (an aspect of creativity), and the lack of need for closure (McCrae & Sutin, 2009), which may be more common in regular AY practitioners. This might be partly explained by the

nature of the practice. On the one hand, the AY practice is based on a structured method encouraging discipline, consistency, and regularity in terms of the frequency of the practice. While this may appeal more to conscientious people, the yoga practice itself may cultivate the trait, as suggested by previous research (e.g., Chokkalingam & Kumari, 2015; Yadav et al., 2015). On the other hand, yoga and AY in particular can foster higher levels of awareness in terms of physical sensations, emotions, and thoughts, as well as teach people to observe their experience with curiosity and acceptance. This is consistent with studies reporting increased levels of conscientiousness and openness to experience in participants after practising yoga (Bright et al., 2020; Yadav et al., 2015). Still, it may also be possible that people with high levels of openness to experience are drawn to this type of practice, since yoga can offer an avenue for self-exploration and transformation (Barkan et al., 2016). Indeed, a high proportion of yoga practitioners in this study stated that one of their main motivations to start practising was curiosity for the practice, which is a facet of openness. Thus, there is a possibility of a bidirectional relationship that would need to be explored in future research.

This group of practitioners also displayed high levels of compassion, mindfulness, quiet ego, and gratitude. The healthy balance between being centred in one-self and being centred in others (i.e., quiet ego) entails both heightened awareness and compassion (Bauer & Wayment, 2008). Previous research has shown that a regular yoga practice is associated with higher levels of mindfulness, which entails heightened awareness (Cartwright et al., 2020; Ross et al., 2012; Ross et al., 2013). The cultivation of observance along with an attitude of acceptance throughout a regular yoga practice may facilitate the strengthening of a quieter ego, and thus explain these characteristics

(Conboy et al., 2010). Similarly, gratitude is positively correlated with years of yoga practice (Ivtzan & Papantoniou, 2014) and can increase after participating in a yoga program (Ahmadi et al., 2016). Considering gratitude involves noticing and appreciating the good within and around us, and the mindful aspects of yoga may make practitioners more prone to notice the good. Based on previous research examining mechanisms of change in yoga (e.g., Harvey et al., 2020; McCall, 2013; Menezes et al., 2015; Tihanyi et al., 2016), as well as practitioners' perceptions (Kishida et al., 2018), it is possible that enhanced levels of these traits can be attributed to the practice. However, more research clarifying these relationships should be done before drawing conclusions.

In terms of motivation, several trends echoed previous research. For instance, most practitioners reported having started practising yoga and maintaining a regular practice due to physical wellness and mental wellbeing (e.g., Cartwright et al., 2020; Kramer-Kostecka et al., 2022) and developed motivations to practice for spiritual wellbeing (e.g., Genovese & Fondran, 2017; Ivtzan & Jegatheeswaran, 2015). This evolution may represent the experience of the holistic nature of yoga and the benefits in different dimensions of human functioning (Cramer et al., 2019). However, as noted in previous research, change trajectories should be further explored by investigating the evolution of practitioners and their practice throughout time.

Wellbeing Patterns Across Clusters

Our cluster analysis revealed interesting differences between regular AY practitioners in terms of their perceptions of health and wellbeing, their yoga practice, and personality traits. We have described how participants practised AY in particular ways and for different reasons, as well as their different levels of engagement with

philosophy, and their perceptions of which dimensions of wellbeing were being positively impacted the most. Here, we further discuss this latter aspect by looking at each dimension of wellbeing in relation to common patterns between the clusters of practitioners.

Physical wellbeing was highly valued by all groups of practitioners. *The Mind Tamers* (cluster 1) and *Into Philosophy* (cluster 3) clusters displayed the highest levels of physical wellbeing, while the *Into Philosophy* (cluster 3) and *The Critical Ashtangis* (cluster 5) clusters believed that this dimension of wellbeing was the most impacted by their yoga practice. Strikingly, the two latter groups were seemingly complete opposites. They had the greatest differences in their levels of gratitude, mindfulness, compassion, quiet ego, and openness to experience, as well as having markedly differences in their relation to yoga philosophy. This suggests that physical wellbeing may be a dimension of wellbeing that is commonly perceived as being influenced by the yoga practice regardless of practitioners' personal characteristics and beliefs. This is consistent with previous research suggesting that practitioners' primary motivation to start doing yoga is physical health and physical fitness (Cartwright et al., 2020; Cramer et al., 2019; Kramer-Kostecka et al., 2022; Telles et al., 2017). Allowing people to experience yoga as a physical practice may constitute a highly important element to consider, as it may be a way to gauge interest and motivation to open up a gateway to access other benefits and dimensions of the practice.

Furthermore, despite the differences between these clusters, they commonly included breathing techniques before, during and/or after their practice, as well as maintained a fairly vigorous (especially cluster 1 and 5) and autonomous practice,

tailored to their needs. Thus, it seems that physical wellbeing emerges not only from the strengthening, flexibility and balance of the musculoskeletal system by performing certain *asanas* (e.g., Gruber, 2008), but also from balancing the autonomic nervous system through breathing techniques (e.g., Tyagi et al., 2016).

Emotional wellbeing was higher amongst participants in the *Into The Inner World And Beyond* (cluster 4), followed both by the *Into Philosophy* (cluster 3) and *The Average Autonomous Ashtangis* (cluster 6) groups. However, the latter two clusters were the ones who perceived that their yoga practice impacted this wellbeing dimension to a higher extent. There were several trends across these three clusters of practitioners: they were more likely to identify with a particular spiritual tradition (i.e., Buddhism, Christianity, Hinduism), they highly valued the spiritual dimension of wellbeing, and their engagement with yoga philosophy was higher than other groups. Previous research has proposed that spiritual teachings may play a key role in reappraisal strategies, which may facilitate emotion regulation in yoga practitioners (Menezes et al., 2015), in turn contributing to emotional wellbeing. Indeed, emotion regulation has been considered a mechanism of change in yoga therapy (Bennetts, 2022), and research has shown that yoga practitioners can regulate their emotions by using attentional awareness and reduced egocentric bias as distinct pathways (Wadden et al., 2018). This may speak to specific abilities or traits linked to the practice.

Interestingly, the three clusters practised different *asana sequences* in different modalities, while also displaying enhanced levels of different personal traits (i.e., gratitude, self-compassion, emotional stability, introversion). Gratitude has been found to be positively associated to the yoga practice (Ahmadi et al., 2016; Ivtzan &

Papantoniou, 2014) and self-compassion has been proposed as an outcome (Crews et al., 2016) and a potential pathway by which yoga generates health and wellbeing benefits (Cox & Tylka, 2020). Thus, gratitude and self-compassion in addition to the self-study of yoga philosophy, which can be considered as part of the *yama* and *niyama* (Bennetts, 2022), may play an important role in cultivating emotional wellbeing. Furthermore, emotion regulation is related to emotional stability, which has been shown to predict emotional wellbeing (Bujor & Turliuc, 2014) and may be enhanced through the practice (Barkan et al., 2016).

Psychological wellbeing was perceived as the main wellbeing dimension that was positively impacted by the yoga practice, according to *The Average Autonomous Ashtangis* (cluster 6) and *The Mind Tamers* (cluster 1), with the latter group also reporting the highest levels of wellbeing in this dimension. Practitioners across these two groups were long-term established practitioners who mostly practised the same asana sequence (i.e., full primary up to intermediate series), and who most highly regarded yoga philosophy after *the Into Philosophy* (cluster 3) group. This may indicate the relevance of developing a steady long-term yoga practice underpinned by philosophy for improvement of psychological wellbeing (Gaiswinkler & Unterrainer, 2016).

While *The Mind Tamers* were more extroverted, *The Autonomous Average Ashtangis* were more introverted. Yet, both were able to experience the benefits in the psychological dimension. One possible explanation is that the AY method enables people to develop and sustain their own practice, whether that is in a group or a solo setting, allowing practitioners to choose what best suits their needs. Future research

could examine how tailoring the yoga practice to people's needs, traits and contexts is related to wellbeing in general and psychological wellbeing in particular.

Social wellbeing and *spiritual wellbeing* were perceived as being impacted by the yoga practice to a higher extent by *The Mind Tamers* (cluster 1) and *The Into The Inner World And Beyond* (cluster 4). The latter cluster and *The Critical Ashtangis* (cluster 5) reported higher levels of wellbeing in both dimensions as well. These three groups do not seem to share many features, besides practising mostly the same *asana* sequence (i.e., full primary series), practising at a *shala* in a group setting, and attending traditional Sanskrit-counted led classes. The preference for practising in a group setting might constitute a relevant factor for social wellbeing, since practising with others can bring a sense of connectedness and belonging to a likeminded community (Ross et al., 2013). Similarly, the shared ritual of attending regularly to traditional Sanskrit-counted led classes may foster a sense of connection to the AY tradition and the yoga framework, which may contribute to cultivating spiritual wellbeing. For *The Mind Tamers* (cluster 1) in particular, higher levels of social wellbeing could be explained by the higher levels of extraversion and agreeableness, which have been identified as divergent pathways to increased satisfaction with social relationships (Tov et al., 2016).

Recent research has proposed that a regular yoga practice may facilitate intrapersonal changes first, which then overflow into the interpersonal realm (Kishida et al. 2018). This would mean that practitioners may take longer to experience the impact in the social dimension. This is consistent with our findings, where practitioners reported higher levels of wellbeing and a greater impact of the practice in the physical, emotional, and psychological dimensions of wellbeing. A similar issue may happen with

spiritual wellbeing. Different studies have suggested that practitioners shift their motivations and perceptions of the impact of the practice, evolving from physical and mental purposes towards the cultivation of spirituality (Büssing et al, 2012; Cramer et al., 2019; Iltzan & Jegatheeswaran, 2015; Park et al., 2014).

It is also worth noting that perceptions of lower levels of wellbeing and decreased impact of the practice on wellbeing was consistently reported by the same group of practitioners: *The Not Too Bad* (cluster 2). Their level of engagement with the practice in terms of frequency, consistency, and yoga philosophy may indicate that the level of involvement could be a crucial element for enhancing wellbeing (Gaiswinkler & Unterrainer, 2016).

Implications

The relevance of acknowledging yoga as a multi-faceted and integrative practice involving different aspects of the individual cannot be overstated. The holistic nature of yoga and other body-mind practices may offer more diverse benefits compared to other forms of either physical, mental, or spiritual practices on their own, since they may act in tandem by addressing one area that can influence other areas as the practice evolves over time (Cagas et al., 2022; Ross et al., 2012). Knowing how and why people practice, as well as learning about differences and similarities in their wellbeing profiles and personal characteristics can allow yoga facilitators to design the best route to target the main area of interest of the yoga practitioner, while providing support and mapping ways in which that can overflow to other areas to amplify and consolidate changes. Knowing their motivation to practice and what aspects of wellbeing people value the most may allow yoga facilitators and wellbeing practitioners to consider leverage points

to catalyse sustainable change. Leverage points represent areas that require minimal shifts or efforts to generate significant change within a system (Meadows, 1999). Looking at the individual as a system, initiating a shift in one wellbeing area or aspect of the practice, can potentially cascade onto others.

Despite differences between clusters, in general, practitioners seemed to have worked out ways to make the practice work for their own needs. For example, *The Autonomous Average Ashtangis* were more introverted, and they tended to practice at home on their own and met with their teacher whenever possible. *The Critical Ashtangis* highly regarded social wellbeing and preferred to practice in a yoga studio, and the *Into Philosophy* group were more likely to adapt their asana practice to their individual context. By knowing this information, practitioners might be able to intentionally and mindfully craft their practice to their own needs and circumstances, instead of feeling overly attached to what their practice should look like at all times. Similarly, teachers may be able to promote practitioners' autonomy by helping them tuning into these subtleties and supporting them to develop a sustainable practice as they evolve.

It appears that some of the personal traits included in this study (i.e., mindfulness, self-compassion, quiet ego, emotional stability) are intricately intertwined. The quiet ego encompasses mindfulness and compassion, mindfulness is fundamental to develop other traits, and self-compassion is needed to cultivating compassion, while certain personality traits seem to be trainable with yoga. Previous research has recommended focusing on examining personality traits in relation to seeking holistic practices such as yoga, and to study changes in these traits after a long-term practice (Vergeer et al., 2021). This study further exposes the dynamism and complexity of the

relationships between personal traits, which can be considered outcomes, predictors or mechanisms of change, depending on the focus of the research. Hence, the need for understanding these relationships within a more comprehensive approach in terms of research and conceptual framework should be considered.

Limitations and Future Directions

Several limitations of the current study must be acknowledged. Firstly, our findings only represent a particular group of AY practitioners and do not necessarily represent all AY practitioners. Although findings are not generalisable, they still add to the existing literature on yoga practitioners in general, and specifically AY practitioners. Secondly, similar to previous research, most practitioners included in the study were middle-aged and highly educated women living in Westernised contexts, which means that characteristics of the sample may have influenced the results. Thirdly, while our research design allowed us to understand the profile of yoga practitioners, the study is descriptive in nature and used cross-sectional and self-report measures. Thus, we cannot draw causal relationships between variables to further explain our findings. Still, we believe that our study makes a relevant contribution to understanding the relations between the practice of yoga and wellbeing in regular practitioners, and further consider the aforementioned limitations open up the door for future research to address these gaps.

Further investigation should examine the development of personal traits such as mindfulness, self-compassion, and quiet ego, through the practice of yoga and their interactions, to unravel the pathways towards wellbeing and identify which ones are more central in the yoga practice to facilitate changes in wellbeing. Future studies

should use mixed-methods designs to both incorporate the relationships between variables and the richness of people's lived experiences in informing how those relationships take shape. Furthermore, longitudinal studies are essential for examining the evolution of the practice and potentially identifying specific trajectories in which yoga practitioners cultivate certain abilities and generate transformational changes for themselves.

Studies might also explore the perceptions of yoga in yoga practitioners, as the conceptualisation of yoga is often defined by researchers without considering the perceptions that practitioners may have. Similar to research on wellbeing conceptualisations, investigating how yoga practitioners define yoga could shed light onto modern and lay views of a construct that may have many interpretations. Finally, future investigation should advance the access of the practice to a more diverse audience. Yoga is often thought of as a practice that can only be done at a studio or following the instructions of a teacher, instead of an autonomous practice. Encouraging people to take ownership of their practice while providing them with the tools and support they need, may help dissolve potential barriers that curb yoga to a particular segment of individuals. Research could focus on trialling yoga programs which encourage and support people to learn and develop a yoga practice that meets their needs in an autonomous and accessible manner.

Conclusion

Our study examined how perceptions of wellbeing varied across regular AYPs, depending on the characteristics of the practitioner, and whether regular AYPs had unique profiles depending on their expertise with yoga. Overall, we found that

practitioners' perceptions of wellbeing were similar in terms of experiencing high levels of wellbeing and believing that the physical, emotional, and psychological dimensions of wellbeing were more relevant to them and positively impacted by their yoga practice. However, we distinguished six groups of practitioners who differed from one another in terms of their practice, personal characteristics, and wellbeing profiles. Our findings suggest that beyond the years of practice and the AY *asana* sequence, different types of engagement with a range of physical, mental, and spiritual aspects of the yoga practice is what makes the difference.

By looking at each dimension of wellbeing it was possible to identify key elements in practitioners that are potentially relevant to consider when designing sessions that may target such dimensions. Physical wellbeing seems to be the entry point for most practitioners, and a gateway to experience further benefits. While gratitude, self-compassion and emotion regulation appear to play a fundamental role in emotional wellbeing, long-term practice in combination with yoga philosophy engagement seem to be central for psychological wellbeing. Examining the mechanisms of yoga in relation to health and wellbeing, while advancing conceptual models trying to capture the dynamism and complexity of elements involved in the yoga practice will allow us to keep advancing yoga research and practice towards more inclusive and holistic worldviews.

CHAPTER 8: YOGA PATHWAYS TO WELLBEING

Chapter Synopsis

Chapter 8 is an unpublished manuscript entitled 'Pathways to wellbeing: Exploring the elements and role of Ashtanga Yoga in regular practitioners' wellbeing', currently under preparation for submission in a peer-reviewed journal. Extending on findings from previous chapters, this paper uses data from semi-structured interviews from Stage 2 of the research process, following up on a subset of participants involved in Stage 1 through the online survey. This paper provides an in-depth examination of the mechanisms of yoga towards wellbeing by integrating data from participants' lived experience as regular AY practitioners, theoretical models, and empirical literature emanating from a range of disciplines. This was achieved by using RTA to independently analyse three key areas: the most relevant elements of the AY practice, the processes or pathways of yoga that practitioners have experienced in relation to wellbeing, and the main wellbeing outcomes that they have experienced and attribute to their AY practice. This chapter provides a methodological contribution as it uses the main method applied in this dissertation (i.e., RTA) in a different stage with a different dataset, providing a deeper understanding of the relationships between yoga and wellbeing. This paper contributes to the existing empirical literature on the mechanisms of yoga by framing the approach from a wellbeing science perspective, while drawing on existing literature across neurosciences and medicine. It also adds by using a qualitative approach to harness the experiential knowledge of practitioners' to discuss

and expand on existing models of yoga. Supplementary material for this chapter has been provided in a separate document and labelled as *Supplement 8*.

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Authors’ Contributions

Authors	Conceptual design	Literature review	Research design	Data analysis	Writing	Graduate researcher supervision
Ramirez-Duran	80%	80%	80%	90%	80%	n/a
Kern	10%	10%	10%	5%	10%	50%
Stokes	10%	10%	10%	5%	5%	50%

Pathways to Wellbeing: Exploring the Elements and Role of Ashtanga Yoga in Regular Practitioners' Wellbeing

Abstract

While the benefits of yoga have been well documented in the scientific literature, recent research focusing on the mechanisms of yoga has suggested that the combination of the physical, mental, and ethical components of yoga are key in yielding these benefits. Few studies have explored relevant mechanisms researched across different fields using qualitative methods. The current study aims to explore the pathways in which yoga can generate wellbeing benefits from the lived experience of regular Ashtanga Yoga practitioners. Twenty three regular Ashtanga Yoga (AY) practitioners were interviewed to examine their perceptions on the connections between their yoga practice and their wellbeing. Through an in-depth exploration using Reflexive Thematic Analysis (RTA), we identified key themes of AY, the pathways, and wellbeing outcomes reported by practitioners. The pathways to wellbeing indicate that elements of yoga in general and from the AY tradition in particular can lead to a range of intrapersonal, interpersonal, and transpersonal wellbeing outcomes underpinned by neurophysiological processes. We discuss and integrate these findings with existing evidence and frameworks into an emerging conceptual model of AY and wellbeing, positing that by practising regularly, practitioners can experience the transformation of their physical and psychological self, from more transient to more permanent ways of being representing positive human functioning. Findings underscore the relevance of incorporating an embodied, holistic and systems lens into wellbeing research, theory, and practice, as well as moving from

purely cognitive wellbeing interventions to embodied and holistic ongoing practices and lifestyles that can lead to sustained intrapersonal, interpersonal, and transpersonal wellbeing outcomes.

Keywords: Ashtanga yoga, wellbeing, mechanisms of yoga, reflexive thematic analysis

Introduction

While the benefits of practising yoga have been experienced by diverse populations and are well documented in the scientific literature (e.g., Goethe et al., 2019; Field, 2016), researchers have only recently started to inquire about how these benefits emerge. Research exploring the mechanisms of yoga have identified specific ways in which the practice can lead to positive physical and mental health outcomes, through positive impacts on the nervous, endocrine, cardiovascular, respiratory, and immune systems (e.g., McCall 2013; Kuntsevich et al, 2010; Riley & Park, 2015), and reduction of anxiety, depression, and other mental illness symptoms (e.g., Cramer et al., 2018; Cramer et al., 2013a; Pascoe & Bauer, 2015). Studies suggest that it is the combination of meditative and ethical components along with breathing techniques that are key in yielding benefits (Gard et al., 2014; Kishida et al., 2018; Gerritsen & Band, 2018). Studies focusing on third wave psychotherapies such as dialectical behavioural therapy (DBT, Asarnow et al., 2021) and acceptance and commitment therapy (ACT, Stockton et al., 2019), as well as mindfulness (e.g., Shapiro et al, 2006; Vago & Silbersweig, 2012), meditation (e.g., Dahl et al., 2015; Kok et al., 2013), and other contemplative and mind-body practices (e.g., Muehsam et al., 2017) have identified various mechanisms through which yoga has positive benefits, including the role of the

vagal nerve in regulating neurophysiological, neuropsychological, and social, as well as pathways involving the connection between higher and lower level brain structures, the body, and intrapsychic processes (e.g., Taylor et al., 2010, Taylor et al., 2011; Thayer & Lane, 2000). Further, in recent years, the acknowledgement of the inherent complexity of mind-body connections has prompted researchers and scholars to examine the combination of different mechanisms and to propose models integrating such pathways in a more holistic manner (e.g., Gard et al., 2014; Cox & Tylka, 2020).

While most of the identified mechanisms are supported by objective measures, few studies have explored relevant mechanisms using qualitative methods (cf. Kishida et al., 2018). To our knowledge, there are no documented studies investigating the pathways in which yoga can create wellbeing benefits from the lived experience of long-term AY practitioners while integrating a significant body of transdisciplinary empirical evidence.

In this paper, we briefly review the main mechanisms of yoga that have been studied in recent years, discussing five conceptual models. We then link these models to the Transdisciplinary Model of Wellbeing (Mead et al., 2021) and the Attuned Representation Model of Self (ARMS, Cook-Cottone, 2006; 2015), due to their relevance to embodied optimal functioning. We provide a general framework for a qualitative study that investigates the pathways through which yoga leads to wellbeing. Through an in-depth exploration using Reflexive Thematic Analysis (RTA), we identify key themes on the elements of AY, and the pathways and wellbeing outcomes reported by practitioners. Finally, we integrate findings with existing evidence and frameworks into a conceptual model of AY and wellbeing. We discuss the implications for wellbeing and

yoga research, as well as for theoretical frameworks of wellbeing, and delineate future directions to advance research and conceptual models using a systems informed approach.

Yoga and the Mechanisms of Health and Disease

Early research on the mechanisms of yoga mainly emerged from neuroscientific and biomedical research investigating specific pathways towards health and disease outcomes (e.g., Kuntsevich et al., 2010; Meister & Juckel, 2018; Streeter et al., 2012). While these studies mostly used linear and reductionist approaches, they identified three main components of yoga practice (i.e., postures, breathing, meditation) and linked these components to a range of neurophysiological indicators and processes related to stress and the functioning of the nervous, endocrine, and cardiorespiratory systems (Kinser et al., 2012; Kunstsevich et al., 2010; McCall 2013; Meister & Juckel, 2018; Streeter et al., 2012). Another stream of research has explored the neuropsychological mechanisms of yoga both through objective and subjective measures, including the role of mindfulness, self-awareness, self-acceptance, and emotion regulation, in generating health and wellbeing outcomes (Kinser et al., 2012; Riley & Park, 2015; Park et al., 2020; Tihanyi et al., 2016; Voss et al., 2022).

Breaking down yoga and related outcomes into smaller components has been useful for understanding these relationships further. For instance, research on mind-body practices usually refers to top-down and bottom-up mechanisms as main pathways towards outcomes (Taylor et al., 2011). Top-down pathways start in the cerebral cortex through higher level brain functions, primarily involving a range of intentional and conscious mental processes. For instance, in the yoga practice, this

manifests as focused attention and open monitoring (Schmalzl et al., 2015). Bottom-up pathways begin through the stimulation of neural receptors throughout the body connecting peripheral and central nervous systems, thus influencing mental processes (Taylor et al., 2011). For instance, in the yoga practice, this manifests as slow breathing (Schmalzl et al., 2015). While some aspects of yoga such as meditation use top-down pathways, other aspects such as breath and movement use bottom-up pathways (Schmalzl et al., 2015; Taylor et al., 2011). Within the mindfulness literature, top-down mechanisms have been described as those involving volitional control of attention, and are associated with more novice practitioners. In contrast, bottom-up practices are more associated with regular practitioners. Bottom-up mechanisms regulate brain structures related to emotions without the participation of higher-level brain structures, and are related to more experienced practitioners, as interoception is enhanced and cognitive regulation processes decrease (Gard et al., 2014; Taylor et al., 2011; Schmalzl et al., 2015).

Deconstructing yoga into its 'active components' reveals the complexity of elements, processes, and interconnections involved, with potentially different pathways for different people. Furthermore, it has been noted that while some studies consider certain variables as mechanisms, other studies consider the same variables as outcomes (Meister & Juckel, 2018). Using more holistic and integrated approaches can allow looking at these components and relationships as part of a greater and dynamic whole, where components can be considered both predictors and outcomes. This also raises the need of moving towards more encompassing research methods and approaches. As noted by Kuntsevich et al. (2010), it is essential to use a systems approach to gain a more

comprehensive understanding of the mechanisms of yoga, especially in the context of a long-term practice. Similarly, Taylor et al. (2011) highlighted the role of bidirectional relationships between brain networks and the body in the generation of both physical and mental health outcomes, contending that advancing psychophysiological frameworks and research is essential for an integrated comprehension and refinement of mind-body practices. Because yoga entails physical postures, breathing, and meditation, it can affect physiological, emotional, cognitive, and behavioural states through this bidirectional communication (Taylor et al., 2011; Schmalzi et al., 2015).

Integrating Pathways into Theoretical Models of Yoga

Existing research points to four conceptual frameworks that explain the pathways of yoga to health and wellbeing: the Self-regulation Model of Yoga (Gard et al., 2014), the Comprehensive Theoretical Framework of Neurophysiological and Neurocognitive Mechanisms of Yoga Practices (Schmalzi et al., 2015), the Conceptual Model of Yoga (Kishida et al., 2018), and the Conceptual Model of Mechanisms of Yoga for Positive Embodiment (Cox & Tylka, 2020). In this section, we have synthesised key aspects of each model in table 8.1 with the aim to map out commonalities to identify key mechanisms relevant for this paper. Although not exclusive to yoga, we have also included a fifth framework, the Respiratory Vagal Stimulation Model of Contemplative Activity (Gerritsen & Band, 2018), due to its relevance to AY.

Although this review is not exhaustive, we believe that by including these models we can provide a transdisciplinary approach to yoga and wellbeing. Furthermore, while these models conceive yoga as a multifaceted practice, some include philosophical and ethical underpinnings, and others take a more secular approach. By reviewing their

different approaches and pathways to health and wellbeing that they highlight, we can gain a broader and higher-level perspective and understanding of the processes and outcomes related to the practice. This review provides a foundation to further discuss and integrate the findings from our study.

Table 8.1. Summary of Models Exploring the Mechanisms of Yoga

Model of yoga	Definition of yoga	Elements of yoga	Core concepts of model	Mechanisms	Outcomes
The Self-Regulation Model (Gard et al., 2014)	Yoga as a comprehensive skillset entailing synergistic process tools (eight limbs of yoga) leading to self-regulation in autonomic, cognitive, emotional, and behavioural realms	Four synergistic process tools: Ethics (<i>yama, niyama</i>) Postures (<i>asana</i>) Breath regulation (<i>pranayama</i>) Meditation (<i>pratyahara, dharana, dhyana, samadhi</i>)	Yoga impacts self-regulatory mechanisms through re-learning adaptive interactions across body systems during the experience of physical and/or emotional stress during and beyond the practice. Yoga enhances the efficiency, bidirectional communication, and integration between (1) higher and lower-level brain networks; and (2) afferent and re-afferent information from interoception (i.e., viscerosomatic processing and integration)	Top-down mechanisms: <i>Higher-level brain structures.</i> Central executive network supports attention and memory. Frontoparietal control network supports monitoring, meta-awareness, and cognitive reappraisal. Moral cognition network supports motivation and intention setting, and thus self-care and prosocial behaviour. <i>Lower-level brain structures.</i> Dorsal attention network supports focused attention and engagement. Parasympathetic nervous system supports vagal tone. Striatopallidal-thalamocortical network supports extinction learning of maladaptive responses. Bottom-up mechanisms: Via interoception and lower-level brain networks	Systems regulation: Self-regulation processes become automatised when mastering the yoga practice, becoming shorter and more efficient. Brain and body systems communication and flexibility is enhanced by efficiency. Cognitive regulation: Attention, memory, concentration, stimulus discrimination. Emotional regulation: Emotional stability, self-compassion, acceptance, emotion awareness, cognitive reappraisal, physiological reactivity. Behavioural regulation: Goal-directed behaviours, health-

Model of yoga	Definition of yoga	Elements of yoga	Core concepts of model	Mechanisms	Outcomes
				inhibits maladaptive autonomic responses to stress and maladaptive emotions, thoughts, and behaviours. Interoception involves processing of information from cardiovascular, respiratory, and musculoskeletal systems.	related behaviours, coping styles.
<i>The Comprehensive Theoretical Framework of Neurophysiological and Neurocognitive Mechanisms in Yoga Practices</i> (Schmalzl et al., 2015)	Yoga as modern psychophysiological therapeutic practices using a range of techniques based on movement, breathing and attention, which derive from diverse yoga traditions, with the goal of promoting health, stress reduction, and self-regulation, both for preventing and treating illness.	Movement (i.e., <i>asana, vinyasa</i>, muscle activation, coordination) Breathing (i.e., <i>pranayama</i> and slow, conscious, intentional breathing) Attention (i.e., bodily sensations, focused attention, open monitoring attention, metacognitive awareness, <i>drishti</i>)	Elements, processes, and outcomes of yoga can be synthesised into two main mechanisms of change: (1) Regulation of allostatic load (i.e., ability to balance and maintain a state of homeostasis when facing the cumulative effects of stress; McEwen, 2003). The vagal nerve is key in regulating allostatic load, which has been found to be associated with a range of physical, affective, cognitive, and social processes (Porges, 2003; 2007). (2) Integration of bottom-up (neurophysiological) and top-down (neuropsychological) processes. Bidirectional	Mechanisms of movement-based aspects of yoga: Through movement and postures, yoga activates neural circuits in the basal ganglia and cerebellum. These are thought of increasing connection and shifting between motor, cognitive, and emotional circuits, thus promoting self-regulation and integration of body and mind. Mechanisms of breath-based aspects of yoga: Slow conscious breathing can decrease chemoreflex sensitivity and oxidative stress, increases hormones that facilitate feelings of	Yoga provides the opportunity to explore the dynamic interaction between physiological stress responses triggered by physical, emotional, or mental challenges, and regulatory systems. Four key areas of outcomes are proposed: (1) Physiological parameters Cortisol levels, GABA levels, heart rate variability (HRV), blood pressure (BP). (2) Body awareness

Model of yoga	Definition of yoga	Elements of yoga	Core concepts of model	Mechanisms	Outcomes
			communication between the body and both lower and higher brain structures result in processing experiences and regulating physiological, intrapersonal, and interpersonal functioning.	calmness and social bonding, and regulates and balances the autonomic nervous system. Mechanisms of attention-based aspects of yoga: Focused attention and open monitoring attention comprise a set of processes in lower and higher brain structures linked to body awareness (i.e., interoception), meta-cognition (i.e., contemplation), and gaze (i.e., <i>drishti</i>)	Attention to proprioceptive and interoceptive signals, pain tolerance. (3) Perceived stress and emotional states Vitality, subjective wellbeing, improved mood, lower stress. (4) Cognitive functioning Attention, memory, alertness, executive functioning. Associated with grey matter volume and more resilient functional brain networks.
<i>The Respiratory Vagal Stimulation Model of Contemplative Activity</i> (Gerritsen & Band, 2018)	Yoga as a contemplative practice rooted in Eastern philosophy with the aim of enhancing physical and mental health	Mental training: (1) Attention training (2) Affect training (3) Metacognitive adjustment Embodied cognitive exercises:	Breathing techniques used in contemplative practices entailing low breathing rate and a reduced inhalation/exhalation ratio can account for physical and mental outcomes, by directly or indirectly activating vagal activity and balancing the autonomic nervous system. Slow diaphragmatic breathing patterns can stimulate the	Direct route for respiratory vagal nerve stimulation: Volitional low breathing rate and reduced inhalation/exhalation ratio via executive network using top-down processes, ultimately affecting HRV, blood pressure, inflammation, sympathetic nervous system, and	Activation and predominance of vagal activity and balance of parasympathetic and sympathetic nervous system generates a cascade of health and wellbeing benefits: Physiological relaxation can generate persistent stress release,

Model of yoga	Definition of yoga	Elements of yoga	Core concepts of model	Mechanisms	Outcomes
		(1) Body awareness training (2) Physical exercise (3) Breathing techniques	vagus nerve and improve vagal tone and HRV. In the case of yoga, these breathing patterns synchronise with movement (i.e., vinyasa).	hypothalamic pituitary adrenal axis. Indirect route for respiratory vagal nerve stimulation: Afferent vagal nerve circuits signal breathing patterns using bottom-up processes, ultimately generating a state of relaxation and safety. This reinforces improved vagal tone and associated physiological benefits described above.	decreasing stress related inflammatory response, and therefore reducing and preventing pathologies related to stress. Vagal activation leads to improved connectivity of lower and higher-level brain circuits contributes to improving cognitive and behavioural performance and flexibility. It also impacts the default mode network, leading to improvements in cognitive control and performance monitoring.
Conceptual Model of Yoga (Kishida et al., 2018)	Yoga as the union of mind, body, and spirit through the combination of ethical principles with breathing, postural, and meditation techniques, leading to health and wellbeing.	Ethics (i.e., <i>ahimsa</i>) Postures (i.e., <i>asana</i>) Breathing techniques	Yoga practice can enhance the relationship to oneself through the practice and presence of mindfulness and self-compassion. It can also enhance relationships with others by improvements of compassion and social connectedness. These intrapersonal and	Direct pathways: Mindfulness, self-compassion, and social connectedness as direct mechanisms by which yoga yields more distal outcomes, such as enhanced physical and mental health and wellbeing.	A common thread across themes suggested that intrapersonal benefits ultimately overflow into interpersonal relationships.

Model of yoga	Definition of yoga	Elements of yoga	Core concepts of model	Mechanisms	Outcomes
		Meditation techniques	interpersonal variables can potentially result in increased health and wellbeing.	Indirect pathways: Compassion and social connectedness would be mediated by mindfulness, proposing that interpersonal outcomes are a by-product of intrapersonal changes.	Intrapersonal outcomes: Calmness, self-compassion, mindfulness Interpersonal outcomes: Compassion, sense of connectedness
Conceptual Model of Mechanisms of Yoga for Positive Embodiment (Cox & Tylka, 2020)	Yoga as the union of body, mind, and spirit, and of the internal with the external. The emphasis of the yoga practice is to move, stretch, and balance through different <i>asanas</i> , <i>pranayama</i> , <i>dhyana</i> , and <i>dharana</i> .	Asana. Facilitating the journey towards the inner world Pranayama. Facilitating the stillness of the mind Dhyana and dharana. Facilitating being in the present moment with acceptance, non-judgement, and openness.	Positive embodiment outcomes derived from yoga are represented as a mediational chain comprising three forms of positive embodiment that sequentially build upon each other. When state-like embodied experiences happen regularly over time, they can lead to trait-like embodied experiences, ultimately overflowing into daily life. This mediational chain represents the mechanisms of yoga for positive embodiment, while also considering how this chain can be moderated by various contextual variables.	Mediational chain comprising three sequential mechanisms: (1) Embodied experiences that the practice promotes within the context of the formal practice (i.e., states) (2) Enduring embodied experience generalisable beyond the formal practice (i.e., traits). (3) Embodied lifestyle practices emerging from those stable and generalised embodied experiences. Moderators: (1) Yoga context (e.g., method of instruction) (2) Personal and social context (e.g., trauma)	State-like experiences evolving into trait like experiences (outcomes): Reduced self-objectification, mindfulness, self-compassion, body acceptance, body image flexibility, competence, joyful immersion and flow, connection to desire and pleasure. Embodied practices imbedded as lifestyles (outcomes): Mindful self-care, intuitive eating, attuned exercise

Model of yoga	Definition of yoga	Elements of yoga	Core concepts of model	Mechanisms	Outcomes
				(3) Social identities (e.g., gender) (4) Personality traits and motivations (e.g., extraversion)	

Holistic and Transdisciplinary Models of Human Functioning

By examining these five models of yoga, it becomes clear that as a multifaceted practice, yoga allows the integration of bodily and mental processes which yield a range of health and wellbeing outcomes at a physiological, intrapersonal, and interpersonal level. This underscores the relevance of considering transdisciplinary and embodied wellbeing frameworks to further understand how the mechanisms exposed in the abovementioned models can produce benefits in different dimensions of the individual. Building upon these five conceptual models, we next link these models to the Transdisciplinary Model of Wellbeing (Mead et al., 2021) and the Attuned Representation Model of Self (ARMS, Cook-Cottone, 2006; 2015). We have selected these two models due to their embodied and systems lens to wellbeing and individual human functioning.

Transdisciplinary Model of Wellbeing

Mead and colleagues (2021) defined wellbeing as “a positive psychological experience, promoted by connections to self, community and environment, supported by healthy vagal function, all of which are impacted by socio-contextual factors that lie beyond the control of the individual” (p. 1). Using a multi-level ecological systems approach, they propose a model of wellbeing (i.e., the GENIAL model) that highlights the role of individual and contextual factors, while stressing how vagal tone affects and is affected by different domains of wellbeing, within and beyond the individual (Mead et al., 2021). Notably, the authors frame vagal nerve activity as the “theoretical glue” of their wellbeing framework, due to its contribution to the experience of wellbeing. The vagus nerve is contended as the structural connection between body, mind, and

environment, supporting self-connection, social connection, and connection to nature, which are central for wellbeing (Mead et al., 2021; Porges, 2007; 2011; Thayer et al., 2009). Considering these links, Mead et al. (2021) suggest that interventions and practices addressing both physical and mental domains together may have a greater impact on the experience of wellbeing rather than separately.

One of the strengths of this model is that it draws upon literature and empirical evidence from a range of disciplines with the aim of providing a foundation for a transdisciplinary science of wellbeing. While using an ecological and systems lens to explore how wellbeing looks like at a community, societal, and environmental level, it also examines how contextual factors at these levels can have an impact at an individual level, affecting the regulation of the autonomic nervous system. Notably, this framework highlights the role of vagal activity in supporting wellbeing, which has been regarded by yoga models as central for adaptive and regulated individual functioning across physiological, emotional, cognitive, and behavioural domains. Furthermore, as stated within such models, yoga can stimulate vagal activity through different pathways, and thus, explain connections to wellbeing.

Attuned Representation Model of Self

Cook-Cottone (2015) conceives the self as a process, meaning that it is a constant journey of being, of practice, and an “ever-changing experience” (p.3). This is closely aligned to yoga, when defined as a process of self-inquiry for self-evolution (Vivekananda, 2012). Following Cook-Cottone (2015), the sense of self arises from each individual’s intrapersonal and physiological context as well as from the environmental factors in which the person is immersed in. Thus, she posits that an effective and

resilient self must be embodied to be known, and that self-regulation is attained by gaining embodied sensitive awareness (i.e., internal and external) and engaging in embodied practices such as yoga (Cook-Cottone, 2006; 2015; Schultz & Ryan, 2013). She further argues that the yoga journey towards self-regulation offers an experiential and cognitive framework to know and regulate the self in a holistic and integrative manner. This translates into making decisions and modulating emotions based on what the individual has gained as true from their physiological and intrapersonal world. This intuitive knowledge is also known as the wise mind, which integrates emotional experience with logical analysis (Linehan, 1993).

Building upon these ideas, the Attuned Representational Model of Self (ARMS) proposes the self as the embodiment of the integration and attunement of the internal self (i.e., physiological, emotional, cognitive) and the external social construction of the self (i.e., self in relation to others). The physiological self refers to the physical experience linked to bodily sensations, serving as the foundation for self-regulation (Cook-Cottone, 2015; Herbert & Pollatos, 2012). The emotional self refers to feelings and emotions that arise from the physiological experience, which are further integrated and regulated through cognition (Cook-Cottone, 2015; Herbert & Pollatos, 2012). The cognitive self refers to thought processes by which the self perceives, conceptualises, and makes sense of themselves and the world (Cook-Cottone, 2015; Siegel, 2010). While the attunement of internal and external self fosters resilience, discordance promotes dysregulation and maladaptive behaviours (Cook-Cottone, 2006; 2015; Heatherton, 2011). It has been proposed that increased awareness, acceptance, and responsiveness

to one's needs can bring about external acceptance and validation of oneself (Cook-Cottone, 2015; Piran, 2001).

Similar to the transdisciplinary model of wellbeing, the ARMS model integrates evidence from a range of fields to present a cohesive and holistic approach to individual functioning and its implications for health and wellbeing. While considering contextual influences and interactions, the model also highlights the role of embodied practices such as mindfulness and yoga in self-regulation, which further links to the self-regulation model of yoga discussed above (Gard et al., 2014). Taken together, the models of the mechanisms of yoga and the models on wellbeing and individual functioning provide a foundation for mapping the complex pathways of yoga towards wellbeing. The key elements emanating from these frameworks are: (1) that transdisciplinary research provides a compelling rationale for human functioning and wellbeing to be considered as embodied; and (2) that yoga can target at different dimensions of individual functioning, thus contributing to practitioners' wellbeing.

The Current Study

This qualitative study follows up on previous studies investigating regular AY practitioners' (AYPs) perceptions of wellbeing (Ramirez-Duran et al., 2022a) and of the dimensions of wellbeing (Ramirez-Duran et al., 2022b), conceptualisations of yoga (Ramirez-Duran et al., 2023a), and regular AYPs' wellbeing profiles (Ramirez-Duran & Kern, 2023). This study aims to examine regular AYPs' perceptions on how their yoga practice relates to wellbeing in general and to specific dimensions of wellbeing, in light of the models reviewed above, and aims to identify how different aspects of their practice relate to different aspects of wellbeing. Additionally, we examine the role of

yoga in the interconnectedness between different elements of wellbeing. As a whole, the current study seeks to conduct an in-depth analysis of the perceptions of regular AYPs in relation to their experiences of yoga and how that contributes to their wellbeing.

Method

Participants and Context

In this study, the first author interviewed 23 regular AY practitioners selected from a larger survey focusing on AY and wellbeing, which included 352 participants fluent in English and/or Spanish from 42 countries. The data from the survey were gathered between April and August 2020, with participants recruited through social media platforms (i.e., Facebook, Instagram, Reddit, LinkedIn) and email communication through yoga studios and/or teachers. Interviewed participants were selected and contacted between July and August 2020 amongst 91 practitioners who defined themselves as regular AY practitioners who were willing to be contacted for a follow up interview, and provided their contact information in the survey. We selected and contacted 24 participants to represent a wide range of characteristics in terms of demographics and yoga practice, from which 23 confirmed their interest and agreed to participate. Procedures and permissions to conduct all stages of the larger research project (i.e., online survey and interviews) were approved by The University of Melbourne (protocol #1955377.1).

Participants in this study were mainly females (69.57%) aged between 25 and 54 years old (73.91%), and the majority were located in Oceania (34.78%), the Americas (30.43%), and Europe (26.09%). Most practitioners identified as Caucasian (56.52%), held a graduate (47.83%) or a post-graduate (47.82%) degree, and either did not identify

with any spiritual tradition (26.09%) or identified as Agnostic or Atheist (34.78%). Participants had been practising AY regularly from 3 months to more than 20 years, with most participants having a regular practice of 1 to 5 years (47.83%). The majority of participants had a morning practice (82.61%) and practised following an only Mysore style (56.52%) or combined with traditional Sanskrit led classes (34.78%), under the guidance of one (34.78%) or two teachers (34.78%) in sessions lasting between one to two hours (91.30%). Their practice represented a variety of *asana* sequence, from the beginning of primary series to advanced series, with most practitioners practising full primary up to intermediate series (65.22%). Their yoga practice typically included *vinyasa* (95.65%), *drishti* (95.65%), *bandhas* (95.65%), free breathing (91.30%) and chanting opening and closing mantras (91.30%).

From the eightfold path framework, the majority of participants declared to practice the four external limbs (i.e., *yama*, *niyama*, *asana*, *pranayama*) to a higher extent than the internal limbs (i.e., 7 or above in an 11-point Likert scale). *Asana* was practised to a higher extent by most practitioners (95.65%), followed by *yama* (86.96%), *pranayama* (82.61%), and *niyama* (69.57%). Most practitioners considered yoga philosophy relevant (82.61%), engaging with it at least once a week (82.61%). In general, participants reported high levels of wellbeing (i.e., 7 or above on an 11-point Likert scale), especially in terms of their physical (86.96%), emotional (78.26%) and spiritual (78.26%) wellbeing, and most reported having excellent or very good general health (82.61%). Similarly, participants estimated that their yoga practice had influenced their physical (86.96%), emotional (86.96%), and psychological (82.61%) wellbeing to a higher

extent (i.e., 7 or above in an 11-point Likert scale). For further details, see Supplements 8.1 to 8.6.

Research Tools and Data Analysis

The first author conducted, transcribed, and analysed all interviews. Semi-structured interviews were guided by a set of eleven questions designed to explore participants' experiences with yoga, particular aspects of the AY practice that were relevant to them and had a positive impact in their wellbeing, and different areas of their lives. For purposes of this study, we only included 7 questions relevant to the pathways of AY to wellbeing (see Table 8.1 for details). Interviews ranged between 40 and 90 minutes depending on the participant, and both video and audio were recorded with participants' consent. Most interviews were conducted in English (n=18) and were transcribed in verbatim using Otter.ai software for further data analysis. Interviews conducted in Spanish (n=5) were transcribed verbatim without software due to difficulties with language recognition and then translated to English for data analysis.

Table 8.2. *Questions From Semi-Structured Interviews Included in This Study*

Question	Main Area	Interview Questions
Q1	Relevant AY elements	What are the most relevant elements of the Ashtanga yoga practice to you?
Q2	Pathways to wellbeing	How do these elements contribute to your well-being? How do these apply in your daily life?
Q3	Outcome of yoga	What areas of your life have been positively influenced by your yoga practice?
Q4	Outcome of yoga	Have you experienced any benefits by practising Ashtanga yoga regularly, and if so, what kind of benefits? In which areas of your life have you experienced these benefits?
Q5	Pathways to wellbeing	How has your yoga practice helped you deal with challenges you have experiences in your life in general? How have you dealt with those challenges? What internal and/or external resources have you drawn upon?
Q6	Outcome of yoga	What realisations, discoveries or accomplishments have you experienced in your yoga practice? How have these realisations and accomplishments affected your perception of the practice and life in general?
Q7	Relevant AY elements	What do you like the most or would highlight about Ashtanga Yoga?

We used Reflexive Thematic Analysis (RTA; Braun & Clarke, 2012; 2021) to analyse the transcribed data. Three sets of questions were addressed: the elements of AY that participants highlighted within their practice; the experiences and perceptions on how those elements of the AY practice had influenced their lives, wellbeing, and challenges; and the outcomes that participants reported as deriving from their AY practice (see Table 8.1 above).

For the AY elements and the AY outcomes topic areas, we mainly used a deductive approach and semantic coding, based on frameworks, literature, and previous research related to yoga and wellbeing that have been included in previous studies (Ramirez-Duran et al., 2022a; Ramirez-Duran et al., 2022b; Ramirez-Duran et al., 2023a). Still, codes were not pre-defined prior to data analysis, consistent with RTA (Braun &

Clarke, 2021). Relevant data relating to the second topic area and the main focus of this study was performed afterwards, mainly coded by using an inductive approach combined with latent and semantic coding (see Figure 8.1 for examples). We then generated a table to integrate the key information from each interview and to visualise shared meanings across participants by using coloured bold font for words, and text highlight colour for codes, to organise information and generate potential themes (see Supplement 8.7). The creation of potential themes, their review, and definition of the final themes was done iteratively. The RTA process was led by the lead author and reflexivity was applied throughout the process independently, and with co-authors to sense-check ideas (Braun & Clarke, 2021). See Figure 8.2 below for details of this process.

Figure 8.1. *Examples of Deductive and Inductive Coding.*

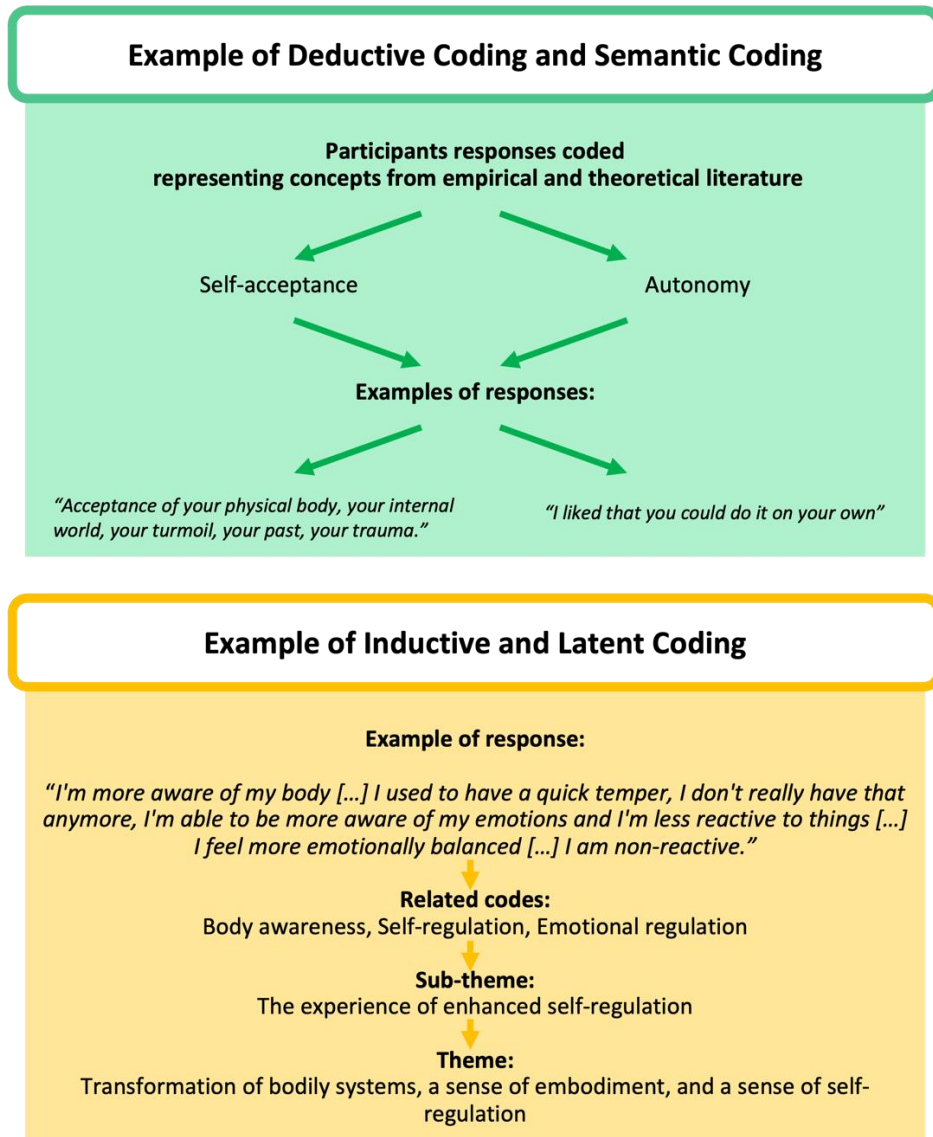
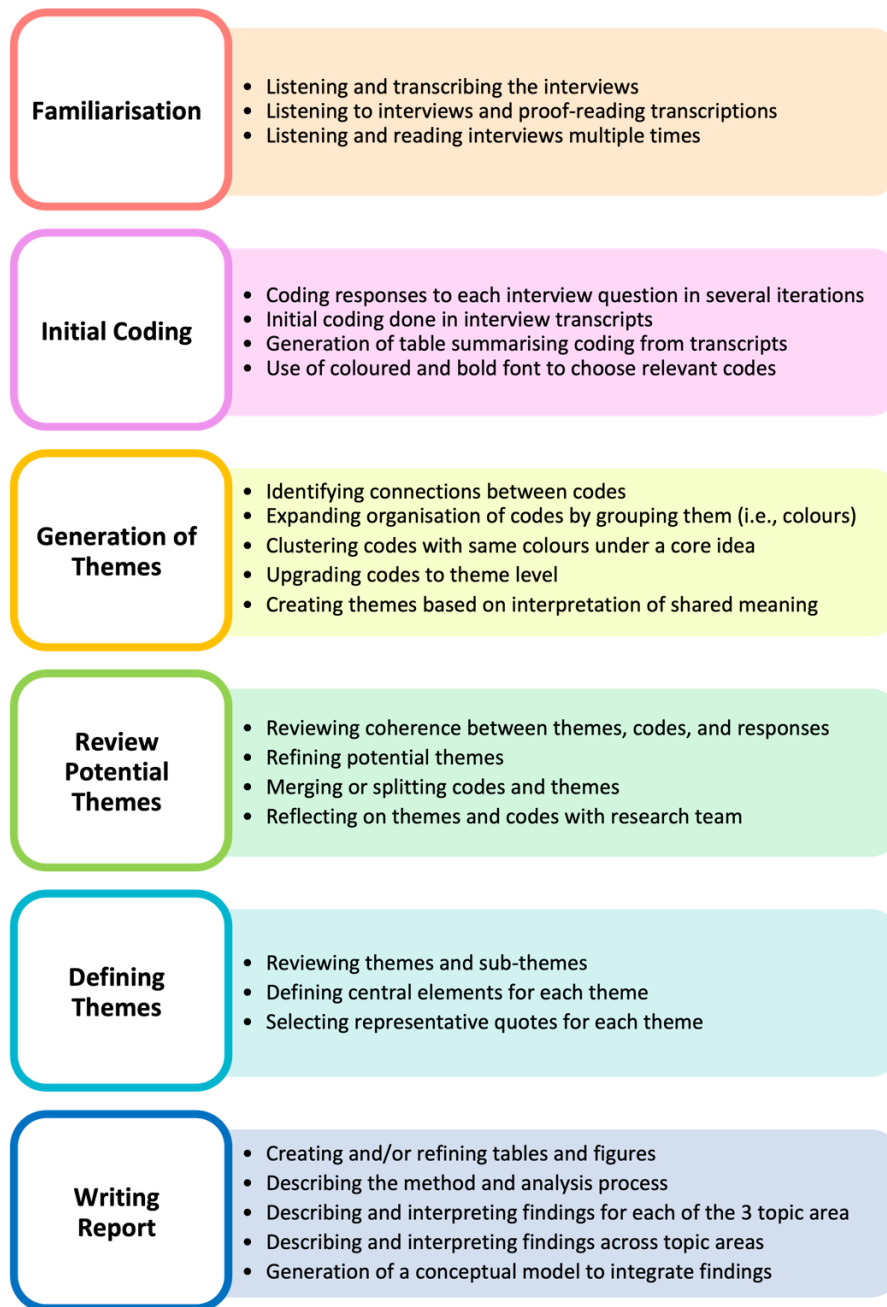


Figure 8.2. Illustration of the RTA Process.



Results and Discussion

The synthesis of themes across participants for each of the three topic areas along with the mechanisms identified across the yoga models, is summarised in Table 8.2 (see Supplement 8.7 to 8.10 for further details).

Table 8.3. *Summary of Themes Across AY Elements, Processes and Outcomes*

AY ELEMENTS (themes from interviews)	AY PROCESSES AND PATHWAYS (themes from interviews)	AY OUTCOMES (themes from interviews)
THEME 1: The AY System Asana sequence Bandhas Breath Drishti Vinyasa Chanting AY Philosophy THEME 2: The AY Method Progressive learning Personalised approach Self-practice Autonomy-supportive teacher Morning daily practice Mysore style Resting days	THEME 1: Transformation of bodily systems and sense of embodiment THEME 2: Construction, de-construction, and harmonisation of the self THEME 3: Ways of being and living in the world	THEME 1: Intrapersonal Outcomes e.g., body awareness, self-compassion, emotion regulation, lifestyle choices THEME 2: Interpersonal Outcomes e.g., authentic relationships, compassion THEME 3: Transpersonal Outcomes e.g., transcendence, meta-physical connection
	YOGA MECHANISMS (from models)	
	MECHANISM 1: Bottom-up pathways from bodily processes and experiences to emotional and cognitive experiences (Gerritsen & Band, 2018; Kishida et al., 2018, Schmalzl et al., 2015) MECHANISM 2: Top-down pathways from volitional cognitive functions affecting bodily functions and outcomes (Cox & Tylka, 2020, Gard et al., 2014; Kishida et al., 2018) MECHANISM 3: Strengthening and balancing of the nervous system and stress response through vagal activity stimulation and predominance (Gerritsen & Band, 2018; Schmalzl et al., 2015) MECHANISM 4: Integration and efficiency of bidirectional communication of top-down and bottom-up processes (Gard et al., 2014; Schmalzl et al., 2015)	

Relevant Elements of Ashtanga Yoga

We first identified common elements from the AY practice that participants considered relevant and valued within their formal practice. The elements were grouped into two major themes: the AY system, and the AY method.

The AY System

The first group of elements were clustered into the theme “*The Ashtanga Yoga system*”, which was defined as the framework comprised by distinctive practical and theoretical components that when combined and applied, can result in a movement meditation practice. While some elements may also be found in other yoga traditions, others are unique to the AY style. For example, the combination of breath, *drishti*, and *asana* known as *trishtana*, is characteristic of the AY framework and was explicitly mentioned by some participants as being a cornerstone of the practice. For instance, one participant noted:

“practising those elements together... is what's most important, is what I find the most beneficial [...] the base of a strong practice is to have those three things, you know, conscious. If I've got those three things conscious at the same time, then I'm really building a solid foundation” (Participant 13, male, age 40)

Other participants used the concept of the AY system as a relevant element in and of itself. They emphasised the combination of a range of different elements (i.e., inclusive or beyond *trishtana*) rather than separate elements on their own, which is what makes their yoga practice unique. For instance, one participant spoke about the system and it being more than the sum of the parts, and in relation to something greater than herself:

“I find that like the system, the package of breath, bandha, and drishti is like a way to kind of utilise a force, or like an energy [...] that's outside of me that I can use anytime I want [...] I can describe as universal energy.” (Participant 10, female, age 25)

Another practitioner talked about the system in terms of the structure and framework of this yoga tradition as the main highlight and foundation, providing steadiness over time:

“I suppose the fact that there is a structure to it, whether it's... whether it's a perfect or imperfect structure [...] It's just the fact that there is a structure and a framework [...] That steady basis of working on things over a long period of time”. (Participant 15, male, age 37)

Other practitioners referred to elements separately while still acknowledging the interrelation between them. This included the use of breathing, the structure of the asana sequence, the use of *bandhas*, *vinyasa* and/or *pranayama*, and the practice of attention and observation. For instance, one participant noted:

“For a long time, I only paid attention to the asanas and the breath [...] then I started being more aware and being more committed. And over the last couple of years, I've started to incorporate other elements [meditation and pranayama]. I've continued with asanas, but being more aware. I observe my body much more now.” (Participant 4, female, age 35)

Finally, other participants underscored the relevance of the philosophical framework and ethical guidelines which sustain the formal practice and play a pivotal role in their approach to the practice and life. One practitioner explained this as:

“expanding on that in what the other Ashtanga yoga, the remaining limbs, especially the first two, yama and niyama. Those aspects of... Ashtanga yoga, extend beyond the mat, but they also apply to the mat as well. And that, for example, ahimsa. Not just being, you know, non-violent to the external world, but to my own internal world, as well.” (Participant 13, male, age 40)

Thus, the combination of particular elements into this specific system of the AY tradition plays a central role for regular practitioners, which can be experienced mostly during their practice, but also beyond their yoga mat. The emphasis on the combination and interrelation of elements as a whole, illustrates what Gard et al. (2014) and Schmalzl et al. (2015) propose in their models about the synergistic and tandem effect of the practices and processes contained in yoga.

The AY Method

The second set of elements were grouped as *“The Ashtanga Yoga method”* to capture the way in which the AY system is taught, learnt, and practised, including the method for teaching and practice. Here, most elements were distinctive to the AY framework, which is characterised by an individual, progressive, and autonomous practice emphasising an internal focus. Participants highlighted the progressive nature of the practice, which relates to the asana sequence and the method for teaching and learning it gradually, tailored to each practitioner. For instance, one practitioner mentioned: *“I think the sequence itself is beautiful. Like the way it works. The slow methodology of taking one posture at the time”*. (Participant 2, female, age 45). Another participant emphasised these aspects as follows:

“I really like the pedagogy of it, this idea of, you know, everybody learns the same stuff at their own rates. And you get individualised, like this differential instruction. [...] And it progressively builds on itself. I like that. The discipline involved in it, and the kind of, the logical order”. (Participant 5, female, age 24).

Other participants underlined the concept of a daily practice that is usually encouraged as a morning ritual, threaded with established resting days. In one participant’s words: *“I really do like that it encourages you to practice daily [...] The encouragement of moon days and resting days [...] I think it's important in anything to recover and recharge.”* (Participant 20, female, age 22).

Participants also underscored the development of a self-practice and the autonomy it provides, even when done in a group setting. For instance, when talking about being introduced to AY, one practitioner said:

“I liked that you could do it on your own [...] I loved that you didn’t have to go to a class [...] I loved that it was your practice, you were learning it and it was like a self-practice. You didn’t need anybody to guide you, you’d just do it on your own”.

(Participant 2, female, age 45)

Similarly, other practitioners specifically spoke about the Mysore style of teaching and practice, while highlighting the discipline, commitment, and autonomy involved:

“The way that it's taught, I think is the big thing [...] you can't just drop in for a quick class. You know, you've got to, like, commit to it [...] the Mysore style way of teaching really appeals to me.” (Participant 12, male, age 24)

Some practitioners also mentioned how the AY method provides the opportunity for self-observation and turning the focus to the internal world, which again relates to the concept of movement meditation:

“a few years later, I went to my first Mysore class. And [...] I knew, like, this was what I was looking for. Finally, it made so much more sense [...] I think what caught me the most is that it was much more inward focused, I didn't have to follow someone”. (Participant 17, female, age 36)

Another key feature that was mentioned was the personalised nature of teaching and the role of the teacher in generating autonomy-supportive relationships and a supportive environment. Participants referred to specific behaviours or attitudes of their teachers. For instance, one participant spoke about this in his experience learning final back bending (i.e., drop backs) with his teacher:

“She was at the other side of the room. And she said: “all by yourself today”. And I was like “you're crazy, what do you mean? I can absolutely smash my head on the floor!”. But she said: “you can do it!”. She goes, “I believe you can do it”. And she talked me through it, through from the opposite end. And I did it.”
(Participant 13, male, age 40).

This theme illustrates the ways in which practitioners are taught and how they learn and develop their own formal practice, experiencing it as quite unique from other forms of yoga. Although almost every modern yoga style comprises the performance of physical postures along with conscious breathing, both the AY system and the method provide particular conditions for practitioners to immerse themselves in a regular personal yoga practice, fostering autonomy and self-observation. Thus, in addition to the usual

physical, mental, and ethical/philosophical components typically described in yoga models (e.g., Cox & Tylka, 2020; Gard et al., 2014; Schmalzl et al., 2015), the method of developing an autonomous practice within an autonomy-supportive environment may become particularly important for participants' self-practice and wellbeing (Mossman et al., 2022; Ramirez-Duran & Kern, 2023).

Processes Experienced Through Regular Ashtanga Yoga Practice

When looking at the processes or pathways leading to wellbeing, three themes encapsulate the complex processes that regular AY practitioners described in the interviews: Transformation of bodily systems, sense of embodiment and self-regulation; Construction, de-construction, and harmonisation of the self; and Ways of being and ways of living in the world.

The Transformation of Bodily Systems, Sense of Embodiment and Self-Regulation

The first theme was defined as the neuro-physiological, sensory-motor, and musculoskeletal changes perceived and experienced by regular AY practitioners, along with a heightened sense of embodiment and self-regulation. Here, there were several aspects of the practice and related behaviours that came into play, which participants described as interacting with increased levels of awareness of their bodily processes. Common shared experiences across participants involved the interconnectedness of the breath, the physicality of the practice, bodily awareness, mindfulness, emotion regulation, lifestyle behaviours, stress management, and resilience, and how these manifested in their *asana* practice and in different areas of their lives, and how they contributed to their sense of wellbeing. One practitioner eloquently articulated how the

physical aspect of his AY practice has impacted intrapersonal and interpersonal aspects of his life:

“I'm more aware of my body. I'm taking care of myself better [...] I used to have a quick temper, I don't really have that anymore, I'm able to be more aware of my emotions and I'm less reactive to things [...] I feel more emotionally balanced. It's... it's also improved relationships [...] I empathise with people more, so I listen better. I am nonreactive. And I think those things I've definitely learned through yoga.” (Participant 16, male, age 35)

This echoes the state-to-trait-to-lifestyle processes that Cox and Tylka (2020) described in their model on how body awareness leads to improved emotion regulation, prosocial behaviour, and healthy lifestyle behaviours. Furthermore, existing yoga models show that yoga can positively impact physiological, intrapersonal, and interpersonal outcomes (cf. Gard et al., 2014; Gerritsen & Band, 2018; Kishida et al., 2018; Schmalzl et al., 2015). The same practitioner then continued to describe how the practice has contributed to his work life:

“In my job, there's a lot of like, deadlines. [...] It helps me, like I step back from stress and know that stress can actually be beneficial rather than something deadly [...] in Ashtanga, you're kind of practising stressful situations and learning to breathe through them.”

The increased body awareness and cognitive reappraisal of stress noted by this practitioner along with the practice of breathing techniques suggest the interplay of top-down and bottom-up mechanisms described in yoga models (Gard et al., 2014; Gerritsen & Band, 2018; Schmalzl et al., 2015). This practitioner and others highlighted how the

use of conscious breathing while performing physically challenging tasks during the AY practice can have a physiological effect in the body, in terms of feeling more calm, grounded, and relaxed, which has also been reported in previous research and yoga models (Gerritsen & Band, 2018; Schmalzl et al., 2015). The interconnection across physiological experience and emotional, psychological, and social dimensions of wellbeing further echoes the holistic models of human functioning (Cook-Cottone, 2015; Mead et al., 2021).

Engaging in a regular and personal yoga practice where an inward focus is encouraged, seems to allow the experience and awareness of physical, mental, and emotional stress, offering the possibility to befriend sensations, feelings, and thoughts that arise, instead of reacting to them automatically. For example, one participant noted the impact of breathing on her emotional states: *“Breath control. That is something that I’d never done much in a conscious manner [...] and it’s something that helps me anytime in regulating my emotional state”* (Participant 19, female, age 33). Another practitioner further illustrated this as:

“Just the ability to concentrate, and your breath. [...] Being aware that I’m stressed out, breathing heavier than I usually am, and my heart’s racing and I can feel this, all this stuff... a lot clearer. I feel this since doing the practice [...] I think just being more aware and more attuned to, like, the body and its fluctuations, and all that, definitely helps in the situations of stress [...] like I know every morning, I get through it [...] that knowledge, I feel helps a lot with, you know, regular life challenges”. (Participant 12, male, age 24)

As this participant articulates, a regular yoga practice offers the possibility of increased interoception and becoming more sensitive, attuned, and responsive to physiological cues or changes in the body (Cox & Tylka, 2020; Gard et al., 2014). Interestingly, the embodied experience of facing and overcoming a challenge during the yoga practice while using conscious breathing seems to equip practitioners with tools for challenges beyond the mat (Cox & Tylka, 2020; Schmalzl et al., 2015). Another practitioner spoke about this in the context of the practice helping her through a difficult pregnancy, stating that through the breath and asana sequence, the AY practice ultimately contributes to the development of both physical and psychological resilience:

“Just breathing and using that sort of equanimity that comes with the practice. Yeah, it was definitely very helpful knowing that it will pass eventually [...] we put ourselves into situations within the practice that can be a little bit stressful at times, on the body [...] whatever it might be. That helps you to understand the stresses that come and then go...” (Participant 2, female, age 45).

This resilience emerging from a regular practice has also been described in yoga models as the regulation of allostatic load, translating into neurophysiological, emotional, cognitive, and behavioural management of stress (e.g., Gard et al., 2014; Schmalzl et al., 2015). Practitioners gradually develop the ability to sit with physical challenges and discomfort with a calm and focused mind, which aid them in withstanding life challenges with equanimity and strength (Schmalzl et al., 2015; Stern, 2020).

Practitioners provided a range of examples of how they have gained increased awareness of the breath throughout their daily lives and how they draw upon this resource that they have learnt through the AY practice to manage difficult situations in

their lives. For instance, one participant noted: *“if you feel stressed, and you instantly notice, “oh, I’m not breathing”. I would have never noticed that before. And then you use your breath in your daily life to go about”*. (Participant 17, female, age 36). This further illustrates the mechanisms of breathing proposed in yoga models (e.g., Gerritsen & Band, 2018; Schmalzl et al., 2015)

In addition to the sense of calm and resilience experienced through the slow conscious breathing aspect of the practice, participants also expressed a newfound sense of positive embodiment and ways of inhabiting their own bodies. For instance, one practitioner stated:

“I’ve noticed from the first two months is that I never would’ve had a connection of like, if I’m happy in my body and happy in myself. And I’ve never been physically strong, or like, happy in my body. It’s really helped me to inhabit my body, which is something that I think I struggled with before.” (Participant 20, female, age 22)

This sense of positive embodiment has been documented in previous yoga research and models, both in phenomenological (e.g., Kishida et al., 2018) and neuro-physiological terms (e.g., Cox & Tylka, 2020; Villemure et al., 2014). Yoga can foster attention to and awareness of information coming from muscles and internal body organs, which can facilitate adaptive interpretations of interoceptive perceptions, leading to more adaptive behaviours (Gard et al., 2014). Cook-Cottone (2015) refers to this as the embodied self, able to integrate the emotional, intuitive, and cognitive selves into a coherent sense of self. Another practitioner highlighted this integration and the sense of embodiment in terms of the mind-body connection and how it was reflecting in her professional life:

“I did my medical studies in the 80s. And when it was pure of a physical [assessment] [...] when I tell you nowadays, about things going to my body, and then my mind knows it is real for me. A sign of this body mind connection. And before that, my head was here, and my body was there. And now I feel this integration”. (Participant 22, female, age 55)

This integration has also been described in yoga models in terms of bidirectional communication of top-down and bottom-up mechanisms and their role in regulating physiological, intrapersonal, and interpersonal functions (Gard et al., 2014; Schmalzl et al., 2015).

In summary, this theme reflects the transformative effect that the practice can have at a physical level through the use of breathing techniques, the cultivation of awareness across physical, emotional, and mental domains, and the experience of facing and overcoming challenges throughout a regular *asana* practice. These regular embodied experiences seem to enhance the conscious perception of the mind-body connection. This translates into a sense of positive embodiment (Cox & Tylka, 2020) contributing to a sense of integrated and embodied self (Cook-Cottone, 2006; 2015), further suggesting that self-regulation and resilience occur across physical, mental, emotional, and relational realms (Gard et al., 2014; Schmalzl et al., 2015). Thus, this theme offers a view on wellbeing and individual functioning across physiological, intrapersonal, and interpersonal domains (Cook-Cottone, 2015; Mead et al., 2021).

Construction, De-construction and Harmonisation of the Self

The second theme was defined as the ongoing processes in which individuals learn and develop themselves while able to accept themselves, as well as challenge and

unlearn maladaptive patterns. Within this theme, the processes around the construction of the self entail the development, cultivation, and strengthening of adaptive perceptions and behaviours about oneself, which may bring about a sense of competence, mastery, and personal growth. The processes around the de-construction of the self comprise the awareness, exploration, and inquiry of oneself in terms of thoughts, beliefs, habits, and emotional responses, from which new reflections and realisations about oneself occur. Thus, the harmonisation of the self emerges as an ongoing result of constant construction and de-construction, where the person may feel more centred, authentic, and accepting of themselves. One key feature within this theme is that the formal AY practice was experienced and perceived as a mirror surfacing and showing practitioners their capabilities as well as their fault and default patterns, hence contributing to the evolution of themselves. One practitioner framed this as a self-discovery process, saying:

“I think yoga does provide you with a lot of time to reflect. [...] I've gotten so much thinking about myself over the years now. And I suppose it's really helped me realise about myself as a person, like the concept of me being a control freak (laughs)”. (Participant 15, male, age 37)

For many practitioners, experiencing these processes of construction and de-construction of the self may not only feel immediately clear, beneficial, or pleasant, yet the experience is positively valued. For example, one participant explained:

“There have been some retreat-type experiences where yoga feels fantastic. And I feel great. But for the most part, it's messy [...] There's a lot of things that I do that are coming up, that brings up a lot of things, you know? The practice, if we

do it long enough, we start to see ourselves in ways that we probably... aren't so fond of". (Participant 13, male, age 40)

As noted by this participant, these experiences may be confronting and uncomfortable. One way of reacting could be to avoid this type of situation. However, a regular practice offers the chance to explore the experience with curiosity and openness in a safe environment, potentially cultivating an open monitoring type of mindfulness (Schmalzl et al., 2015; Taylor et al., 2011). The same participant continues:

"it's that curiosity of [...] learning about myself in that process and understanding, who am I? [...] So, I can know how to work with all these different aspects of myself, rather than shut them off. And by doing the same thing every day [...] the practice feels different daily. What's changing? Something in me is changing. You know, my perspective of the experience is changing. [...] it's not pleasant and it's difficult. We have these physical things that come up and emotional things that come up. Yet, through that whole process, doing the practice every day gives me the stability to experience myself in whatever capacity I have to, or in whatever way that presents itself."

This openness to experience has been reported in research involving yoga practitioners (Bright et al., 2010; Yadav et al., 2015) and regular AY practitioners described in Ramirez-Duran and Kern (2023). Echoing yoga models, a regular practice involving sustained attention and awareness might help develop or strengthen this quality (Gard et al., 2014; Kishida et al., 2018; Schmalzl et al., 2015). Here, the practice seems to provide a constant space to experience oneself while experiencing impermanence. Another practitioner specifically spoke about the concept of the AY practice being a mirror and a

safe place for this self-inquiry, and the therapeutic and transformative effect that this can have:

“the biggest influence that [it] has is, is the ongoing process of learning to be kind to myself. [...] I know the asana doesn't really matter. But if I have a day where I feel that my asana practice was not good, I feel sad or disappointed in myself. And the process of being shown the mirror of the practice, being the mirror of the doubt, and the insecurities I have. [...] It's a safe mirror [...] It creates a space where I can explore the things that I'm insecure about, safely.” (Participant 8, female, age 45)

These experiences suggest that despite the discomfort, practitioners are able to feel safe and remain calm and compassionate while exploring less desirable aspects of themselves. Yoga models and trauma literature suggests that by having an embodied sense of safety through the upregulation of the parasympathetic nervous system through breathing, practitioners are able to access higher levels of cognitive functioning, related to this meta-awareness described by participants (Gard et al., 2014; Gerritsen & Band, 2018; Schmalzi et al., 2015; Stern, 2020; van der Kolk, 2017).

The AY practice was also experienced as a safe place to try out new skills and to defy self-limiting beliefs, challenging oneself by adventuring into unexplored territories, and having the opportunity to succeed and grow. This is consistent with Cox and Tylka's (2020) model suggesting that competence, agency, and mastery are being embodied on and off the mat. One way participants experienced this was through their *asana* practice. For example, one participant talked about mastering a specific posture:

“Coming up from, um, bhujapidasana... being lifted off and then like, going back to bakasana. Like, it feels good. Just whenever I do it, and I get it right. And nail it. It's like, “yes! I did that thing” [...] There's a general attitude [...] if I'm just like “I can't do this stuff” (Participant 12, male, age 24)

These opportunities may then spill over into other areas of life, as suggested in some yoga models (Cox & Tylka, 2020; Kishida et al., 2018). The same practitioner continues on to describe how this attitude is transformed through the practice and then transferred to other life challenges:

“And I try to, whenever I'm learning a new skill, learning a language or reading a novel, anything, I know that if I approach it from how I approach the yoga practice, of respect to your body and your limits, and all that and, you know, limits on time limits, on doing all this stuff with calmness and clarity. I know that, um, yeah, there's lots of things that I can and have achieved [...] just knowing that I can do it. That is the epiphany.”.

As mentioned above, within these processes of construction and deconstruction of the self, there is an implicit sense of increased awareness and openness towards exploring what emerges. The ongoing result of these interactions seems to be a more authentic and balanced self, which mirrors what Cook-Cottone (2006; 2015) proposes in the attuned representation model of self. For instance, one participant noted:

“I feel like the practice, by doing it every day or to breathe or to meditate, it helps you to accept your own reality. If you accept your own reality and don't fight against your own reality, things flow. [...] To me, wellbeing has to do with being

able to accept yourself and being able to enjoy yourself [...] I love that people can know me for who I am [...] and appreciate me a lot more because of that. I feel that they appreciate honesty.” (Participant 7, female, age 34).

In summary, this theme speaks about how the AY practice provides the tools and the opportunities to become more aware of and embrace oneself, to challenge beliefs, to feel empowered and develop oneself, as well as to observe and unlearn maladaptive patterns. While these internal processes may be uncomfortable and confronting, participants recognise them as transformative experiences that ultimately contribute to their personal wellbeing, growth, and evolution. These experiences seem to mainly illustrate top-down mechanisms of change described in the scientific yoga literature. More specifically, focused attention (i.e., *drishti*) and concentration (i.e., *pratyahara*), as well as open monitoring attention towards internal stimuli (e.g., interoception, emotions, thoughts), along with other meditative aspects of the practice (i.e., *dharana*, *dhyana*) and meta-awareness related to self-inquiry would mainly involve higher-level brain processes (Gard et al., 2014; Schmalzl et al., 2015). Still, these processes are embodied. Aligned with Kishida and colleagues (2018) and the mediational chain proposed by Cox and Tylka (2020), it seems that the changes that are experienced on the mat during the formal AY practice, overflow into daily life and may consolidate as new and more permanent ways of being.

Ways of Being and Ways of Living in the World

The third theme was defined as the stable and coherent set of mindsets, values, behaviours, lifestyle choices, and worldviews in relation to oneself, others, human existence, and the world as a whole, which guide people’s ways of inhabiting their

bodies, relating to others, and inhabiting the world. These ways of being and ways of living in the world might be pre-existing to yoga, or have developed through yoga alone or in combination with other practices and teachings. Yet, these ways seem to be reinforced by and aligned with the regular AY practice and have a positive influence in how practitioners perceive their own wellbeing. For example, one participant spoke about how the AY practice has impacted his physical wellbeing and how it influenced his dietary choices through an increased bodily awareness:

“I started doing yoga. And then I started paying attention to how my body felt after I ate certain types of food. It was years later when I realised this connection, and it was like, oh! Actually, it was a lot more down to yoga than I realised.”

(Participant 15, male, age 37)

Another practitioner noted a similar experience. While noticing increased embodied self-awareness, she underscored the transformative lifestyle effect that the practice can have, permeating different areas of life, including relationships:

“It's not something you can just do for two hours a day. It changes your life. [...] for sure, [it permeates] into all relationships, whether it is partner, family, friends. Permeates into your lifestyle, the choices that you make for your health, it permeates in your work. Everything basically. [...] Just a simple example would be... noticing what makes me feel good and what doesn't. [...] So, more connection to myself and more awareness regarding that. [...] before I was like, not aware of what I said, how I interacted with people, how I let other people treat me. So, it helped me to learn to draw boundaries and to communicate clearer.” (Participant 17, female, age 36)

This mirrors the internal and external attunement of the embodied self proposed by Cook-Cottone (2006; 2015) contributing to wellbeing. Hence, this theme suggests that the AY practice can offer the opportunity to develop, imbed, and sustain a healthy lifestyle through increased self-awareness (Cox & Tylka, 2020). In many cases this may happen naturally as practitioners develop increased self-awareness in different dimensions of being, seemingly emerging in the physiological and intrapersonal space, and spilling over to the interpersonal space (Kishida et al., 2018; Mead et al., 2021). For example, one participant noted:

“I feel better in terms of general health. I have dropped bad habits that I used to have [...] I didn’t even propose to myself that, it just happened [...] now I feel much more prepared to face any challenge, in a more calming way. There are still things that bother me about myself, but hmm... I feel better with myself. I have learnt who I am, what I want. And I feel more connected to others and the world.”

(Participant 19, female, age 33).

These ways of being partly arise from the elements that practitioners mentioned in the previous two themes. The long-term role of breathing and *asanas*, the encouragement of inward focus, the self-inquiry, and self-acceptance seem to thread and lead to these more established ways of existing as a human being in this world, which apply beyond the formal AY practice (Cox & Tylka, 2020). This is consistent with research looking at regular yoga and meditation practitioners displaying increased levels of mindfulness, self-compassion, calmness, openness, and emotion regulation (Gard et al., 2014; Kishida et al., 2018; Ramirez-Duran & Kern, 2023; Schmalzl et al., 2015). One

practitioner eloquently spoke about how self-acceptance and intrapersonal changes then reflect outwardly in relation to others:

“Acceptance of yourself, it’s such a huge thing, that creeps in among the people who do yoga. Acceptance of your physical body, your internal world, your turmoil, your past, your trauma. So, I think you start accepting yourself and then of course it is much easier to accept anyone else. So, your relationships improve as you’re not judging yourself so harshly, so you’re not judging other people so harshly.”

(Participant 2, female, age 45)

There seems to be a ripple effect that occurs when intrapersonal changes take place, spreading beyond relationships in the immediate context to the wider world, aligned with Kishida and colleagues’ (2018) model. This further links to the previous themes and echoes research indicating that off-the-mat yoga can lead to improved relationship satisfaction through decreased stress, increased mindfulness and enhanced attunement with an authentic version of oneself (Evron, 2019). Furthermore, the same participant explains how this has translated into a renewed worldview:

“I think maybe your perspective of the entire world changes, you kind of see [...] where people’s pain is coming from. Whether it is physical pain, trauma. So, I feel that there’s an ease and acceptance of sort of the wider society, even though I could point out a million things that I don’t like about how our society runs.”

Interestingly, long-term practitioners who started their practice in their late adolescence or early adulthood found it harder to express the extent in which yoga has shaped them, since they themselves developed and evolved alongside the development of their practice. A similar issue happened with those practitioners who developed a

meditation practice alongside their AY practice or who had prior meditation experience. Despite them being cautious in stating a direct relationship between the AY practice and outcomes, practitioners still valued the role that the practice has played in shaping who they are. For instance, one practitioner who started practising at 19 years old said: *“I have a hard time thinking in terms of before and after. I have the feeling that no doubt my life would’ve been different without the practice. [...] I feel that it helps me being more courageous.”* (Participant 7, female, age 34).

Most likely a combination of top-down and bottom-up mechanisms contribute to the development and reinforcement of particular states experienced within the practice and existing personal traits, such as mindfulness, openness, and compassion (Cox & Tylka, 2020; Garland et al., 2010; Ramirez-Duran & Kern, 2023; Taylor et al., 2011), which may shape and settle practitioners’ ways of being. The regulation of the nervous system through breathing and *asana*, along with the activation of higher-level brain networks through meditation can promote self-regulation, and likely contribute to establishing certain intrapersonal characteristics or states into more stable traits (Bauer et al., 2019; Cook-Cottone, 2015; Gard et al., 2014).

These ways of being and living reported by long-term AY practitioners are complex and paradoxical. Although practitioners recognise the benefits in terms of interpersonal relationships, their experiences often imply changes that might feel unpleasant or that create dissonance. Yet, they usually and ultimately bring wellbeing. In the words of one practitioner:

“with my social life for example, it also helps. And there is a small paradox, because let’s say, most of my social circle was around partying. [...] I’m not

interested anymore [...] my social life it's not the same [...] let's say that what yoga took away from me, is what I'm now gaining in terms of wellbeing."

(Participant 19, female, age 33).

A previous study with the same group of practitioners revealed that perceived levels of social wellbeing and the perceived influence of the practice on social wellbeing were lower compared to physical, emotional, and psychological wellbeing (Ramirez-Duran & Kern, 2023). The paradoxical effect of yoga described by this practitioner may partly explain decreased levels of wellbeing in the relationship domain: while there might be a perception of one's social network being reduced or reshaped, other benefits are gained when reshaping those relationships and related social activities.

Finally, participants valued their connection to something greater than themselves, something that guides them, provides meaning, and gives them a sense of transcendence. Here again, this seems to come from an interplay between their lived experiences with the practice, the philosophical frameworks underpinning the practice, and their own belief systems. This mirrors one aspect of *niyama* that speaks about surrendering to the divine (i.e., *ishvara pranidhana*; Jois, 2016). For example, one practitioner explained this as: *"a sensation of something mystical and philosophical, of being connected with the universe, to put it in some way, it helps me trust that, well... everything will go well basically."* (Participant 19, female, age 33). Another participant coming from an atheist background insightfully spoke about developing a connection to something greater than herself:

"There is also something that for me it was very powerful, that it was that kind of surrender to something bigger. And again, I think because I came from like, a

non-religious background [...] I don't know what created the switch. I don't know what happened. It was so organic [...] it's like I softened a lot. I was able to become much more vulnerable to myself, to the world, to other people. And it was like a trust." (Participant 2, female, age 45)

This can be interpreted as long-term changes in neuro-physiological processes and structures (e.g., enhanced vagal tone) potentially increasing an embodied sense of safety and openness, which would allow practitioners to be more comfortable with feeling vulnerable and to access higher brain functions that have been related to states of oneness or transcendence (Gard et al., 2014; Gerritsen & Band, 2018; Schmalzl et al., 2015; Stern, 2020; Wahbeh et al., 2019). The same practitioner continued:

"A trust for myself, a trust for the world. It was like this God space came. And I'm still not religious, so I'm not saying God in a religious way. But... it was like a surrender, you know? [...] Like a weight came off my shoulders. And something bigger, surrender, God. You know. But again, it just happened, and I would've never guessed it."

This theme captures the more permanent changes that take place after developing a regular and long-term AY practice, in which practitioners shift in terms of how they see themselves and the world, and how they live and interact with others and in the world. Notably, these ways of being and living echo what has been proposed in the model of positive embodiment (Cox & Tylka, 2020), in which yoga practitioners embody healthy habits and lifestyles driven by mindfulness, intuition, and attunement through the experience of mind-body integration. Here again, it seems that the neurophysiological and intrapersonal changes experienced through the formal practice

consolidate and become stable, overflowing into interpersonal relationships and social behaviours beyond the mat. This aligns with Kishida et al. (2018) conceptual model of yoga and illustrates how different domains of the transdisciplinary model of wellbeing (Mead et al., 2021) are interwoven and can be influenced by yoga.

Wellbeing Outcomes Experienced by Regular Practitioners

Practitioners included in this study described a wide range of outcomes arising from their yoga practice that related to wellbeing (see Table 8.2 and Supplement 8.3). For purposes of this research and consistent with previous research on yoga, health, and wellbeing (e.g., Bennetts, 2022; Gard et al., 2014; Kishida et al., 2018), we have grouped these outcomes into two broad categories: intrapersonal outcomes and interpersonal and transpersonal outcomes. However, these two themes are closely intertwined, and each should be viewed as part of a greater whole. Here, we discuss these two themes separately with the aim of integrating these wellbeing outcomes in relation to the elements of the yoga practice and the processes and mechanisms discussed above. To facilitate the comprehension of connections across AY elements and the processes and mechanisms, discussed in previous sections with this section specifically addressing wellbeing outcomes, we provide an integrative summary in Table 8.3. At the end of this section, we provide a figure illustrating and synthesising key findings from this study into a conceptual model of AY for wellbeing.

Table 8.4. Integrative Summary for Proposed Model of AY Towards Wellbeing

ELEMENTS OF AY	AY PROCESSES TOWARDS WELLBEING		OUTCOMES OF AY	LIFESTYLE AY PRACTICE
THEME 2: The AY Method A regular autonomous and autonomy-supported inner journey	THEME 1 Transformation of bodily systems and sense of embodiment	MECHANISM 4 Increased interoception (bottom-up) and body awareness (bottom-up and/or top-down) MECHANISM 3 Enhanced vagal tone expressed in calmness, resilience, safety	THEME 1: Intrapersonal outcomes Experience of positive states across physical, emotional, psychological domains through the practice (Cook-Cottone, 2015; Kishida et al., 2018; Gard et al., 2014; Mead et al., 2021) THEME 2: Interpersonal and Transpersonal outcomes Experience of positive states within social domain through the AY community (Cook-Cottone, 2015; Kishida et al., 2018; Mead et al., 2018)	THEME 3: Ways of living and ways of being (Cook-Cottone, 2015; Cox & Tylka, 2020; Mead et al., 2021) Embodied, attuned, and regulated self through adaptive processes and responses across physiology, emotions, cognitions, and behaviours (Cook-Cottone, 2015; Gard et al., 2014; Mead et al., 2021; Schmalzl et al., 2015)
	(Cook-Cottone, 2015; Gard et al., 2014; Gerritsen & Band, 2018; Mead et al., 2021; Schmalzl et al., 2015)			
	THEME 2 Construction, de-construction and harmonisation of the self	MECHANISM 1 Inward focus, self-awareness, meta-cognition, open monitoring attention (top-down)		
	(Cook-Cottone, 2015; Gard et al., 2014; Kishida et al., 2018, Schmalzl et al., 2015)			
THEME 1: The AY System Trishtana and Vinyasa (i.e., asana, drishti, breath)	THEME 1 Transformation of bodily systems and sense of embodiment (i.e., asana and vinyasa)	MECHANISM 4 Integration of cardiovascular, respiratory, and musculoskeletal systems, and of motor, cognitive, and emotional circuits (top-down and bottom-up)	THEME 1 and THEME 2: Integration of Physiological, Intrapersonal, Interpersonal and Transcendental states (Cook-Cottone, 2015; Gard et al.,s 2014; Mead et al., 2021; Schmalzl et al., 2015)	Attunement within oneself (i.e., authenticity, congruence) spills over to interpersonal relationships by shaping social life and receiving acceptance and validation of authentic self (Cook-Cottone 2015; Kishida et al., 2018; Mead et al., 2021)
	(Cook-Cottone, 2015; Gard et al., 2014; Schmalzl et al., 2015)			
	THEME 1 Transformation of bodily systems and sense of embodiment (i.e., drishti)	MECHANISM 1 Focused attention, concentration (top-down)		
	(Schmalzl et al., 2015)			
	THEME 1 Transformation of bodily systems and sense of embodiment (i.e., slow conscious breathing)	MECHANISM 1 Focused attention to breath and intentional breathing pattern (top-down) MECHANISM 3		

		Direct and indirect stimulation of vagal activity		
	(Gerritsen & Band, 2018; Mead et al., 2021; Schmalzl et al., 2015)			
THEME 1: The AY System Philosophical and ethical underpinnings	THEME 3 Ways of living and ways of being (i.e., <i>yamas</i> , <i>niyamas</i>)	MECHANISM 1 Intentional study, immersion and behaviours aligned with ethical and philosophical foundations, moral cognition network (top-down)		
	(Gard et al., 2014)			
	THEME 1 Transformation of bodily systems and sense of embodiment (i.e., sense of safety, surrender)	MECHANISM 2 and MECHANISM 3 Connection to something greater, sense of surrender, and transcendental experiences without particular belief system (bottom-up and vagal activity predominance)		
	(Mead et al., 2021; Schmalzl et al., 2015)			
MEDIATIONAL CHAIN Mechanisms acting in an iterative sequence: from embodied states to embodied traits to embodied lifestyle behaviours MODERATORS Variables influencing the practice, processes and outcomes: e.g., personal and social context, personality traits, AY context (Cox & Tylka, 2020)				

Intrapersonal Outcomes

This theme represents outcomes mostly pertaining to affective and cognitive domains, which are experienced subjectively by each practitioner, yet are supported and informed by physiological and physical states and overall body functioning. This is aligned with four types of outcomes that were identified by Schmalzl and collaborators (2015) in their theoretical framework (i.e., physiological, body awareness, stress and emotional states, cognitive functioning). Most of the outcomes identified within this theme have been largely documented as psychological constructs, such as competence, autonomy, and self-acceptance. Some of the outcomes reported by regular AY practitioners mirror psychological processes involved in yoga therapies and practices, including introspection, compassion, self-criticism, emotion regulation, attention, and spirituality (Bennetts, 2022). Notably, findings from the current study underscore the embodied nature of such constructs, unveiling the need for integrated approaches acknowledging the body-mind integration.

For example, enhanced body awareness gained through the practice, which encompasses attention to bodily sensations and increased interoception and proprioception, is essential for improved emotion regulation and self-regulation, and ultimately for health and wellbeing (Mehling et al., 2012; Pinna & Edwards, 2020; Schmalzl et al., 2015). This was evidenced when participants noted changes in their breathing patterns and used their breath to regulate their emotions, along with acceptance and cognitive reappraisal (Kobylinska et al., 2018; Pinna & Edwards, 2020). They also reported gaining awareness of how certain types of food were influencing bodily sensations and using that information to make lifestyle changes (Cox & Tylka,

2020). Similarly, competence, mastery, agency, autonomy, self-acceptance, and resilience were experienced and cultivated through the AY *asana* practice by being able to gradually engage in new and increasingly challenging situations while maintaining steady slow breathing and focused attention through *drishti*. As established in several of the models of yoga described above, while the mechanisms of slow conscious breathing impacts vagal activity and hormones, the mechanisms of movement and attention foster self-regulation and meta-cognition, bringing about physical, emotional, and mental calmness and equanimity in the face of challenge (Cox & Tylka, 2020; Gerritsen & Band, 2018; Schmalzl et al., 2015).

Thus, within the intrapersonal realm and aligned with previous models on the mechanisms of yoga, findings from this study illustrate the interplay and integration of bottom-up and top-down mechanisms in yielding wellbeing outcomes while highlighting the role of vagal activity. On the one hand, physical elements of the AY practice such as *asana*, breathing, and *vinyasa* may act as gateways for neurophysiological balance by stimulating vagal activity and balancing the nervous system, and then overflowing into emotional, cognitive, and behavioural areas by improving neural and physiological connections between them (Gard et al., 2014; Schmalzl et al., 2015). On the other hand, cognitive components of AY represented in *drishti* through focused attention and in movement meditation through open monitoring attention and meta-awareness, as well as the ethical and philosophical framework as a belief system, may account for changes in higher level brain regions and functions, influencing emotional, cognitive, and physical aspects, including improved attention, mindfulness, and tolerance to physical and emotional pain (Schmalzi et al., 2015). Furthermore, by regularly exposing practitioners

to small amounts of physical, emotional, and psychological stress as described by interviewees, AY may facilitate the adaptation, regulation, and balance of different systems within the individual, ultimately experiencing decreased stress and increased wellbeing across these dimensions.

Interpersonal and Transpersonal Outcomes

This theme encapsulates outcomes that are experienced in relation to other people, whether this is enacted as a behaviour or an attitude, or as a way of thinking and feeling about other beings, communities, and beyond. In this study, participants highlighted the presence of authentic relationships and a supportive AY community as the main interpersonal outcomes derived from the practice. Arguably, other outcomes such as transcendence and meta-physical connection could be considered within this theme, as they expose a connection between the individual and something greater and beyond themselves. Here, we consider these outcomes as part of connectedness in its broadest sense, and thus include them within this theme as transpersonal outcomes. Like intrapersonal outcomes, we argue that interpersonal and transpersonal outcomes are also intimately connected to physiological, emotional, and cognitive domains.

Evidence specifically focusing on interpersonal outcomes emerging from a regular yoga practice are outnumbered by scientifically documented physiological and psychological outcomes (cf. Kishida et al., 2018; Kishida et al., 2019a; Ross et al., 2014). However, interpersonal benefits have also been reported in previous studies, showing that yoga can yield improved social connectedness, compassion, and other pro-social behaviours (Evron, 2019; Gard et al., 2014; Kishida et al., 2019b), supporting findings from this study. Following Gard and colleagues' (2014) model of self-regulation, the

ethical and philosophical components of yoga may guide and align with practitioners' values and beliefs. This translates into participants' references to embodying ethical lifestyles (i.e., *yama*, *niyama*), typically including non-harm, compassion, honesty, and kindness. Furthermore, from a top-down approach, intention setting and motivation to practice, and adhering to ethical principles mentioned by participants, may activate a moral cognition network in higher level brain structures, promoting emotion regulation, empathy, and prosocial behaviour associated with yoga (Cope, 2006; Gard et al., 2014). It is also likely that interpersonal changes are facilitated by intrapersonal changes linked to neurophysiological outcomes using bottom-up pathways (Mead et al., 2021; Schmalzi et al., 2015).

Supporting this line of argument, in the interviews, participants narrated how intrapersonal changes permeated into the interpersonal space. For example, several participants described how they were more aware and less reactive towards their emotions and thoughts, being less triggered by environmental factors or able to manage stress more efficiently, which was also seen in their relationships. Participants also spoke about increased compassion, acceptance, and authenticity with others through the development of those elements towards themselves first. This interconnection between intrapersonal and interpersonal outcomes can be linked to models of yoga (Kishida et al., 2018; Schmalzi et al., 2015), with links to the polyvagal theory (Porges, 2007). Schmalzi and colleagues (2015) propose that the mechanisms of breath involving the regulation and balance of the autonomic nervous system through increased vagal activity can lead to a calming effect while enhancing social bonding, which was described by practitioners in this study. Indeed, the polyvagal theory (Porges, 2001; 2007) posits

that the vagal nerve is involved in the regulation of stress responses and engagement with the social environment. When the autonomic nervous system is dominated by parasympathetic activity (i.e., increased vagal tone), a sense of calmness and safety is experienced, physically, emotionally, and mentally. By experiencing this regularly through the *asana* practice, it can overflow into everyday life and interpersonal relationships, as highlighted by participants (Schmalzi et al., 2015). In turn, this allows individuals to engage with others and their environment, potentially becoming more open, and thus able to access higher levels of consciousness related to transcendence (Porges, 2001; 2007; Schmalzi et al., 2015; Stern, 2020).

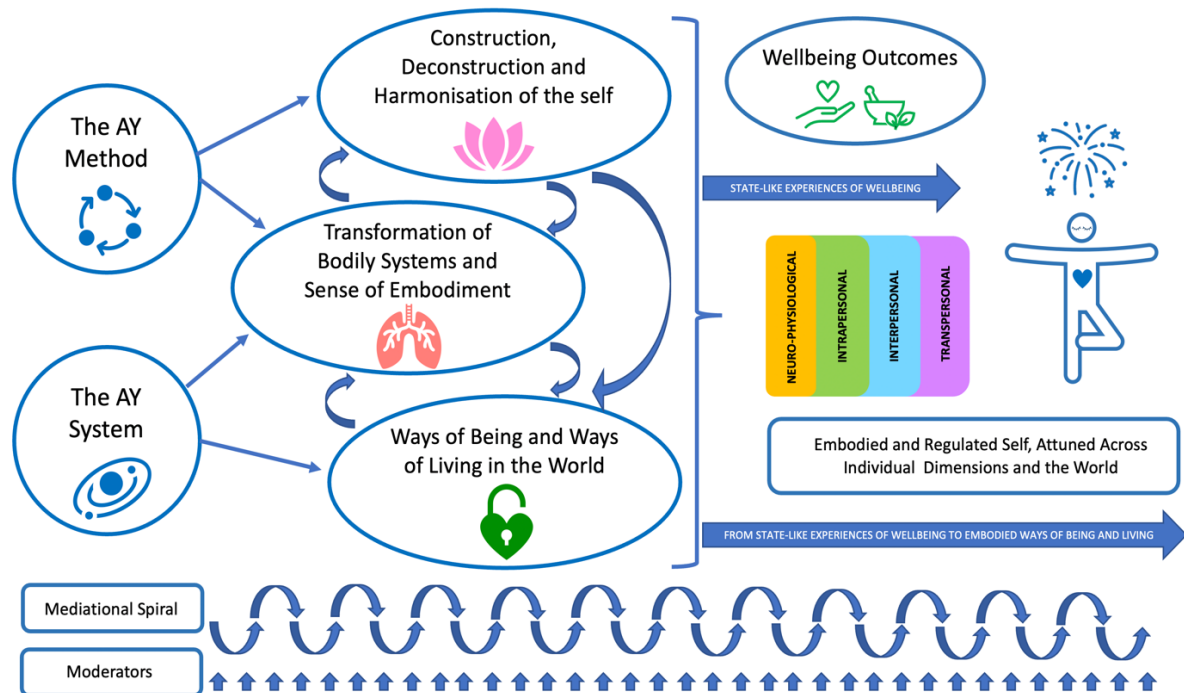
Integration: A Conceptual Model of Ashtanga Yoga and Wellbeing

In the previous section, the elements of AY were clustered into either the AY method or the AY system. While the latter encapsulated the way of teaching and learning as a regular autonomous and autonomy-supported inner journey, the former entailed aspects of the formal *asana* practice and philosophical and ethical principles. Both system and method were closely related to the process involving the transformation of bodily systems and sense of embodiment (i.e., theme 1), which were informed by mechanisms integrating top-down and bottom-up pathways in addition to the regulation of the nervous system. The AY method was closely related to the process of construction, deconstruction, and harmonisation of the self (i.e., theme 2), which was mostly informed by performing intrapsychic strategies. The AY system was related to the process of ways of being and living in the world (i.e., theme 3) by the active engagement with yoga philosophy and ethics (top-down strategy), or through the

transformation of bodily systems and sense of embodiment supported by vagal activity predominance (i.e., theme 1).

As illustrated in Figure 8.1, these processes are actively interconnected and mutually influencing each other over time to generate wellbeing outcomes at an individual, interpersonal, and transpersonal levels. These outcomes are closely intertwined, and can also be viewed as a process that evolves throughout time. To represent this, and inspired in Cox and Tylka's (2020) model, we included a concept of mediational spiral to represent the interconnection between elements in iterative processes that can occur during a long-term practice, bringing state-like wellbeing outcomes into more stable characteristics and embodied lifestyles over time. Inspired in the models of Mead et al. (2021) and Cook-Cottone (2006;2015), we conceptualised wellbeing outcomes as permeating across neuro-physiological, intrapersonal, interpersonal, and transpersonal dimensions of the self, leading to an embodied and regulated self, attuned across those dimensions and with the world. Our conceptual model for AY and wellbeing is supported by and further extends on the models of yoga, wellbeing, and embodied human functioning that we included in this paper, using transdisciplinary research and applying a systems informed lens.

Figure 8.3. *Conceptual Model of Ashtanga Yoga Pathways Towards Wellbeing*



Implications and Future Directions

By discussing findings from this study in light of evidence and theoretical frameworks of yoga and wellbeing, we have proposed a model of the pathways of AY towards wellbeing. From the study comprised in this paper and conceptual model emerging from our findings and previous models, three main implications arise.

First, the comprehensiveness and complexity of yoga needs to be addressed through research and theoretical models adopting a systems-informed perspective and drawing on a diversity of methods and perspectives across a range of disciplines. A dynamic view on the elements involved, their relationships, role across different domains (i.e., physiological, intrapersonal, interpersonal, transpersonal), and how they evolve, is needed to consolidate holistic and a higher-level conceptual integration of

yoga as well as optimal human functioning. Future research should include a variety of methods and epistemologies, transdisciplinarity, and increased collaboration across fields to integrate and disseminate knowledge on yoga to a broader audience, as well as to advance transdisciplinary and embodied perspectives on wellbeing emerging from mind-body practices like yoga. The current study adds to existing empirical and theoretical literature through a qualitative approach, complementing the development of existing models reviewed in the introduction by integrating them into our proposed model.

Second, the AY system and method has specific components distinct from other practices (e.g., personalised approach, autonomy-support, *tristhana*), which hold the potential of providing self-transformation and wellbeing across multiple levels within the individual and beyond. This can have implications in terms of designing sustainable wellbeing and yoga programs that intentionally comprise a range of elements meeting participants context and targeting different pathways, supported both by philosophical/ethical principles and scientific knowledge, while encouraging regularity and autonomy. Furthermore, findings from this study revealed the intricate connections between the elements of the practice, and in light of the mechanisms reviewed, the relevance of synergistic and tandem effects should be further explored. Future research could include longitudinal studies to investigate how the practice evolves as practitioners develop a regular practice over time. These longitudinal studies could include a combination of objective and subjective measures, with quantitative and qualitative components to further advance models looking at mechanisms of yoga from a holistic and transdisciplinary perspective.

Third, the embodied nature of the yoga practice uncovers the relevance of conceptualising and addressing psychological constructs key for wellbeing as rooted in physiology and in interconnection with the outside world, looking at the individual as a system and within a system. Yoga offers multiple avenues to explore and develop positive embodied qualities within a formal practice, leading to more stable traits, and towards more permanent lifestyles aligned with wellbeing. Future research could focus on specific states or qualities, such as self-compassion, through an embodied approach including its development over time (intrapersonal), in relation to others (interpersonal), and beyond (transpersonal).

Limitations

Despite the strengths of this study, including the in-depth exploration of practitioners' lived experiences, several limitations of this study must be acknowledged. Although the sample size in this study was larger than in most qualitative studies using interviews, findings are still limited to a relatively small number of participants. Thus, findings are not generalisable to all regular AY practitioners or regular yoga practitioners in general. Participants were self-selected, which implies that they were motivated to participate in the research, and had access to the digital tools required to join the interview remotely. Furthermore, since this is a qualitative study using RTA, it followed an interpretative approach. Although we consider that our expertise with yoga and wellbeing science played a key role in shaping findings, we recognise that there can be other ways of organising and interpreting the information provided by participants. Lastly, while our review of models on the mechanisms of yoga was rigorous, it was not systematic nor exhaustive. We acknowledge that other models from different disciplines

may exist and/or have not been reported in the literature. We have attempted to synthesise complex information beyond our fields of expertise with the intention of integrating and communicating ideas to a broader audience through our proposed model.

Conclusion

Through an in-depth analysis of regular AY practitioners' experiences and perceptions of how their yoga practice relates to wellbeing, we identified three key themes delineating the pathways from AY yoga elements (i.e., AY method and AY system) to wellbeing outcomes (i.e., intrapersonal, interpersonal, transpersonal). The themes connecting AY elements to wellbeing outcomes were internal and external physical transformation and enhanced embodiment along with intrapsychic process of harmonising the self, which can lead to perdurable ways of being and living. In discussing these findings through the evidence and knowledge of existing models of yoga, transdisciplinary wellbeing, and embodied human functioning, we proposed a model synthesising the AY pathways towards wellbeing. Our findings and model raise the relevance of using transdisciplinary, systems-informed, and embodied approaches to advance knowledge and practice in the science of both yoga and wellbeing.

CHAPTER 9: DISCUSSION AND CONCLUSION

Introduction

The final chapter of this dissertation is a general discussion reviewing, synthesising, and integrating research findings, contributions, and implications across studies. The purpose of this dissertation was to gain an in-depth understanding of the elements and processes involved in the yoga pathways towards wellbeing from the lived experience of regular AY practitioners. Overall, the thesis has supported and extended on empirical and theoretical knowledge about wellbeing and yoga, by specifically examining how regular AY practitioners conceptualised wellbeing and yoga, by identifying differences and similarities in their wellbeing and yoga profiles, and by exploring the connections between their yoga practice and their perceptions of wellbeing.

Altogether, the different chapters comprising this dissertation aimed to bring together the fields of wellbeing science and yoga through the experiences and perceptions of a group of regular AY practitioners across the world. The multifaceted nature of yoga and wellbeing as well as the dynamic interaction between their components were highlighted throughout the thesis. In this chapter, I will begin discussing the most relevant findings across the different studies included in this dissertation showing how these build upon each other and on previous knowledge. This includes a summary table showing how the research questions were answered and identifying the key themes emerging from each chapter. I will bring these themes together to synthesise the main findings in relation to wellbeing, yoga, and the yoga

pathways towards wellbeing. This will be further synthesised and conveyed using a visual representation of the integration of the conceptual models and findings emerging from the dissertation. I will continue by discussing the contributions of this thesis to the fields of wellbeing science, yoga, and positive psychology in terms of empirical, methodological, and theoretical outputs. Lastly, I will consider the main implications of the thesis as well as the limitations, and finish by discussing reflexivity in the research process and PhD journey.

Integration of Findings Across Chapters

This dissertation comprised five studies examining wellbeing and yoga from different angles. The first three studies were dedicated to understanding the conceptualisations of wellbeing (Chapters 4 and 5) and yoga (Chapter 6) from the perspectives of the participants. The last two chapters were focusing on exploring the connections between yoga and wellbeing, one by looking at the profiles of regular AY practitioners (Chapter 7), and the other by looking at the mechanisms connecting yoga and wellbeing (Chapter 8). Table 9.1 summarises each chapter in terms of the research questions that were addressed, how these questions were answered, and the key themes emerging from each study.

In the next few paragraphs, I discuss the main findings of each chapter in terms of how they support and extend the current empirical and theoretical knowledge about wellbeing and yoga. In doing this, I also refer to the ways in which each chapter is building on previous chapters and contributing to following chapters. Towards the end of this section, I will further summarise and synthesise the main findings arising from this

thesis, grouped into three main areas: wellbeing, yoga, and yoga pathways towards wellbeing.

Table 9.1. *Summary of Findings Addressing Research Questions in Each Chapter*

Chapter	Research question	How research question was addressed	Key themes
Chapter 4: Conceptualisations of wellbeing (Study 1) More than a feeling: Perceptions of wellbeing in regular AY practitioners Published in 2022	What are the perceptions of regular Ashtanga Yoga practitioners in relation to the experience of their wellbeing?	Wellbeing was conceptualised as being multidimensional, holistic, non-dualistic, and dynamic. The multidimensional nature of wellbeing considers different domains of the individual, comprising physical, emotional, mental, social, spiritual, and ethical dimensions. The holistic nature of wellbeing refers to the interconnection, balance, and integration of those dimensions in composing overall wellbeing. The non-dualistic nature portrayed wellbeing as simultaneously entailing elements that may be viewed as opposite ends of a spectrum. The dynamic nature of wellbeing emphasised the process, evolution, and change as well as the embodied aspect.	Wellbeing is multidimensional, holistic, non-dualistic, and dynamic. Wellbeing is embodied and spanning across mind-body-spirit as an integrated whole.
	What is the role of yoga in the interconnectedness between different dimensions of wellbeing?	It was hypothesised that the practical aspects of yoga may equip practitioners with specific embodied skills, and promote specific embodied states and traits able to influence their perception of themselves and the world. It was also hypothesised that the philosophical aspects of yoga may influence practitioners' belief systems about reality, human nature, health, and wellbeing. Thus, through either or both pathways, yoga might influence practitioners' conceptualisations of wellbeing.	Yoga may shape physical and embodied capabilities of practitioners through postural practice. Yoga may shape mental capabilities and perception through philosophical elements.

Chapter 5: Conceptualisations of dimensions of wellbeing (Study 2) Going within, between and beyond: Conceptualisations of five dimensions of wellbeing Published in 2022	What are regular Ashtanga Yoga practitioners’ perceptions about their physical, emotional, psychological, social, and spiritual wellbeing?	<i>Physical wellbeing</i> was conceptualised as a multilayered experience ranging from the absence of physical ailment, the ability to manage and raise above suffering, and the ability to experience positive physicality, while engaging in physical awareness and contemplation to make the best choices for healthy living. <i>Emotional wellbeing</i> was conceptualised as multileveled by embracing all emotions, being able to experience pleasant affect and positively value unpleasant affect by cultivating emotional awareness, regulation, and meta-awareness. <i>Psychological wellbeing</i> was conceptualised as the dynamic interrelation between the absence of mental ailments and the experience of a strong and integrated sense of self. Here, the self is able to direct and still the mind while engaging in contemplation and managing mental suffering and challenges. <i>Social wellbeing</i> was conceptualised as both the objective presence of having social connections and the subjective experience of feeling connected and competent with others and the environment, through stable, nurturing mutual interactions, while developing the capacity of contemplating those interactions and oneself in the social realm. <i>Spiritual wellbeing</i> was conceptualised as a multileveled lived experience of awareness, connection, meaning, and purpose across different realms, including the individual self, other beings, the environment, and a divine source, along with practices and beliefs that cultivate such connection.	Dimensions of wellbeing are embodied, multileveled, and intricately interconnected. Different levels of human functioning are represented within each dimension of wellbeing, with an interplay between deficiency and growth. Elements composing wellbeing span across physical, emotional, psychological, social, and spiritual domains.
	What is the role of yoga in the	Shared meanings across dimensions were found, reinforcing the notion that these are interrelated and part of a greater whole.	Yoga may influence the perception of wellbeing as being embodied and

	interconnectedness between different dimensions of wellbeing?	Furthermore, these common themes were organised in different levels of individual functioning, in which wellbeing was perceived differently (i.e., deficit, growth, transcendence): The <i>foundational level of functioning</i> (i.e., deficit) comprised the common theme <i>freedom from and managing suffering</i> spanned across physical, emotional, psychological, and social dimensions of wellbeing. The <i>optimal level of functioning</i> (i.e., growth) comprised three common themes. The theme <i>a positive and integrated sense of self</i> spanned across emotional, psychological dimensions of wellbeing. The theme <i>steadiness and equanimity</i> spanned across emotional and psychological dimensions. And the theme <i>the self in relation to others</i> spanned across social and spiritual wellbeing. The <i>contemplative and transcendental level of functioning</i> (i.e., transcendence) comprised the common theme <i>meta-awareness across dimensions</i>, which spanned across all five dimensions. The orientation towards embodiment and awareness in the yoga practice may provide the opportunity for practitioners to work on themselves across dimensions, both in terms of the foundational level (i.e., addressing deficit) and optimal functioning level of wellbeing (i.e., addressing growth). With the evolution of the self, a higher level of functioning can take place, in terms of contemplation and transcendence.	spanning across mind-body-spirit as an integrated whole. Yoga may provide the opportunity to work with psychological constructs (e.g., resilience, emotion regulation) in a continuum involving physical, emotional, mental, social, and spiritual dimensions.
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Chapter 6: Conceptualisations of yoga (Study 3) From practice to lifestyle: Conceptualisations of yoga in regular AY practitioners Under review in 2023	What are the perceptions of regular Ashtanga Yoga practitioners in relation to their experience with yoga?	Yoga was conceptualised as a practice that practitioners do, as a tool that practitioners use to improve health and wellbeing, as a method for personal growth, as a lifestyle and worldview, and as a spiritual journey Yoga philosophy was conceptualised as a collection of ancient teachings reflecting ways of understanding human nature and higher levels of consciousness, organised into an applied framework that serves yoga asana practice, guides ways of living, and supports personal and spiritual development. Yoga practice was conceptualised not only in terms of the elements and features contained in the daily AY asana practice, but also in terms of how the practice is malleable and evolving according to particular circumstances and needs, how it can draw upon wisdom from other practices and how the practice permeates into daily life. Overall, yoga was viewed through three common themes: as an embodied integrated practice, as an embodied path for self-knowledge, and as a spiritual path.	Yoga is a multifaceted, embodied, and integrated practice. Yoga spans from being a practice to being a lifestyle and way of perceiving the world. Yoga is rooted in traditional teachings and evolving throughout time and contexts.
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Chapter 7: Practitioners’ wellbeing and yoga profiles (Study 4) Exploring wellbeing profiles, mindfulness, compassion, and personality traits in regular AY practitioners: A cluster analysis Under review in 2023	How does the perception of the yoga practice and the perception of wellbeing vary depending on characteristics of the practitioner?	In general, the group of regular AY practitioners shared a range of similarities. When exploring potential variations across practitioners, six different groups were identified, each of which shared common features. Shared characteristics Yoga practitioners shared similar aspects and represented a mostly homogeneous group. They were mostly middle-age and highly educated females living in urban areas. In general, regular AY practitioners had high levels of health and of physical, emotional, and psychological wellbeing. These dimensions were also reported as the most relevant and the most impacted by the yoga practice. They were very likely to practice autonomously in a consistent and frequent manner. Regular AYPs also displayed high levels of conscientiousness and openness to experience in general. They also displayed high levels of compassion, mindfulness, quiet ego, and gratitude. Main initial motivations were physical and mental wellbeing and development of spiritual wellbeing came after. Differences between clusters Six clusters were identified, which differed in terms of their engagement with the practice and philosophical aspects, their wellbeing levels, the perceived impact of the practice on wellbeing, and personal characteristics. Years of practice, asana sequence, and duration of the practice did not have a relevant influence in defining clusters. Rather, findings suggested that consistency, frequency, and immersion with different elements of yoga are more relevant in distinguishing practitioners with higher and lower levels of wellbeing.	Yoga can be a formal practice and/or a more permanent way of living and seeing the world. AY can promote and support autonomy, self-awareness, and curiosity. Particular AY elements seem to play a key role in wellbeing, including breathing, philosophical framework, autonomous practice, and traditional led classes.
	Do yoga practitioners have distinctive wellbeing profiles based on their level of expertise with yoga?		

		Breathing techniques and advanced asana practice seemed to play an important role in physical wellbeing. Adhering to a spiritual tradition, valuing spirituality, and engaging in yoga philosophy seemed more relevant for emotional wellbeing. A long-term and established autonomous practice founded in yoga philosophy seemed to play a key role in psychological wellbeing. Practising in a group setting and attending traditional Sanskrit counted led classes seemed to be important for social and spiritual wellbeing.	
Chapter 8: Yoga pathways to wellbeing (Study 5) To be submitted for publication in 2023	What are the perceptions of Ashtanga Yoga practitioners about how their yoga practice relates to their physical, emotional, psychological, social, and spiritual wellbeing?	In this study, regular AY practitioners provided their perspectives about elements of their yoga practice that they considered relevant and how these elements were contributing to their wellbeing. Some practitioners specifically linked the practice to physical, emotional, psychological, social, or spiritual wellbeing. Interviewees spoke of outcomes in terms of intrapersonal, interpersonal, or transpersonal levels. Intrapersonal wellbeing outcomes comprised emotional and psychological domains, interpersonal outcomes reflected the social domain, and transpersonal outcomes, the spiritual domain. All these outcomes were underpinned by neuro-physiological processes and outcomes, physical states and overall bodily functions that were inferred from participants' reports.	The AY practice relates to intrapersonal, interpersonal, and transpersonal outcomes of wellbeing, which are rooted in the body. Wellbeing is embodied, multidimensional, holistic, and dynamic, involving functioning in a coping mode as well as in a personal growth mode.
	What are AYPs' perceptions of how do different aspects of the yoga practice relate to different dimensions of practitioners' wellbeing?	Findings from this study suggested that different aspects of the practice related in dynamic ways to aspects of practitioners' wellbeing. Rather than establishing linear relationships between elements, participants' views reflected intricate interconnections between elements of the AY method and the AY system influencing different areas of individual functioning, at a physical level, at an	The relationships between the elements of AY (system and method) and dimensions of wellbeing are dynamic and evolving.

		intrapersonal level (i.e., emotional, cognitive), and at an external/interpersonal level (i.e., behavioural, social).	
	What is the role of yoga in the interconnectedness between different dimensions of wellbeing?	As an embodied and integrated physical, mental, and spiritual practice, yoga offers the opportunity for practitioners to connect more deeply with themselves and experience transformations across different elements related to wellbeing. Furthermore, these elements within wellbeing – and within human functioning in general – are usually seen as purely psychological (i.e., resilience, competence), yet here were seen as embodied, revealing a continuity from physical into emotional, psychological, social, and spiritual realms.	Yoga permeates different dimensions of the individual, as a tool for self-inquiry and self-development

Chapter 4 (Study 1) supported mainstream theoretical frameworks (e.g., Deci & Ryan, 2008; Huppert, 2014, Ryff & Keyes, 1995) and emerging conceptualisations of wellbeing (e.g., Bharara et al., 2019; Black & Kern, 2020; Hone et al., 2015) by characterising wellbeing as multidimensional, including physical, emotional, psychological, social, and spiritual domains. Aligned with current scholarly definitions (e.g., Deci & Ryan, 2008; Huppert, 2014; Huta, 2016; Keyes & Annas, 2009), findings also supported the notion of wellbeing as comprising positive attributes and affect. The concept of balance between dimensions as part of the holistic nature of wellbeing as perceived by practitioners, represented a unifying principle, and supported the relatively new concept of balance/harmony within the wellbeing literature (Lomas, 2021).

This study extends on the existing literature in several ways. Firstly, the overlaps found between the dimensions of wellbeing as reported by participants and existing wellbeing models reveal the interconnection between dimensions. This highlights the relevance of considering wellbeing holistically rather than looking at certain individual domains separately. Secondly, the conceptualisation of wellbeing as a process, an enabler, and an outcome point to the complexity and dynamism of the construct. This underscores the need to address wellbeing through a systems-informed approach in order to consider relationships in a broader context, where wellbeing can be an enabler, a process, and an outcome depending on the aim and perspective that is being taken. Thirdly, the role of individuals' embodied experience was found key in knowing about wellbeing, not only in terms of 'feeling' but also in terms of 'being' and 'doing'. Following embodiment frameworks asserting that psychological processes are influenced and

connected to different body systems, structures, and processes (e.g., Varela et al., 2016), conceptualisations of wellbeing implied that regular AY practitioners may have particular physical and mental abilities that influence their experiences and perceptions of wellbeing. And lastly, the role of philosophical assumptions involving holistic thought and the interconnectedness of mind and body found in yoga frameworks and imbued in the AY practice may influence practitioners' beliefs in their ways of knowing and cultivating wellbeing. Altogether, these findings imply the relevance of using alternative paradigms to understand further the connections of mind and body and how they work together in achieving optimal human functioning, highlighting the need of moving towards transdisciplinary and integrative models of wellbeing.

Findings from Chapter 5 (Study 2) supported findings from Chapter 4 (Study 1) by showing that wellbeing dimensions comprise the ability to cope with challenges and suffering in addition to being able to feel and function at an optimal level. As with general wellbeing, dimensions of wellbeing were generally conceptualised as embodied, and their interconnection was highlighted through common themes across them, which supports the integrated and holistic nature of wellbeing proposed in Study 1. This further supports current wellbeing frameworks looking at multiple domains of the individual, such as the complete health model (Keyes, 2007) and the socio-emotional model of wellbeing (Gee et al., 2014).

Furthermore, Chapter 5 extended on the existing knowledge on wellbeing by providing a conceptual model on human functioning emerging from findings and supported by the *pancha kosha* yoga framework (Vivekananda, 2012) and theory Z from the wellbeing literature (Kaufman, 2020; Maslow, 1971), while using a systems-

informed perspective. The model proposed that dimensions can be seen as multileveled, involving a foundational level of functioning as a baseline for wellbeing, an optimal functioning level as the area for personal growth, and a contemplative and transcendental level of functioning as meta-awareness within and beyond the individual. While shared themes across dimensions including the absence of illness and managing suffering, the positive and integrated sense of self, and the self in relation to others support existing wellbeing frameworks (e.g., Ryff, 2014; Wong, 2011), the model extended current knowledge by underscoring the relevance of equanimity and of meta-awareness. These findings suggested that yoga can play a key role in the development of such qualities, as well as in holding embodied and holistic views about wellbeing. The conceptual model offered an embodied and systems-informed perspective to human functioning and wellbeing by looking at the self as a system, in terms of levels of functioning and in terms of interactions across dimensions, embracing dynamism and complexity into the understanding of wellbeing.

Similar to Chapters 4 and 5, Chapter 6 (Study 3) conceptualisations of yoga from the perspectives of regular practitioners both supported and extended current understandings of yoga. Findings supported modern and traditional literature by characterising yoga as a set of tools that can be practised and as a more permanent way of living and seeing the world. Concordant with previous studies (e.g., Gaiswinkler & Unterrainer, 2016), practitioners displayed different levels of engagement with philosophy and spirituality: while some maintained a more secular view of yoga, others actively incorporated yoga teachings into their beliefs systems. Findings from this study extended on current knowledge of yoga by considering definitions from regular

practitioners' perspectives, which, to my knowledge, has not been previously reported in the empirical yoga literature.

This study also expanded modern understandings of yoga by specifically including yoga philosophy and yoga practice, and by identifying common threads across those conceptualisations. These common threads interwove philosophical, theoretical, and ethical aspects of yoga along with traditional and modern practical aspects that practitioners adopt and adapt according to their personal contexts. These conceptualisations underscored the relevance of acknowledging the spiritual facet and philosophical underpinnings of the practice whilst embracing the evolution of yoga across time and contexts. This has implications in terms of how yoga can be addressed and researched with different groups of people. Although the spiritual path might not reflect every regular yoga practitioner or be of interest of more novice practitioners, it is an aspect that can resonate with certain groups of people and act as a gateway to experience the benefits of the practice.

After gaining an understanding of practitioners' conceptualisations of wellbeing and yoga, Chapter 7 (Study 4) provided the first exploration of the connections between yoga and wellbeing within this thesis, by examining the characteristics of regular AY practitioners. Findings supported and extended on previous research in short and long-term yoga practitioners, both in terms of shared characteristics and distinctive profiles. Consistent with previous studies (e.g., Cartwright et al., 2020; Cramer et al., 2019), regular AY practitioners overall displayed heightened levels of wellbeing and general health, attributing benefits in these areas to their yoga practice. Enhanced levels of compassion, mindfulness, and gratitude also echoed findings from previous research

(e.g., Cartwright et al., 2020; Harvey et al., 2020), as well as reporting that physical and mental wellbeing motivations were predominant when starting practising yoga and that spiritual motivations emerged as the practice evolved (e.g., Cramer et al., 2019; Ivtzan & Jegatheeswaran, 2015).

Findings from Study 4 extended current knowledge on yoga practitioners and the perceived impact of their yoga practice in several ways. In terms of the overall group of practitioners, it was interesting to observe high levels of openness to experience and conscientiousness along with the increased likelihood of having an autonomous practice in a consistent and frequent manner. Although the nature of the study did not allow drawing conclusions about directionality and specificity in the relationships between these elements, findings suggested that AY can play a relevant role in fostering and supporting autonomy, discipline, consistency, and regularity while promoting higher levels of awareness by directing the focus inwards, remaining curious and accepting of what emerges during the practice. This in turn, might positively influence and explain high levels of wellbeing. While the clusters emerging from this study also mirrored groups of practitioners identified within other studies (e.g., Cagas et al., 2022; Henrichsen-Schrembes, 2008), findings contributed to the incipient research on profiles of regular yoga practitioners by specifically looking at dimensions of wellbeing, personal traits, and elements of AY. Notably, practitioners who reported less consistency, frequency, and immersion with different elements of yoga showed the lowest levels of wellbeing and general health, implying that these three aspects may play a key role gaining such benefits. Even though the profiles emerging from each cluster did not involve casual relationships between AY elements, wellbeing, and personal traits, these

patterns implied that practising certain elements to a greater extent may play a differential role in perceived levels of wellbeing across dimensions. Particularly in terms of AY elements, the breathing techniques, beliefs rooted in spiritual and yoga traditions, long-term autonomous practice, practising in a group setting, and traditional led classes were highlighted, potentially playing a key role in the pathways of yoga towards wellbeing. Overall, findings implied that dimensions of wellbeing might be impacted differently by different elements of yoga and that certain elements may appeal more to different groups of individuals, which also points to the potential of yoga to act in tandem and cater to individuals with a range of needs.

Lastly, findings from Chapter 8 (Study 5) supported and extended on findings from the previous chapter by taking a deep dive into examining the connections between yoga and wellbeing through regular AY practitioners' lived experience. Across the interviews, participants vividly illustrated how wellbeing was being experienced at an intrapersonal, interpersonal, and transpersonal level and in relation to their AY practice. These levels were representing physical, emotional, psychological, social, and spiritual dimensions reported in study 4. Chapter 8 (Study 5) also supported the relationship between specific elements of the AY practice and wellbeing outcomes. The elements highlighted in Chapter 7 (Study 4) were reiterated in the interviews and their relationship to wellbeing was further examined, supporting existing literature and models on the mechanisms of yoga towards health and wellbeing (Cox & Tylka, 2020; Gard et al., 2014; Gerritsen & Band, 2018; Kishida et al., 2018; Schmalzl et al., 2015). Furthermore, Study 5 supported implications of Study 4 concerning the use of multiple facets of yoga for catering different needs across groups of people. More specifically,

findings from Study 5 suggested that elements of the AY tradition grouped into the AY system and AY method, can inform the design of sustainable yoga programs targeting health and wellbeing, considering relevant elements and pathways supported both by empirical knowledge and philosophical underpinnings of yoga.

Findings from Chapter 8 also supported and extended on findings from previous chapters. Throughout the interviews, wellbeing was depicted by participants as being embodied, multidimensional, holistic, and dynamic (Chapter 4). This was reflected by considering different dimensions of wellbeing as evolving and being interconnected, exposing benefits within and beyond the individual in terms of coping and personal growth (Chapter 5). Findings also supported conceptualisations of yoga (Chapter 6) as an embodied integrated practice rooted in traditional worldviews adaptable to contexts, with the potential of permeating and settling into all areas of life and individual functioning. The perception of yoga as an instance for self-discovery and self-development and as a practice that is transferrable off the mat that emerged from Chapter 6 (Study 3) was widely reinforced across participants in Chapter 8.

Through the perceptions and lived experiences of practitioners, findings from Chapter 8 also extended on existing literature by illustrating the pathways described in models of yoga across a range of disciplines in an integrated manner, as well as using a systems-informed perspective to consider the entanglement of yoga elements and wellbeing dimensions and their interconnectedness. Specifically, this study integrated and extended on existing models of the mechanisms of yoga (Cox & Tylka, 2020; Gard et al., 2014; Gerritsen & Band, 2018; Kishida et al., 2018; Schmalzl et al., 2015), the transdisciplinary model of wellbeing (Mead et al., 2021) and the attuned representation

model of the self (Cook-Cottone, 2006; 2015). Chapter 8 integrated findings with theoretical and empirical knowledge emanating from these frameworks, illustrating processes and outcomes from the lived experience of practitioners, and creating a novel output synthesising this information into a conceptual model of AY towards wellbeing. The model encapsulates the breadth and complexity of AY by showing how wellbeing outcomes experienced across dimensions of the individual are constantly developing while being underpinned by neurophysiological structures and processes described in the empirical literature.

Based on the key themes across the five studies (see table 9.1 above), I have further synthesised the main findings from this thesis by specifically focusing on three areas guided by my research questions: wellbeing, yoga, and the yoga pathways towards wellbeing. Table 9.2 below summarises the key takeaway messages in relation to each of these three areas, providing the specification of the chapters within this thesis that were considered when drawing these conclusions.

Table 9.2. *Key Findings on Three Topic Areas Addressed in this Dissertation.*

Topic	Key Findings	Sources
Wellbeing	Wellbeing was portrayed by regular AY practitioners as embodied, multidimensional, integrated, holistic, and dynamic. This means that wellbeing was experienced and perceived by the self as an embodied whole being. The benefits experienced and perceived in one dimension of being were seen as permeating into other dimensions, with each dimension also informing and interacting with other dimensions.	Chapter 4 / Study 1 Conceptualisations of wellbeing Chapter 5 / Study 2 Conceptualisations of dimensions of wellbeing Chapter 8 / Study 5 Yoga pathways to wellbeing
Yoga	Yoga was depicted as an evolving system interweaving practical and philosophical elements, taking the shape of a practice, a lifestyle and/or a worldview, and acknowledged as being closely connected to individual health and wellbeing. This means that yoga was conceptualised as beyond mind-body practice and evolving into a way of being and seeing the world.	Chapter 6 / Study 3 Conceptualisations of yoga Chapter 7 / Study 4 Profiles of regular AY practitioners Chapter 8 / Study 5 Yoga pathways to wellbeing
Yoga pathways towards wellbeing	Regular AY practitioners identified different pathways of yoga towards wellbeing, which involved different levels of engagement with varied aspects of the AY system, the experience of increased autonomy and awareness through the AY method, and the integration of mechanisms across neurophysiological, intrapersonal, interpersonal, and transpersonal domains. This means that the AY system can cater to different individual while providing autonomy in ways of engaging with the practice, which activate certain pathways benefiting the individual as a whole.	Chapter 7 / Study 4 Profiles of regular AY practitioners Chapter 8 / Study 5 Yoga pathways to wellbeing

Integration of Conceptual Models

This dissertation has proposed two conceptual models emerging from empirical evidence: the conceptual model of human functioning and wellbeing (Chapter 5) and the conceptual model of AY pathways towards wellbeing (Chapter 8). In this section, I

integrate these two models along with relevant findings from the other studies (Chapters 4, 6 and 7) into a cohesive single framework and narrative synthesising the pathways from yoga to wellbeing. This integrated cohesive framework considers the self as embodied and as a system, and explains the mechanisms of yoga for wellbeing across different individual dimensions. The main objective of this section is to provide an overarching conceptual framework linking elements across studies to provide a broader perspective and convey the key message arising from the thesis supported by visual representations. This ultimately brings the title given to this dissertation to life.

Figure 9.1. *Integration of Conceptual Models Emerging from the Dissertation*

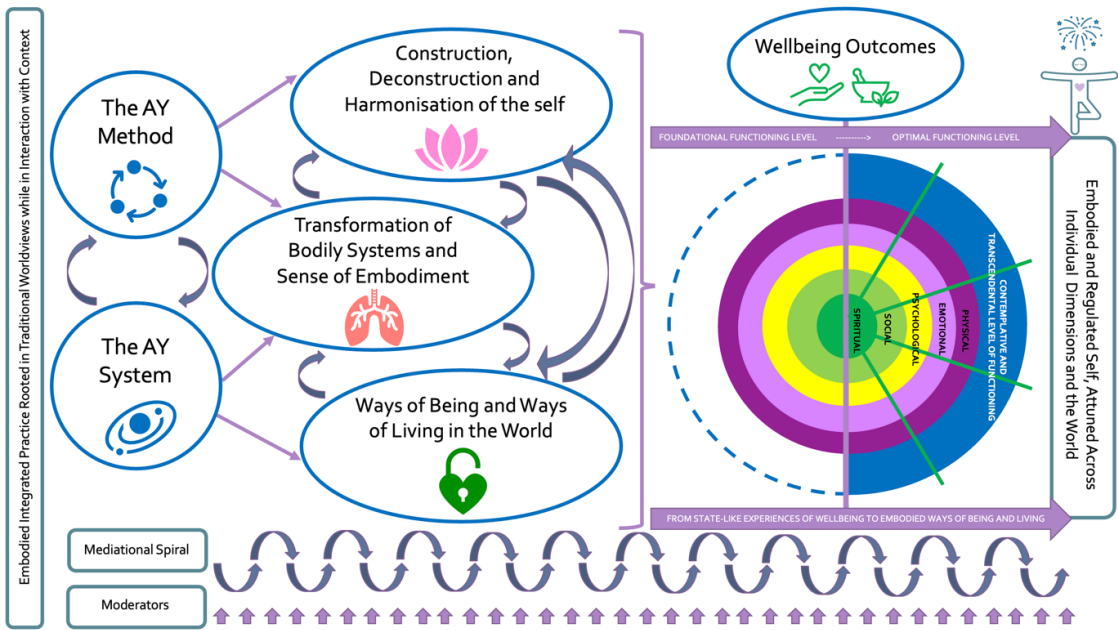


Figure 9.1 represents the key elements and processes identified throughout the thesis and their interaction, illustrating aspects related to yoga on the left and aspects of individual functioning and wellbeing on the right. The intention of setting the diagram

in this particular way is to offer a sequential reading and discussion from left to right, explaining how yoga leads to wellbeing outcomes. Starting from the far left, an overall definition of yoga informed by regular AY practitioners has been included as representing the underpinning perspective of yoga in general that then flows into the perceptions of the AY tradition in particular. As previously explained in Chapter 8, the most relevant elements of AY were grouped into two themes: the AY system representing the components that are practised (e.g., *trishtana*), and the AY method representing the way of learning and teaching these elements (e.g., Mysore style). The elements contained in each of these two areas of AY lead to distinctive processes as informed both by practitioners and the current literature on the mechanisms of yoga. While both the AY system and the AY method lead to the transformation of bodily systems along with an increased sense of embodiment and self-regulation, they also relate to other processes differently. The AY method fosters processes related to the construction, de-construction, and harmonisation of the self, while the AY system facilitates processes related to more permanent ways of being and ways of living in the world. Far from representing linear relationships, all these elements and processes are interacting and feeding each other in dynamic ways, reinforcing pathways and outcomes.

These dynamic interactions created by the embodied knowledge and practice of AY yield wellbeing benefits across different dimensions of the individual. On the right side of Figure 9.1, I have embedded the diagram from the conceptual model of human functioning and wellbeing (Chapter 5) to further expand on how the benefits from the practice are experienced across individual dimensions. The original figure (see Figure 5.7

in Chapter 5) has been tilted 90 degrees to the right consistent with the display of this overarching diagram, going from a foundational level of functioning on the left side, to an optimal level of functioning, and towards a contemplative and transcendental level of functioning on the right side. This represents the idea that yoga can be beneficial in coping with challenges, distress, and disease across physical, emotional, psychological, social, and spiritual dimensions, as well as providing opportunities for personal development and growth across those dimensions for optimal functioning. Aligned with other theories discussed in Chapter 8, a bidirectional and iterative transformative process occurs over time. On the one hand, changes experienced by the physical self in terms of neurophysiological states and processes, overflow into the emotional, psychological, social, and spiritual self. The activation of the parasympathetic nervous system and the overall strengthening and balance of the nervous system allow the experience of safety (Porges, 2007). This can facilitate venturing into self-inquiry and self-development across intrapersonal dimensions (i.e., emotional, psychological) and to experience enhanced social connectedness and transpersonal connections (i.e., spiritual). On the other hand, changes experienced in the psychological self in terms of states and processes related to attention, awareness, and meta-awareness, also overflow into the other dimensions, influencing practitioners' perspectives and physiological experiences (e.g., Schmalzl et al., 2015).

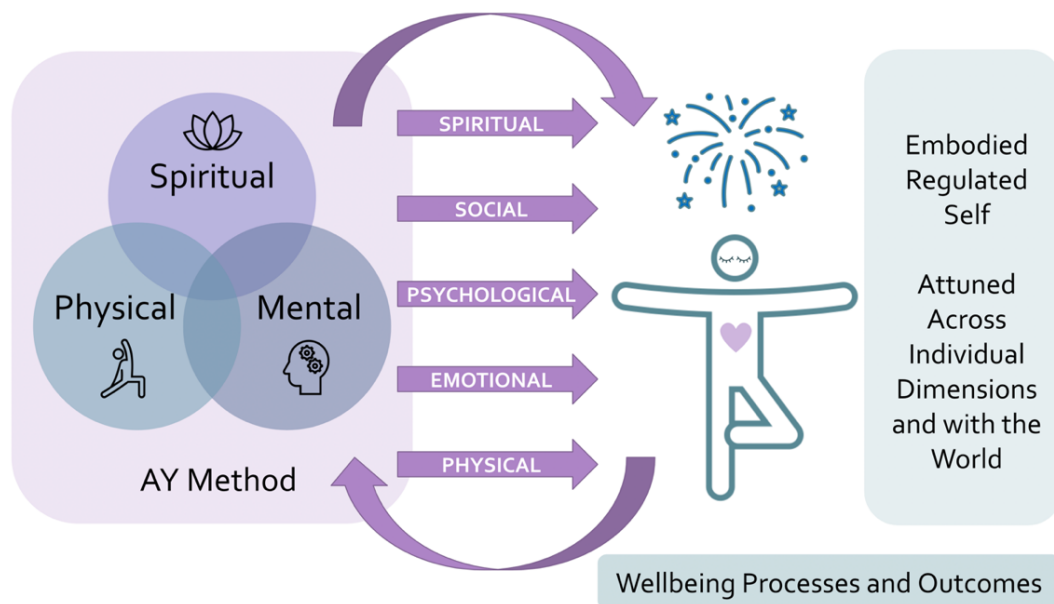
The regular practice plays a key role in these pathways and processes involving yoga and wellbeing. As the yoga practice becomes increasingly established, wellbeing outcomes experienced in the form of positive states across individual dimensions can eventually transform into more stable and durable experiences. This is represented as a

transition from state-like experiences of wellbeing to trait-like embodied experiences of wellbeing, which translate into more permanent ways of being and ways of living in the world (Cox & Tylka, 2018). These processes represent a mediational spiral, which is illustrated in the bottom of figure 9.1. This illustrates the iterative nature and dynamic dance between AY elements, neurophysiological and intrapersonal processes, and wellbeing processes and outcomes, which interact and reinforce each other as the practice becomes a personal ritual or habit. As intrapersonal changes become more recurrent or established, benefits would then overflow into the social and spiritual domains (Kishida et al., 2018; Porges, 2007). Below the mediational spiral, is a visual representation of the specific characteristics and context of the participant (i.e., moderators) which influence these interactions over time (Cox & Tylka, 2018), mirroring findings from the cluster analysis study (Chapter 7).

Thus, a regular yoga practice can permeate into every dimension of human existence and yield wellbeing benefits within the self and in relation to others. As discussed earlier, the intrapersonal changes can facilitate interpersonal changes supported by neurophysiological changes. By feeling safe and able to connect with others, practitioners can also become more attuned to their own needs and boundaries, influencing others and the environment around them (Cook-Cottone, 2015; Porges, 2007). The ability to navigate through different levels of individual functioning (i.e., from foundational, to optimal, to transcendental) in an embodied and regulated manner can ultimately translate into a sense of integrated self, which is attuned to themselves, to others, and to the world around them.

Aligned with a systems-informed perspective and based on the notion of simplicity (Kern et al., 2020; Kern & Taylor, 2021), Figure 9.2 represents the complexity of the elements and interactions involved within and between AY and wellbeing in a simplified manner. This figure captures the main elements contained within the AY system in interaction with the AY method as a broader system to generate benefits across physical, emotional, psychological, social, and spiritual domains of the individual. These benefits are then experienced at a foundational level by coping with and overcoming challenges, at an optimal level by engaging in personal development and growth, and at a contemplative and transcendental level by developing meta-awareness across individual domains and a connection beyond the self. These pathways may vary across individuals according to their own particular context, yet the diagram can help in identifying leverage points to create the most impact with less effort (Meadows, 1999).

Figure 9.2. *Synthesis of Conceptual Models*



Contributions to the Field and Implications

In this section I discuss the empirical, methodological, and theoretical contributions of this dissertation to the fields of wellbeing science, yoga, and positive psychology. Here, I also consider the overall implications of this thesis based on these contributions.

Empirical Contributions

This dissertation comprises five studies that have been (Studies 1 and 2), are in the process of (Studies 3 and 4), or are intended for (Study 5) publication in peer-reviewed academic journals. Each output on its own represents a tangible empirical contribution to the fields of wellbeing science, positive psychology, yoga, and related fields in different ways. The main empirical contributions of Study 1 (Chapter 4) and Study 2 (Chapter 5) was to extend on the current empirical literature on lay

conceptualisations of wellbeing and on wellbeing in general, by both using a method (i.e., RTA) and focusing on a group of participants (i.e., AY practitioners) that had not been investigated before. Additionally, Study 2 (Chapter 5) further expanded on wellbeing conceptualisations by considering five dimensions of wellbeing which had not been previously investigated.

Empirical contributions emanating from Study 3 (Chapter 6) are threefold. Firstly, it provided conceptualisations of yoga from the perspective of practitioners, which had not been previously documented in empirical research. Secondly, findings from this study offered views that challenge assumptions that have been broadly disseminated by media and social media. And lastly, Study 3 contributes to the existing empirical and theoretical literature of yoga by adopting a novel approach. Altogether, these contributions may open up the debate about how yoga is conceptualised nowadays and explore ways in which to maintain a balance between acknowledging and honouring its roots and embracing the evolution across time and context while preserving its essence.

Studies 4 and 5 (Chapters 7 and 8) represented a contribution to the empirical literature focusing on the moderators and mediators of yoga in health and wellbeing. Study 4 (Chapter 7) specifically contributed to the emergent research on profiles of established yoga practitioners by focusing on a specific yoga tradition, by using a method scarcely employed in previous research on this topic (i.e., cluster analysis), and by including dimensions of wellbeing as well as personal traits in the analysis. This resulted in comprehensive profiles supporting and extending on current knowledge about regular yoga practitioners. The main empirical contribution of Study 5 (Chapter 8) was

to examine yoga pathways to wellbeing by integrating findings emanating from practitioners' viewpoints with existing conceptual and empirical knowledge on the mechanisms of yoga from across different disciplines. This study comprehensively illustrated the different pathways reported in the literature and expanded on them by synthesising emerging and previous knowledge into a novel conceptual output.

Methodological Contributions

Altogether, the five studies along with the overarching narrative of this thesis provided an in-depth examination of yoga and wellbeing using multiple angles within the same group of participants. Here, the methodological contributions are threefold. Firstly, this dissertation utilised the application of RTA across four studies investigating different aspects and relationships of yoga and wellbeing. This was interwoven with cluster analysis as a complementary method also used for exploring and interpreting patterns. While studies comprising RTA used a mainly qualitative approach, cluster analysis employed a quantitative stance. Overall, the combination of methods provided a highly comprehensive understanding of wellbeing, yoga, and their interconnections.

Secondly, RTA was utilised within two studies (Studies 2 and 3) as a higher-level analysis to identify common threads between themes across dimensions of wellbeing and different aspects of yoga. This approach allowed me to draw further insights based on the key themes from domains that were analysed separately. On the one hand, this reinforced the relevance of recurring themes across dimensions of wellbeing (i.e., physical, emotional, psychological, social, spiritual) or across aspects of yoga (i.e., yoga, yoga philosophy, yoga practice). For instance, the notion of freedom from suffering and managing illness in the case of the dimensions of wellbeing grouped themes found

across physical, emotional, and psychological spheres. On the other hand, this higher-level RTA considering separate elements as part of a larger whole, enabled the consideration of findings under a new light and in a more holistic and integrated manner. By taking this approach in Study 2, wellbeing dimensions were brought back together in relation to each other, resulting in a conceptual model of human functioning and wellbeing.

Thirdly, at an epistemological level, this dissertation has contributed to the understanding of social constructivism in the context of yoga and wellbeing, as well as linking the interpretive phenomenological approach to this paradigm and to wellbeing and yoga. Throughout the thesis, participants' accounts reflected their lived experiences and embodied cognitive processes in interaction with their environment, contextualised by the AY tradition. In this context, meaning and knowledge about yoga and wellbeing was experienced and enacted through the mind-body complex as well as co-constructed through language with teachers and fellow practitioners, and with myself as the researcher. Here, wellbeing emerged in the context of the intricate interactions experienced within the mind-body complex, underscoring the relevance of phenomenology for the scientific inquiry of wellbeing. Additionally, the incorporation of practitioners' perspectives on wellbeing through the shared experience and language of yoga allowed the co-creation of newfound meanings and knowledge about wellbeing. Thus, using a social constructivist paradigm in interaction with a phenomenological approach in wellbeing science has contributed to advance the understanding of wellbeing as a construct that emerges within the relationship of an embodied mind in a dynamic interaction with the world.

Notably, within this final chapter I have also applied a higher-level analysis informed by the RTA framework in order to identify key themes across studies comprising this dissertation, as shown in table 9.1. This has allowed me to examine the main findings within each study and between different studies looking at three main elements addressed throughout the thesis: wellbeing, yoga, and the connections between yoga and wellbeing (see Table 9.2).

Theoretical Contributions

The theoretical contributions emerging from this dissertation are represented in the generation of two conceptual models that support and build upon existing theoretical knowledge within wellbeing science, positive psychology, and yoga. These two models are the conceptual model of human functioning and wellbeing deriving from Study 2 (Chapter 5) and the conceptual model of AY pathways towards wellbeing stemming from Study 5 (Chapter 8). Each model integrated original empirical evidence from this dissertation with existing frameworks using a transdisciplinary and systems-informed perspective to provide contextualised models that can be further studied in other contexts. By using these perspectives, the models can contribute to wellbeing science in closing gaps between different disciplines investigating on yoga and wellbeing, potentially reaching a wider audience.

The integration of the two models presented earlier in this chapter as a way of synthesising the findings across studies also represent a theoretical contribution emerging from this dissertation. The purpose of this conceptual integration was to organise and visualise complex information into a simpler way of conveying the

relevance of using embodied, integrated, holistic and transdisciplinary approaches to wellbeing and human functioning (see figure 9.2 above).

Implications

Considering the abovementioned key findings across studies and their contributions, implications arising from this dissertation can be synthesised into three main areas. These areas refer to (1) theoretical and empirical considerations in relation to the construct of wellbeing, (2) theoretical assumptions in yoga research, and (3) development and implementation of yoga practices and research for wellbeing. In discussing these implications, I will also address possible future directions for wellbeing and yoga research, theory, and practice.

The first implication emerging from this thesis is shifting epistemological, theoretical and empirical considerations of the construct of wellbeing towards the incorporation of embodied, transdisciplinary, and systems-informed views. At an individual level, subjective wellbeing has been approached through an overly psychological lens in the academic literature, as something that individuals perceive and experience mainly through mental processes (e.g., Hefferon, 2013). Findings from this dissertation reinforce the notion that humans are embodied beings and that different dimensions of human functioning are intricately interconnected and rooted in the body (Cook-Cottone, 2015). Thus, this integration (or lack of integration) of mind and body plays an important role on how people perceive and experience wellbeing. Maintaining a regular yoga practice uncovers how humans are able to experience this integration and perceive wellbeing in an embodied and holistic way. However, this goes beyond the

lived experience reported by practitioners as comprehensively examined throughout this thesis.

One way of incorporating an embodied approach to wellbeing frameworks and research, is through transdisciplinarity. As a construct that has been researched, theorised, and measured across a range of disciplines, different fields imbue particular epistemologies, use diverse methods, and emphasise varying foci in regard to wellbeing, including bodily systems. As discussed in this dissertation, and specifically in Chapter 8, wellbeing science can highly benefit from an increased integration of theoretical and empirical knowledge across disciplines looking at neurophysiological processes in relation to emotional, mental, social, and spiritual aspects of wellbeing as a whole. Using a range of methodological approaches including participants' perspectives, lived experiences, and objective measurements, as well as collaborative research practices hold the potential to broaden and deepen the understanding of wellbeing. Furthermore, the incorporation of an embodied and transdisciplinary approach to wellbeing is intimately connected to applying a systems-informed perspective both to individual functioning and to academic fields. This dissertation (especially Chapters 2 and 8) highlighted the notion of the embodied self as a multileveled system. Each level of the self can be studied and understood on its own as a system, as well as in relation to other levels as part of a wider system, and in relation to other embodied selves as part of a greater system. For this is essential to take a transdisciplinary perspective while considering these fields as interactive systems.

The second implication emanating from this dissertation is to consider the theoretical assumptions that have been used in yoga scholarship and research. More

specifically, this dissertation (particularly through Chapters 6, 7, and 8) has raised the need to acknowledge and incorporate the ethical and philosophical foundations of yoga in research as a relevant element from practitioners' perspectives. Researchers may choose to focus on more objective and secular features of yoga (i.e., postures, breathing, attention) as a way to maintain rigour in their scientific endeavours (e.g., Schmalzl et al., 2015). However, as discussed in Chapters 7 and 8, yoga is a multifaceted practice and lifestyle, and different practitioners are drawn to it through different pathways, including spiritual, philosophical, and/or ethical elements. Thus, researchers' theoretical assumptions about what yoga is can hinder the understanding and content of what is being communicated to both the academic and broader audiences. To the best of my knowledge, Chapter 6 is the first study looking at conceptualisations of yoga in a cross-cultural group of regular practitioners' and offers the opportunity of reflecting about researchers' theoretical assumptions as well as to keep exploring practitioners' conceptualisations in different contexts and traditions. This in turn, can help in contextualising yoga as a millennial tradition, philosophy, and practice in this current day and age.

Lastly, the third implication arising from this dissertation relates to research and applications of yoga and wellbeing. Throughout this thesis (particularly in Chapters 7 and 8), it has been established that as a multifaceted and holistic practice, yoga in general and AY in particular, have distinctive elements that can appeal to diverse interests of practitioners and that can impact practitioners' wellbeing through different pathways. By having multiple components taught and learnt as part of a whole and in a contextualised manner, AY itself holds a great potential to target the needs of a wide

range of people and to address multiple dimensions of wellbeing. This means that by having this empirical knowledge, it can be communicated more effectively to teachers and both new and more established practitioners. Furthermore, if yoga teachers have a clear understanding of their students' motivations, they can initiate a dialogue around those aspects that most resonate with the practitioner at a given point. This way, the elements of the practice can intentionally be used in tandem, as addressing one aspect can have an impact on one relevant area, which can in turn facilitate changes in other areas. This knowledge emerging from AY throughout this dissertation, can also be applied when designing, implementing, and evaluating yoga programs for improving health and wellbeing amongst different groups of people. By understanding participants' motivations and context, yoga programs can be tailored to emphasise different elements at different times, highlight mind-body connections, and adapt the language and narrative to be used depending on participants' context (e.g., scientifically-driven, spiritual/philosophically-driven). By supporting participants' autonomy through the practice there is also potential for developing sustainable changes beyond a formal yoga program, returning ownership of the practice to the practitioner.

Considering the implications stemming from this thesis, some future directions have been outlined in terms of approaches that can be taken in wellbeing and yoga theoretical and empirical work. Yet, one specific area for future research that can be emphasised, entails designing and conducting a longitudinal study with yoga naïve participants and/or yoga practitioners at a very early stage. The study could include a variety of methods and measures (i.e., objective and subjective) to better understand how wellbeing is impacted and how the engagement with different elements of yoga

develop and evolve over time. This can provide an opportunity to keep exploring the moderators and trajectories in practitioners' yoga practices and wellbeing over time. Furthermore, longitudinal research would benefit the most with the involvement of a transdisciplinary team collaborating in the generation and integration of theoretical and empirical knowledge using different approaches.

Limitations

There are several limitations to this dissertation that need to be acknowledged. The thesis specifically focused on the AY tradition and on a limited group of practitioners. This means that despite the parallels drawn to similar research on other styles and groups of practitioners, findings are not generalisable to other yoga traditions and to other groups of regular yoga practitioners. Another limitation is that participants were self-selected, which means that they were likely to be highly motivated to participate in the research, influencing their responses to the survey and the interviews. Practitioners' participation was also tied to internet access and use of digital devices, as well as proficiency in the languages in which the survey was available (i.e., English or Spanish). This might have limited the scope of participants or affected the quality and accuracy of their responses in the case they had low proficiency in either of the given languages. The use of only self-reported measures such as Likert scale type of items and open-ended questions can also be affected by participants' perceptions at the time of the survey.

Noteworthy, the data used for this dissertation was gathered between April and December 2020, which was the first year of the COVID pandemic. Surprisingly, responses barely included mentions to the impact of COVID. Nonetheless, the local and global

effects of the unfolding health crisis might have had an impact in more subtle ways that were not fully captured by the measurements used or by the data analyses. Another possible explanation is that this sample of regular practitioners had the tools and capabilities to accept and cope with their circumstances at the moment of the data collection stage. Moreover, the lockdowns and extended isolation periods might also have positively predisposed participants to connect and participate, given that during the first months of the pandemic many people were confined at home and not necessarily working.

Importantly, the nature of this dissertation was mostly qualitative and was underpinned by a social constructivist approach. This means that there was a high involvement of myself, the researcher, as a central piece in shaping and interpreting the data. As mentioned in the introduction (Chapter 1), the methodology (Chapter 3) and across all studies (Chapters 4 to 8), I have argued that my expertise in the fields of psychology, wellbeing science, and yoga represent strengths and a vantage point in identifying and interpreting relevant meanings while connecting to participants' lived experiences. While these strengths are highly valuable and relevant, and although reflexivity was constantly applied by myself and in collaboration with my supervisors and co-authors to sense-check interpretations, my background and active role in the research influenced the interpretation of findings. I have acknowledged my experience and perspectives in each study within this thesis, and that there might be other ways in which the data can be interpreted. However, due to the structure and word limit of each chapter intended for publication, reflexivity throughout the research process was not fully discussed. To further address this point, in the next section I will discuss this

element in relation to the research process, to my PhD journey, and to academic teaching.

Reflexivity

The active and reflexive role of the researcher is considered central in RTA, and the quality of the analysis is closely related to their awareness of epistemological and theoretical assumptions and their active engagement with the data (Braun & Clarke, 2019). Throughout this thesis, I have stated my position in terms of the epistemological stance guiding this dissertation (i.e., social constructivism), the theoretical lenses that have used across studies (i.e., wellbeing theories, yoga frameworks, systems-informed perspectives, psychology), my personal experience as a regular AY practitioner, and my professional expertise as a psychologist specialised in clinical psychology and positive psychology. However, reflexivity goes beyond providing a checklist for positionality in the research, involving the negotiation of complexities involved in such positionality (Braun & Clarke, 2023; Hill & Dao, 2020; Trainor & Bundon, 2020). In this section I will expand on negotiating these complexities that have been previously stated and discussed at an earlier stage of this dissertation (see Chapter 3). Here I will retrospectively reflect on my role in the research process as a whole, since reflexivity in relation to data collection and data analysis has been addressed in the methodology (see Chapter 3) and in each study (see Chapters 4 to 8). In doing so, I will also reflect on how my PhD journey has been intricately informed by my yoga practice, permeating into the way in which I engaged with the data.

The decision of embarking into this PhD journey has been accompanied by both courage and fear, as well as determination and doubt. As I wrote the research proposal,

I became aware of how deeply immersed I would be in the project by studying and investigating a topic that constituted such a central part of my way of living. Throughout the four years that took to bring this dissertation to fruition, I have maintained and deepened my yoga practice by practising five to six days a week with the same teacher and community, completed a yoga teacher training program in India, and continued to be mentored and trained by my teacher at her yoga school in Melbourne, Australia, where I am currently assisting and teaching AY. I have often felt during these years that yoga has infiltrated into every dimension of my existence, not only in terms of practicing and applying yoga teachings off the mat, but also in terms of grappling with the complexity and vastness of this ancient tradition. The wisdom ingrained in the practice and the philosophical underpinnings makes me feel humbled. From the beginning I have struggled with the label of being “an expert” in the field of yoga, as I acknowledge that my understanding is limited and constantly expanding, being shaped, and evolving within myself and in relation to others. While I highly value the work of both renowned and early career scholars and researchers, I equally value the knowledge and wisdom of past and present yoga teachers and practitioners. Throughout the thesis, my intention has been to generate new knowledge and contribute to existing knowledge based on the dynamic interaction of these multiple perspectives.

In particular, the four studies using RTA were conducted and written sequentially, and in my view represent an evolution of myself as a researcher using this method. With the first Study (Chapter 4), I faced the challenge of using the method for the first time and overcame the fear of failing. I spent several months immersing myself in the data, making sense of it, coding, and refining coding, until finally defining the final

themes. In addition to the NVivo software, I drew conceptual maps in butcher paper and used sticky notes to visualise themes and connections. Each time I reviewed the themes and sub-themes, I reflected in which ways I was bringing participants' voices to life and shaping their meanings in light of my theoretical assumptions and personal experiences. As I resonated with their perspectives, their views also provided me with new viewpoints, expanding my own knowledge in yoga, wellbeing, and beyond. Going through this process certainly paved an avenue for the next studies, in finding my own knowing and rhythm with analysing and interpreting each dataset. With each study I learnt how to follow my intuition. This represented the intersection of the rational knowledge that I acquired by familiarising myself with the method and the theoretical frameworks used in each case, and the emotional responses to that knowledge and the data. I believe that this allowed me to create the best route to make sense, organise, interpret, and convey the information provided by participants in light of my own perspectives. In doing this, in each study I constantly engaged in zooming in and zooming out of the dataset and coding process, looking in detail at each piece of information to then look at it in relation to a broader picture. I could experience the awareness and meta-awareness cultivated by the yoga practice in engaging in this process. As a result, each study followed the same method while considering specific approaches to best interpret the information and convey the findings. I consider these processes as what Braun and Clarke (2022) have called "owning your perspective" (p.3) or "knowing practice" (p.4). While bringing together these studies as a whole into the final dissertation, I have also striven to claim this ownership of my perspective, by creating a cohesive narrative guided by my epistemological and theoretical lenses.

Conclusion

This dissertation comprehensively explored the pathways of yoga towards wellbeing from different angles. This included an in-depth understanding of regular AY practitioners' conceptualisations of wellbeing and yoga, their similarities, and differences in terms of wellbeing and yoga profiles within the AY tradition, and the mechanisms of yoga towards wellbeing through their lived experiences. The thesis drew and built upon a range of philosophical and theoretical frameworks and models, and empirical research from across different disciplines focusing on and relevant to yoga and wellbeing. Original empirical work was produced, which supported and extended on current academic and scientific knowledge, yielding two conceptual models. These models were integrated with key findings across studies into a cohesive narrative synthesising the dissertation. These empirical and theoretical contributions are connected to the methodological approach. The use of a social constructivist paradigm in interaction with an interpretive phenomenological approach has allowed advancing the understanding of wellbeing as emerging within the dynamic and synergistic relationship within body and mind, and in constant interaction with the material and spiritual world.

In conclusion, throughout this dissertation, I have contended that the physical, mental, and spiritual elements of AY and the teaching method, can shape regular practitioners' human experience by rewiring their physical self, transforming their emotional and psychological self, and shifting their relationship with themselves, others, the world, and beyond. This results into constantly being and becoming more conscious, embodied, self-regulated and attuned, and with such states eventually being reflected

as a more permanent way of being and living in the world. Thus, the incorporation of more holistic, embodied, transdisciplinary, and systems-informed approaches to individual functioning and wellbeing cannot be overstated, in which philosophy, science, and practice become more integrated.

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APPENDIX 1. Ethics Approval Letter

24 February 2020

A/Prof M.L. Kern
Melbourne Graduate School of Education
The University of Melbourne



Dear A/Prof Kern

I am pleased to advise that the Humanities Law & Social Sciences Human Ethics Sub-Committee approved the following Project:

Project title: **The Yogic Path: Exploring Ashtanga Yoga Practitioners' Experiences to Unravel the Mechanisms and Moderators Connecting Yoga to Well-being**
Researchers: **A/Prof H Stokes, D Ramirez Duran, A/Prof M L Kern**
Ethics ID: **1955377.1**

The Project has been approved for the period: **24-Feb-2020 to 31-Dec-2020**

It is your responsibility to ensure that all people associated with the Project are made aware of what has actually been approved.

Research projects are normally approved to 31 December of the year of approval. Projects may be renewed yearly for up to a total of five years upon receipt of a satisfactory annual report. If a project is to continue beyond five years a new application will normally need to be submitted.

Please note that the following conditions apply to your approval. Failure to abide by these conditions may result in suspension or discontinuation of approval and/or disciplinary action.

- (a) **Limit of Approval:** Approval is limited strictly to the research as submitted in your Project application.
- (b) **Variation to Project:** Any subsequent variations or modifications you might wish to make to the Project must be notified formally to the Human Ethics Sub-Committee for further consideration and approval. If the Sub-Committee considers that the proposed changes are significant, you may be required to submit a new application for approval of the revised Project.
- (c) **Incidents or adverse effects:** Researchers must report immediately to the Sub-Committee anything which might affect the ethical acceptance of the protocol including adverse effects on participants or unforeseen events that might affect continued ethical acceptability of the Project. Failure to do so may result in suspension or cancellation of approval.
- (d) **Monitoring:** All projects are subject to monitoring at any time by the Human Research Ethics Committee.
- (e) **Annual Report:** Please be aware that the Human Research Ethics Committee requires that researchers submit an annual report on each of their projects at the end of the year, or at the conclusion of a project if it continues for less than this time. Failure to submit an annual report will mean that ethics approval will lapse.
- (f) **Auditing:** All projects may be subject to audit by members of the Sub-Committee.

If you have any queries on these matters, or require additional information, please contact me using the details below.

Please quote the ethics registration number and the title of the Project in any future correspondence.

On behalf of the Sub-Committee I wish you well in your research.

Yours sincerely

Ms Belinda Kelly – Human Ethics Committee Secretary
Phone: (03) 903 59095, Email: belinda.kelly@unimelb.edu.au

Research, Innovation and Commercialisation
Incorporating UoM Commercial Ltd

Alan Gilbert Building, Level 5, The University of Melbourne, 161 Barry Street, Victoria 3010 Australia
T: +61 9035 5943 | W: research.unimelb.edu.au | unimelb.edu.au

APPENDIX 2. Plain Language Statements for Online Survey (English and Spanish)

Plain Language Statement – Online Survey

Centre for Positive Psychology
Melbourne Graduate School of Education



Project: The Yoga Path: Exploring Ashtanga Yoga Practitioners' Experiences to Unravel the Mediators and Moderators Connecting Yoga to Well-being

Researchers:

Ms. Daniela Ramirez Duran (PhD student)

Email: dramirez1@student.unimelb.edu.au

A/Prof Peggy Kern (Responsible Researcher and Primary Supervisor)

Tel: +61 3 8344 3402; Email: peggy.kern@unimelb.edu.au

A/Prof Helen Stokes (Secondary Supervisor)

Email: h.stokes@unimelb.edu.au

Introduction

Thank you for your interest in this research project. Below, you will find details about the study, so that you can decide if you would like to take part in this research. Please take the time to read this information carefully. If you have any questions or concerns, please contact the researchers listed above by phone or email before continuing.

What is this study about?

This study is examining how Ashtanga Yoga relates to well-being, exploring the positive impacts that yoga can have on practitioners.

What will I be asked to do?

Should you agree to participate, you will be asked to complete a confidential online survey, beginning on the next page. The survey will take 15-30 minutes to complete. Questions will ask about your yoga practice, multiple dimensions of well-being, some basic demographic questions, and your personality and health.

The questions are fairly common questions that you might encounter in your daily life. You can skip any questions or sections that make you feel uncomfortable. All responses are voluntary, and you can withdraw from the survey at any stage, simply by closing your web browser.

At the end of the survey, you will be invited to participate in a follow up interview. The second part of the PhD project will interview some respondents, to gather more detailed perspectives than can be captured by a survey alone. If you may be willing to participate in the additional interview, you will be asked to provide your contact details for us to

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get in touch with you by email. Your details will be handled with complete confidentiality, accessed only by the research team for the purposes of setting up the interview. Not all participants will be interviewed, and participation is completely voluntary. You can complete the survey without any obligation to participate in the interview.

What are the possible benefits of participating in the study?

Upon completion of the survey, you will have the option to enter a prize draw with a chance to win an online Meditation Teacher Training course sponsored by The School of Positive Transformation valued at \$690AUD and one of five \$50AUD gift card from Amazon.com.

Beyond the prize draw, by sharing your experiences and perspective, it will help us develop a broader and deeper understanding of the benefits of yoga. This knowledge has the potential of contributing to the scientific and yoga communities as well as the wider community.

Is there any potential conflict of interest?

It is noteworthy to clarify that there are no affiliations with the organisation sponsoring the online course, nor any conflict of interest between The School of Positive Transformation and The University of Melbourne and researchers involved in this project.

What are the possible risks?

This study focuses on positive aspects and enjoyable activities, such as well-being and yoga. The survey asks questions related to physical and mental health, which might be sensitive to some individuals. However, questions do not ask about specific details of such conditions. They mostly address positive aspects of practice and life.

However, you could experience some discomfort due to the nature of some questions in the survey. You can skip questions or withdraw from the study at any time. If you do experience any adverse reaction, we encourage you to seek community information and support services by visiting websites containing online resources and support or by visiting your local GP. Helpful resources are listed at the bottom of this page, and then again at the end of the survey.

Do I have to take part?

No. Your participation is completely voluntary. You are able to withdraw at any time, simply by closing your browser or by contacting the researchers. You are free to withdraw without any explanation, prejudice or consequence.

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.2

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Will I hear about the results of this project?

Your responses will be combined with others, such that only grouped responses will be shared. The results of the study will be made public through conference presentations, research journal articles, the student researcher's PhD thesis, book chapters, interested media sources, social media, newsletters, and online blogposts.

You will be able to choose to receive a written summary of the research results. These results will be sent by email to all participants who have indicated interest in receiving the summary. If you wish to be informed of the findings, an option will appear at the end of the survey. You will be able to choose this option and asked to provide a valid email address.

What will happen to information about me?

The survey uses a secure web-based survey platform. We will protect your anonymity and confidentiality to the fullest extent possible, within the limits of the law (subpoena, freedom of information, mandated reporting). If you provide your contacts details, to be included in the prize draw, to be involved in the follow up interview or to receive a report on the study, we will keep these details in a password-protected computer file, separate from any data that you supply. Your contact and name details will only be used to link survey responses by the researchers involved in this project, to contact people for interviews, prize draw and to send the summary with the research findings. In the final research report, participants will be referred to by a pseudonym and in grouped data format. Any references to personal information that might allow someone to guess a participant's identity will be removed. Upon completion of the project, all identifying information will be removed and destroyed, leaving only deidentified data.

How will my responses be used after the project is finished?

Non-identifiable data collected in this research project may be used in future research or shared with other researchers in the field, for studies closely related to the current project to provide additional knowledge about yoga and well-being. Please note that the minimum retention period for data collected for any research conducted at the university is of five years after publication.

Who is funding this project?

This research project is being funded as part of a scholarship provided by the Chilean Government. Daniela's PhD program is being sponsored by the Advanced Human Capital Program of the National Commission for Scientific Research and Technology (CONICYT).

Where can I get further information?

If you would like more information about the project, please contact the researchers:
Ms. Daniela Ramirez (PhD Graduate Researcher) Email:

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.2

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dramirez1@student.unimelb.edu.au or A/Prof Peggy Kern (Responsible Researcher)
Tel: +61 3 8344 3402 or Email: peggy.kern@unimelb.edu.au.

Who can I contact if I have any concerns about the project?

This research project has been approved by the Human Research Ethics Committee of The University of Melbourne. If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you should contact the Manager, Human Research Ethics, Research Ethics and Integrity, University of Melbourne, VIC 3010. Tel: +61 3 8344 2073 or Email: HumanEthics-complaints@unimelb.edu.au. All complaints will be treated confidentially. In any [correspondence](#) please provide the name of the research team or the name or ethics ID number of the research project.

Mental Health Resources

Whether you are located in Australia or overseas, you can also seek support by visiting your local doctor or general practitioner (GP). If you are residing in Australia, you can use the following contact details for external counselling support through Beyond Blue or Lifeline Australia:

Beyond Blue Provides mental health information and support, including 24/7 telephone counselling service. Tel: 1300 22 4636 www.beyondblue.org.au	Lifeline Australia Provides a 24/7 telephone counselling service. Tel: 13 11 14 www.lifeline.org.au
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If you are residing in Australia or overseas, you can find online resources and general information and guidelines to access mental health support by checking the following websites:

World Health Organisation Fact Sheets (English and Spanish)

https://www.who.int/topics/mental_health/factsheets/en/

University of Melbourne Services Tip Sheets (English)

<https://services.unimelb.edu.au/counsel/resources/tip-sheets>

National Alliance on Mental Health Fact Sheets (English and Spanish)

<https://www.nami.org/learn-more/fact-sheet-library>

Way Ahead Translated Fact Sheets (Spanish and other languages)

<https://wayahead.org.au/get-the-facts/translations/>

Black Dog Institute Fact Sheets (English)

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.2

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<https://www.blackdoginstitute.org.au/about-us/publications-and-resources/fact-sheets>

Reach Out Apps (English)

<https://au.reachout.com/tools-and-apps>

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.2

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Declaración en Lenguaje Simple – Encuesta Online

Centro de Psicología Positiva
Facultad de Educación, Universidad de Melbourne



Project: El sendero del Yoga: Explorando las Experiencias de Practicantes de Ashtanga Yoga para Dilucidar los Mediadores y Moderadores Conectando el Yoga al Bienestar

Investigadoras:

Ms. Daniela Ramírez Duran (Estudiante de PhD)

Email: dramirez1@student.unimelb.edu.au

Prof. Asociada Peggy Kern (Investigadora Responsable y Supervisora Principal)

Tel: +61 3 8344 3402; Email: peggy.kern@unimelb.edu.au

Prof. Asociada Helen Stokes (Supervisora Secundaria)

Email: h.stokes@unimelb.edu.au

Introducción

Gracias por tu interés en este proyecto de investigación. Más abajo, encontrarás detalles acerca esta parte del estudio, para que puedas decidir si quieres participar. Por favor toma tu tiempo para leer esta información cuidadosamente. Si tienes cualquier pregunta o preocupación, por favor pregúntale a las investigadoras mencionadas al inicio, por teléfono o email, antes de continuar.

¿De qué se trata este estudio?

Este estudio se encuentra examinando cómo el Ashtanga Yoga se relaciona al bienestar, explorando los impactos positivos que el yoga puede tener en los practicantes.

¿Qué me pedirán hacer?

Si aceptas participar, te pediremos completar una encuesta online confidencial, que comienza en la siguiente página. La encuesta tomará entre 15 a 30 minutos en ser completada. Las preguntas indagarán acerca de tu práctica de yoga, múltiples dimensiones del bienestar, algunas preguntas demográficas básicas y aspectos de tu personalidad y salud.

Las preguntas son relativamente comunes a las que puedes encontrar en tu vida diaria. Puedes saltar cualquier pregunta o sección que te haga sentir incómodo/a. Todas las respuestas son voluntarias y puedes retirarte de la encuesta en cualquier punto, simplemente cerrando tu navegador de internet.

Al final de la encuesta, serás invitado/a a participar en una entrevista de seguimiento. La segunda parte del proyecto de PhD consiste en entrevistar a algunos respondientes para recolectar perspectivas más detallada de lo capturado por la encuesta por sí sola. Si

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estás interesado/a en participar en la entrevista adicional, te pediremos que proveas tus datos de contacto para poder contactarte a través de email. Tus detalles serán tratados con completa confidencialidad, pudiendo sólo ser accedidos por el equipo investigador para propósitos de organizar la entrevista. No todos los participantes serán entrevistados y la participación es completamente voluntaria. Puedes completar la encuesta sin ninguna obligación de participar en la encuesta.

¿Cuáles son los posibles beneficios de participar en este estudio?

Luego de completar la encuesta, tendrás la opción de participar en un sorteo con posibilidades de ganar un curso online de Entrenamiento en Meditación, patrocinado por The School of Positive Transformation, avaluado en \$690 AUD y una de cinco gift cards por \$50 AUD para utilizar a través de Amazon.com.

Más allá del sorteo de premios, al compartir tus experiencias y perspectivas, nos estarás ayudando a desarrollar una comprensión más amplia y profunda acerca de los beneficios del yoga. Este conocimiento tiene el potencial de contribuir a la comunidad científica y del yoga, así como también a la comunidad más amplia.

¿Existe algún potencial conflicto de interés?

Es necesario aclarar que no existe afiliación alguna con la organización patrocinadora del curso online, y tampoco existe algún conflicto de interés entre The School of Positive Transformation y la Universidad de Melbourne y las investigadoras involucradas en este proyecto.

¿Cuáles son los posibles riesgos?

Este estudio está enfocado en aspectos positivos y actividades agradables, tales como el bienestar y el yoga. La encuesta contiene preguntas acerca la salud física y mental, lo que puede ser sensible para algunas personas. Sin embargo, las preguntas no indagan sobre detalles específicos de dichas condiciones. En su mayoría preguntan acerca de aspectos positivos de la práctica y la vida en general.

Sin embargo, podrías experimentar algo de incomodidad debido a la naturaleza de las preguntas. Si te sientes incómodo/a con cualquiera de las preguntas, sólo hazle saber a la investigadora y puedes saltar esas preguntas. Si la investigadora encuentra que estás experimentando malestar, ella dará término a la entrevista y te indicará recursos útiles. Si experimentaras cualquier reacción adversa, te recomendamos que busques información comunitaria y servicios de apoyo a través de sitios web que contienen recursos en línea y apoyo, o bien visitando a tu médico local. Más abajo encontrarás recursos útiles, los que también estarán disponibles durante la entrevista.

¿Tengo que participar?

No. Tu participación es completamente voluntaria. Podrás retirarte del estudio en cualquier momento, simplemente avisándole a la entrevistadora. Eres libre de retirarte sin ninguna explicación, prejuicio o consecuencia.

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.2

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¿Cómo sabré acerca de los resultados de este proyecto?

Tus respuestas serán combinadas con otras, de tal manera que sólo respuestas agrupadas serán compartidas. Cuando los individuos sean descritos, se ocuparán pseudónimos para proteger tu confidencialidad. Los resultados del estudio serán publicados a través de presentaciones en conferencias, artículos en revistas de investigación, la tesis de PhD de la investigadora estudiante, capítulos de libros, medios de comunicación interesados, redes sociales, boletines y blogs.

Podrás recibir un resumen escrito de los resultados de la investigación. Estos resultados serán enviados por email a todos los participantes que hayan indicado interés en recibir el resumen. Si quieres ser informado/a de los resultados, una opción aparecerá al final de la encuesta. Podrás escoger esta opción y te pediremos que compartas una dirección de email válida.

¿Qué ocurrirá con la información acerca de mí?

La encuesta usa una plataforma para encuestas en un sitio web seguro. Protegeremos tu anonimato y confidencialidad hasta el máximo grado posible, dentro de los límites de la ley (requerimiento legal, libertad de información, reporte mandatorio). Si entregas tus datos de contacto para ser incluido/a en el sorteo de premios, participar en las encuestas de seguimiento o para recibir el reporte del estudio, guardaremos esos datos en un archivo de computador protegido con contraseña, separado de cualquier otra información que hayas entregado. Tus datos de contacto y nombre solo serán ocupados para contactar a las personas para las entrevistas, sorteo de premios y para enviar el resumen con los resultados de la investigación.

En el reporte final de la investigación, los participantes serán nombrados bajo un pseudónimo y en formato de datos agrupados. Cualquier referencia sobre información personal que pueda permitir a alguien adivinar la identidad de los participantes, será removida. Luego de que el proyecto sea completado, toda información identificable será removida y destruida, sólo dejando datos no identificables.

¿Cómo serán utilizadas mis respuestas después que finalice el proyecto?

Datos no identificables recolectados en esta investigación podrán ser ocupados en futuras investigaciones o compartidos con otros investigadores de la misma línea de investigación, para estudios estrechamente relacionados con el actual proyecto, con el fin de proporcionar conocimiento adicional sobre yoga y bienestar. Por favor ten en consideración que el período mínimo de retención de datos recolectados para cualquier investigación realizada en la universidad, es de cinco años después de la publicación.

¿Quién se encuentra financiando este proyecto?

Este proyecto de investigación está siendo financiado como parte de una beca de estudios otorgada por el Gobierno de Chile. El programa de PhD de Daniela está siendo auspiciado por el Programa de Capital Humano Avanzado de la Comisión de Investigación Científica y Tecnológica (CONICYT)

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Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.2

¿Dónde puedo obtener más información?

Si quisieras obtener más información sobre el proyecto, por favor contacta a las investigadoras Daniela Ramírez (Investigadora Estudiante de PhD) al email dramirez1@student.unimelb.edu.au o Profesora Asociada Peggy Kern (Investigadora Responsable) al teléfono +61 3 8344 3402 o al email peggy.kern@unimelb.edu.au.

¿A quién puedo contactar en caso de tener cualquier preocupación respecto a este proyecto?

Esta investigación ha sido aprobada por el Comité de Ética de Investigación Humana de la Universidad de Melbourne. Si tienes cualquier preocupación o queja acerca de la conducción de este proyecto de investigación, la cual no quisieras discutir con el equipo investigador, puedes contactar al Manager, ~~Ética~~ ^{Ética} en Investigación Humana, Ética e Integridad en Investigación, Universidad de Melbourne, VIC 3010. Tel: +61 3 8344 2073 o Email: HumanEthics-complaints@unimelb.edu.au. Todos los reclamos serán tratados confidencialmente. En caso de correspondencia, por favor provee el nombre del equipo de investigación o el número de identidad de ética de este proyecto de investigación.

Recursos de Salud Mental

Si te encuentras en Australia o en cualquier otra parte del mundo, puedes buscar ayuda visitando a tu médico local o de cabecera. Si te encuentras viviendo en Australia, puedes usar uno de los siguientes contactos para apoyo externo de consejería a través de Beyond Blue o Lifeline Australia:

Beyond Blue Entrega información y apoyo en salud mental, incluyendo servicios de consejería telefónica 24/7 Tel: 1300 22 4636 www.beyondblue.org.au	Lifeline Australia Entrega servicios de consejería telefónica 24/7 Tel: 13 11 14 www.lifeline.org.au
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Si te encuentras residiendo en Australia u otro país, puedes encontrar recursos en línea e información general y guía para acceder a soporte de salud mental, chequeando los siguientes sitios web:

Organización Mundial para la Salud – Folletos (Inglés y Español)

https://www.who.int/topics/mental_health/factsheets/en/

Servicios de la Universidad de Melbourne – Hojas con Tips (Inglés)

<https://services.unimelb.edu.au/counsel/resources/tip-sheets>

Alianza Nacional en Salud Mental - Folletos (Inglés y Español)

<https://www.nami.org/learn-more/fact-sheet-library>

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Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.2

Way Ahead – Folletos Traducidos (Español y otros idiomas)

<https://wayahead.org.au/get-the-facts/translations/>

Instituto Black Dog - Folletos (Inglés)

<https://www.blackdoginstitute.org.au/about-us/publications-and-resources/fact-sheets>

Reach Out – Aplicación (Inglés)

<https://au.reachout.com/tools-and-apps>

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.2

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APPENDIX 3. Consent Forms for Online Survey (English and Spanish)

Consent Form – Online Survey

Centre for Positive Psychology
Melbourne Graduate School of Education



Project: The Yoga Path: Exploring Ashtanga Yoga Practitioners' Experiences to Unravel the Mediators and Moderators Connecting Yoga to Well-being

Researchers:

Ms. Daniela Ramirez Duran (PhD student) Email: dramirez1@student.unimelb.edu.au
A/Prof Peggy Kern (Responsible Researcher and Primary Supervisor) Tel: +61 3 8344 3402; Email: peggy.kern@unimelb.edu.au
A/Prof Helen Stokes (Secondary Supervisor) Email: h.stokes@unimelb.edu.au

After reading the information above, please read each of the following statements, and click the button below to indicate whether or not you consent to be a part of the study. If you consent to participate, the following screen will take you directly to the online survey.

1. I consent to participate in this project, the details of which have been explained to me, including details of survey, and I have been provided with a written plain language statement to keep.
2. I authorise the researchers to use information collected from the survey for purposes of this research.
3. I understand that the purpose of this research is to investigate the elements connecting yoga to well-being by understanding the experiences of people who practice Ashtanga yoga.
4. I understand that my participation in this project is for research purposes only.
5. I acknowledge that the possible effects of participating in this research project have been explained to my satisfaction.
6. In this project I will be required to:
 - a. Complete an online survey including questions about my yoga practice, well-being, health status and personality traits as well as basic demographic information. The survey will take approximately 30 minutes to complete.
 - b. Indicate whether or not I am willing to participate in an interview as a second part of the study, receive a summary of the research findings, or optionally be included in the prize draw. For each of these, I understand that I will be asked to provide my contact details, to allow the researchers to contact me via email.

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.1

Melbourne Graduate School of Education

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7. I understand that my participation is voluntary and that I am free to withdraw from this project anytime without explanation, prejudice or consequence and to withdraw any unprocessed data that I have provided.
8. I understand that the data from this research will be stored on secure servers at the University of Melbourne. Only de-identified data will be kept indefinitely to enable data to be used in possible related future research and/or shared with other researchers in the field, for studies closely related to the current project to provide additional knowledge about yoga and well-being.
9. I understand that non-identifiable data collected in this research may be used in future research, to provide additional knowledge about yoga and well-being.
10. I have been informed that the confidentiality of the information I provide will be safeguarded subject to any legal requirements; my data will be password protected and accessible only by the named researchers.
11. I understand that my affirmation of consent will be retained by the researcher.

YES, I have read the information above and AGREE to be part of the study.

NO, I have read the information above and DO NOT want to be part of the study.

Consentimiento Informado – Encuesta Online

Centro de Psicología Positiva
Facultad de Educación, Universidad de Melbourne



Project: El sendero del Yoga: Explorando las Experiencias de Practicantes de Ashtanga Yoga para Dilucidar los Mediadores y Moderadores Conectando el Yoga al Bienestar

Investigadoras:

Ms. Daniela Ramirez Duran (Estudiante de PhD)

Email: dramirez1@student.unimelb.edu.au

Prof Asociada Peggy Kern (Investigadora Responsable y Supervisora Principal)

Tel: +61 3 8344 3402; Email: peggy.kern@unimelb.edu.au

Prof Asociada Helen Stokes (Supervisora Secundaria)

Email: h.stokes@unimelb.edu.au

Después de leer la información presentada anteriormente, por favor lee cada una de las siguientes declaraciones y haz click en el botón más abajo para indicar si aceptas ser parte de este estudio. Si aceptas participar, la siguiente ventana te llevará directamente a la encuesta online.

1. Acepto participar en este proyecto, cuyos detalles me han sido explicados, incluyendo los detalles de la encuesta, y me han entregado una copia escrita de la declaración en lenguaje simple.
2. Autorizo a las investigadoras para usar la información recolectada de la entrevista para fines de esta investigación.
3. Comprendo que el propósito de esta investigación es investigar los elementos conectando el yoga al bienestar mediante la comprensión de las experiencias de personas que practican Ashtanga yoga.
4. Comprendo que mi participación en este proyecto es sólo para fines de investigación.
5. Reconozco que me han explicado los posibles efectos de participar en esta investigación.
6. En este proyecto tendré que:
 - a. Completar una encuesta online que incluye preguntas acerca de mi práctica de yoga, bienestar, estado de salud y rasgos de personalidad, así como información demográfica básica. La encuesta tomará alrededor de 30 minutos en ser completada.
 - b. Indicar si estoy dispuesto/a a participar en una entrevista como parte de la segunda parte de este estudio, recibir un resumen con los resultados de

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la investigación o tener la opción de ser incluido/a en el sorteo de un premio. Para cada uno de estas instancias, entiendo que se me solicitará entregar mis datos de contacto para permitir que las investigadoras puedan contactarme vía email.

7. Entiendo que mi participación es voluntaria y que puedo decidir retirarme del proyecto en cualquier momento sin ninguna explicación previa, prejuicio o consecuencia, y retirar cualquier información no procesada que haya provisto.
8. Entiendo que la información proveniente de esta investigación será almacenada de manera segura en los servidores de la Universidad de Melbourne. Solo información de-identificada será guardada de manera indefinida, con el propósito de ser utilizada en posibles futuras investigaciones y/o compartida con otros investigadores de la misma disciplina, para estudios estrechamente relacionados con este proyecto, con el fin de proporcionar mayor conocimiento acerca del yoga y el bienestar.
9. Entiendo que la información no identificable recolectada en esta investigación podrá ser usada en investigaciones futuras, para proveer conocimiento adicional acerca del yoga y bienestar.
10. He sido informado/a que la confidencialidad de la información que provea, será salvaguardada acorde a cualquier requerimiento legal, que mi información será protegida con clave y accesible solo para las investigadoras nombradas.
11. Entiendo que mi consentimiento informado será guardado por la investigadora.

SI, he leído la información anterior y ACEPTO ser parte de este estudio

NO, he leído la información anterior y NO ACEPTO ser parte de este estudio

APPENDIX 4. Plain Language Statements for Interviews (English and Spanish)

Plain Language Statement - Interview

Centre for Positive Psychology
Melbourne Graduate School of Education



Project: The Yoga Path: Exploring Ashtanga Yoga Practitioners' Experiences to Unravel the Mediators and Moderators Connecting Yoga to Well-being

Researchers:

Ms. Daniela Ramirez Duran (PhD student)

Email: dramirez1@student.unimelb.edu.au

A/Prof Peggy Kern (Responsible Researcher and Primary Supervisor)

Tel: +61 3 8344 3402; Email: peggy.kern@unimelb.edu.au

A/Prof Helen Stokes (Secondary Supervisor)

Email: h.stokes@unimelb.edu.au

Introduction

Thank you for your interest in this research project, and for participating in the survey. The second part of the PhD project is interviewing some respondents, to gather more detailed perspectives than can be captured by a survey alone. Below, you will find details about this part of the study, so that you can decide if you would like to take part. If you have any questions or concerns, please ask the interviewer before continuing.

What is this study about?

This study is examining how Ashtanga Yoga relates to well-being, exploring the positive impacts that yoga can have on practitioners.

What will I be asked to do?

The second part of the study involves an online interview, which will take around 60 minutes to complete. We will arrange the interview for a date and time of your convenience.

During the interview, you will be asked more in-depth questions about your yoga practice, including reflecting on your yoga journey, how different elements of your yoga practice contribute to your well-being, and how your life has been influenced by your yoga practice. We'll also explore challenges that you have experienced in your practice, how you have dealt with these challenges, and your accomplishments in your practice.

Interviews will be conducted online by the PhD researcher (Daniela), using Zoom technology. You will be sent a link for the session, so you do not need to download or set up any additional software. With your permission, the interview will be digitally

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recorded, so that we can make sure we accurately capture your experience. This information will be transcribed into a digital file. If you would like to, you will have the opportunity to review the transcript, being able to remove any parts that you do not want to be included.

What are the possible benefits of participating in the study?

You will receive a \$20AUD gift card from Amazon.com after the interview, to thank you for your participation and to compensate you for your time.

In addition, by sharing your experiences and perspective, it will help us develop a broader and deeper understanding of the benefits of yoga. This knowledge has the potential of contributing to the scientific and yoga communities as well as the wider community.

What are the possible risks?

This study focuses on positive aspects and enjoyable activities, such as well-being and yoga. While some of the interview questions explore challenges in your yoga practice, the focus will be on the positive experiences that you have had. The questions generally will allow you to share your perspective and experiences with others.

However, you could experience some discomfort due to the nature of some questions. If you feel uncomfortable with any of the questions, just let the interviewer know and you can skip those questions. If the interviewer finds that you are experiencing distress, then she will end the interview and point you to helpful resources. If you do experience any adverse reaction, we encourage you to seek community information and support services by visiting websites containing online resources and support or by visiting your local GP. Helpful resources are listed below, and will be available at the interview.

Do I have to take part?

No. Your participation is completely voluntary. You are able to withdraw at any time, simply by letting the interviewer know. You are free to withdraw without any explanation, prejudice or consequence.

Will I hear about the results of this project?

Your responses will be combined with others, such that only grouped responses will be shared. When individuals are described, pseudonyms will be used, to protect your confidentiality. The results of the study will be made public through conference presentations, research journal articles, the student researcher's PhD thesis, book chapters, interested media sources, social media, newsletters, and online blogposts.

You will be sent a written summary of the research results after the study is complete.

Ethics ID Number: 1955377.1; Date: 26/11/2019; Version: 1.1

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What will happen to information about me?

Interview transcripts will be stored in digital format. The digital data provided will be kept confidential subject to any legal limitations (subpoena, freedom of information, mandated reporting), and to the degree permitted by the technology used. We will protect your anonymity and confidentiality to the fullest extent possible, within the limits of the law. Due to the relatively small sample size of this part of the project, however, it is still possible that someone may be able to identify you.

Your name and contact details will be kept in a password-protected computer file, separate from any data that you supply. Your contact and name details will only be used to link your interview to your survey responses, to arrange communication for the interview and allow you to review the final transcript, and to provide you with the gift card and final research report.

In the final research report, participants will be referred to by a pseudonym and in grouped data format. Any references to personal information that might allow someone to guess a participant's identity will be removed. Upon completion of the project, all identifying information will be removed and destroyed, leaving only deidentified data.

How will my responses be used after the project is finished?

Non-identifiable data collected in this research project may be used in future research or shared with other researchers in the field, for studies closely related to the current project to provide additional knowledge about yoga and well-being. Please note that the minimum retention period for data collected for any research conducted at the university is of five years after publication.

Who is funding this project?

This research project is being funded as part of a scholarship provided by the Chilean Government. Daniela's PhD program is being sponsored by the Advanced Human Capital Program of the National Commission for Scientific Research and Technology (CONICYT).

Where can I get further information?

If you would like more information about the project, please contact the researchers:

Ms. Daniela Ramirez (PhD Graduate Researcher) Email:

dramirez1@student.unimelb.edu.au or A/Prof Peggy Kern (Responsible Researcher)

Tel: +61 3 8344 3402 or Email: peggy.kern@unimelb.edu.au.

Who can I contact if I have any concerns about the project?

This research project has been approved by the Human Research Ethics Committee of The University of Melbourne. If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you

Ethics ID Number: 1955377.1; Date: 26/11/2019; Version: 1.1

Melbourne Graduate School of Education

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should contact the Manager, Human Research Ethics, Research Ethics and Integrity, University of Melbourne, VIC 3010. Tel: +61 3 8344 2073 or Email: HumanEthics-complaints@unimelb.edu.au. All complaints will be treated confidentially. In any correspondence please provide the name of the research team or the name or ethics ID number of the research project.

Mental Health Resources

Whether you are located in Australia or overseas, you can also seek support by visiting your local doctor or general practitioner (GP). If you are residing in Australia, you can use the following contact details for external counselling support through Beyond Blue or Lifeline Australia:

Beyond Blue Provides mental health information and support, including 24/7 telephone counselling service. Tel: 1300 22 4636 www.beyondblue.org.au	Lifeline Australia Provides a 24/7 telephone counselling service. Tel: 13 11 14 www.lifeline.org.au
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If you are residing in Australia or overseas, you can find online resources and general information and guidelines to access mental health support by checking the following websites:

World Health Organisation Fact Sheets (English and Spanish)

https://www.who.int/topics/mental_health/factsheets/en/

University of Melbourne Services Tip Sheets (English)

<https://services.unimelb.edu.au/counsel/resources/tip-sheets>

National Alliance on Mental Health Fact Sheets (English and Spanish)

<https://www.nami.org/learn-more/fact-sheet-library>

Way Ahead Translated Fact Sheets (Spanish and other languages)

<https://wayahead.org.au/get-the-facts/translations/>

Black Dog Institute Fact Sheets (English)

<https://www.blackdoginstitute.org.au/about-us/publications-and-resources/fact-sheets>

Reach Out Apps (English)

<https://au.reachout.com/tools-and-apps>

Ethics ID Number: 1955377.1; Date: 26/11/2019; Version: 1.1

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Declaración en Lenguaje Simple - Entrevista

Centro de Psicología Positiva
Facultad de Educación, Universidad de Melbourne



Project: El sendero del Yoga: Explorando las Experiencias de Practicantes de Ashtanga Yoga para Dilucidar los Mediadores y Moderadores Conectando el Yoga al Bienestar

Investigadoras:

Ms. Daniela Ramírez Duran (Estudiante de PhD)

Email: dramirez1@student.unimelb.edu.au

Prof. Asociada Peggy Kern (Investigadora Responsable y Supervisora Principal)

Tel: +61 3 8344 3402; Email: peggy.kern@unimelb.edu.au

Prof. Asociada Helen Stokes (Supervisora Secundaria)

Email: h.stokes@unimelb.edu.au

Introducción

Gracias por tu interés en este proyecto de investigación y por participar en la encuesta. La segunda parte del proyecto de PhD es entrevistar a algunos respondientes para obtener percepciones más detalladas que las recolectadas sólo con la encuesta. Más abajo, encontrarás detalles acerca esta parte del estudio, para que puedas decidir si quieres participar. Si tienes cualquier pregunta o preocupación, por favor pregúntale a la investigadora antes de continuar.

¿De qué se trata este estudio?

Este estudio se encuentra examinando cómo el Ashtanga Yoga se relaciona al bienestar, explorando los impactos positivos que el yoga puede tener en los practicantes.

¿Qué me pedirán hacer?

La segunda parte del estudio involucra una entrevista online, que toma alrededor de 60 minutos en ser completada. Organizaremos una entrevista para una fecha y horario que sea de tu conveniencia.

Durante la entrevista, realizaremos preguntas acerca de tu práctica de yoga en mayor profundidad, incluyendo reflexionar sobre la evolución de tu práctica, cómo diferentes elementos de tu práctica de yoga contribuyen a tu bienestar y cómo tu vida ha sido influenciada por tu práctica de yoga. También exploraremos desafíos que hayas experimentado en tu práctica, cómo has enfrentado esos desafíos y tus logros en la práctica.

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Ethics ID Number: 1955377.1; Date: 26/11/2019; Version: 1.1

Las entrevistas serán conducidas online por la investigadora estudiante de PhD (Daniela), usando la tecnología Zoom. Te enviaremos un link para la sesión, por lo que no tienes que descargar ni instalar ningún software adicional. Con tu permiso, la entrevista será digitalmente grabada, para asegurarnos que hemos capturado tu experiencia de manera fidedigna. Esta información será transcrita en un archivo digital. Si quisieras, tendrás la oportunidad de revisar la transcripción y decidir remover cualquier parte que no quieras que sea incluida.

¿Cuáles son los posibles beneficios de participar en este estudio?

Recibirás una gift card de Amazon.com por \$20 AUD después de la entrevista, como un agradecimiento por tu participación y para compensarte por tu tiempo.

Además, al compartir tus experiencias y perspectivas, nos estarás ayudando a desarrollar una comprensión más amplia y profunda acerca de los beneficios del yoga. Este conocimiento tiene el potencial de contribuir a la comunidad científica y del yoga, así como también a la comunidad más amplia.

¿Cuáles son los posibles riesgos?

Este estudio está enfocado en aspectos positivos y actividades agradables, tales como el bienestar y el yoga. Mientras algunas preguntas de la entrevista exploran desafíos respecto a tu práctica de yoga, el foco serán las experiencias positivas que has tenido. En general las preguntas te permitirán compartir tus perspectivas y experiencias con otros.

Sin embargo, podrías experimentar algo de incomodidad debido a la naturaleza de las preguntas. Si te sientes incómodo/a con cualquiera de las preguntas, sólo hazle saber a la investigadora y puedes saltar esas preguntas. Si la investigadora encuentra que estás experimentando malestar, ella dará término a la entrevista y te indicará recursos útiles. Si experimentaras cualquier reacción adversa, te recomendamos que busques información comunitaria y servicios de apoyo a través de sitios web que contienen recursos en línea y apoyo, o bien visitando a tu médico local. Más abajo encontrarás recursos útiles, los que también estarán disponibles durante la entrevista.

¿Tengo que participar?

No. Tu participación es completamente voluntaria. Podrás retirarte del estudio en cualquier momento, simplemente avisándole a la entrevistadora. Eres libre de retirarte sin ninguna explicación, prejuicio o consecuencia.

¿Cómo sabré acerca de los resultados de este proyecto?

Tus respuestas serán combinadas con otras, de tal manera que sólo respuestas agrupadas serán compartidas. Cuando los individuos sean descritos, se ocuparán pseudónimos para proteger tu confidencialidad. Los resultados del estudio serán publicados a través de presentaciones en conferencias, artículos en revistas de

Ethics ID Number: 1955377.1; Date: 26/11/2019; Version: 1.1

Melbourne Graduate School of Education
Kwong Lee Dow Building, 234 Queensberry Street, The University of Melbourne, Victoria 3010 Australia
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investigación, la tesis de PhD de la investigadora estudiante, capítulos de libros, medios de comunicación interesados, redes sociales, boletines y blogs.

Podrás recibir un resumen escrito de los resultados de la investigación después que el estudio se haya completado.

¿Qué ocurrirá con la información acerca de mí?

Las transcripciones de las entrevistas serán guardadas en formato digital. Los datos digitales provistos serán guardados de manera confidencial, sujetos a cualquier limitación legal (requerimiento legal, libertad de información, reporte mandatorio), y hasta el grado permitido por la tecnología utilizada. Protegeremos tu anonimato y confidencialidad hasta el máximo grado posible, dentro de los límites de la ley. Sin embargo, dado el relativo pequeño tamaño de la muestra de participantes para esta parte del proyecto, es posible que alguien pueda identificarte.

Tu nombre y datos de contacto serán guardados en un archivo de computador protegido con contraseña, separado de cualquier otro dato que hayas provisto. Tus datos de contacto y nombre solo serán ocupados para conectar tu entrevista a tus respuestas de la encuesta, para organizar comunicación para la entrevista y para permitirte revisar la transcripción final, y para proveerte de la gift card y reporte final.

En el reporte final de la investigación, los participantes serán nombrados bajo un pseudónimo y en formato de datos agrupados. Cualquier referencia sobre información personal que pueda permitir a alguien adivinar la identidad de los participantes, será removida. Luego de que el proyecto sea completado, toda información identificable será removida y destruida, sólo dejando datos no identificables.

¿Cómo serán utilizadas mis respuestas después que finalice el proyecto?

Datos no identificables recolectados en esta investigación podrán ser ocupados en futuras investigaciones o compartidos con otros investigadores de la misma línea de investigación, para estudios estrechamente relacionados con el actual proyecto, con el fin de proporcionar conocimiento adicional sobre yoga y bienestar. Por favor ten en consideración que el período mínimo de retención de datos recolectados para cualquier investigación realizada en la universidad, es de cinco años después de la publicación.

¿Quién se encuentra financiando este proyecto?

Este proyecto de investigación está siendo financiado como parte de una beca de estudios otorgada por el Gobierno de Chile. El programa de PhD de Daniela está siendo auspiciado por el Programa de Capital Humano Avanzado de la Comisión de Investigación Científica y Tecnológica (CONICYT)

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¿Dónde puedo obtener más información?

Si quisieras obtener más información sobre el proyecto, por favor contacta a las investigadoras Daniela Ramírez (Investigadora Estudiante de PhD) al email dramirez1@student.unimelb.edu.au o Profesora Asociada Peggy Kern (Investigadora Responsable) al teléfono +61 3 8344 3402 o al email peggy.kern@unimelb.edu.au.

¿A quién puedo contactar en caso de tener cualquier preocupación respecto a este proyecto?

Esta investigación ha sido aprobada por el Comité de Ética de Investigación Humana de la Universidad de Melbourne. Si tienes cualquier preocupación o queja acerca de la conducción de este proyecto de investigación, la cual no quisieras discutir con el equipo investigador, puedes contactar al Manager, Ética en Investigación Humana, Ética e Integridad en Investigación, Universidad de Melbourne, VIC 3010. Tel: +61 3 8344 2073 o Email: HumanEthics-complaints@unimelb.edu.au. Todos los reclamos serán tratados confidencialmente. En caso de correspondencia, por favor provee el nombre del equipo de investigación o el número de identidad de ética de este proyecto de investigación.

Recursos de Salud Mental

Si te encuentras en Australia o en cualquier otra parte del mundo, puedes buscar ayuda visitando a tu médico local o de cabecera. Si te encuentras viviendo en Australia, puedes usar uno de los siguientes contactos para apoyo externo de consejería a través de Beyond Blue o Lifeline Australia:

Beyond Blue Entrega información y apoyo en salud mental, incluyendo servicios de consejería telefónica 24/7 Tel: 1300 22 4636 www.beyondblue.org.au	Lifeline Australia Entrega servicios de consejería telefónica 24/7 Tel: 13 11 14 www.lifeline.org.au
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Si te encuentras residiendo en Australia u otro país, puedes encontrar recursos en línea e información general y guía para acceder a soporte de salud mental, chequeando los siguientes sitios web:

Organización Mundial para la Salud – Folletos (Inglés y Español)

https://www.who.int/topics/mental_health/factsheets/en/

Servicios de la Universidad de Melbourne – Hojas con Tips (Inglés)

<https://services.unimelb.edu.au/counsel/resources/tip-sheets>

Alianza Nacional en Salud Mental - Folletos (Inglés y Español)

<https://www.nami.org/learn-more/fact-sheet-library>

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Way Ahead – Folletos Traducidos (Español y otros idiomas)

<https://wayahead.org.au/get-the-facts/translations/>

Instituto Black Dog - Folletos (Inglés)

<https://www.blackdoginstitute.org.au/about-us/publications-and-resources/fact-sheets>

Reach Out – Aplicación (Inglés)

<https://au.reachout.com/tools-and-apps>

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APPENDIX 5. Consent Forms for Interviews (English and Spanish)

Consent Form - Interview

Centre for Positive Psychology
Melbourne Graduate School of Education



Project: The Yoga Path: Exploring Ashtanga Yoga Practitioners' Experiences to Unravel the Mediators and Moderators Connecting Yoga to Well-being

Researchers:

Ms. Daniela Ramirez Duran (PhD student)

Email: dramirez1@student.unimelb.edu.au

A/Prof Peggy Kern (Responsible Researcher and Primary Supervisor)

Tel: +61 3 8344 3402; Email: peggy.kern@unimelb.edu.au

A/Prof Helen Stokes (Secondary Supervisor)

Email: h.stokes@unimelb.edu.au

Please read each of the following statements. If you agree to participate, please add your details and return this consent to Daniela (dramirez1@student.unimelb.edu.au), who will arrange a time for the interview.

1. I consent to participate in this project, the details of which have been explained to me, including details of interview, and I have been provided with a written plain language statement to keep.
2. I authorise the researchers to use information collected from the interview for purposes of this research.
3. I understand that the purpose of this research is to investigate the elements connecting yoga to well-being by understanding the experiences of people who practice Ashtanga yoga.
4. I understand that my participation in this project is for research purposes only.
5. I acknowledge that the possible effects of participating in this research project have been explained to my satisfaction.
6. In this part of the study, I will be required to complete a 60-minute virtual interview on a date and time of my convenience. I understand that interviews will be audio and/or video recorded to make sure my experience is accurately captured and that a transcript will be sent to me for verification. I have also been informed that participants will be referred to by a pseudonym in any research publications.
7. I understand that my participation is voluntary and that I am free to withdraw from this project anytime without explanation, prejudice, or consequence and to withdraw any unprocessed data that I have provided.

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.1

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8. I understand that the data from this research will be stored on secure servers at the University of Melbourne. Only de-identified data will be kept indefinitely to enable data to be used in possible related future research and/or shared with other researchers in the field, for studies closely related to the current project to provide additional knowledge about yoga and well-being.
9. I understand that non-identifiable data collected in this research may be used in future research, to provide additional knowledge about yoga and well-being.
10. I have been informed that the confidentiality of the information I provide will be safeguarded subject to any legal requirements; my data will be password protected and accessible only by the named researchers.
11. I understand that given the small number of participants being interviewed, it may not be possible to guarantee my anonymity.
12. I understand that after I sign and return this consent form, it will be retained by the researcher.

Participant Name: _____

Participant Signature: _____

Date: _____

Ethics ID Number: 1955377.1; Date: 20/02/2020; Version: 1.1

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Consentimiento Informado - Entrevista

Centro de Psicología Positiva
Facultad de Educación, Universidad de Melbourne



Project: El sendero del Yoga: Explorando las Experiencias de Practicantes de Ashtanga Yoga para Dilucidar los Mediadores y Moderadores Conectando el Yoga al Bienestar

Investigadoras:

Ms. Daniela Ramirez Duran (Estudiante de PhD)

Email: dramirez1@student.unimelb.edu.au

Prof Asociada Peggy Kern (Investigadora Responsable y Supervisora Principal)

Tel: +61 3 8344 3402; Email: peggy.kern@unimelb.edu.au

Prof Asociada Helen Stokes (Supervisora Secundaria)

Email: h.stokes@unimelb.edu.au

Por favor lee cada una de las siguientes declaraciones. En caso de aceptar participar, por favor incluye tus datos y envíalos de regreso a Daniela (dramirez1@student.unimelb.edu.au), quien agendará una hora para la entrevista.

1. Acepto participar en este proyecto, cuyos detalles me han sido explicados, incluyendo los detalles de la entrevista, y me han entregado una copia escrita de la declaración en lenguaje simple.
2. Autorizo a las investigadoras para usar la información recolectada de la entrevista para fines de esta investigación.
3. Comprendo que el propósito de esta investigación es investigar los elementos conectando el yoga al bienestar mediante la comprensión de las experiencias de personas que practican Ashtanga yoga.
4. Comprendo que mi participación en este proyecto es sólo para fines de investigación.
5. Reconozco que me han explicado los posibles efectos de participar en esta investigación.
6. En esta parte del estudio, se me ha solicitado completar una entrevista virtual de 60 minutos en una fecha y lugar de mi conveniencia. Entiendo que las entrevistas serán grabadas en audio y/o video para asegurar que mi experiencia sea capturada en forma fidedigna y que me enviarán una transcripción para su verificación. También he sido informado/a que para cualquier publicación de la investigación, los participantes serán nombrados usando un pseudónimo.

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7. Entiendo que mi participación es voluntaria y que puedo decidir retirarme del proyecto en cualquier momento sin ninguna explicación previa, prejuicio o consecuencia, y retirar cualquier información no procesada que haya provisto.
8. Entiendo que la información proveniente de esta investigación será almacenada de manera segura en los servidores de la Universidad de Melbourne. Solo información de-identificada será guardada de manera indefinida, con el propósito de ser utilizada en posibles futuras investigaciones y/o compartida con otros investigadores de la misma disciplina, para estudios estrechamente relacionados con este proyecto, con el fin de proporcionar mayor conocimiento acerca del yoga y el bienestar.
9. Entiendo que la información no identificable recolectada en esta investigación podrá ser usada en investigaciones futuras, para proveer conocimiento adicional acerca del yoga y bienestar.
10. He sido informado/a que la confidencialidad de la información que provea, será salvaguardada acorde a cualquier requerimiento legal, que mi información será protegida con clave y accesible solo para las investigadoras nombradas.
11. Entiendo que dado el pequeño número de participantes entrevistados, es posible que no se pueda garantizar mi anonimato.
12. Entiendo que luego de firmar y devolver este consentimiento informado, este documento será guardado por la investigadora.

Nombre del/la participante: _____

Firma del/la participante: _____

Fecha: _____