Young Men's Anxiety:

Uncovering Experiences and

Pathways to Help-Seeking

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Abstract

Background: Despite anxiety being the most common mental health condition experienced by men, empirical evidence surrounding young men's experiences and help-seeking is lacking. Globally, young men are reported to have lower rates of anxiety disorders than young women; however, these sex-differences (juxtaposing *all males* with *all females*), fail to reflect the complexities and nuances that exist within young men. As a result, our understanding of how young men experience, seek-help from, and cope with anxiety is limited, without definitive answers from young men themselves. Addressing these gaps in men's anxiety scholarship is critical to improving the identification and treatment of anxiety in young men and ultimately reducing deleterious mental health outcomes, including suicide.

Aims and objectives: This thesis aims to understand and contextualise young men's gendered experiences of anxiety and explore the ways they seek help and utilise health services. Specifically, this thesis aims to: 1) report on young men's lived experiences of anxiety symptoms and disorders; 2) evaluate the role of masculinities in young men's anxiety; and 3) describe the varied pathways to mental health services for young men experiencing anxiety.

Methods: This thesis includes four key studies employing qualitative and quantitative methodologies to address the three overarching aims above. Study one (Chapter 2) was a systematic review of qualitative and quantitative evidence in men's anxiety scholarship (a first for the field) with 25 studies meeting inclusion criteria for the review. Study two (Chapter 3) a grounded theory study, undertook in-depth interviews with 25 young Australian men (aged 15–25 years) self-reporting anxiety symptoms or a diagnosed anxiety disorder. Study three (Chapter 4) explored the drivers of anxiety help-seeking, mapping 419 Australian men's (M = 40.92 years, SD = 15.36) pathways to

help-seeking via their open-text qualitative survey responses. Lastly, study four (Chapter 5), utilised a four-phase mixed-methodology to describe and interpret the clinical characteristics and contexts of 694 young Australian men (aged 15–25 years) who presented to ambulance services in Victoria, Australia with an anxiety related concern in 2019.

Results: A foundational systematic review of men's anxiety in Chapter 2 provided early evidence for a male-type anxiety phenotype characterised by psychosomatic symptoms (i.e., myalgia, panic attacks and headaches), significant shame and guilt and chronic and/or recurrent anxiety symptoms. This review highlighted the gendered nature of men's anxiety and/or anxiety disorders and advocated for a shift beyond sex-differences research to explore nuances in the expression and experience of anxiety within sub-groups of men (i.e., young men) through high-quality qualitative research. The world first theory of young men's anxiety, depicted in Chapter 3 (Resisting-Reckoning-Responding), responded to this gap in young men's anxiety scholarship, highlighting the discrete yet interconnected phases of young men's anxiety gilded and guided by their masculine socialisation. Initially, young men noticed somatic symptoms (i.e., headaches, myalgia, nausea) but tended to avoid these symptoms (via denying or distracting) prompting a diffusion of anxiety and ultimate reckoning (meaning making). As young men gained literacy and language toward these symptoms, some were prompted towards actions of acceptance, seeking help proactively and employing adaptive or strength-based coping strategies. Men's pathways to formal mental health help-seeking were ascertained in Chapter 4, mapping tipping points and reclusive causes and consequences of men's anxiety which converged to propel men through defeat and defiant pathways to formal help-seeking for anxiety. In some instances, men associated help-seeking with resigning to the reality that they were unable to self-

manage or cope with their anxiety independently (defeat pathways). Other men perceived help-seeking as an opportunity for change, motivating a search for adaptive remedies to combat persistent anxiety symptoms and psychological distress (defiant pathways). Finally, the four-phase mixed methods study in Chapter 5 characterised the clinical characteristics and typologies of young men's anxiety presentations to ambulance services in Victoria, Australia, a priority acute health care setting in the context of young men's anxiety. Three typologies 'Psychosomatic-Anxiety,' 'Anxious-Substance Use' and 'Complex-Anxiety' were evident across severities with diverging clusters of clinical characteristics and presentation contexts including psychosomatic symptoms, alcohol and/or drug use, and situational stressors.

Conclusions: Findings reported in this thesis evidence the distinct gendered experiences and expressions of anxiety in young men, engendering disparate pathways to help-seeking and patterns of engagement with health services. Implications for research, clinical care, public health promotions and interventions are notable. This includes: 1) the importance of young men's lived experiences of anxiety being at the forefront and foreground of rigorous, robust and well-designed future quantitative studies; 2) the adoption of gender-responsive models of care which improve the identification and treatment of young men's anxiety, ensuring clinicians are providing care that is both *needed* and *wanted* by young men themselves; and 3) the development of young men's anxiety interventions which target the restrictive masculine norms owing to the development and maintenance of young men's anxiety. Such efforts, along with an outlined future research agenda for the field of young men's anxiety would likely have significant upstream benefits in reducing the deleterious harms associated with young men's anxiety across the life course.

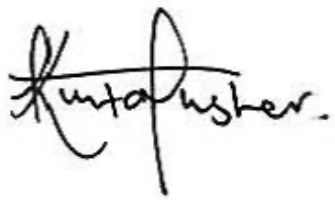
Declaration

I, Krista Sheridan Fisher, declare that this thesis:

1. contains no material which has been accepted by me for the award of any other degree at any other university or equivalent institution
2. to the best of my knowledge, contains no material previously published or written by another person except where appropriate reference is made in the thesis.

I certify that the intellectual content of this thesis is the product of my own work and that all assistance received in preparing this thesis and the sources have been acknowledged in the text.

Signed



Dated 24th April 2024

Preface

This thesis comprises four manuscripts presented as separate chapters. I was the lead author of all four manuscripts and conducted these studies collaboratively with colleagues in Australia and overseas. A summary of author contributions for each of these four studies is outlined below.

Chapter 2: Men's Anxiety: A Systematic Review. Published in the *Journal of Affective Disorders* (https://doi.org/10.1016/j.jad.2021.08.136) in December 2021. All contents of this manuscript were my original work. I developed and performed the searches, retrieved papers, and abstracted data. ZS and I screened the results and performed data synthesis. I wrote up the manuscript and ZS, SR, JO, and KK reviewed and edited the manuscript. All authors contributed to the study design, interpretation of findings, and gave approval for the final version to be published.

Chapter 3: Resisting-Reckoning-Responding: The First Theoretical Model of Men's Anxiety. Published in *Sociological of Health and Illness* (https://doi.org/10.1111/1467-9566.13641) in April 2023. All contents of this manuscript were my original work. ZS, SR, and I developed the interview schedule. I conducted the participant interviews and wrote the manuscript. ZS, SR, and JO contributed to the interpretation of the data and consensus was reached amongst all authors for the overarching themes and final grounded theory model. All authors reviewed and edited the manuscript and gave approval for the final version to be published.

Chapter 4: Australian Men's Help-Seeking Pathways for Anxiety. Published in *SSM-Mental Health* (https://doi.org/10.1016/j.ssmmh.2024.100313) in March 2024. All contents of this manuscript were my original work. ZS and MW collected the data as part of a larger study (see Seidler et al., 2021). I completed data analysis with input from ZS and MW to

ensure consensus was reached on the accuracy of the thematic content. I wrote the manuscript and all authors provided feedback and suggestions to contextualise the findings appropriately.

Chapter 5: Young Men's Anxiety Presentations to Australian Ambulance Services.

Under review in the *Journal of Anxiety Disorders* (https://doi.org/10.31219/osf.io/vzeua) submitted in August 2023. All contents of the manuscript were my original work. I devised and completed the data analysis with data curation support from NB, RO, DS, and DL. All authors reviewed the coding framework, and consensus was reached on the typologies identified in the hierarchical cluster analysis. I wrote the manuscript and all authors contributed to the drafting process. All authors reviewed the manuscript, provided edits, and gave approval of the final manuscript to be submitted.

I would also like to acknowledge the contributions of Elizabeth Beach, PhD, AE, for proofreading and editing this thesis.

Research Outputs Included in This Thesis

- **Fisher, K.,** Seidler, Z. E., King, K., Oliffe, J., Rice, S. M. (2021) Men's anxiety: A systematic review. *Journal of Affective Disorders*, *295*, 688–702. https://doi.org/10.1016/j.jad.2021.08.136 **(Chapter 2)**

  Cited 43 times since publication in December 2021

- **Fisher, K.,** Rice, S. M., Oliffe, J. L., King, K., Seidler, Z. E. (2023). Young men and anxiety: Resisting, reckoning and responding. *Sociology of Health & Illness*, *45*(7), 1462–1482. https://doi.org/10.1111/1467-9566.13641 **(Chapter 3)**

  Cited 5 times since publication in April 2023

- **Fisher, K.,** Rice S. M., Wilson, M. J., Benakovic, R., Oliffe, J. L., Walther, A., Sharp, P., Seidler, Z. E. (2024). Men's help-seeking pathways for anxiety across the life course. *Social Science and Medicine – Mental Health, 5*, 100313. https://doi.org/10.1016/j.ssmmh.2024.100313 **(Chapter 4)**

- **Fisher, K.,** Rice, S. M., Scott, D., Lubman, D. I., Oliffe, J. L., Ogeil, R. P., Beard, N., Nehme, Z., Seidler, Z. E. (under review). Young men's anxiety presentations to Australian ambulance services. *Journal of Anxiety Disorders.* https://doi.org/10.31219/osf.io/vzeua **(Chapter 5)**

Related Research not Included in This Thesis

- **Fisher, K.,** Seidler, Z. E., King, K., Oliffe, J. L., Robertson, S., & Rice, S. M. (2022). Men's anxiety, why it matters, and what is needed to limit its risk for male suicide. *Discover Psychology*, *2*(1), 1–7. https://doi.org/10.1007/s44202-022-00035-5

  Cited 20 times since publication in March 2022

Conference Presentations During Candidature

- **Fisher, K.,** (2023, August 30). *Young men's anxiety presentations to ambulance services* [Symposium presentation]. Turning Point 2023 Research Symposium, Melbourne, Australia.
- **Fisher, K.,** (2023, June 25). *Am I dying or is this anxiety? Young men's anxiety presentations to ambulance services* [Oral presentation]. Men's Health Week, Reducing Male Suicide Cluster, University of British Columbia, Vancouver, Canada.
- **Fisher, K.,** (2023, April 17–19). *Men's anxiety and its risk for male suicide* [Symposium presentation]. The National Suicide Prevention Conference, Canberra, Australia.
- **Fisher, K.,** Seidler, Z. E., King, K., Oliffe, J. L. & Rice, S. M. (2022, November 23–24). *Young men get anxious too: A grounded theory investigation* [Rapid presentation]. Faculty of Medicine, Dentistry and Health Science Graduate Research Conference, Melbourne, Australia.
- **Fisher, K.,** Seidler, Z. E. & Rice, S. M. (2022, October 30). *Young men get anxious too: A grounded theory investigation* [Oral presentation]. Orygen Centre for Youth Mental Health Graduate Research Conference, Melbourne, Australia.
- **Fisher, K.,** Seidler, Z. E., King, K., Oliffe, J. L., Robertson, S. & Rice, S. M. (2022, May 3). *Men's anxiety and its risk for male suicide* [Lightning presentation]. International Association for Suicide Prevention Annual Conference, Gold Coast, Australia, Country.
- **Fisher, K.,** (2021, November 15–16). M*en's Anxiety: The blind spot in men's mental health and why it matters* [Oral presentation]. Mental Health PhD Program Conference, Melbourne, Australia.

Invited and Keynote Presentations During Candidature

- **Fisher, K.,** Seidler, Z. E. & Rice, S. M. (2023, November 9). *Resisting, reckoning and Responding: A world first theory of young men's anxiety* [Keynote presentation]. School Counsellors and Psychologists Conference, Melbourne, Australia.
- **Fisher, K.,** (2023, November 16). *Men's Anxiety: The blind spot in men's mental health and why it matters* [Invited presentation]. Talking Point, Turning Point and Eastern Health, Melbourne, Australia.
- **Fisher, K.,** Kealy, D., Ganton, T. & Hermansen, M. (2023, June 11). *Brewing conversations to promote men's mental health* [Invited panellist]. Men's Health Week, Reducing Male Suicide Cluster, Movember Canada and University of British Columbia, Vancouver, Canada.
- **Fisher, K.,** (2022, February 4). *Men's anxiety, what it feels like, why it matters and how it impacts men* [Invited presentation]. Reducing Male Suicide Symposium, Melbourne, Australia.
- **Fisher, K.,** (2022, April 12) *Men's anxiety, why it matters, and what is needed to limit its risk for male suicide* [Symposium presentation]. Suicide Prevention Summit, Mental Health Academy, Melbourne, Australia.
- **Fisher, K.,** (2021, December 1) *Men's Anxiety: The blind spot in men's mental health and why it matters* [Invited presentation]. Masculinities, Health and Relationships Forum, Eastern Health, Melbourne, Australia.

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Countless people have played pivotal roles in shaping this PhD, but none more so than the men who generously shared their stories. To them I extend my deepest gratitude.

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To my friends, many of whom I have known for decades, thank you for riding the highs and lows of this PhD with me. Nothing has taught me more about the importance of connection, the power of teamwork, and the insurmountable benefits of joy and laughter than my friendships. I am continually inspired by the people you are and all you bring to your work, your friends, your families, and the world. Knowing each and every one of you has made me a better person. My gratitude for your unconditional support, encouragement, and love throughout the entirety of my studies is impossible to express.

To my family, you are the *how* and *why* of all I do. Every word on the pages that follow is a testament to our own story of love, strength, and hope. While large samples may be the marker of statistical significance, you serve as my reminder that the effects of n=1 hold transformative and lifesaving potential. In a multitude of ways, you have helped answer the questions that paved the landscape of this thesis. Through hour-long discussions at the dinner table, sharing thoughts on early findings, or debating new articles and podcasts, it's been a gift to share and grow in the knowledge garnered from this thesis together. Mum and dad, you are the greatest parents and role models I could ask for. Jayden, you have believed in me since we were children. Thank you for encouraging me to believe in myself.

Table of Contents

Chapter 1: Introduction: Situating Men's Anxiety and the Current Thesis

Chapter Overview

This chapter introduces men's anxiety scholarship, laying a foundation for the body of work undertaken as part of this thesis. As will be seen below, the field is in its relative infancy, with a predominance of sex-based research that overlooks men's gendered experiences and expressions of anxiety. Chapter 1 situates empirical evidence, including the prevalence and burden of anxiety disorders in males, amid pointing to knowledge deficits regarding the nuances that exist *within* and *between* men. This chapter also outlines critical gaps and opportunities in men's anxiety scholarship, providing a clear rationale for the focus of this thesis. At the conclusion of the chapter, an overview of this thesis is provided alongside a statement of significance for the research findings.

Introduction

Anxiety disorders are the most prevalent mental health condition experienced by men; yet, they remain poorly understood and often overlooked (World Health Organization, 2022b). This is particularly concerning given that anxiety disorders are predictive of psychiatric disorders including depression and associated suicide risk (Nock et al., 2010). Globally, males are half as likely to be diagnosed with an anxiety disorder in comparison to females; however, this has not translated to better mental health outcomes amongst men. Evidence shows that men exhibit increased rates of substance use and interpersonal violence and account for approximately three-quarters of suicides in Western countries (Hay et al., 2019; World Health Organization, 2022b). In addition, males are also significantly less likely to seek help through formal mental health services for anxiety disorders relative to females (Craske, 2003; Merikangas et al., 2011). Despite the prevalence of anxiety disorders in men, low rates of help-seeking,

and the empirical links between men's anxiety and suicide (Kealy et al., 2021), there has been a lack of research in this field (Drioli-Phillips, Oxlad, Feo, et al., 2020). Driven by the urgent need to investigate the drivers behind deleterious mental health outcomes (i.e., high rates of suicide, substance use, and interpersonal violence) and address the lack of research and understanding in men's anxiety, this chapter provides a background on scholarship regarding men's anxiety and anxiety disorders.

Anxiety Disorders

Anxiety disorders are the most commonly diagnosed mental health condition worldwide, causing significant distress and disability (GBD Mental Disorders Collaborators, 2022; Xiong et al., 2022). Anxiety disorders are characterised by persistent fear and anxiety-related responses and behaviours, considered disproportionate to the context or situation (American Psychiatric Association, 2022). Symptoms of anxiety disorders are strongly associated with prototypical fear (e.g., escape behaviours, physiological arousal, thoughts of *imminent* threat), and the experience of anxiety (e.g., avoidant behaviours, tension, and thoughts of *future* threats; Craske et al., 2009). Avoidance and escape behaviours commonly underlie these functional impairments and may include disengaging or withdrawing from an anxiety trigger, or restrictive and maladaptive coping behaviour (Craske & Stein, 2016). While elevated anxiety is reasonable and adaptive throughout some life experiences, it reaches diagnostic threshold (i.e., diagnosed anxiety disorder) when associated with impairments in social, occupational, and other important areas of functioning (American Psychiatric Association, 2022). The diagnosis of an anxiety disorders is guided by diagnostic criteria as detailed in both the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR; American Psychiatric Association, 2022) and the International Classification of Diseases (ICD-11; World Health Organization, 2022a).

Global Prevalence and Incidence Rates of Anxiety Disorders

It is estimated that 301.39 million (95% uncertainty interval [UI]: 252.63, 356.00) people have been diagnosed with an anxiety disorder in their lifetime, equating to 4.05% of the global population (Global Burden of Disease Collaborative Network, 2019). Between 2018 to 2019, 45.82 million [95% UI: 37.14, 55.62] people received their first diagnosis of anxiety (Global Burden of Disease Collaborative Network, 2019). In Australia, 17% of the population (3.3 million people) reported having a lifetime diagnosis of an anxiety disorder, of which they experienced sufficient symptoms between 2020–2021 (Australian Bureau of Statistics, 2022). Similar twelve-month anxiety prevalence rates are seen in other Western countries including the United States (19% of the population; Kessler, 2015), Canada (15%; Statistics Canada, 2020) and the United Kingdom (6.6%; McManus et al., 2016). Recent evidence indicates that the rates of anxiety disorder are increasing worldwide as a result of the Coronavirus pandemic (COVID-19; Rogers et al., 2020; World Health Organization, 2020). Since January 2020, the global prevalence rates of anxiety disorders have increased by as much as 25.6%, which corresponds to 76.2 million new cases of anxiety disorders (Santomauro et al., 2021).

Globally, males are diagnosed with an anxiety disorder at almost half the rate of females (Baxter et al., 2014; World Health Organization, 2017). Approximately 19.38 million males (95% UI: 15.78, 23.41) within the population have a lifetime diagnosis of an anxiety disorder as compared to 26.44 million females (95% UI: 21.23, 32.27; Yang et al., 2021). In Australia, 12% of males self-reported experiencing an anxiety disorder between 2020–2021, in comparison to 21% of females (Australian Bureau of Statistics, 2022). Similar 12-month anxiety disorder prevalence rates are seen in other Western countries, including the United States (14% of males vs. 23% of females; Kessler,

2015), Canada (15% of males vs. 21% of females; Statistics Canada, 2020) and the United Kingdom (15% of male vs. 30% of females [aged 18–24 years]; Slee et al., 2021). This equates to one in five males in Western countries being diagnosed with an anxiety disorder in their lifetime, as opposed to one in three females (Australian Institute of Health Welfare, 2022; Baxter et al., 2013). These sex differences were even more pronounced amongst adolescence, with young men aged 16–24 years half as likely to be diagnosed with an anxiety disorder relative to young women (i.e., 21.4% of young men in comparison to 41.3% of young women; Australian Bureau of Statistics, 2022; Wilkins et al., 2019).

Disability, Burden, and Economic Toll of Anxiety Disorders

At an individual level, anxiety disorders impair quality of life estimates including social and occupational functioning, emotional and physical health, wellbeing, and life-satisfaction (Hoffman et al., 2008). Anxiety disorders also have a substantial economic burden due to unemployment levels, reduced work productivity, high rates of health-care utilisation and prescription medication needs (Hoffman et al., 2008; Kertz & Woodruff-Borden, 2011). It is estimated that health-care costs are approximately 64% higher for individuals with an anxiety disorder, in comparison to those without. Olfson and Gameroff (2007) reported that, of the 14% of Australians in 2007 with a diagnosed anxiety disorder, 36% utilised mental healthcare resources in the preceding 12 months. This equates to approximately $376 million (AUD) in treatment costs for the Australian healthcare system, substantially higher than the healthcare costs associated with depression $111 million (AUD), and substance use disorders $44 million (AUD; Australian Bureau of Statistics, 2007; Lee et al., 2017). Anxiety disorders are a leading cause of mental health related disability-adjusted life-years in males worldwide (DALYs; 10.96 million), second only to depressive disorders (DALYs;

18.18 million; Global Burden of Disease Collaborative Network, 2019; Kessler et al., 2010). The DALYs attributed to males' anxiety disorders are estimated to be highest in high sociodemographic index regions, including the United States (675.48 per 100,000), the United Kingdom (112.88 per 100,000), Canada (59.56 per 100,000) and Australia (53.32 per 100,000; Global Burden of Disease Collaborative Network, 2019; The World Bank, n.d.).

Diagnosing Anxiety Disorders

The DSM-5-TR (American Psychiatric Association, 2022) and the ICD-11 (World Health Organization, 2022a) outline the major symptoms of anxiety disorders and guide clinical diagnosis. Diagnostic categories in the DSM-5-TR include separation anxiety disorder, selective mutism, specific phobia, social anxiety disorder, panic disorder, agoraphobia, generalised anxiety disorder, substance/medication-induced anxiety disorder, and anxiety disorder due to another medical condition. Likewise, the ICD-11 includes the first seven of the aforementioned diagnostic categories and uses slightly different criteria (i.e., other specified anxiety or fear-related disorders and anxiety or fear-related disorders, unspecified) for the others. Obsessive compulsive disorder and post-traumatic stress disorder were formally classified as anxiety disorders in earlier editions of the DSM (American Psychiatric Association, 2013); however they are now classified under Obsessive Compulsive and Trauma sections, and as such are not discussed in this chapter or thesis.

Despite a range of anxiety-specific diagnostic categories within the DSM-5-TR and ICD-11 (i.e., social anxiety disorder, generalised anxiety disorder), in all cases fear (e.g., escape behaviours, physiological arousal, thoughts of *imminent* threat) and anxiety (e.g., avoidant behaviours, tension, and thoughts of *future* threats) must be classified as persistent (e.g., present for 6 months or more for generalised anxiety disorder and 4

weeks or more for panic disorder) and marked (American Psychiatric Association, 2022). This can be difficult to discern given the dimensional nature of anxiety, which exists on a continuum from adaptive emotional response to maladaptive psychopathology (Stein et al., 2017).

The key distinctions between anxiety disorders are typically based on the object or situation that elicits the fear or anxiety response, and in addition, the content of thoughts and resulting behaviour patterns (American Psychiatric Association, 2022). Due to the common underlying dimensions across anxiety disorders – namely worry, repetitive thinking, fear and avoidance of emotions (Barlow et al., 2004; Kessler et al., 1998) – a high degree of comorbidity is observed between anxiety disorder diagnostic categories. Many contemporary researchers have therefore advocated for a transdiagnostic approach for anxiety disorder research and treatment that prioritises and adequately captures the underlying psychological mechanisms across all anxiety disorders (i.e., negative affect, intolerance of uncertainty and anxiety sensitivity), rather than limiting research or clinical treatment to one diagnosed sub-type of anxiety disorders (Allan et al., 2023; Barlow et al., 2004). By adapting this transdiagnostic perspective, researchers can uncover new insights into the core processes that drive anxiety across the spectrum (i.e., adaptive emotional experience to maladaptive psychopathology), leading to more comprehensive and nuanced empirical evidence surrounding this mental health condition (McEvoy et al., 2009). Clinicians, in turn, benefit from a transdiagnostic approach as it allows for the development of treatments and interventions that target these shared mechanisms, thus offering more efficient and versatile approaches to anxiety management (Norton, 2006; Norton & Barrera, 2012). A transdiagnostic approach to the sub-diagnostic classification of anxiety disorders (e.g., social anxiety disorders, generalised anxiety disorders, panic disorders) within the

DSM-5-TR (American Psychiatric Association, 2022) has been adopted throughout this thesis.

Sex and Gender as Risk Factors for Anxiety Disorders

Sex and gender are important to consider in relation to the manifestation and maintenance of anxiety disorders. Sex and gender are not mutually exclusive. It is therefore crucial to differentiate the nomenclature surrounding these two constructs given the differential impacts on, and explanations for, mental health outcomes including anxiety and anxiety disorders. Sex-differences are commonly understood as the inherent and immutable biological determinants that distinguish males and females including hormonal reactivity, chromosomes, and brain anatomical functioning (Riecher-Rössler, 2017). Conversely, gender-differences consider the process of socialisation attributed to an individual's biological sex at birth, influenced by culture, social expectations, stereotypes, gender norms, roles and relations, and the drive for power and control in gender hierarchies (Mauvais-Jarvis et al., 2020; Riecher-Rössler, 2017).

In line with sex and gender nomenclature recommendations outlined by Clayton and Tannenbaum (2016, p. 1), "the terms male and female should be used when describing the sex of human participants or other sex-related biological or physiological factors." Throughout this thesis, when referring to sex-differences research (i.e., research that has classified participants based on their biological status at birth of male or female) the term '*male*' will be used. The term '*men*' is applied to gender-differences research (i.e., research that has classified participants based on their self-identified gender).

Over the last 40 years, sex has been consistently identified as a prominent risk factor for anxiety disorders (GBD Mental Disorders Collaborators, 2022; Xiong et al.,

2022). Reasons for the significant differences amounting to the lower prevalence rates of anxiety disorders in males are unclear (i.e., males are diagnosed with an anxiety disorder at almost half the rate of females; World Health Organization, 2017). This has, in part, been attributed to the sex-based underpinnings of epidemiological and/or population-based research. This approach has garnered statistics surrounding global trends in the prevalence and incidence of men's anxiety disorders by juxtaposing *all males* to *all females.* Mechanistic explanations have largely relied on the examination of sex-specific physiological determinants (i.e., biological, neurological and hormonal differences) which may predispose either sex to develop an anxiety disorder (Fisher et al., 2022). For example, some studies implicate brain structures (i.e., the hippocampus, amygdala, and prefrontal cortex) in the regulation of fear and negative emotions, proposing that brain structures exert a differential role in the regulation of threat reactivity amongst males and females (Day & Stevenson, 2020; Donner & Lowry, 2013). Similarly, an adjacent body of literature has focused on genetic factors underlying anxiety disorders, suggesting that the heritability of anxiety disorder-related vulnerabilities, such as neuroticism and anxiety sensitivity (i.e., the fear of anxiety-related sensations based on the belief that they may have harmful physical, cognitive or social consequences; Reiss et al., 1986; Taylor et al., 2007), is higher among females than males (Lake et al., 2000). Findings surrounding biological differences are limited by the lack of control groups, the subjective nature of retrospective self-report data, and external factors simultaneously influencing physiological characteristics and reported risk factors for anxiety disorders (Farhane-Medina et al., 2022; McLean & Anderson, 2009). Yet, as Deacon (2013) suggests, despite numerous well-designed and well-funded research studies, no neurological or physiological function has been uncovered as solely responsible for the manifestation of any psychiatric condition, including

anxiety disorders. As such, considering these sex differences in anxiety disorders purely through a biological or physiological lens has been met with increasing criticism and labelled overly reductive (Courtenay, 2002; Fisher et al., 2022; Gough et al., 2021).

Conversely, gender research is beginning to explore the impact of gender socialisation and idealised gender norms/expectations on men's anxiety symptoms and the experiences and expressions of anxiety amongst men (Craske, 2003; Mauvais-Jarvis et al., 2020). Traditionally, Western cultures have reinforced and reified traditional masculine norms of stoicism, self-reliance, emotional restrictiveness, invulnerability and toughness as key indicators of manliness (Connell & Messerschmidt, 2005; Mauvais-Jarvis et al., 2020). Masculinities, however, are increasingly understood as the plurality of practices men enact, express, or perform in relational social contexts (i.e., sports clubs, workplaces, with friends and family; Connell & Messerschmidt, 2005). Masculinities are highly variable due to situational or environmental pressures and constantly shift across diverse social contexts, time, and populations (Connell & Messerschmidt, 2005; Ridge et al., 2011). As such, masculinities constitute an intersection between men's gender and other social determinants of health including social class, sexuality, and culture (Di Bianca & Mahalik, 2022). The concept of masculinities challenges singular, one-dimensional representations of idealised masculinity; however recognised are masculine hierarchies wherein hegemonic masculinity is denoted as the "most honoured way of being a man" (e.g., heterosexual, able-bodied, employed; Connell & Messerschmidt, 2005, p. 832) invoking subordinate (e.g., unemployed, flamboyant) and marginalized masculinities (e.g. men of colour, disabled, homosexual; Connell & Messerschmidt, 2005, p. 832). Hegemonic masculinities are powerfully enacted by complacency. Complicit masculinities are those that passively exist under (and benefit from) hegemonic structures and systems,

unquestioning the indirect oppression of subordinate or marginalised masculinities (Connell & Messerschmidt, 2005). On the other hand, protest masculinities challenge hegemonic masculinities. Protest masculinities are represented by the adoption of hegemonic masculine ideals in individuals (i.e., women, ethnically marginalised men) lacking in economic resources or institutional authority which underpins the unequal regional and global distribution of gendered power (Connell & Messerschmidt, 2005, p. 848).

Strict adherence to traditional norms of masculinity in Western counties (i.e., stoicism, self-reliance, emotional restrictiveness) represents men's attempt to embody hegemonic masculinities. Enacting and embodying traditional masculine norms has been found to negatively influence men's willingness to seek help (Seidler et al., 2016; Wong et al., 2017), and predict maladaptive coping strategies in an attempt to overcome psychological distress, including social withdrawal, substance use, risk-taking and avoidance (Brownhill et al., 2002; Chuick et al., 2009; Whittle et al., 2015). While the specific role of masculinities in men's experiences and manifestations of anxiety is largely unknown, or only explored alongside men's depression, early scholarship in the field of men's anxiety hypothesised that gender plays an integral part in shaping men's experiences and manifestations of symptoms (McDermott et al., 2016), particularly in relation to cultural representations of anxiety (May, 1996). Across generations, uncertainty, irrationality, and mood volatility have been depicted as feminised traits and, by extension, unmasculine – which positions anxiety as an unmanly and emasculating experience (May, 1996). The remainder of this opening chapter summarises the landscape of men's anxiety scholarship (recognising that an in-depth systematic review will follow in Chapter 2), atop which the empirical studies constituting the remaining chapters of this thesis are formulated and forged.

Men's Anxiety

Men's Psychological and Social Risk Factors for Anxiety Disorders

Prominent reviews over the last decade have called out the potential impact of masculine socialisation and idealised gender norms on men's experiences and expressions of anxiety (i.e., Craske, 2003; Farhane-Medina et al., 2022; McLean & Anderson, 2009). Identified psychosocial factors: (i) psychological temperament (e.g., reduced negative affect and anxiety sensitivity) and (ii) coping behaviours (e.g., employment of problem-focused coping strategies) are moderated by the macro influence of masculine socialisation; that is, how men learn to *be* masculine. Indeed, whilst prevalence rates indicate that anxiety disorders are less prevalent in men relative to women, there is evidence (Drioli-Phillips et al., 2021) to suggest a gendered experience of men's anxiety symptoms distinct from diagnostic criteria (e.g., Generalised anxiety disorder in the DSM-5 TR; American Psychiatric Association, 2022). If true, this suggests a potential under identification and diagnosis of anxiety disorders in men.

Several studies have reported reduced negative affectivity among men relative to women in adolescence and adulthood (Costa et al., 2001; Steiner et al., 2002). The discrepancy in men and women's negative affectivity is increasingly apparent after childhood, highlighting the influence of environmental factors including gender socialisation, given that men may perceive the expression of negative affect (e.g., sadness) to be less socially acceptable as they transition into adolescence (Lonigan & Phillips, 2001). Similarly, numerous studies have reported lower anxiety sensitivity amongst men relative to women (Stewart et al., 1998; Stewart et al., 1997), which may in part be due to attributes such as neuroticism, worry, and anxiety being more strongly

associated with stereotypical femininities and, as such, juxtaposed to masculinity and avoided by men (Norr et al., 2015).

Coping strategies typically used by men and women are also important. Coping is defined as an individual's disposition to employ cognitive and behavioural strategies to manage and regulate emotions in response to stress or anxiety (Byrne, 2000). Men are significantly more likely to revert to problem-focused coping strategies, defined as active or functional engagement in, rather than avoidance of, a stressor (Kelly et al., 2008). Examples of problem-focused coping include confronting the problem, searching for solutions, and seeking information (Garcia-Lopez et al., 2008; Jones, 1999), while emotion-focused coping refers to rumination and seeking emotional support (Kelly et al., 2008). Problem-focused coping strategies, when compared to emotion-focused strategies, are considered more effective in reducing anxiety symptoms (Byrne, 2000; Kelly et al., 2008). However, beyond a short-term reduction in anxiety on self-report scales (such as the STAI), there is limited evidence surrounding the long-term implications of problem-focused coping for men and how this may interact with other maladaptive coping behaviours (i.e., increased alcohol and drug use, avoidance, risk-taking behaviour) across the life course (Feng et al., 2019; Wilson et al., 2022). Indeed, when used inflexibly, problem-focused coping may exacerbate anxiety if solutions cannot be reached, particularly if the anxiety stimulus cannot be controlled or adjusted (Carver, 2011; Park et al., 2004).

Men's coping strategies and behaviours become increasingly nuanced when considering the gendered ways men and women are reinforced to respond to anxiety. The disposition for men to revert to problem-focused coping strategies likely reflects the broad ways boys and girls are socialised to respond to fear and anxiety from a young age (McLean & Anderson, 2009). For example, in observational studies, boys are more

likely to be encouraged by parents to confront stressful and fearful stimuli. In contrast, girls are more commonly comforted by parents when displaying a fearful or anxious response (Stevenson-Hinde & Shouldice, 2013). This aligns with the gender socialisation of boys (who naturally become young men), including expectations to uphold and adhere to traditional masculine norms such as strength, power, dominance, and self-reliance (Connell, 2020).

Masculinities and Men's Anxiety Across the Life Course

Strong adherence to traditional masculine norms has been found to mediate the association between mental health literacy and help-seeking for anxiety (Clark, Hudson, Rapee, et al., 2020), and reduce men's willingness to accept therapeutic help in the form of psychotherapy and/or medication (Berger et al., 2013). The broad effects of masculinities are particularly prominent for young men, with some research suggesting they are likely to adhere to traditional masculine norms than older cohorts (Herreen et al., 2021; O'Neil, 2008; Rice et al., 2011), and less likely to seek formal psychological support for anxiety disorders (Clark et al., 2018). Adolescence is an important period of identity formation, whereby gender roles and norms reified in Western cultures crystalise, and the social consequences of violating gender norm expectations become increasingly severe (Pleck, 1995; Rice et al., 2011). Young men can experience significant ridicule and social ostracism for engaging in non-traditional masculine behaviours including showing emotions of fear and anxiety (Aubé & Koestner, 1992; Courtenay, 2002). This may in part explain why young men orient to feelings of self-blame, failure, and powerlessness when describing anxiety, perpetuated by a perceived inability to adhere to traditional masculine norms (Drioli-Phillips, Oxlad, Feo, et al., 2020). Furthermore, young men appear to have a low awareness of anxiety disorders (e.g., mental health literacy) and do not believe seeking help will change these

experiences (Clark, Hudson, & Haider, 2020; Cotton et al., 2006). As such, aligning with traditional masculinity and ideals can contribute to both the onset of anxiety symptoms, psychological distress as a result of experiencing symptoms and deleterious health outcomes associated with the consequences of men's anxiety including comorbid psychiatric conditions (i.e., depression and substance use; Marmorstein et al., 2010; Zimmermann et al., 2003) and physical health issues (i.e., poor sleep and nutrition, low levels of physical activity; Van Hout et al., 2004).

Bushnell et al. (2019) defined anxiety disorders as a *gateway,* given they typically manifest in childhood or adolescence and predict or perpetuate later comorbid psychiatric conditions. In the two years following an anxiety-disorder diagnosis, boys are found to have higher rates of mental-health related hospitalisations, inpatient treatment for self-harm, and emergency department visits (for anxiety-related and injury-related concerns) in comparison to boys without an anxiety disorder diagnosis (Bushnell et al., 2019). Anxiety disorders have also been identified as unique risk factors for suicidality in adolescent and adult men, even when controlling for other comorbidities such as depressive symptoms, major depressive disorder, and substance use disorder (Diefenbach et al., 2009; Nepon et al., 2010; Nock et al., 2010). Weiss et al. (2016) and Weitoft and Rosén (2005) found feelings of nervousness, unease, and anxiety to be more strongly associated with later suicide attempts (over a 5–10-year period) for men than for women (Weiss et al., 2016; Weitoft & Rosén, 2005). This risk may be exacerbated by the complex range of social factors interconnected synergistically as both consequences of men's anxiety disorders and risk factors for male suicide (i.e., relationship breakdown, interpersonal violence and aggression and alcohol and other drug use; Oliffe et al., 2021; Oliffe et al., 2019).

Chapter 2 of this thesis undertakes a foundational synthesis of qualitative and quantitative evidence on men's anxiety and masculinities by conducting the first systematic review in the field (Fisher et al., 2021). This systematic review answers the primary research question: 1) *What qualitative and quantitative evidence exists on men's anxiety and/or anxiety disorders?* Four secondary research questions were also answered in this systematic review, including: 1) *What are men's experiences of anxiety?* 2) *What constitutes help-seeking in men with anxiety disorders?* 3) *What coping strategies are commonly associated with men experiencing anxiety disorders?* and 4) *Is there evidence for a specific role of masculinity in men's anxiety disorders?* In line with past research, young men report stricter adherence to traditional masculine norms relative to older cohorts (Herreen et al., 2021; O'Neil, 2008; Rice et al., 2011), and are less likely to seek formal psychological support for anxiety and anxiety disorders (Clark et al., 2018).

The review findings highlight the striking absence of qualitative research in men's anxiety scholarship. It goes on to call for high quality within-men research to distil men's subjective experiences of anxiety and how they seek-help and cope with symptoms when they arise. Novel findings also emphasised young men as a critical sub-group vulnerable to gendered-experiences of anxiety (framed by masculinities) characterised as a potential male-type anxiety phenotype. In line with past research, young men report stricter adherence to traditional masculine norms relative to older cohorts (Herreen et al., 2021; O'Neil, 2008; Rice et al., 2011), and are less likely to seek formal psychological support for anxiety and anxiety disorders (Clark et al., 2018). Chapter 3 addresses the identified gaps and future recommendations outlined in Chapter 2 (i.e., limited qualitative evidence in men's anxiety scholarship and need for targeted young men research; Triple-R Anxiety Model; Fisher et al., 2023). By answering the

primary research question, *how do young men experience anxiety?* Or more specifically, *what* does anxiety feels like for young men? *Why* does it manifest? and *how* does it impact and lobby action in their lives? Twenty-five young Australian men's subjective experiences of anxiety were distilled to generate the world first theory of young men's anxiety, Resisting-Reckoning-Responding (Triple-R Anxiety Model; Fisher et al., 2023). Resisting-Reckoning-Responding is a three-process theory depicting the often-long term and tumultuous periods of avoidance (resisting), prior to understanding (reckoning) and addressing (responding) their anxiety symptoms. This responding phase encompasses integrating anxiety as a core aspect of young men's lives, which often leads to a greater openness towards, or acceptance of, informal (i.e., friends and family) and formal help-seeking (i.e., professional mental health services). Additionally, Chapter 3 begins to contextualise the intersections of masculinities and culture across young men's anxiety symptoms and/or anxiety disorders to distil practices, relations and structural influences which may impact men's mental health outcomes more broadly.

Men's Help-Seeking for Anxiety

Rather than formal help-seeking (i.e., utilising mental health care services either in-person or online), men experiencing anxiety symptoms report a preference for self-reliance or informal sources of support (i.e., vocalising their anxiety concerns with parents, friends and family; Iwamoto et al., 2012). Young men are particularly reluctant to seek formal mental health support, with only 15% of young men who exhibit clinically significant anxiety, utilising mental health services (Merikangas et al., 2011). This is likely due to additional barriers to formal help-seeking that have been identified amongst young men including confidentiality concerns, scepticism regarding treatment effectiveness, and stigma related to psychological treatment and anxiety disorders (Clark et al., 2018; Fisher et al., 2021). For adult men (e.g., 25 years and above; Plante

& Plante, 2016), self (internal) and social (external) stigma surrounding anxiety and help-seeking is negatively associated with a reported willingness to seek help (Berger et al., 2013). Stigmatised views surrounding anxiety are typically centred on a *weak not sick* narrative (i.e., that is that anxiety is indicative of weakness rather than a legitimised illness; Curcio & Corboy, 2020; Yap et al., 2014). This self-stigmatisation is often layered and compounded by men's gendered expectations to adhere to traditional masculine norms, such as being emotionally restrictive and stoic (Clark, Hudson, & Haider, 2020; Fisher et al., 2023).

Despite past research largely focusing on the nihilistic view that men "do not, and will not seek help," there are mounting calls within broader men's mental health scholarship to instead focus on facilitating factors encouraging men's mental health engagement (Seidler, Rice, River, et al., 2018, p. 98). Facilitating factors within mental health services that have been shown to promote help-seeking for anxiety in young men are often low-effort and fast-access resources, which maintain anonymity and convey stories of lived experience, normalising anxiety within a masculine context (Clark et al., 2018; Drioli-Phillips, Oxlad, LeCouteur, et al., 2020). Gough et al. (2021) indicated that men can, and do, talk to informal supports about their anxiety, albeit in ways governed by masculinities. Men felt more comfortable talking about their anxieties with significant women in their lives (i.e., partner, mother, sister, friend), whereas speaking to other men was fraught, with some men attributing this to concerns of being a burden to others or oversharing and embarrassment (Gough et al., 2021). In addition, a recent nation-wide Australian survey found anxiety to be the primary reason men sought help through mental health services (Seidler et al., 2021). Yet the broader context surrounding men's pathways to help-seeking and the driving factors that precipitate and propel men experiencing anxiety to reach out to formal mental health services have not

been explored. Chapter 4 addresses this shortcoming by answering the research question *what drivers and processes lead men with anxiety to seek help through formal mental health services?* Study findings are drawn from 419 Australian-based respondents who provided open-ended responses to an online survey investigating men's pathways to help-seeking for anxiety across the life course. Men attribute their decision to seek-help for anxiety (via community based psychotherapeutic intervention [i.e., psychologist, counsellor, social work]) to tipping points (i.e., interpersonal relationship difficulties, job loss) and reclusive causes and consequences of anxiety symptoms and disorders (i.e., burdensome symptoms and unmet internal expectations and external social pressures). Tipping points and reclusive causes and consequences then converge to propel men towards defeat and/or defiant pathways for help-seeking. In answering this research question, Chapter 4 illuminates facilitating factors that can be leveraged in early-interventions and public health campaigns to encourage help-seeking in men.

For men reluctant to seek help for anxiety, particularly those concealing anxiety in attempts to uphold norms of stoicism and emotional restrictiveness, an ensuing psychological crisis may lead them to present to emergency medical services (i.e., ambulance services and emergency departments). In these instances, emergency services often serve as the first instance of mental health help-seeking for men with undiagnosed and untreated anxiety disorders, whereby diagnostic screening and medical procedures are undertaken to rule out physiological conditions (Dark et al., 2017; Prince, 2021). These diagnostic workups are extensive and require considerable resources, given many symptoms of anxiety disorders (i.e., sweating, shortness of breath, chest pain, and nausea) resemble life threatening conditions, such as myocardial infarction, dyspnoea, asthma, and stroke (Australian Institute of Health Welfare, 2022; Yap et al., 2020). Between 2014 to 2017 in Australia, anxiety-related presentations were

the primary reason for ambulance call-outs responding to men's mental health concerns (10.3%; Turning Point, 2019), with similar trends seen across other Western countries (i.e., Europe; Buccelletti et al., 2013; United States; Dark et al., 2017). Foldes-Busque et al. (2011) reported that 44% of patients presenting to a Canadian emergency department with non-cardiac related chest pain, met diagnostic criteria for panic attacks and panic disorder, yet only 7.4% of these patients were correctly identified by emergency physicians. Patients who seek-help for non-cardiac related chest pain via emergency departments or paramedic services, are more likely to be referred onto cardiology specialist clinics, rather than psychiatric services (Demiryoguran et al., 2006). Therefore, most anxiety-related presentations encountered by emergency medical services remain undiagnosed and untreated only increasing the likelihood of recurrent presentations (Fleet et al., 1996; Foldes-Busque et al., 2011). In instances where anxiety presentations are correctly diagnosed, treatment for young men's anxiety disorders in emergency services is difficult and often ineffective, albeit most common, given the brief intervention period. Care pathways from emergency department presentations for anxiety disorders typically involve pharmacological treatment (i.e., anxiolytics [benzodiazepines]; Buccelletti et al., 2013; Dark et al., 2017; Wulsin et al., 2002) and referral back to primary care teams (i.e., general practitioners or psychologists). Despite reducing severe anxiety symptoms in the short-term, these brief interventions show minimal evidence of preventing men's recurrent presentations of anxiety over the long term and can be problematic and dangerous given the risk of overdose and addiction (Dark et al., 2017).

Chapter 5 of this thesis distinguishes ambulance services as a priority health care setting in acute presentations of young men's anxiety, answering the primary research question: *How do young men experiencing anxiety engage with acute health care*

settings? A more specific secondary research question was also answered in Chapter 5: *What are the clinical characteristics and contexts of young men's anxiety presentations to ambulance services?* This four-phase mixed-methodology study used population-based data from the Australian National Ambulance Surveillance System (NASS; Lubman, Heilbronn, et al., 2020) analysing 694 young men's anxiety-related presentations to ambulance services in Victoria, Australia in 2019. By exploring young men's health service engagement in the context of ambulance services, critical insights were attained surrounding the clinical profiles of young men's anxiety presentations and classifying typologies. Three typologies for young men's anxiety presentations to ambulance services were identified through this study: 1) Psychosomatic-Anxiety, 2) Anxious-Substance Use and 3) Complex-Anxiety were evident across severities. Chapter 5 highlights the numerous intervention points and triage considerations to aptly tailor mental health supports, health service policies and public health resourcing to better serve young men with anxiety. These findings, alongside those from Chapters 2, 3 and 4 are distilled in Chapter 6 to outline implications and future directions for the field of young men's anxiety, including a future research agenda. This agenda addresses gaps in empirical evidence, advocates for the development of gender responsive models of care and promotes the potential benefits of men's anxiety interventions.

Gaps in Men's Anxiety Scholarship

Despite this evidence, men's mental health research, clinical care and services have been largely centred on men's depression, overlooking and somewhat subsuming men's anxiety. This is particularly evident in the absence of subjective lived experience research in men's anxiety and the lack of rigorous and methodologically sound within-men study designs. There is little, if any, empirical evidence focused on young men's lived experiences of anxiety, including how young men's anxiety symptoms manifest,

the impacts of anxiety over time and young men's coping strategies in times of distress. Additionally, how young men's experiences of anxiety translate to, and influence, formal and informal help-seeking is not known. Despite current empirical evidence highlighting a reticence and hesitancy towards formal help-seeking within young men, there is little focus on uncovering the nexus points through which young men do come into contact with health services (particularly ambulance services) for anxiety-related concerns over the life course. This thesis directly addresses these gaps, answering key research questions to generate novel insights and new understandings surrounding the breadth and gravity of young men's anxiety. Scholarship within the field of men's depression similarly grew from the foundations of sex differences research and reductive notions such as "women seek help, men die" (Angst & Ernst, 1990, p. 73). Yet, in prioritising qualitative research with culturally and socially diverse populations of men, critical insights moved the field of men's depression beyond stereotypical biases and biological determinism defined as a *cul de sac* of sex-based ideologies (Seidler, Rice, Ogrodniczuk, et al., 2018).

Thesis Overview

Based on the gaps within men's anxiety scholarship highlighted above, the overarching aims of this thesis are to:

- report young men's lived experiences of anxiety symptoms and disorders
- evaluate the role of masculinities in young men's anxiety
- describe the varied pathways to mental health services for young men experiencing anxiety.

This thesis seeks to explore four overarching research questions (as mentioned above) pertaining to young men's gendered experiences of anxiety and/or anxiety

disorders and their engagement with health services for anxiety. These research questions have been summarised below for clarity:

1. What qualitative and quantitative evidence exists on men's anxiety and/or anxiety disorders?
    - What are men's experiences of anxiety?
    - What constitutes help-seeking in men with anxiety disorders?
    - What coping strategies are commonly associated with men experiencing anxiety disorders?
    - Is there evidence for a specific role of masculinity in men's anxiety disorders?

These research questions are answered in Chapter 2.

2. How do young men experience anxiety?
    - What does anxiety feel like for young men?
    - Why does anxiety manifest (according to young men themselves)?
    - How does anxiety impact and lobby action in young men's lives?

These research questions are answered in Chapter 3.

3. What drivers and processes lead men with anxiety to seek help through formal mental health services?

This research question is answered in Chapter 4.

4. How do young men experiencing anxiety engage in acute health care settings?
    - What are the characteristics and contexts of young men's anxiety presentations to ambulance services?

These research questions are answered in Chapter 5.

Each research question is directly addressed in four key studies (and across one or more chapters); a systematic review uncovering qualitative and quantitative evidence on men's anxiety (Chapter 2), a grounded theory study distilling young men's

experiences and expression of anxiety (Chapter 3), mapped pathways to help-seeking detailing the drivers that lead men to seek formal mental health support for anxiety (Chapter 4) and finally a mixed-methods study identifying how young men with anxiety engage with acute health services (Chapter 5). This PhD was undertaken by publication, meaning some of the work presented in this thesis at times overlaps or is repeated, particularly in the background (introduction) and discussion sections of Chapters 2, 3, 4 and 5. The overviews and conclusions for each chapter are purposefully written to reflect the connections between each of the four published articles. The overviews and conclusions of each Chapter also summate how each publication addresses a critical research aim and/or research question of the overall thesis.

Data in this thesis are derived to provide a holistic overview of young men's anxiety, with the intention of exploring and investigating young men's anxiety and anxiety disorders across divergent clinical complexities, comorbid mental health severities and healthcare settings. As such, data in Chapters 4 and 5 are sourced from external pre-existing population-based cohort datasets. These independent cohort data have differing research objectives and data sources, established prior to undertaking the grounded theory study (Chapter 3). As a result, the findings from Chapter 3 provide an innovative and critical theoretical lens for secondary data analyses, applicable to the specific research objectives of this thesis, guiding interpretation, conceptualisation, and generalisation of thesis findings. For example, data in Chapter 4 extends beyond young men, to explore pathways to help-seeking across the life course. This adds considerable depth and breadth to determine unique differences for young men, relative to older men, and establish how facilitators for help-seeking may change for men across the lifespan.

Significance of This Research

Data sampling procedures used in this thesis have been carefully designed to reflect the diversity that exists within-young men and capture key clinical contexts in which young men may seek help for anxiety (i.e., community and ambulance services, informal supports). Diverse methods and novel data analytic techniques are applied throughout. Primary data collected via in depth interviews (Chapter 3), secondary analysis of existing open-ended responses focused on men's anxiety help-seeking (Chapter 4) and analysis of the National Ambulance Surveillance System data (Chapter 5) provided multiple angles of vision. These perspectives offer important new insights related to young men's anxiety. The first systematic review of men's anxiety (Chapter 2) reports early evidence for a male-type anxiety phenotype (i.e., myalgia, panic attacks and headaches). Further, it highlights the critical role of masculinities in shaping the experience and expression of anxiety in young men advocating for a shift beyond sex-based research to explore young men's lived experiences of anxiety through rich qualitative methodologies. A world first theory of young men's anxiety (Chapter 3) models the three distinct yet interconnected phases of young men's anxiety depicting the ways young men move from initially resisting their anxiety, to gaining literacy and understanding (reckoning) and ultimately responding to their symptoms. Mapping men's pathways to formal help-seeking for anxiety (Chapter 4) depicts the tipping points (interpersonal relationship issues, vocational and work stress) tilting men towards the possibility of anxiety intervention and the reclusive causes and consequences that converge to propel men towards mental health services through both defeat and defiant help-seeking pathways. Finally, the four-phase mixed methods study exploring young men's engagement with acute health services for anxiety (Chapter 5) characterises common clinical characteristics and discrete typologies of young men's anxiety presentations to ambulance services in Victoria, Australia.

Chapter Summary

In conclusion, Chapter 1 briefly summarises men's anxiety scholarship linking critical research gaps to the work completed in the current thesis.

Chapter 2: Men's Anxiety: A Systematic Review

Chapter Overview

This chapter presents the first systematic review in the field of men's anxiety. The primary objectives of this review centred on understanding how men experience, cope with, and seek help for anxiety, alongside uncovering how masculinities shape and are shaped by men's anxiety experiences. By systematically analysing 25 studies, the current evidence documenting the gendered nature of men's anxiety is synthesised. This chapter provides a clear rationale to take a within-men approach in the subsequent chapters of the thesis and highlights young men as a critical sub-population to understand and tailor interventions for. This review was published in the *Journal of Affective Disorders* (IF: 6.53) in September 2021 and has been cited 43 times.

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Review article

Men's anxiety: A systematic review

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ABSTRACT

Aim: Anxiety disorders are amongst the most commonly diagnosed mental illnesses amongst men; however male-specific anxiety research is lacking. This review explores men's anxiety symptoms and disorders including help-seeking, coping and the role of masculinity.
Method: Four electronic database searches identified 8,333 citations, with 25 studies meeting inclusion criteria. Nineteen studies employed quantitative methods, five studies reported qualitative research, and one utilised mixed methods.
Results: Unique profiles of anxiety, including psychosomatic symptoms, were identified and persisted over extended periods of time. Men commonly reported self-reliance over formal help-seeking, and typically managed anxiety symptoms through problem-based coping. Masculinity was related to anxiety in complex ways; adherence to norms of toughness could be protective against anxiety onset, while adherence to emotional restrictiveness and heterosexual presentation norms were positively associated with anxiety. The experience of, and help-seeking for anxiety transgressed many men's adherence to masculinity norms resulting in significant social and self-stigmas.
Limitations: The anxiety measurement scales utilised were inconsistent across included studies and there was limited scope of research into panic disorders, phobias and agoraphobia.
Conclusion: Findings demonstrate the enduring nature of anxiety for men and a potential under-reporting of symptoms, especially amongst younger men. To better tailor clinical care and public health resources to the needs of men with anxiety disorders, targeted research examining men's lived experiences of (and coping strategies for) anxiety is essential.

Anxiety disorders are amongst the most common mental health conditions for men worldwide (Kessler et al., 2010); however empirical research exploring the gendered dimensions of men's anxiety is lacking. Anxiety disorders (e.g., Generalised Anxiety Disorder [GAD] Social Anxiety Disorder [SAD] and specific phobias) are characterised by excessive and persistent fear-related responses and behaviours, beyond reasonably appropriate in the context or situation (American Psychiatric Association, 2013). These persistent and excessive anxious responses reach diagnostic threshold when associated with impairments in social, occupational and other important areas of functioning (American Psy- chiatric Association, 2013). As of 2010, anxiety disorders were the sixth leading cause of disability in both high and low income countries (Baxter et al., 2014; World Health Organization, 2014a) however, more recent evidence indicates rates of anxiety, in addition to fear, stress and depression are increasing globally as a result of the novel coronavirus (COVID-19) that emerged in 2019 (Rogers et al., 2020; World Health Organization, 2020).

Males are diagnosed with anxiety at half the rate of females, approximately 2.6% of males within the global population as compared to 4.6% of females (Baxter et al., 2013; World Health Organization, 2017). This lower rate of diagnosis is not however indicative of better mental health amongst males, as men exhibit increased rates of sub- stance use, interpersonal violence and account for around three-quarters of suicides in Western countries (Hay et al., 2019; World Health

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Organization, 2014b). The reasons behind men's lower prevalence rates of anxiety disorders is unclear. Research has largely centered on exploring sex differences (i.e., male verses female) rather than gender differences, which include culturally and socially defined roles, responsibilities, attributes and entitlements (Darmstadt et al., 2019). Reviews by McLean and Anderson (2009) and Craske (2003) have summarised the ecological differences in fear and anxiety for males and females, and postulate the lower rates of anxiety in males may be due to: biological factors (e.g., genetic disposition and increased physiological reactivity in females), psychological temperament (e.g., reduced negative affect and anxiety sensitivity), stress responses (e.g., sex specific trauma exposures and increased threat appraisal in females), cognitive mechanisms (e.g., lower levels of rumination and worry) and environ- mental influences (e.g., gender socialisation and behavioral avoidance) all emerging at an individual level. Central in the emergence of these aetiological differences is the moderating impact of gender socialisation, that is, how men and women learn to *be* masculine or feminine. To date, the role and impact of gender socialisation and more specifically masculine norms is sporadically referenced in men's anxiety (Drioli-- Phillips et al., 2020b; Kierski, 2014; McDermott et al., 2016; McLean and Anderson, 2009). Whilst prevalence rates of anxiety suggest men experience a lower burden of disease associated with anxiety relative to women, recent evidence highlights that men are less likely to disclose symptoms and seek psychological treatment (Clark et al., 2020a). In addition, as has been seen with other mental health disorders such as depression (Martin et al., 2013; Rice et al., 2020a) current diagnostic screening may not adequately detect anxiety symptoms and disorders in men, resulting in a potential under detection and under diagnosis of anxiety in men.

Dominant ideals characterizing masculine socialisation in the Western world continue to exert significant pressure on men, reinforcing and reifying stoicism, self-reliance, emotional restrictiveness, invulnerability and toughness as key indicators of manliness (Connell and Messerschmidt, 2005; Mauvais-Jarvis et al., 2020). More recently, masculinity frameworks have shifted towards a plurality of idealized 'masculinities', defined as the multifarious ways men action and embody gender, practices learnt over time and constantly shifting across diverse social situations and populations (Connell and Messerschmidt, 2005). The concept of masculinities challenges earlier contemporary ideals of a singular, one-dimensional representation of idealized masculinity, however still recognises a socially determined hierarchy, privileging some expressions of masculinity (e.g., heterosexual, able-bodied, employed) over subordinate and marginalized masculinities (e.g. men of colour, disabled, homosexual; Connell and Messerschmidt, 2005). Strict adherence to these patriarchal masculinities can negatively in- fluence men's willingness to seek help (Seidler et al., 2016; Wong et al., 2017), and is predictive of increased maladaptive coping strategies in an attempt to overcome psychological distress, including social withdrawal, substance use, risk-taking and avoidance (Brownhill et al., 2002; Chuick et al., 2009; Whittle et al., 2015). Research reports that young men are especially vulnerable to the social pressures for embodying masculine norms (Rice et al., 2011) including reluctance to seek psychological support, with only 15% of young men who exhibit clinically significant anxiety utilising mental health services (Merikangas et al., 2011).

Much of the literature surrounding masculinity and men's mental health has centered on reductionist ideals of masculinity as a 'pathology.' Kiselica and Englar-Carlson (2010) proposed shifting towards a strength-based approach, integrating a plurality of diverse and intersecting masculinities. To date, the role of masculinity has been most widely explored in the context of depressive disorders, suggesting symptoms may be expressed through externalising behaviours (e.g., anger, aggression, risk taking and substance use) rather than typical internalised expressions of distress (Addis, 2008; Cavanagh et al., 2016; Rice et al., 2013; Seidler et al., 2016). Contrasting these insights men's anxiety disorders are poorly understood. Importantly, some men's mental health scholarship has considered anxiety and depression concomitantly due to their high comorbidity (McDermott et al., 2016), proposing that psychological distress may be experienced, and manifest differently, for men who endorse traditional masculine norms. Despite this, anxiety and depression should be considered separately, especially given they do not always co-occur or affect men in the same way. This limited scope in research has meant that public health campaigns and resources such as '*Real Men, Real Depression*' in the United States and '*HeadsUpGuy*' in Canada have focused on depression somewhat obscuring (and perhaps subsuming) men's anxiety. Rigorous research seeking to understand men's experiences of anxiety, and more specifically help-seeking and coping strategies when anxiety arises, is important for advancing the field of men's mental health research. Such research should apply a gendered lens, in particular considering findings in the context of masculinity. Given anxiety is amongst the most com- mon mental health conditions for men, a comprehensive exploration of these experiences will augment and advance contemporary overviews of men's mental illness. In addition, understanding how men seek help for, and cope with anxiety is integral to the efficacy of treatment and public health education. By taking a gendered approach, and considering anxiety through the lens of masculinity, community and therapeutic responses can be tailored based on men's experiences with anxiety, and responsive to their needs.

This systematic review is the first to explore men's experiences of clinical and sub-clinical anxiety. The aims of this review were to; 1) provide a comprehensive overview of men's experiences of anxiety disorders and symptoms, 2) explore men's help seeking behaviours for anxiety disorders, 3) describe men's coping in relation to symptoms of anxiety, and 4) report the influence of masculinity on men's experiences of anxiety. The empirical findings from this systematic review will be summarised and structured in responding to four discrete research questions; 1) What are men's experiences of anxiety? 2) What constitutes help-seeking in men with anxiety disorders? 3) What coping strategies are commonly associated with men experiencing anxiety disorders? and 4) Is there evidence for a specific role of masculinity in men's anxiety disorders?

1. Method

1.1. Data sources and search strategy

This review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). A systematic search of four electronic databases (CINAHL, EMBASE, MEDLINE and PsycINFO) was conducted in February 2021. The search strategy was devised in consultation with a university librarian for use with the PsycINFO database and adapted as required for other databases (see supplementary file 1). Both MeSH headings and free text words (outlined in Table 2 . 1) were used with a date range

Table 2.1
Syntax search terms for PsycINFO.

Participants		"male" OR "males" OR "men" OR "mens" OR "father*" OR "brother*" OR "boyfriend*" OR "husband*" OR "mate" OR "mates" OR "boy" OR "boys"
	AND	
Intervention/ Interests		"experienc*" OR "experiences" OR "seek* help" OR "help seek*" OR "help-seek*" OR "health care seeking behav*" OR "help seeking behaviour" OR "health care utili$ation" OR "pathways to treatment" OR "masculin* OR "traditional masculin*" OR "masculine gender norm" OR "gender role conflict" OR "gender role strain" OR "gender norm" OR "gender social norm"
	AND	
Outcomes		"anxiety" OR "anxiety disorders" OR "anxiety management" OR "anxiety treatment" OR "anxiety intervention"

publication limiter from 1990 to 2021 inclusive. Further manual searching of article reference lists was also undertaken.

1.2. Inclusion and exclusion criteria

Studies with a focus on either anxiety disorders, anxiety symptoms or sub-clinical anxiety symptoms were included for review. Anxiety disorders were classified in accordance with standardised diagnostic systems, such as the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-V; American Psychiatric Association, 2013). Sub-clinical anxiety was defined as mild, brief, masked or atypical psychopathological symptoms associated with anxiety disorders, yet failing to reach the disorder diagnostic criteria (Fehm et al., 2008; Haller et al., 2014). In accordance with diagnostic guidelines anxiety disorders reviewed included: Selective Mutism (SM), Specific Phobia (SP), Social Anxiety Disorder (SAD), Panic Disorder (PD), Agoraphobia, Generalised Anxiety Disorder (GAD). Obsessive Compulsive Disorder (OCD) and Post-Traumatic Stress Disorder (PTSD) were excluded from this review as they are not listed within the Anxiety Disorder section of the DSM-V, but instead are classified under Obsessive Compulsive and Trauma sections (American Psychiatric Association, 2013; Beesdo et al., 2009).
A transdiagnostic approach to the sub-diagnostic classifications of anxiety disorders (e.g., SAD, GAD, PD) within the DSM-5 (American Psychiatric Association, 2013) was adopted. While these sub-diagnoses may differ from one another in the object or situation eliciting the anxiety response, these anxiety disorders are highly comorbid and share a fear, or avoidance-based component (Barlow et al., 2004). Therefore, psychological mechanisms relevant to anxiety (such as worry, repetitive thinking and avoidance of emotions) were collectively considered across all anxiety disorders to better address the underlying emotional experience (Barlow et al., 2017). Studies with a mixed sex sample were included if they reported on gender differences in anxiety (beyond merely stating a difference in the level or prevalence of anxiety scores) and investigated mechanisms that underlie these gender differences between men and women. The inclusion and exclusion criteria for this systematic review is outlined in Table 2.2.

1.3. Screening

The screening process was undertaken in accordance with the Cochrane Collaboration guidelines (Lefebvre et al., 2019). Firstly, database search results were merged into reference management soft- ware and duplicates removed. One reviewer (KF) screened titles and abstracts to determine relevance based on the specified inclusion criteria. An additional reviewer (ZS) independently dual screened 20% of total results at both title and abstract level. Any discrepancy between the two reviewers was referred to a third reviewer (SR) for final decision. In accordance with the Cochrane guidelines, one reviewer (KF) worked independently at full text screening level to ensure included studies met the eligibility criteria.

1.4. Data abstraction and synthesis

Data was extracted by one reviewer (KF) and checked by two re- viewers (ZS and SR). The extracted data included: author, year, location of study, design, setting participant characteristics, measures, analysis and primary outcomes. Data was extracted and synthesised from these included studies in line with four key research questions which were derived from the study aims of this review. A content analysis was undertaken to synthesise qualitative data in two stages. Both study themes and reported participant qualitative data was extracted and organised under the key research questions. The number of studies that addressed each theme was then reported to determine what patterns emerged amongst a range of qualitative papers. A formal meta-analysis was not conducted due to the diverse range of methodological underpinnings, variables and outcome measures of the included studies.

1.5. Quality assessment

Three types of assessment were undertaken within this review: 1) levels of evidence, 2) quantitative quality assessment and 3) qualitative quality assessment. These three assessments evaluated both the rigor of research study designs and the quality of the evidence itself. The rigor of research study designs informed the level of evidence of the included studies, and was assessed in accordance with the National Health and Medical Research Council (NHMRC) Evidence Hierarchy (National Health Medical Research Council, 2009).
The quality of evidence for the included studies was evaluated using two validated assessment tools based on recommendations outlined in Ma et al. (2020) and Hannes (2011). The National Institutes of Health Quality (NIH) Assessment Tool for Observational Cohort and Cross-Sectional Studies (National Heart Lung and Blood Institute, 2018) was used to determine methodological quality for the included quantitative studies, and the Critical Appraisal Skills Programme (CASP) Qualitative Research Assessment Tool (Critical Appraisal Skills Pro- gramme, 2018) guided evaluation of the qualitative studies methodological quality. One reviewer (KF) assessed study quality alongside data extraction with two reviewers (ZS and SR) resolving any uncertainty in classifications.

2. Results

The initial database searches returned 11,852 references of which 3519 were duplicates. Following this 8333 were screened at title and abstract level, and then the remaining 72 full-text publications were screened. After full-text review, 25 studies met full inclusion criteria and were therefore retained as the final studies for extraction and synthesis.

Table 2.2
Inclusion and Exclusion criteria

Inclusion criteria	(1) mixed gender or male only samples, (2) with quantitative or qualitative data, (3) addressing the experiences of diagnosed anxiety disorders or elevated subclinical anxiety symptoms (based on clinical interview or elevated self-report anxiety scales) OR (4) evaluating anxiety and sub-clinical anxiety symptoms in relation to at least one of the following; help-seeking, coping or masculinity, (5) published in English, (6) in a peer-reviewed journal or PhD thesis. Studies with a focus on interventions and treatments for anxiety were also included for review if they had a mixed gender or male only sample and evaluated anxiety or sub-clinical anxiety symptoms in relation to at least one of the following: (1) the experiences of diagnosed anxiety disorders or elevated subclinical anxiety symptoms, (2) help-seeking, (3) coping or (4) masculinity.
Exclusion criteria	(1) female only sample, samples with a mean age <12 years, (2) studies inclusive of post-traumatic stress disorder or obsessive-compulsive disorder, (3) measuring anxiety in relation to a physical condition or illness, dental, health, body-image or performance-based (e.g., test anxiety and sporting anxiety), (4) not disaggregating gender based differences, and (5) non-peer reviewed books or reports (see supplementary file 2).

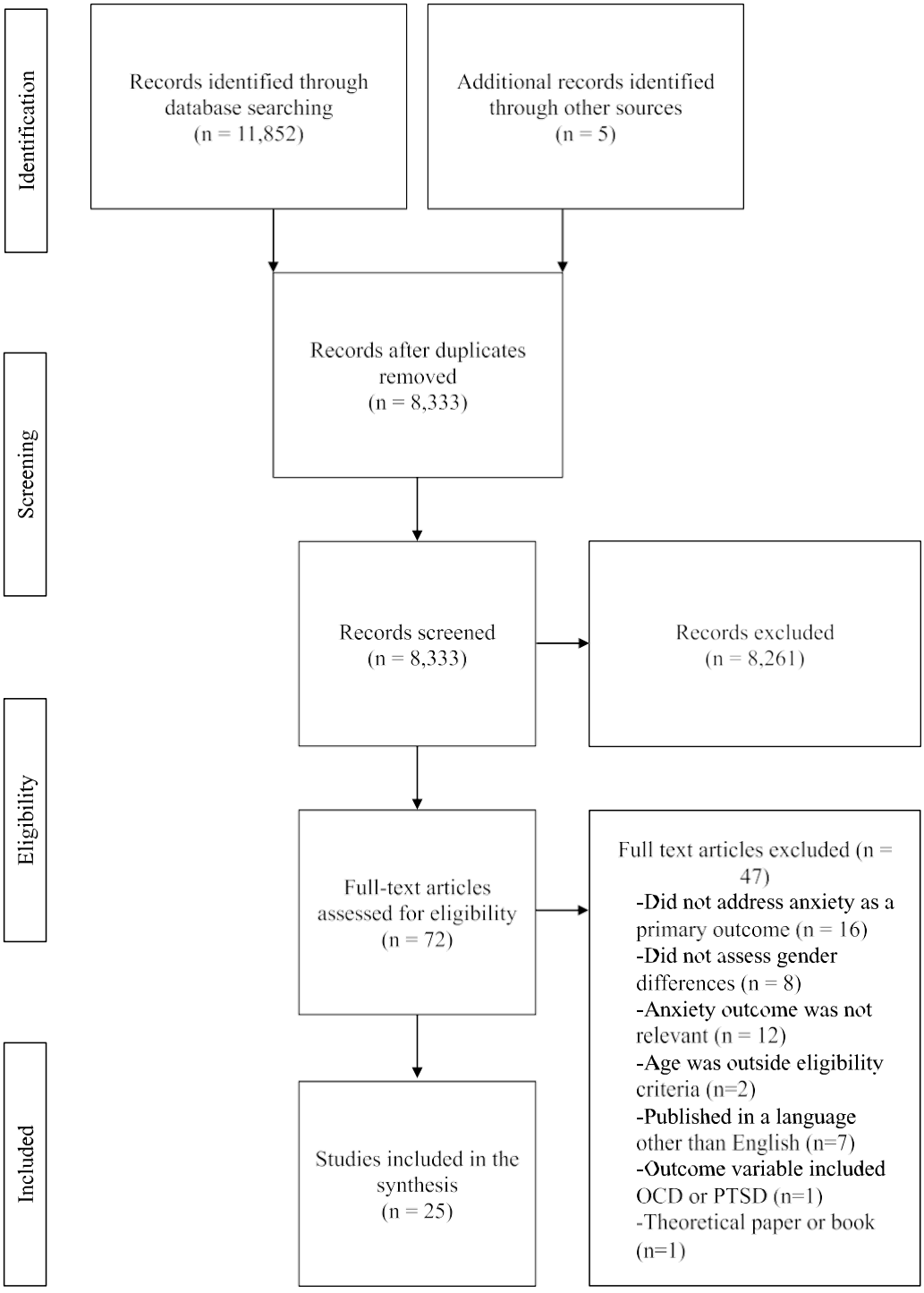

Figure. 2.1. Study selection PRISMA Flow Diagram.

Figure. 2.1 presents the PRISMA flow diagram for the selection process of the included studies.

2.1. Study and sample characteristics

Year and location. Of the 25 included studies, 72% were published in the last 10 years (n = 18) and 24% were published in 2020 (n = 6). Majority of the studies were conducted in the USA (n = 8, 32%) and Australia (n = 8, 76.92%). Quantitative study characteristics are out- lined in Table 2.3 (n = 19 and n = 1 mixed methods study, 23.08%) and qualitative study characteristics are available in Table 2.4 (n = 5 and n = 1 mixed methods study, 20%).

Participants. In total there were 10,134 participants (7646 males and 3 transgender males) and 260 online forum posts included in the synthesis. Participants ranged from 9 to 74 years of age; and most study participants had a mean age range between 12 and 25 (n = 16, 64%). The majority of studies did not report participant ethnicity (n = 16, 64%) however for those that did, 73% of total participants were Caucasian, 11% African American, 7% Asian, 6% Latino or Hispanic,
<1% Indian and 3% categorised as 'other'. A majority of the studies had a student sample population (n = 16, 64%) and were largely recruited through schools and universities (n = 15, 60%). Six (24%) of the

Table 2.3
Characteristics, key findings and quality rating of quantitative studies.

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating	[a]Level of Evidence
Auerbach *et al.* (2012); Canada; longitudinal; students.	NC; n = 105; mixed gender (45 male); age range = 12-18 years years (M = 15.12).	-Girls reported higher levels of overall anxiety ($p < .05$). -Low perceived control associated with physical symptoms in boys ($b = –3.29$, $p < .01$), and social anxiety and total anxiety levels for girls ($b = –3.71$, $p < .001$). -For girls, interpersonal stress mediated an association between low perceived control and both social anxiety ($b = 0.74$, SE = 0.26, $p < .05$) and total anxiety ($b = 2.02$, SE = 0.75, $p < .05$). -For boys, interpersonal stress mediated an association between low perceived control and physical anxiety ($b = 0.89$, SE = 0.45, $p < .05$). -Low perceived control contributed to greater levels of dependent interpersonal stress, which then triggered higher levels of social anxiety for girls, and physical anxiety for boys.	Fair	Level II
Bender *et al.* (2012); Denmark: cross-sectional; students.	NC; n = 544; mixed gender (246 male); age range = 9-16 years (M= 12.24).	- Girls reported higher levels of overall anxiety [$F(1,542) = 73.87$, $p < .001$]. - Boys had greater difficulties surrounding emotional awareness [$F(1,542) = 6.02$, $p = .01$]. Whereas girls had more difficulties regulating their emotions overall [$F(1,542) = 4.38$, $p = .04$]. -For boys, non-acceptance of negative emotional responses (4%, $p < .01$) predicted anxiety, 23% of variance in anxiety scores. - For girls, limited access to effective emotion reg. strategies (10%, $p < .001$), as well as a lack of emotional clarity (2%, $p < .05$) predicted anxiety, 37% of variance in anxiety scores.	Poor	Level IV
Berger *et al.* (2013); USA; cross-sectional survey; general community.	S/NC Anxiety rating scale cut-off; n = 85; male; age range = 19–77 years (M = 45.4).	-Acceptance to the label “anxiety” stronger than “depression” ($p = .01$). -Psychotherapy had higher levels of acceptance for help seeking over medication or friends/family and other forms of help seeking ($p < .001$). -Men responded more positively to advice from psychotherapist than primary care physician or partner. -Masculine norms negatively impacted attitudes toward psychotherapy ($r = -.27$, $p < .05$) and medication ($r = -.37$, $p < .01$).	Poor	Level IV
Bruch (2007); USA; cross-sectional; students.	SAD rating scale cut-off; n = 127; male; age range = 18-26 years (M = 19.6).	-Men with increased social anxiety had increased estimates of the probability ($r = .54$, $p < .01$) and cost of negative events ($r = .42$, $p < .01$). -Bias in probability: Men with increased tough social norms had decreased probability estimates of negative events involving male role norms ($r = -.22$, $p < .05$). -Bias in cost: Men with increased tough social norms and increased anxiety levels overestimated costs associated with negative interpersonal events targeting explicit male norms. This association increased from medium adherence ($b = 2.62$, $p < .001$) to high adherence ($b = 4.08$, $p < .0001$).	Poor	Level IV
Bryne (2000); Australia; cross-sectional; students.	S/NC Anxiety rating scale cut-off; n = 224; mixed gender (106 male); age range = 12–18 years (M = 15.05).	-Boys anxiety levels had decreased from year 7 to year 9 [$F(3,92) = 2.69$, $p = .01$] and year 9 to year 12 [$F(2, 63) = 5.13$, $p = .001$]. -Girls anxiety levels had increased from year 7 to year 9 [$F(2,61) = 6.02$, $p = .004$] and year 9 to year 12 [$F(4,91) = 3.06$, $p = .02$]. -By year 12 girls and boys were using different coping strategies, girls started with problem-based coping in year 7 then shifted to emotion based over time.	Poor	Level IV
Clark *et al.* (2020); Australia; cross-sectional; students.	SAD and GAD rating scale cut-off; n = 702; male; age range = 12-18 years (M = 14.70).	-Greater stigma towards non-clinical vignette (10% of participants), than SAD (5%) and GAD (4%). - Severity was greater in SAD when compared to non-clinical, however no difference in severity between GAD and non-clinical. -50% of the stigma seen was "weak not sick" category, 50% of stigma in direct association with hegemonic masculinity norms. -Boys who displayed increased stigma towards SAD had more negative attitudes towards formal help seeking ($p = .03$) and those with increased stigma towards GAD had negative attitudes towards online help seeking ($p = .005$).	Poor	Level IV
de Anda *et al.* (1997); USA; cross-sectional; students.	S/NC Anxiety rating scale cut-off; n = 54; mixed gender (16 males); age range = 12–14 years (M = 13).	-Girls reported higher levels of overall anxiety and higher durations of stress [$t(43) = 2.76$, $p < .01$]. -No significant difference between boys and girls in physical symptoms, however types of physical symptoms were	Poor	Level IV

(*continued on next page*)

Table 3 (*continued*)

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating	[a]Level of Evidence
		different. Girls reported more biting of nails, crying, feel like crying, boys reported reduced appetite. -Girls reported sadness as a frequent response to stress (73.7%) in comparison to boys (6.3%). Boys reported feeling more out of control (37.5%) in comparison to girls (18.4%).		
Duchesne *et al.* (2016); Canada; longitudinal; students.	S/NC Anxiety rating scale cut-off; n = 493; mixed gender (224 male); age range = 11–16 years (M = 11.82 at T1 and 16.82 at T6).	- Low anxiety group very similar trajectories for boys (20% of boys) and girls (19% of girls) anxiety levels decreased to almost undetected anxiety at age 16. - High anxiety group very similar trajectories for boys (28% of boys) and girls (27% of girls) anxiety levels remained consistently high to age 16. -Moderate anxiety group was different for boys and girls. -Boys moderate anxiety group (52%) decreased slightly and steadily in anxiety levels to age 16. -Girls moderate anxiety group (39%) remained stable until age 16, then a moderate increasing anxiety group emerged (15%) where anxiety levels increased to severe at age 14, then stabilised to age 16.	Fair	Level II
Gallegos *et al.* (2019); USA; cross-sectional; university students.	NC; n = 529; mixed gender (243 male); age range = NR (M = 19).	-6 vignettes all men: anxiety + moral anger, anxiety + non-moral anger, anxiety + positive (described men positively in terms of job performance), no anxiety + moral anger, no anxiety + non-moral anger, no anxiety + positive. -Men who expressed anxiety verses no anxiety were seen as less masculine [$F(1, 523) = 8.78$, $p = .003$] and less competent [$F(1, 523) = 10.59$, $p = .001$]. -Men who expressed moral anger verses non-moral anger were seen as more masculine [$F(2, 523) = 35.09$, $p = .001$] and more competent [$F(2, 523) = 36.78$, $p = .001$]. -Morality had a buffering effect on loss of masculinity when displaying anxiety.	Poor	Level IV
Garcia-Lopez *et al.* (2008); Spain; cross-sectional; students.	SAD rating scale cut-off; n = 2,543; mixed gender (1317 male); age range = 12-17 years (M = 13.90).	-Girls reported higher levels of overall anxiety ($p < .001$). -Highest percentage of socially anxious adolescents in 12-13 year age group, then decreased to 17 years. -Boys and girls did not have differing reported triggering situations. -Girls more likely to report higher avoidant coping styles than boys. -Some gender differences but not significantly remarkable. Therefore, no norm ranges are needed for separate age and gender groups.	Poor	Level IV
Iwamoto *et al.* (2012); USA; cross-sectional; prisoners.	S/NC Anxiety rating scale cut-off; n = 123; male; age range = NR (M = 31.70).	-Incarcerated men with stronger heterosexual presentation and less informal supports (B = 0.56, $p < .001$) had higher anxiety symptoms.	Poor	Level IV
Maddock *et al.** (2017); Ireland; mixed pre-post pilot (quant) and qualitative; homeless service users.	S/NC Anxiety rating scale cut-off; n = 12; male; age range = 21-52 years (M = 40).	Quantitative -12 participants began the Mindfulness Based Stress Reduction (MBSR) program and 7 completed. -Anxiety scores decreased from pre to post intervention ($Z = -2.371$, $p = 0.02$). Qualitative -Qualitative findings matched quantitative improvements seen in mental wellbeing variables. -MBSR themes: 1) enhance coping skills (less rumination, increased ability to accept negative thoughts/emotions and increased ability to regulate attention) 2) enhanced mindful traits (enhanced self-awareness, decreased emotional reactivity, increased self-control and compassion) and 3) enhanced wellbeing (improved mood, relationships and less negative emotions). -Reiterated importance of acknowledging emotions were short lived, not getting bogged down, processing difficult emotions.	Fair	Level III
Pachankis *et al.* (2006); USA; cross-sectional; tertiary students.	SAD rating scale cut-off; n = 174; male (87 heterosexual and 87 gay men); age range = 18-24 years (M = 20.25).	-Gay male sample reported increased social interaction anxiety scores than the heterosexual group [$F(1, 174) = 13.18$, $p < .0001$]. -Comfort being gay negatively associated with gender conformity, social interaction anxiety, social phobia and negative evaluation. -Sexual orientation was found to account for 76% of the variance in the anxiety measure [$F(28, 138) = 15.81$, $p < .0001$].	Poor	Level IV
Pavlova *et al.* (2017); Russia; cross-sectional; students.	SAD rating scale cut-off; n = 183; mixed gender (90 male); age range = 12–16 years (M = NR).	-Social anxiety associated with depression ($p < .05$) and suicidal thoughts (B = .57, $p < .001$). -Masculinity found to be negatively associated with social anxiety regardless of biological sex ($p < .001$).	Poor	Level IV

(*continued on next page*)

Table 3 (*continued*)

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating	[a]Level of Evidence
		-Positive correlations found between concern over mistakes (p < .05) and overdoing with social distress (p < .001) with social anxiety. -Positive correlations found between the social anxiety and suppression of emotions and outward well-being subscales.		
Rice *et al.* (2020); Australia; pre-post pilot; outpatients.	SAD structured clinical interview; n = 89; mixed gender (43 male, 3 transgender male); age range = 14-25 years (M = 19.80).	-N=89 participants at commencement, N=76 (85.4%) completing the post-treatment assessment. Feasibility and safety indicators met; acceptability not met. -Social anxiety symptoms had the largest improvement pre and post (d = 0.73, p < .001) and 48.33% (n = 29) of participants showed reliable improvement. -Males improved on 14/22 variables (d = 0.39), non-males improved on18/22 variables (d = 0.56).	Good	Level III
Yang *et al.* (2018); Hong Kong; cross-sectional; general community.	SAD rating scale cut-off; n = 2000; male; age range = 18-60 years (M = NR).	-Discrepancy stress (z = 10.22) and self-esteem (z = 3.85) mediated the association between masculine role discrepancy and social anxiety (p < .001). -Relationship between discrepancy stress and social anxiety (Cohen's f^2 = .32) stronger than self-esteem and anxiety (Cohen's f^2 = .02). -Younger males, single males and those with lower education were found to have more masculine role discrepancy, discrepancy stress and worse mental health outcomes (in particular social anxiety). -Social anxiety and depression positively associated (r =.11, p < .01).	Poor	Level IV
Jones (1999); NR; cross-sectional; general community.	S/NC Anxiety rating scale cut-off; n = 130; male (125 gay men, 5 bisexual); age range = 22–54 years (M = 36.08).	-Trait anxiety associated with success, power and competition (r = .26, p < .01), restrictive emotionality (r = .34, p < .01) and restrictive affectionate behaviour between men (r = .25, p < .01). -Trait anxiety negatively associated with problem based coping (r = -.34, p < .01) and positively associated with emotion focused coping (r = .66, p < .01). -Trait anxiety and depression correlated (r = .70, p < .01). -Coping styles accounted for between 35-45% of total explained variance in anxiety. -Within the coping styles, only emotion-orientated coping had a positive contribution to trait anxiety variance (β = .43, t = 5.42, p <.001).	Poor	Level IV
Moscovitch *et al.* (2005); USA: cross-sectional; university students.	SAD rating scale cut-off; n = 97; mixed gender (43 male); age range = 17–22 years (M = 18.70).	-Masculinity (r = -.45) and independence (r = -.33) were negatively associated with social anxiety. -Masculinity, femininity, independence and interdependence accounted for 30% of the variance in social anxiety. - For men more independent constructs rather than interdependent revealed less social anxiety, for women more interdependence rather than independence results in less social anxiety.	Poor	Level IV
Clark *et al.* (2020); Australia; cross-sectional; students.	S/NC Anxiety rating scale cut-off; n = 1732; male; age range = 12–18 years (M = 14.83).	-Higher mental health literacy was associated with increased formal help seeking attitudes and intentions (r = .17, p < .001) and informal help seeking attitudes and intentions (r = .06, p < .05). -Higher mental health literacy negatively associated with masculinity scores (r = -.30, p < .001). -Moderating effect of masculinity on the relationship between anxiety mental health literacy and attitudes to formal help-seeking (b = -0.0016, SE = 0.0006, t = -2.72, p = .006). -Higher anxiety mental health literacy positively associated with formal help seeking attitudes in participants with low/ average traditional masculine values (b = 0.018, SE = .006, t = 2.93, p = .003). However, no relationship was found between help seeking attitudes and mental health literacy when participants had a greater alignment with hegemonic masculinity (b = -0.002, SE = 0.005, t = -0.42, p = .678).	Poor	Level IV
Ren *et al.* (2020); China; cross-sectional; university students.	GAD rating scale cut-off; n = 122; male; age range = NR (M = 21.01).	-Worry strongly influenced by other nodes in the network (highly dependent on other symptoms). -Worry (0.53 predictability score) and meta worry (0.50 predictability score) had the greatest expected influence on anxiety. Most important nodes in the present network.	Fair	Level IV

Note: * Mixed methods.

[a] NHMRC Evidence Hierarchy for Etiology Studies comprises the following categories: Level I the highest form of evidence (systematic reviews), Level II (prospective cohort studies), Level III-2 (retrospective cohort studies), Level III-1 (case-control studies) and Level IV the lowest form of evidence (cross-sectional study or case series); NHMRC = National Health and Medical Research Council, NC = non-clinical, M = mean, NR = not reported, S/NC = sub/non-clinical, SAD = Social anxiety disorder, GAD = Generalised anxiety disorder, SE = Standard error.

Table 2.4
Characteristics, key findings and quality rating of qualitative studies

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating*
Clark *et al.* (2018)[a]; Australia; individual interviews, focus groups and vignettes; students.	AD self-report, NC; n = 29; male; age range= 12-18 years (M = 15.17).	-Overall preference for self-reliance rather than help-seeking. -Barriers to help-seeking: stigma, masculine norms, limited awareness of anxiety and help seeking options, concerns of overwhelming emotions, effort. -Didn't think anyone had the ability to help anyway. -Facilitators to help-seeking: Fast access/ low effort interventions, confidentiality, normalising of anxiety (masculine context), knowing what supports are available.	9
Clark *et al.* (2018)[b]; Australia; individual interviews, focus groups and vignettes; students.	AD self-report, NC; n = 29; male; age range= 12-18 years (M = 15.17).	-Young males weren't aware of computerised help-seeking as a concept. -Concern for confidentiality and security of information. -Concern over autonomy and decision-making power. -Could be a safer first step rather than going straight into face-to-face help seeking. -Needs to require little effort to be effective (link in with a computerised program being used already).	9
Drioli-Phillips *et al.* (2020)[c]; Australia; forum posts; forum users.	AD self-report; n = 130 FP; male; age range = 12+ (M = NR).	-Men attempted to authenticate their anxiety. -Orienting to a diagnosis (expressed clinical diagnosis, specified clinical confirmation as if validating it as a medical illness).	8

Table 2.4 (*continued*)

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating*
		-Looking for peer support and others experiences through forum posts.	
Kierski (2014); UK; individual interviews; psychotherapists.	NC; n = 8; male; age range = 40-74 years (M = NR).	-Anxiety is manifold (both physical and emotional reactions). -Feelings of failure and not being good enough. -Loss of control, which affected self-esteem. -Anxiety lifelong but the patterns and nature of anxiety shifts through stages. -Positive aspects, anxiety can facilitate self-knowledge.	5
Drioli-Phillips *et al.* (2020)[d]; Australia; forum posts; forum users.	AD self-report; n = 130 FP; male; age range = 12+ (M = NR).	-Men described anxiety as an out of control physical and mental state. -Immobilising sensations, feeling trapped by anxiety and powerless to it. -Anxiety as an independent entity to oneself. -Referred to two selves (anxious and non-anxious self).	7
Maddock *et al.** (2017); Ireland; mixed pre-post pilot (quant) and qualitative; homeless service users.	S/NC Anxiety rating scale cut-off; n = 12; male; age range = 21-52 years (M = 40).	-Discussed Mindfulness Based Stress Reduction program. -Enhanced participants coping skills (less rumination, increased ability to accept negative thoughts/emotions and increased ability to regulate attention) -Improved mindful traits, decreased emotional reactivity, increased self-control and compassion. -Overall improved mood, relationships and less negative emotions. -Reiterated importance of acknowledging emotions were short lived, not getting bogged down, processing difficult emotions	8

Note: *Out of 10; **Mixed methods; M = mean; FP = forum posts; NR = not re- ported; NC = non-clinical; AD = anxiety disorder.

[a] Clark, L. H., et al. (2018) Barriers and facilitating factors to help-seeking for symptoms of clinical anxiety in adolescent males.

[b] Clark, L. H., et al. (2018) Capturing the attitudes of adolescent males' to- wards computerised mental health help-seeking.

[c] Drioli-Phillips, P. G., et al. (2020) Men's talk about anxiety online: Con- structing an authentically anxious identity allows help-seeking.

[d] Drioli-Phillips, P. G., et al. (2020) I Feel Abused by My Own Mind: Themes of Control in Men's Online Accounts of Living With Anxiety.

included studies were recruited through a mental health service including community mental health settings (n = 4, 16%) and online mental health forums (n = 2, 8%).

Mental health status. The included studies covered three population groups; nonclinical samples (n = 20, 76%) clinical samples (n = 2, 12%) and a mix of clinical and non-clinical participant samples (n = 3, 12%). The majority of the five studies with clinically anxious samples did not report the sub-type of anxiety disorder of participants (n = 4, 16%), while one study (4%) focused on social anxiety disorder. Clinically significant levels of anxiety, or elevated levels of anxiety symptoms were determined by rating scale cut points (n = 16, 64%) or participant self-report (n = 3, 12%) with only one study using a structured clinical interview.

2.2. Quality assessment

2.2.1. Levels of evidence

None of the 25 included studies reviewed obtained Level I evidence in accordance with the NHMRC Evidence Hierarchy. Based on extensive database screening, to our knowledge there has been no systematic re- view or meta-analysis (Level I) or randomised controlled trials exploring men's anxiety disorders and symptoms in the existing literature to date. Level of evidence ratings for quantitative studies are outlined in Table 2 . 3.

2.2.2. Quantitative and qualitative quality assessment

The included quantitative and mixed methods studies (n = 20, 80%) had overall poor to fair study quality, suggesting a potential risk of bias (see supplementary file 2 for risk of bias ratings). The qualitative studies and mixed methods study (n = 6, 24%), had a moderate-high level of research quality indicating a good strength of evidence and trustworthiness (see supplementary file 3)

2.2.3. Synthesis of empirical findings

Findings from the included 25 studies were synthesised to address each of the four research questions within this systematic review.

What are men's experiences of anxiety? In total, nine (36%) studies evaluated men's experiences of anxiety through sex difference comparative samples, and five (20%) studies contained within-male only samples.

Between-group including male studies. Nine (36%) included studies evaluated sex differences in the prevalence rates of anxiety symptoms and disorders. Females were found to have significantly higher rates of reported anxiety symptoms and disorders in seven out of nine studies, ranging in size from 11 to 27% (Auerbach et al., 2012; Bender et al., 2012; Byrne, 2000; de Anda et al., 1997; Duchesne and Ratelle, 2016; Garcia-Lopez et al., 2008; Rice et al., 2020b). The remaining two studies (8%) did not find sex differences between male's and female's anxiety levels (Moscovitch et al., 2005; Pavlova and Kholmogorova, 2017).

Patterns in the trajectory of anxiety symptoms varied between young males and females with young males generally experiencing a decrease in anxiety symptoms between the ages of 14–16 years, whereas for young females of the same age, anxiety symptoms increased (Byrne, 2000; Duchesne and Ratelle, 2016). Behavioural, emotional and social responses to increased anxiety symptoms also varied with young males, in comparison to young females, reporting more externalised physical or psychosomatic symptoms of anxiety (such as loss of appetite, restlessness, racing heart, sweaty hands and dizziness) over internalised sadness and teariness (Auerbach et al., 2012; de Anda et al., 1997). Young males typically experienced less social disruption as a result of their anxiety symptoms than young females, who were more likely to report interpersonal stress and social withdrawal (Auerbach et al., 2012).

The reasons for these sex differences were explained through cognitive and emotional mechanisms of anxiety, specific to males and females (Auerbach et al., 2012; Bender et al., 2012; Byrne, 2000; Duchesne and Ratelle, 2016). Both young males and females who held beliefs of low control over themselves, the world and their future, experienced high levels of interpersonal stress, which led to increased physical anxiety symptoms in young males and social anxiety symptoms in young females (Auerbach et al., 2012). Furthermore, young males reported lower emotional awareness, and non-acceptance of negative emotion which predicted increased anxiety symptoms (Bender et al., 2012).

Within male studies. Two quantitative (8%) and three qualitative studies (12%) expanded on the comparative sex differences mentioned above, to identify gender nuances in the experiences of anxiety, specific to male only samples. In reviewing quantitative evidence, worry and meta worry cognitions, in comparison to intolerance of uncertainty and attention bias towards threat, were the strongest predictors of anxiety levels in adult men (Ren et al., 2020). However, predictors for anxiety differed across male sub-population groups, such as gay men. Gay men, had higher levels of overall anxiety relative to heterosexual men, and anxiety severity was strongly influenced by an individual's acceptance towards being gay (Jones, 1999).

In reviewing the qualitative evidence, men across the lifespan described anxiety experiences through physical sensations, *"…I can't sleep, don't want to eat, feel sick and have body tremor[s]"* (Drioli-Phillips et al., 2020a) and emotional turmoil, *"…inside I feel chaotic"* (Kierski, 2014). Furthermore, these patterns of anxiety and symptoms appeared to be enduring, ever present and sometimes life-long, leaving men feeling powerless and out of control. Men expressed being *"scared to lose control and become crazy one day"* or *"spiral to a place…[they] can't come back from"* (Drioli-Phillips et al., 2020b). Some men perceived anxiety as something happening to them, *"like the mind and body were two separate things"* and compartmentalised anxiety symptoms as an external entity (Drioli-Phillips et al., 2020a). Parallel to these described sensations, men also recounted internalised judgement at *"failing"* to regain control over their anxiety (Kierski, 2014) as if they were *"doing their anxiety to themselves"* (Drioli-Phillips et al., 2020a). These internalised judgements were expressed through feelings of self-blame "*I literally punished myself by creating or manifesting intrusive thoughts*," failure and powerlessness as a result of both experiencing and disclosing anxiety (Drioli-Phillips et al., 2020a; Kierski, 2014).

What constitutes help-seeking in men with anxiety disorders? Five studies (20%) had a primary focus on help-seeking for anxiety disorders, and three of these five studies (60%) contained samples of young men, between the ages of 12 to 18 years (Clark et al., 2018a, 2018b; Clark et al., 2020a). Young men had an overarching preference for self-reliance or informal support for anxiety disorders (Clark et al., 2018a, 2018b), and these sources of informal and emotional support appeared effective in reducing symptoms of anxiety (Pavlova and Kholmogorova, 2017). Self-reliance was reported as a response to the perceived barriers of formal help-seeking identified through qualitative studies as; a limited awareness of anxiety symptoms, reluctance (e.g., confidentiality concerns), scepticism (e.g., it won't help) or fear of stigma related to treatment and help-seeking options (Clark et al., 2018a). The themes of stigma emerging for young men were strongly associated with a perceived compromise to their social status and more specifically their masculinity, "*…there's a sort of stereotype of males…. if you are suffering from one of those [mental health problems] that you are weaker than everyone else*" (Clark et al., 2018a).

Stigma as a barrier for help seeking was also identified in quantitative studies, though the relative influence of self and social stigma was described differently amongst men (Berger et al., 2013; Clark et al., 2020a). Increased levels of self-stigma were negatively associated with men's willingness to seek help (Berger et al., 2013). However, social stigma was not as pervasive and prevalent for anxiety, in comparison to other mental health disorders such as depression (Berger et al., 2013). When responding to vignettes presenting young men with clinical and non-clinical anxiety, male participants reported stigmatised views only towards the non-clinically anxious vignettes (Clark et al., 2020a). These findings suggest sub-threshold anxiety symptoms were more stigmatised or encouraged different forms of stigmatised views, than diagnosed

anxiety disorders, which may be perceived as more severe (Clark et al., 2020a). The most prominent stigmatised attitude was a 'weak not sick' sentiment towards anxiety disorders, that is, a belief that mental disorders signal weakness not legitimate illness (Yap et al., 2014).

Despite these barriers, specific themes were also identified as facilitators for help-seeking attitudes and behaviours. Young men in particular referred to the importance of fast access, low effort interventions (e. g., highly visible and easily accessible information, immediate methods of help-seeking communication) and resources that maintained confidentiality (Clark et al., 2018a, b). Information based resources normalising anxiety disorders were another facilitating help-seeking option identified in two qualitative studies (Clark et al., 2018a; Drioli-Phillips et al., 2020b). Young men in particular reinforced the importance of disseminating information on the symptoms and treatment of anxiety to *"putting it in front of kids as often as possible…"* and outlining both the seriousness of anxiety and efficacy of treatment (Clark et al., 2018a). Participants suggested they would be more likely to access websites and resources utilising less diagnostic-driven and formal, jargon-ridden vocabulary, such as general men's health, work or relationship issues rather than clinical anxiety (Clark et al., 2018a). Furthermore, information on anxiety presented through a 'traditionally masculine' lens, including stereotypically 'manly' case examples, "*like, the tradies [tradesmen]…the guys that work sort of in tough situations"* was described by young men to be more relatable (Clark et al., 2018a).

Upon overcoming potential barriers and seeking help for anxiety disorders, there was limited evidence surrounding what promotes ser- vice engagement. Within the quantitative studies, men appeared to be accepting of talk-therapy relative to medication and responded best to treatment recommendations from psychotherapists rather than a romantic partner or doctor (Berger et al., 2013). Qualitative studies with young men focused on digital help-seeking services, and while the maintenance of confidentiality was beneficial, there was still a reported preference for face-to-face connection (Clark et al., 2018b). When engaging with informal services such as online chat forums, men seemed to be looking for immediate support with a desire for comradery, reciprocity and relatability in the form of 'second-stories;' the disclosure of personal stories to promote the understanding of shared similar experiences (Drioli-Phillips et al., 2020b).

What coping strategies are commonly associated with men experiencing anxiety disorders? Four studies (16%) suggested that men employ problem-based coping strategies to deal with anxiety. This was one of the most consistent sex-based differences within comparative samples, with women reportedly displaying avoidant or emotion based coping strategies (Byrne, 2000; Garcia-Lopez et al., 2008). Two studies (8%) (de Anda et al., 1997; Garcia-Lopez et al., 2008) with 12–17 year-old adolescent student samples described the nature of anxiety and fear provoking situations as similar between young men and women. However, young men were more likely to employ problem-based coping mechanisms, described as functional problem-solving strategies and engaging in, rather than avoiding, stressful situations. In association young men were more successful in reducing anxiety symptoms (Byrne, 2000; de Anda et al., 1997; Garcia-Lopez et al., 2008). One study (4%) depicted this change within a cross-sectional study for young women and men in grades 7, 9 and 12 (Byrne, 2000). Within the different age cohorts, young men in grades 9 and 12 had higher levels of problem-based coping and lower levels of anxiety, whereas young women had lower levels of problem-based coping at the same age and higher levels of anxiety overall. This gender differentiation in coping strategies emerged around 14–15 years of age (Byrne, 2000; Garcia-- Lopez et al., 2008). Problem based coping was also a significant predictor of anxiety symptoms in within-male samples (Jones, 1999). Both gay and heterosexual men who engaged in more problem-based coping strategies were more likely to report lower levels of anxiety overall (Jones, 1999).

Whilst problem-based coping emerged as an effective coping mechanism for anxiety disorders, no studies described the exact nature, and practical examples of these strategies. Two studies (8%) were identified within this review with results reported for interventions targeting male anxiety and sub-clinical anxiety symptoms in relation to either: the experiences of diagnosed anxiety disorders or elevated subclinical anxiety symptoms, help-seeking, coping or masculinity. Both of these interventions reduced men and young men's reported anxiety levels respectively, and simultaneously provided context for effective coping mechanisms that manage, regulate and reduce anxiety symptoms (Maddock et al., 2017; Rice et al., 2020b). These interventions included a non-gender-sensitised Mindfulness Based Stress Reduction program (MBSR; Maddock et al., 2017) and a gender-sensitised digital co-designed program (Entourage) for young people diagnosed with social anxiety (Rice et al., 2020b). The gender-sensitised moderation strategies included action-orientated, structured therapy, accessible language with minimal jargon, and normalised experiences of mental ill-health (Rice et al., 2020b). Both programs reported statistically significant reductions in anxiety symptoms. Coping skills in particular were improved through increased grounding capabilities, less ruminative cognitive patterns, ability to accept difficult thoughts and emotions and an ability to regulate attention (Maddock et al., 2017).

Is there evidence for a specific role of masculinity in men's anxiety disorders? Ten studies (40%) addressed the impact of masculinity on men's anxiety disorders. The role of masculinity within men's anxiety comprised differing masculine norms presenting as either helpful or harmful according to individual presentation and across populations. Two studies (8%; Bruch, 2007; Moscovitch et al., 2005) reported higher adherence to masculine norms was protective against increased anxiety levels for men, seven studies (28%; e.g., Berger et al., 2013; Clark et al., 2020a) indicated one or more masculine norms had a deleterious influence on reported anxiety levels and one study (4%; Pavlova and Kholmogorova, 2017) had mixed findings. Two quantitative studies reported masculinity to be negatively associated with anxiety levels for young men ($r = -0.45$, $p < .001$), suggesting as masculinity increased, levels of anxiety symptoms decreased (Mosco-vitch et al., 2005; Pavlova and Kholmogorova, 2017). Young men (18–26 years old) with higher conformity to masculine norms of toughness, in comparison to young men with low conformity, were less likely to perceive negative events as probable (Bruch, 2007). Toughness in this study was defined as the importance for a man to maintain an air of confidence, determination and self-reliance (Bruch, 2007). In contrast, higher endorsement of masculine norms: restrictive emotionality, restricted affectionate behaviour towards other men and overt heterosexual presentation, were all associated with increased levels of anxiety in young and adult men (Iwamoto et al., 2012; Jones, 1999; Pavlova and Kholmogorova, 2017).

In addition to considering the role of specific masculine norms in isolation, overall a strong adherence to traditional masculine norms had obstructive effects on young and adult men's help-seeking for anxiety (Berger et al., 2013; Clark et al., 2020b). Men with overall increased adherence to masculine norms were less likely to accept psychotherapy and medication for mental health treatment (Berger et al., 2013). They were also less accepting of informal help-seeking advice from friends, family and romantic partners (Berger et al., 2013). Furthermore, higher levels of mental health literacy were associated with positive help-seeking attitudes and behaviours for young men with anxiety; however, this relationship decreased as alignment to traditional masculine norms increased (Clark et al., 2020b). More specifically, mental health literacy had no association with favourable attitudes towards formal and informal help-seeking in men with high conformity to traditional masculine norms (Clark et al., 2020b).

Men who experienced elevated gender role discrepancy; a perceived failure to live up to societal expectations of ideal manhood, had greater discrepancy stress and social anxiety (Yang et al., 2018). The results also highlighted a complex interaction between masculinity and men's anxiety levels; higher levels of gender role discrepancy increased social anxiety levels, whilst simultaneously the experience of anxiety resulted

in a perceived cost to men's masculinity (Drioli-Phillips et al., 2020a; Gallegos et al., 2019; Yang et al., 2018). This relationship between gender role discrepancy and social anxiety was particularly prominent for younger men who were single (Yang et al., 2018). Throughout the qualitative data, men emotionally detached from their anxiety, conceptualising symptoms as external entities out of their control, "*panic attack has reared its ugly head again*" in an attempt to recover and preserve threatened masculinity (Drioli-Phillips et al., 2020a). Addition- ally, an association between anxiety, social stigma and masculinity also emerged within the included studies. Both male and female participants appraised vignettes of men with anxiety as less masculine than male vignettes without anxiety, or male vignettes of anxiety in response to a moral dilemma or contextual event (Gallegos et al., 2019).

3. Discussion

This review provides the first synthesis of the literature on men's anxiety, focusing on help-seeking, coping and the influence of masculinity. While broad in scope, the four research questions under which findings were shared were inherently inter-related and provide a comprehensive overview of the unique and multifarious challenges for men with anxiety. The current findings indicate that men can have unique constellations of anxiety symptoms and experiences of anxiety disorders, commonly defaulting to self-reliance over formal help- seeking, and managing these symptoms through problem-based coping strategies. The experience of anxiety for men, appears to transgress some masculine norms, perpetuating social and self-stigmas. Men who disclose and seek help for anxiety may transgress traditional masculine norms, wherein their panic trumps composure and self-doubt overrides idealized self-reliance and aspirations for a competitive edge.

To date, anxiety disorders have been largely overlooked within the men's mental health literature, and there remains a much-needed gap for high quality, diverse, within-men research uncovering the nuanced experiences for men with anxiety. The methodological quality of included qualitative studies was moderate to high, however the quality of quantitative studies was poor to fair, lacking well-designed, randomised and case-control methodologies. In including both quantitative and qualitative evidence within this review, the breadth, depth and nuance through differentiating and defining personal reflections and perspectives offers some beginning insights. This review extends upon previous research examining men's help-seeking (Seidler et al., 2016) and gender differences (McLean and Anderson, 2009) , and helps in conceptualising the intricacies associated with anxiety amongst men. Findings lay the foundation for future research focusing on men's anxiety and potential considerations for clinical and community-based interventions.

In the reviewed sex differences studies, women had increased levels of anxiety symptoms and disorders, a finding consistent with previous empirical research (Bourdon et al., 1988; Costello et al., 2004; Craske, 2003; Dowbiggin, 2009). Rather than merely stating reported gender differences, this review addressed calls to explore underlying mechanisms for these differences, such as gender socialisation (Craske, 2003; McLean and Anderson, 2009; McLean et al., 2011). As such, young men reporting increased anxiety severity, were more likely to report physical symptoms (e.g., headaches, loss of appetite, body tremors) and sensations of losing control instead of social disruptions, teariness and interpersonal distress compared to age matched women (Auerbach et al., 2012; Bender et al., 2012). These sex differences were largely reflective of how cognitive and emotional vulnerabilities manifest, rather than the cognitions or emotions themselves. Subjective descriptions of anxiety throughout the qualitative data reiterated that for men anxiety tended to manifest physically and centred on feelings of being out of control (Drioli-Phillips et al., 2020a). Men depicted anxiety symptoms as enduring, ever-present and sometimes life-long, leading to conceptualisations of anxiety being an external entity, or something happening to men (Drioli-Phillips et al., 2020a). Furthermore, men perceived themselves as a failure if they were unable to regain control over anxious states (Drioli-Phillips et al., 2020a; Kierski, 2014). Similar experiences of somatic sensations and subjective descriptions (e.g., feeling out of control, perceiving failure) have also been found in literature pertaining to men's depression (Apesoa-Varano et al., 2015; Heifner, 1997; Rice et al., 2019). Whilst the patterns of men's anxiety appear to be enduring, and sometimes lifelong, how men attempt to regain control over their anxiety, and whether this differs from other mental disorders such as depression is not yet known.

Rather than formal help-seeking for anxiety, young men reported a preference for self-reliance or informal sources of support (Clark et al., 2018a, 2018b). These findings are consistent with previous literature highlighting men's reluctance to seek help and reduced engagement in psychological services (Harris et al., 2015; Rice et al., 2018b). Young men's reticence towards formal help-seeking services and mental health interventions for anxiety largely stemmed from confidentiality concerns, perceived stigma, judgement by self and peers and the assumption of help-seeking being futile (Clark et al., 2018a). Young men also reported a lack of understanding and education regarding anxiety disorders, which translated into a limited awareness of treatment and help-seeking options (Clark et al., 2018a). Conversely, help-seeking resources and services that were low effort with fast access, maintained anonymity, conveyed stories of relatable lived-experiences and attempted to normalise anxiety within a masculine context facilitated help-seeking behaviour in young men (Clark et al., 2018a; Drioli-Phillips et al., 2020b). These findings are in line with previous literature which has highlighted the importance of aiming for a purposeful, early orienting and educating of men to mental health systems and treatment, providing gender-sensitive options that integrate men's strengths amidst a collaborative and transparent delivery of care (Seidler et al., 2018a).

Beyond formal help-seeking, this review also explored strategies men utilised to cope with anxiety symptoms. Overall, young men typically reverted to problem-based coping (e.g., confronting problems, searching for solutions, seeking information) while young women were more likely to rely on avoidant coping strategies (e.g., seeking emotional support, ruminating, discussing externally; Byrne, 2000; Garcia-Lopez et al., 2008). This finding is consistent with existing empirical research, generally suggesting men are more likely to confront problems, whereas women are more likely to seek external emotional support (Brems and Johnson, 1989; Kelly et al., 2008; Matud, 2004; Ptacek et al., 1994; Robichaud et al., 2003). In behavioural observation studies of boys and girls, boys were disproportionately encouraged by parents to confront stressful and fearful stimulants, whereas girls were more commonly comforted by parents when displaying a fearful or anxious response (Craske, 2003; McLean and Anderson, 2009; Stevenson-Hinde and Shouldice, 2013). Therefore, rather than immutable biological sex differences, researchers have postulated these differences in coping styles may reflect broader gender socialisation mechanisms whereby men and women are taught and reinforced overtime to cope and respond to stress and anxiety in gendered ways. Furthermore, when evaluating socialised gender roles and coping behaviour, individuals with higher levels of masculinity were more likely to employ problem-based coping, regardless of biological sex (Brems and Johnson, 1989; Dyson and Renk, 2006). This suggests a strong adherence to traditional masculine norms may impact expectant coping behaviours in men, prompting action-orientated, problem-based approaches in the face of elevated anxiety levels (Feng et al., 2019). In contrast, there may be a threshold, at which, the tendency to revert to problem-based coping exacerbates anxiety if solutions cannot be reached by men accustomed to self-remedy. Previous research evaluating stress and coping suggests problem-based coping may only be effective when stressors or situations are controllable or can be adjusted (Carver, 2011; Park et al., 2004). Therefore, employing alternate coping strategies (e.g., emotion-based, positive or meaning-focused coping) and utilising external resources such as networks of family and friends, and psychological supports, may also be important.

The experience of anxiety and the associated feelings of fear, powerless and weakness, are typically in direct opposition to socialised traditional masculine norms including courage, control and strength. This review extends upon this notion, with evidence of increased conformity to traditional masculine gender norms being associated with less severe anxiety symptoms for young men (Moscovitch et al., 2005; Pavlova and Kholmogorova, 2017). This has also been found in previous quantitative literature, particularly in studies that have utilised sex role measures such as Bem's Sex-Role Inventory (BSRI; Carter et al., 2011; Cosentino and Heilbrun, 1964; Erdwins et al., 1980). Included studies that built upon the index of specific masculine norms offered by the BSRI found toughness was considered protective (Bruch, 2007), whereas restricted emotionality and heterosexual presentation were risk factors for men's anxiety (Iwamoto et al., 2012; Jones, 1999; Pavlova and Kholmogorova, 2017). This review however highlights a dynamic and fluid concept of masculinity that can both help and heighten anxiety symptoms and disorders. Further to this, the relationship between anxiety and masculinity appears to function diversely at points along the continuum of men's adherence to masculine norms. Included studies found that high adherence to traditional masculine norms mediated the positive association between mental health literacy and help-seeking (Clark et al., 2020b) and reduced men's willingness to accept therapeutic help in the form of psychotherapy and/or medication (Berger et al., 2013; Clark et al., 2020b).

In the reviewed qualitative studies, a contradiction between maculinity and the experience of anxiety emerged. Men orientated to feelings of self-blame, failure and powerlessness when describing their anxiety, perpetuated by a perceived inability to adhere to traditional masculine norms (Drioli-Phillips et al., 2020a). Moreover, particularly for young, single men, gender role conflict increased levels of social anxiety (Yang et al., 2018). This sentiment of anxiety undermining men's embodiment of masculinity was similarly highlighted by Davies and Eagle (2010), suggesting young male counsellors reported considerable anxiety in how they would be perceived by other peers, prompting the employment of strategies to compensate for these anxious feelings such as: emphasising their masculine 'credit', and attempting to present the activity of peer counsellors as decidedly masculine. This may constitute a key point of difference in the content of concerns underlying men's anxiety in comparison to that of women. Past research has found women, in comparison to men, are more likely to ruminate and have higher levels of reported worry (Johnson and Whisman, 2013). Socialised gender norms may underlie and explain some of these differences, with worry typically identified as a stereotypically feminine trait (Robichaud et al., 2003). Robichaud et al. (2003) found that the content of worry for women and men is also different, with women more likely to worry about lack of confidence issues where as men reported higher levels of worry around financial and relationship concerns (Wood et al., 2000). In line with previous men's mental health literature masculinity may contribute to both the onset of these anxiety symptoms and increase distress as a result of experiencing symptoms (Galasinski, 2008; Ridge et al., 2011). In essence, anxiety and masculinity could emerge recursively to fuel and frame what men experienced. The impact of anxiety on masculinity was not only subjective, but socially conditioned and relational, with both men and women perceiving vignettes of men with anxiety as 'less manly' than those without anxiety (Gallegos et al., 2019). This may be due in part to limited public awareness surrounding anxiety disorders, specifically amongst men, contributing to a perceived stigma of anxiety not being a 'real' mental illness, or merely associated with common personality traits like shyness and introversion (Curcio and Corboy, 2020; Jorm and Wright, 2008). The higher formal diagnoses of anxiety amongst women also (perhaps inadvertently) signal anxiety as emasculating when embodied uncontrollably by men.

4. Future directions

It is imperative future qualitative and quantitative research employ rigorous, well-designed, randomised and case-control methodologies to move beyond cross-sectional study designs that mark the highest level of empirical evidence within the field. Furthermore, future scholarship should extend beyond essentialising research that has previously led to homogenised assertions of the association between increased masculinity, coping strategies and reduced anxiety symptomology in men. Given this review provides preliminary evidence that men may exhibit unique constellations of anxiety symptoms, future researchers must ensure inductively derived insights to men's lived experiences to inform quantitative measurement scales to accurately itemize, capture, measure and reflect men's anxiety. For example, an increased understanding of men's presenting symptomology for depression (i.e., irritability, aggression, substance abuse) has led to the development of psycho- metric measures more reflective of men's externalizing symptoms, such as the Male Depression Risk Scale (MDRS-22; Rice et al., 2013, 2020a). Within this systematic review, there was a sizeable absence of subjective lived experience research from the perspective of within-men studies. Therefore, our understanding of how men experience, seek-help and cope with anxiety is limited, without definitive answers from (or for) men themselves. Prioritising qualitative studies will help move the field beyond stereotypical biases or biological determinism, which has so far restrained the field of men's anxiety to a 'cul de sac' of sex differences ideologies (Seidler et al., 2018b). Scholarship within the field of men's depression similarly grew from a foundation of sex differences research which in retrospect laid an important foundation to then consider the gendered dimensions of men's depression. Of the included studies there was no qualitative investigation into men's description and perspective of their subjective experiences of anxiety symptoms and coping strategies. In comparison, more than 20 qualitative studies have been undertaken to identify and investigate men's experiences of depression (e.g., Apesoa-Varano et al., 2015; Chuick et al., 2009; Danielsson et al., 2011; Danielsson and Johansson, 2005; Emslie et al., 2006; Heifner, 1997). Future research surrounding men's anxiety should leverage the findings surrounding sex differences in anxiety disorders in a similar way to the field of men's depression. This would advance research to better understand the interplay between masculinity and anxiety, and to delineate the pathways between men's depression and suicide, and anxiety and suicide. Considering the association between men's anxiety and suicide is critically important to tailor upstream early intervention efforts, particularly given the high fatality rates of male suicide (Weiss et al., 2016). In addition, future research should consider how anxiety manifests and impacts men across diverse populations, including those who have and have not engaged with the mental health system. By first understanding broad effects of socialisation on the development and maintenance of anxiety on men, a more specific approach can be taken through within-males studies, allowing for meaningful change with at-risk minority population groups (e.g., racially diverse ethnic groups, LGBTQIA+ community, men with a disability) and amongst young men prioritising early intervention. Previous studies reporting a negative correlation between masculinity and anxiety symptoms may be more reflective of traditional masculinity masking these anxious experiences, rather than the absence of anxiety itself (Palapattu et al., 2006). These considerations highlight important questions for men's mental health research to consider; on a continuum how can we tap masculinity as a protective factor to reduce the likelihood of anxiety symptoms and disorders, and protect men who through strongly aligning to stoicism and self-reliance are reticent to disclose and discuss anxiety? Moreover, under what conditions do variations along this continuum of masculinity function as both a catalyst, and barrier, for seeking and engaging in mental health care? Within this review, the masculine norm of toughness, served as a protective factor for men with anxiety, acting as a barrier against negative cognitive distortions in thinking (Bruch, 2007). This may in turn facilitate effective self-coping mechanisms and attitudes towards help-seeking. In comparison, rigid endorsement of emotional restiveness and heterosexual presentation appeared to be problematic, which may in turn deter

men from seeking help, or reduce their wiliness to discuss and disclose of their anxiety (Iwamoto et al., 2012; Jones, 1999; Pavlova and Khol- mogorova, 2017). Further evaluation and exploration of which unique masculine norms, and in what contexts, may function as both helpful and potentially harmful in men's anxiety will be a useful future endeavor. In line with the work of Kiselica and Englar-Carlson (2010), researchers should prioritise exploring the positive aspects of masculinities in association with men's anxiety as a means to engage those at-risk, yet reluctant to seek help. Additionally, a growing body of evidence highlights the benefits of gender-sensitive interventions to support and engage young men experiencing mental ill-health (Rice et al., 2018a). These strategies include structured, transparent and goal-orientated interventions, language adaption (i.e., male-orientated metaphors) and building rapport and collaboration (Seidler et al., 2018a). Preliminary evidence for the gendered experience of anxiety, highlights the potential for gender sensitive interventions to bring about positive impacts for males with anxiety disorders. However, given the focused scope of this review, future systematic reviews and meta-analyses are needed to identify the broad remit of anxiety interventions for men. Developing research, clinical interventions and public health promotion from a strength-based perspective will empower and engage men and society more broadly, whilst destigmatising the legitimacy of men seeking help for anxiety.

Previous research suggests young men are more likely to conform to traditional masculine norms than older cohorts (Rice et al., 2011), and are less likely to seek formal psychological support (Clark et al., 2018a). Throughout this review, young men appeared to have a low awareness of anxiety disorders and did not believe seeking help would change these experiences (Clark et al., 2020a; Cotton et al., 2006). More worryingly though, in both experiencing and disclosing anxiety symptoms, young men perceived a cost to their masculinity and in turn expressed feelings of self-blame, failure and powerlessness (Clark et al., 2018a; Drioli-- Phillips et al., 2020a). Importantly, while prevalence rates suggest young men are diagnosed with anxiety at a much lower rate than young women (World Health Organization, 2014a) they are also less likely to disclose these experiences, orienting to self-reliance and problem-based coping rather than transgressing traditional masculine norms. Therefore, future research should consider the unique factors and challenges facing young men with anxiety disorders to encourage early intervention and prevention in an attempt to avoid more complex mental health challenges if left untreated (McGorry et al., 2014). In addition, given young men are considered the most difficult of any group to engage in psychological treatment (Seidler et al., 2020), it follows that gender-specific clinical interventions and resources are crucial to further destigmatise men's anxiety and provide a tailored response to the needs of young men specifically.

5. Limitations

Several methodological limitations should be considered when interpreting the current findings. First, there was a lack of consistency and precision in the self-report anxiety measurement scales utilised across the included studies (n = 15 anxiety scales across n = 20 quantitative studies). Included studies utilised a range of different anxiety scales to measure broad diagnoses, or trait like symptoms, negating fluctuating and acute constructs of anxiety which may be just as prevalent (e.g., sudden panic, heightened arousal and agitation). Second, not all sub-types of anxiety disorders were evaluated or considered within the included studies. Social anxiety disorder and generalised anxiety disorders were the most commonly evaluated sub-types of anxiety dis- orders, whereas panic disorder, agoraphobia and phobias were not considered. Therefore, the findings of this review can hopefully be complimented by future research to include other sub-types of anxiety disorders, in particular panic disorder and agoraphobia. Lastly, the participants included in this study were primarily Caucasian students, with non-clinical anxiety, largely recruited through schools and not engaged with mental health services. Important demographic factors for men such as race, sexual orientation, income and occupation were therefore not widely considered but would inevitably interact with distinct experiences of anxiety and health care use. This broad review paves the way for future research with greater specificity to within-male population subgroups.

6. Conclusion

This systematic review provides a synthesis of men's experiences of anxiety, focusing on help-seeking, coping and the influence of masculinity. The intricacies of men's anxiety experiences have been largely overlooked within the mental health literature; however, this review paves the way for important future contributions of empirical research. Overall, anxiety commonly manifested as physical symptoms for men, and experiences of anxiety were both enduring and debilitating. Barriers such as a limited awareness of anxiety, reluctance, skepticism and fear of stigma negated men's willingness to seek help, instead opting for self- reliance. Men tended to engage with anxiety through problem-solving rather than avoiding or withdrawing from the stressor. These experiences were also influenced by socialised gender norms of masculinity, and this relationship between masculinity and men's anxiety reflects gendered risks and benefits. Men's anxiety research has important im- plications for clinical care and public mental health promotion, particularly given the global implications of COVID-19 which is likely to further invoke uncertainty and transition, potentially heightening men's anxiety risk. Additional nuanced research exploring men's experiences of anxiety is crucial to tailor clinical interventions and improve men's mental health outcomes and suicide prevention.

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CRediT authorship contribution statement

Krista Fisher: Conceptualization, Methodology, Data curation, Writing – original draft. **Zac E. Seidler:** Conceptualization, Validation, Writing – review & editing, Supervision. **Kylie King:** Writing – review & editing. **John L. Oliffe:** Writing – review & editing. **Simon M. Rice:** Conceptualization, Validation, Writing – review & editing, Supervision.

Declaration of Competing Interest

The authors declare that they have no competing interests.

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Supplementary materials

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Chapter Summary

Chapter 2 provides a comprehensive synthesis of men's anxiety scholarship uncovering the *known* and *unknowns* of men's gendered experiences. Men can have unique constellations of anxiety symptoms and experiences of anxiety disorders (i.e., male-type anxiety phenotype), commonly defaulting to self-reliance over formal mental health help-seeking and managing their symptoms through problem-based coping strategies. Central to this is men's gender socialisation, wherein symptoms of anxiety frequently transgress some traditional masculine norms, perpetuating social and self-stigmas, particularly for young men. Albeit the sizeable absence of qualitative evidence limited knowledge about young men's subjective experiences of anxiety. Synthesizing this gap informed the design of subsequent studies (and chapters) in this thesis. Chapter 3 will now address the critical absence of qualitative research in men's anxiety scholarship, undertaking the first grounded theory study in the field.

Chapter 3: Resisting-Reckoning-Responding:

The First Theoretical Model of Men's Anxiety

Chapter Overview

This chapter outlines the development of the first theoretical model of men's anxiety: the Triple-R anxiety model. Notably, this chapter addressed the striking absence of qualitative research in men's anxiety scholarship, featuring 25 young Australian men's experiences of anxiety through a grounded theory analysis of in depth semi-structured interviews. The three phases within the Triple-R anxiety model (Resisting-Reckoning-Responding) depict the processes through which young men became aware of, understood, and responded to their anxiety over time, gilded and guided by masculinities. This study was published in *Sociology of Health and Illness* (IF: 2.90) in November 2022 and has been cited 5 times.

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ORIGINAL ARTICLE

Young men and anxiety: Resisting, reckoning and responding

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Abstract

Anxiety is the most prevalent mental disorder experienced by young men, and when untreated, is predictive of co-morbid mental health challenges and suicide. Despite the rising prevalence, there is a conspicuous absence of qualitative research to distil and theorise young men's anxiety. Twenty-five young Australian men (15-25 years), who had been diagnosed with an anxiety disorder or self-reported anxiety symptoms, took part in individual semi-structured interviews. Interviews were transcribed verbatim and analysed using a constructivist grounded theory approach. A three-process grounded theory (Resisting-Reckoning-Responding; Triple R Anxiety Model) depicted young men's experiences of anxiety, gilded and guided by their masculine socialisation. Initially, young men noticed somatic symptoms (i.e., headaches, nausea and myalgia) but did not connect these symptoms to anxiety. Avoiding anxiety (e.g., denying, distracting) proved unhelpful in the longer term and as symptoms diffused, a subsequent process of reckoning anxiety (i.e., meaning making) ensued. As young men gained insight to the life limiting bounds of their anxiety, some were prompted towards actions of acceptance, seeking help proactively and

employing strength-based adaptive coping strategies. This theoretical conceptualisation of young men's anxiety has the capacity to enhance identification and treatment efforts, improving young men's mental health outcomes across the lifespan.

KEYWORDS
anxiety, grounded theory, help-seeking, masculinity, men, mental health

INTRODUCTION

Anxiety disorders are the most commonly diagnosed mental illness in men worldwide (Kessler et al., 2010). In a given year, 11% of the global male[1] population will be diagnosed with an anxiety disorder, and more than 113 million males have been diagnosed with an anxiety disorder in their lifetime (Global Burden of Disease Collaborative Network, 2019). The onset of anxiety symptoms usually occurs in childhood or early adolescence, and young males aged 10-24 years constitute 12% of the global anxiety prevalence (5.48 million; Global Burden of Disease Collaborative Network, 2019). There is early empirical evidence of a male-type anxiety phenotype characterised by physical symptoms (i.e., muscle tension, panic attacks and headaches), chronic recurrence of symptoms and enduring out-of-control anxious sensations (Drioli-Phillips, Oxlad, Feo, et al., 2020; Fisher et al., 2021). This male-type anxiety phenotype is distinct from the current diagnostic criteria for a diagnosis of Generalised Anxiety Disorder (GAD) in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2022). As a result, anxiety disorders in some young men exhibiting male- type anxiety symptoms are likely undetected and undiagnosed. This is particularly concerning as untreated anxiety can lead to other mental health problems including depression, substance use and increased suicide risk (Nock et al., 2010).

To date, young men's anxiety is under-researched and poorly understood. Men's anxiety scholarship is largely limited to sex-differences research, juxtaposing *all* young males to *all* young females to differentiate biological determinants (Craske, 2003). Across population cohort and epidemiological studies, young males (12%) are diagnosed with anxiety disorders at almost half the rate of young females (17%; Global Burden of Disease Collaborative Network, 2019). While the factors underlying these sex differences are unclear, they have been largely attributed to distinct biological factors including genetic vulnerabilities, evolutionary factors and physio- logical reactivity (McLean & Anderson, 2009). As an example, research conducted by Eley (2001) found young females have a higher heritability estimate of fear and phobia disorders than young males. However, these biomedical approaches have been criticised by social scientists for over- looking the socially constructed nature of anxiety (Bendelow, 2009; de Courville Nicol, 2021; Rogers & Pilgrim, 2021). These perspectives sit within longstanding debates surrounding the medicalisation of mental illness, which contests the over-reliance on medical professionals (i.e., psychiatrists) and pharmacology naming and remedying everyday 'problems in living' (Szasz, 1961, p. 113). With no objective determinants to sanction anxiety disorder diagnoses and treatment, Conrad (1992, 2007) asserts that the boundary between adaptive and maladaptive distress is difficult to discern, requiring clinical decision-making in tandem with

judgements of

normative social behaviours. Moreover, the thresholds of *'normal'* anxiety are context-specific and everchanging with tumultuous social, political, economic and environmental global landscapes. Traditionally, the cultural representations of anxiety have been gendered (May, 1996), with uncertainty, irrationality and mood volatility depicted as feminised traits and, by extension, unmanly emasculating embodiments. As such, clinical diagnostic guidelines (i.e., DSM-5-TR) can negate and neglect men's experiences of anxiety due to their juxtaposition with traditional masculine norms. Masculine gender socialisation offers important contexts and nuance towards understanding men's gendered experiences (and expressions) of anxiety and the potential avenues for self-management or tailored treatment (Fisher et al., 2022).

Men in western cultures are often socialised from boyhood to behave in ways seen to be (and celebrated as) traditionally masculine, reifying norms of invulnerability, fearlessness, stoicism, emotional restrictiveness and toughness (Connell & Messerschmidt, 2005). Strict adherence to these traditional masculine norms can negatively influence mental health literacy, the willingness to seek help and mental health outcomes (Seidler et al., 2016;Wong et al., 2017). With respect to anxiety, symptoms of worry, fear and nervousness have typically been framed in direct opposition to rigid masculine norms of stoicism, self-reliance and toughness (Gallegos et al., 2019). These broad effects of masculine socialisation can create unique challenges for the development and maintenance of anxiety disorders in young men, given they report higher endorsement of traditional masculine norms than older cohorts (Cournoyer & Mahalik, 1995; Herreen et al., 2021; Rice et al., 2011). These unique challenges and experiences often include high levels of shame, self-blame and powerlessness, leading some young men to further conceal, rather than disclose their anxiety 2021 (Drioli-Phillips, Oxlad, et al., 2021).

This concealing of uncomfortable internalising anxiety symptomology, alongside shame, often accompanies drug and alcohol use, social withdrawal and risk-taking behaviour (Brownhill et al., 2002; Oliffe et al., 2012). Other men attempting to alleviate their anxiety symptoms may rely on problem-based coping strategies (i.e., confronting problems, searching for solutions, seeking information; Byrne, 2000) in efforts to claim control (and conceal) feelings of failure and self-blame (Spendelow & Seidler, 2019). Young men, in particular, are likely to manage anxiety independently, in lieu of utilising formal mental health services (Clark et al., 2018). This preference for self-reliance amongst young men has been linked to concerns surrounding confidentiality, scepticism (e.g., formal mental health services or assumptions that therapy will not help anyway), stigmas related to psychological therapy and a lack of understanding surrounding anxiety symptoms and wide-ranging help-seeking options available to them (Clark et al., 2018). While the prevalence of young men's anxiety has risen over the last 30 years (Global Burden of Disease Collaborative Network, 2019), there is a conspicuous absence of qualitative research to distil and theorise young men's experiences of *what* anxiety feels like, perspectives about *why* it manifests and *how* it impacts and lobbies actions in their lives. To address this gap, the current study explores the process by which young men experience anxiety and, more specifically, outline the course of young men's anxiety overtime.

METHOD

Study design

A constructivist grounded theory study design was utilised to generate an empirically supported theory regarding young men's experiences of anxiety (Charmaz, 2014). Grounded theory is an inductive qualitative methodology whereby social processes are derived from, and grounded

within, the qualitative data collected (Glaser & Strauss, 1967). Within this constructivist ontology, researchers deliberately consider the subjective interpretations that they impart on the data through a process of reflexivity (Charmaz, 2014). In line with social theorist commentary critiquing the over-medicalisation of anxiety, and to better explore the emotional experiences (and expressions) of anxiety for young men across all subtypes of anxiety disorders, this study adopted a transdiagnostic approach (Barlow et al., 2004). Therein, this study examined the psychological mechanisms common to all anxiety disorders (i.e., worry, repetitive thinking and fear-based emotion), rather than limiting findings to one specific biomedical subtype of anxiety disorder (e.g., GAD, Social Anxiety Disorder).

Sampling

To ensure we included young men who both had, and had not sought help through mental health services (to capture diverse anxiety experiences), participants were recruited through the community (i.e., mental health-related social media and organisation websites) and via clinical liaison across two headspace early intervention centres in the north-western Melbourne region (McGorry et al., 2007). Young men were eligible to be included in the study on the basis of the following: (i) self-identify as male; (ii) 15-25 years old inclusive; (iii) signed informed consent (including parental consent for participants under 18 years); (iv) able to converse in English and (v) a score of 6 on the Overall Anxiety Severity and Impairment Scale (OASIS; Norman et al., 2006) indicating 'moderate' anxiety (Bragdon et al., 2016).

Recruitment

Young men within the community were recruited via a youth mental health website, social media (Twitter, Facebook and Linkedin), posters and flyers. Recruitment materials invited study participation by asking: *'Are you a young man experiencing anxiety?'* Potential participants were then directed to a study website (hosted by Qualtrics) to confirm study eligibility, provide informed consent, parental consent (if applicable), contact details and demographic information to complete the OASIS scale.

Young men were also recruited via clinical services at two headspace centres in north-west Melbourne. Potential participants were referred to the study by clinical staff who identified their current young male clients experiencing anxiety or were identified by a researcher who screened electronic medical records at headspace centres for current young male clients experiencing anxiety (in intake and access departments specifically) between January and March 2022. Following eligibility confirmation from the young person's treating clinician, the first author contacted the young person to gauge interest in study participation and invite them to visit the study website for further information. After study consent was received by the study team, the participant was contacted to schedule a 60-min virtual video interview.

Procedure

The first author conducted all 28 interviews (25 individual and three-member checking interviews) between October 2021 and March 2022. Participants provided verbal consent at the beginning of the interview to having their interviews audio-recorded (via Dictaphone) and transcribed and to ensure they had an adequate understanding of study aims, participation requirements and withdrawal rights. Interviews were semi-structured and guided by an interview schedule (see supplementary file 5)

exploring topics of anxiety symptoms (what these looked and felt like to the young man), the impacts and chronicity of these experiences as well as questions surrounding how they coped with anxiety when **it** arose. The interview schedules were developed in consultation with a lived experience of anxiety working group, comprising three young men. The interviews ranged in time from 25 to 70 min *(Mtime* = 45 min; see supplementary file 6 for extended procedure).

Data analysis

Data analysis occurred in three over-arching phases in line with constructivist grounded theory approaches (open, focused and theoretical coding; Charmaz, 2014). NVivo 12 Plus was used for data storage and coding in addition to reflexive journaling, memoing, mind maps, sketching and storyboarding (see supplementary file 7). Data collection and analysis occurred concurrently, and analyses began as soon as the interview transcripts were received (see supplementary file 6 for extended data analysis).

Firstly, the first author performed line-by-line coding on all transcripts and consulted other study team members weekly to discuss the codes and labels that were emerging (i.e., long-term onset, physical symptoms, definition of anxiety, co-morbidities). Focused coding involved study team members reviewing the list of initial codes to reorganise and recategorise codes (i.e., how anxiety changes overtime, severity and impact of anxiety, anxiety being a hidden experience) into overarching categories (i.e., resisting anxiety, reckoning with anxiety, responding to anxiety). Data collection and analysis took place until data saturation was reached at 25 interviews. Lastly, for theoretical coding, all co-authors met to discuss and consider the relationships between categories and ensure the theory was grounded in the data and conveyed via gerunds to signal the basic social processes comprising the findings.

Ethical considerations

Ethics approval was received from a Human Research Ethics Committee to conduct the study. All participants were offered an opportunity to debrief at the conclusion of the interview and given information detailing the mental health services available to them (see supplementary file 6 for extended ethical considerations).

RESULTS

Thirty young men consented to take part in the study. Of these, 25 participants were interviewed (with three participants partaking in secondary member-checking interviews for the purposes of data validation; Birt et al., 2016). Five participants were unable to be contacted following consent. Participants were aged between 16 and 25 years of age (M = 22.2 years, *SD* = 2.71), and most 20 (80%) identified as heterosexual and 20 (80%) had previously sought help through mental health services. Thirteen participants identified as Australian/Caucasian (53%), six were Asian (24%), five were European (20%) and one was African (4%). Most participants reported moderate to severe levels of current anxiety symptoms (OASIS *M* = 11.6, *SD* = 2.53; see Table 3.1).

Overview

While the onset of anxiety symptoms occurred at different stages of childhood or adolescence, all participants described being unaware of their anxiety initially amid noticing physical symptoms

TABLE 3.1 Demographic variables for participants.

Variable	Participants *n* (%) or mean (SD) (*n* = 25)
Gender	
Men	24 (96)
Transgender male	1 (4)
Age in years, mean (SD)	22.2 (2.71)
OASIS total score, mean (SD)	11.6 (2.53)
OASIS scoring category	
Moderate (6-10)	9 (36)
Severe (11-15)	15 (6)
Extreme (16-25)	1 (4)
Sexual orientation	
Heterosexual	20 (80)
Gay	3 (12)
Bisexual	1 (4)
Queer	1 (4)
Years of therapy	
No therapy	5 (20)
0-5 years	9 (36)
5-10 years	4 (16)
10-15 years	1 (4)
15+ years	3 (12)
Help-seeking status	
Has sought help through mental health services	20 (80)
Has never sought help through mental health services	5 (20)
Ethnicity	
Australian	13 (53)
Asian	6 (24)
European	5 (20)
African	1 (4)
Location of residence	23 (92)
Metropolitan Regional	2 (8)

such as headaches, nausea, chest pains and myalgia (muscle tension). Experiencing these symptoms was distressing and uncomfortable, and as a result, the young men recalled avoiding (disregarding, distracting, denying), rather than acknowledging the realities of their anxiety experiences (i.e., resisting anxiety; Figure 3.1). Despite the avoidance of anxiety providing some temporary relief against intensifying physical symptoms, the energy required to maintain this veil of distance and denial, both from themselves and from others, was unsustainable and symptoms grew in severity, oftentimes suddenly exacerbating in contexts that had previously been non-threatening (i.e., diffusing anxiety; Figure 3.1). As the presence of anxiety symptoms grew, invoking more debilitating psychological pain, participants embarked on an introspective and somewhat retrospective search

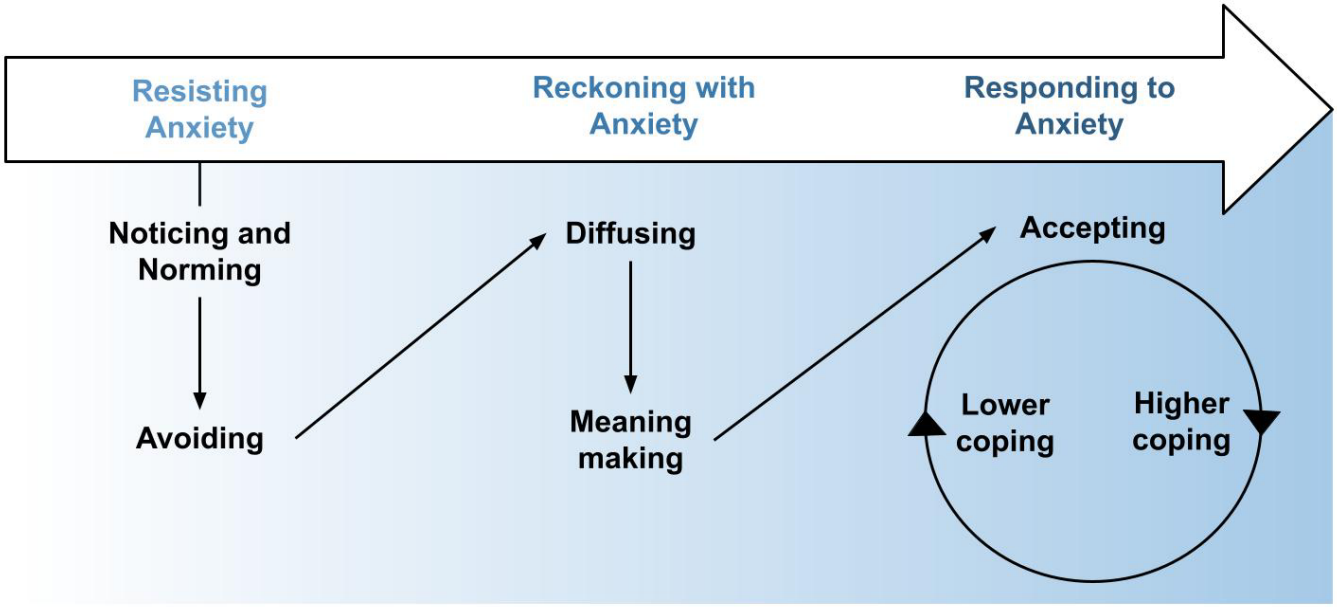

FIGURE 3.1 Resisting-Reckoning-Responding: Triple R Anxiety Model. The processes are differentiated and defined and should be understood as interconnected rather than linear in their linkages.

for answers to try and make sense of their anxious experiences and what was happening to them (i.e., meaning making; Figure 3.1). As some young men reached clarity surrounding the overarching functioning and bounds of their symptoms, they integrated these discursive anxiety narratives as a core component of their lives and self-concept (i.e., accepting anxiety; Figure 3.1). This allowed them to renegotiate and reframe the traditional tenets of their developing masculine and cultural identities, overcoming norms of stoicism, independence and emotional restrictiveness which conflicted with their anxiety experiences. Outwardly, the young men also became more open to and accepting of the peer-based and professional help-seeking, acknowledging the importance of talking to others.

Resisting anxiety

Noticing and norming

Participants most commonly stated that their anxiety symptoms were first noticeable in early adolescence (aged 13-16 years). Even for those young men who reported later onset of symptoms, they still recalled, or had been told of, their anxious predisposition. This included difficulty distancing themselves from parents, shyness, specific phobias, tearfulness and catastrophising as a child. Twenty-one-year-old Liam assumed that he had been experiencing anxiety for a lot longer than he realised as he had normed anxiety as an engrained personality trait:

> I can't remember living without it. I've always kind of said as a joke that "I bit my fingernails in the womb", but I doubt that. Just as long as I can remember existing, I remember feeling anxious.
>
> (Liam, 21 years)

Participants described having limited awareness of their anxiety symptoms initially yet noticed physical responses to new situational stressors (e.g., presenting in front of a class, an important sports game on the weekend or meeting new people). These early physical symptoms were interpreted as normative even though they left participants feeling uneasy, confused and

disorientated, meaning these salient recollections of early discomfort were particularly prominent. Twenty-four-year-old Matt reflected that he felt so nauseous he could not move some mornings or get out of bed, *'every time I took a step further in getting ready...it was like I needed to throw up'*. Participants framed these strange and overwhelming somatic symptoms (e.g., headaches, nausea, chest pains, sweats and body aches) as burdensome, embarrassing and inconvenient yet they did not have language to express them:

> I think it's been around a lot longer than I've been able to identify it. So, at some points, I think around early high school, around year seven, I was feeling very nauseous all the time and feeling very worried, just unnecessarily, even when I couldn't really pinpoint a reason as to why I would. And I didn't really have a term for it at the time...
>
> (Matt, 24 years)

Significant life events that precipitated change, exposure to trauma or stress in the young man's life sometimes marked the inflection point to which anxiety onset could be traced. This was particularly relevant for minority (i.e., ethnic, sexuality) young men who faced significant discrimination and marginalising conditions. Twenty-one-year-old Jay referenced bullying at school as the catalyst for his anxiety symptoms, and twenty-three-year-old Yuan recalled his parent's separation as particularly anxiety-inducing. Reflecting on the onset of his anxiety, twenty-five-year-old Said felt that his anxiety manifested in tandem with contemplating his identity as a gay man. Said recalled feeling a sense of failure and struggling with rejection:

> I think my anxiety is all because I have a lot of ... I'm actually gay, homosexual. So, a lot of my anxiety is to do with my identity, I would say. I was struggling a lot with it when I was growing up, especially feelings of inadequacy, feelings of rejection and things like that.
>
> (Said, 25 years)

Other young men found it difficult to identify antecedents that may have contributed to their anxiety as it seemingly came *'out of the blue'* for twenty-four-year-old Charlie who described a *'confusing and disorientating'* sudden onset of anxiety. Charlie expressed this unpredictability was due to a paucity of language to process and accurately describe what was happening to him. Without any prior knowledge of, or experience with mental ill health before the onset of his anxiety symptoms, twenty-four-year-old Adi did not reconcile his experiences with a mental illness. Adi initially saw anxiety as something at arm's length, affecting *'other people;* and peripheral to himself:

> So I first thought like, "Oh my God, what is this?" Because I had no idea about any mental illnesses at that age, I suppose, as well. I remember my heart beating really fast one time, probably the first time, heart beating really fast and my attention turned towards it. And then I was like, "Okay, what's happening?"
>
> (Adi, 24 years)

Avoiding anxiety

When the young men reflected on their lack of understanding and awareness at the onset of anxiety symptoms, the influence of gender socialisation was especially prominent. Young men's descriptions of anxiety were often juxtaposed against traditional norms of masculinity *'anxiety is*

seen as you're weak'. Anxiety was described by most participants as incongruous with traditional masculine norms, stereotyping anxiety as an unmanly, emasculating experience, threatening their position within masculine hierarchies. Twenty-one-year-old Sun spoke of social expectations to embody traditional masculine norms such as *'being physically and mentally strong'* and achieving academic success to get into university and then get a good job. Twenty-five-year-old Tim expanded on this, explaining that he was particularly self-conscious around male peers in high school, a pattern that exacerbated his already prominent anxiety and deteriorating self-esteem. Twenty-one-year-old Oscar triaged his uncertainty for fitting with masculine norms and other men as the trigger for his anxiety:

> I think masculinity is the main topic or the main umbrella, and then anxiety falls underneath that, rather than it being on the contrary because I think it all starts from the top in the way that men talk, act, speak, perceive other people.
>
> (Oscar, 21 years)

The perceived invisibility of anxiety amongst male role models also had considerable influence on the young men's developing masculine identity, and by association, their preconceptions, interpretations and attitudes towards anxiety. Twenty-four-year-old Jack recalled constantly comparing himself to the apparent *'fearless'* older men in his life and how that induced feelings of failure, loneliness and confusion:

> The male figures in my life would be very... Not neurotic at all and not be worrying or even identified as dealing with anxiety. So it does feel a bit like, well, I'm different in this way from my father or from my grandfather or my grandparents.
>
> (Jack, 24 years)

Initially, Adi normed anxiety symptoms as a masculine edge, reflecting a cultural idiom that some anxiety is good for men. This streams and norms anxiety as *'something everyone experiences'* and as such when individual men do not manage *their* anxiety, they effectively come up short of expectations. Twenty-four-year-old Aarun reasoned that he did not and couldn't acknowledge his anxiety for a long time because he dismissed these symptoms as normal:

> I thought it was normal, or I thought it'd go away... I think it's something that every- one has. Everyone's been anxious...
>
> (Aarun, 24 years)

Social structures and culminating masculine pressures beckoned young men to avoid these physical symptoms (and anxiety labels) as they wanted to pass as mainstream and normative, rather than marginalised by debility states. Young men initially who found it difficult to describe or understand the distress they were experiencing yet recognised an internal *'instinct to flee'* as their first reaction to anxiety. Sixteen-year-old Jarred expressed uncertainty as to the origins of his need to *'get away from his anxiety'* reflecting how:

> I didn't really know it was anxiety. I just went along with it, thinking that... I didn't really think, because I was trying to figure out how to flee away from the problem,

> more than actually realize the problem itself...So I do not think of anything else, but to just get away from that.
>
> (Jarred, 16 years)

For twenty-two-year-old Rohan, admitting to himself that anxiety was real and deserved attention was so frightening that finding avenues to lie to himself was a safer option. He detailed the ways in which he tried to justify and rationalise responses like *'vomiting every morning in the shower;* as the cause-effect repercussions of *'having off yoghurt for breakfast'.*

Twenty-four-year-old Aarun recalled avoiding anxiety by distraction, isolating himself from others and binge-watching movies in periods of high anxiety. Other participants described distracting themselves from anxiety through increased alcohol and drug use, withdrawing from social situations, and engaging in self-harm behaviours. Twenty-five-year-old Tim reflected how self-harm afforded him some release and temporary respite:

> And the anxiety was just so overwhelming that the self-harm was just a way to release a lot of pressure building up and it would just feel good in the moment. But then long term it didn't feel good.
>
> (Tim, 25 years)

Some participants also spoke of de-identifying with symptoms, placing the disconnect between their anxious experiences and self-concept at the heart of their inclination to avoid anxiety. Twenty-two-year-old Rohan recalled suspecting anxiety, but continued to avoid these symptoms, reassuring himself: *'Oh no, it's not me. I'm not an anxious person. I pride myself on being confident'.*

Twenty-five-year-old Callan expanded on Rohan's sentiments, grounding his avoidance of anxiety in shame, perpetuated by internal expectations that he should be able to manage his anxiety and conform to masculine norms. Virtues reifying masculine suffering, particularly in the context of anxiety, induced feelings of failure and weakness in Callan, as he recounted:

> I do feel like as a man, people expect you to be brave and strong and put together and able to push through things. So depending on who I'm around and how well I know the person, I do feel like I need to pull myself together and be calm sometimes when I'm absolutely not.
>
> (Callan, 25 years)

Whilst avoiding anxiety provided some short-term respite for young men, many described the limits to which they were able to maintain this concealment both from themselves and from others. Participants described how avoiding anxiety, oftentimes, intensified symptoms and infiltrated broader social and occupational functioning. Twenty-four-year-old Jack spoke to the broad impacts on his world and an increasing difficulty *'getting and maintaining work or building friendships'.* Jack even foreshadowed future implications of his anxiety, speculating that he had probably lost the opportunity to further his education after high school as he had lost confidence in his ability to adapt to new situations, socialise with others and adequately manage stress associated with completing assignments, exams and placements. For twenty-three-year-old Harry, anxiety had a significant impact on his romantic relationship. As the negative impacts on his girlfriend became more apparent, Harry became angry, irritable and withdrawn, eventually acknowledging his anxiety required intervention:

> My girlfriend was like, "You have to go see someone..." because like it's...a roller-coaster, which it is like, it's just, sometimes I'm fine and other times I'm, yeah, down.
>
> (Harry, 23 years)

As the contexts and consequences of the young men's anxiety symptoms started to encroach on their everyday and relationships, the visibility and impact of anxiety on loved one's often led to a moment of clarity. For many, this motivated them to grapple with the realities of their experiences.

Reckoning with anxiety

Diffusing anxiety

With limited understanding of anxiety, the narrative of young men's experiences was framed by shame (arising from a perceived failure to meet masculine expectations) and uncertainty (lacking the language to describe their symptoms). Participants described severe symptoms or in their words, *'breakdowns'* which included emotional outbursts, uncontrolled crying and panic. For twenty-four-year-old Aarun, these were frightening and confronting, and he described feeling untethered from his own emotions. Aarun felt that he was at the mercy of his anxiety and directly called out his inability to control or identify symptoms as scary:

> It wasn't until I had a full emotional response that I could even acknowledge that it was bad, and it just didn't make sense. It was quite scary. And just thinking about what caused it, it was nothing and everything at the same time. So, that was really confronting.
>
> (Aarun, 24 years)

In conjunction with the increasing frequency and severity of anxiety symptoms, the contexts eliciting young men's anxiety became more diffuse. Seventeen-year-old Felix remembered that his anxiety symptoms initially manifested when he was playing rugby on the weekend, but this eventually expanded to conversations with his coaches off the field and teachers in the classroom and then to *'catching up with my friends on the weekend'*.

With this diffusing process, many young men looked back to their early childhood and adolescent experiences to seek answers for *where* it arose and *why*. For twenty-four-year-old Dom, these recollections were characterised by sadness and loss as he described difficulty socialising with others because of his anxiety and the insurmountable ways his life would have been different had he been able to identify his anxiety earlier:

> I've been able to go through all of school and uni and everything and not address it, and still come out okay. But what would my life have been if I was able to get this treated earlier? I don't know. I might have a completely different social life if I was able to identify this social anxiety early enough or try to get treatment or even just acknowledge it.
>
> (Dom, 24 years)

Meaning making

As the young men became more aware of their anxiety, their internal dialogue expanded. They developed labels and language for their experiences, internally questioning symptoms as they arose, asking: *'What is this?' 'Why am I feeling like this?'* and *'What can I do to help myself?'* Twenty-four-year-old Matt expressed that by labelling his experiences as anxiety, and he was finally able to identify and familiarise himself with symptoms, reassuring himself that anxiety will *'come and go in waves'*. Anxiety, as an epistemic tool, may have allowed some young men to reinterpret their related experiences, challenges and changes differently. Eighteen-year-old Andrew started to delineate between his anxiety and depression, describing anxiety as a physical embodiment of distress, equating symptoms with hyperactivity; *'anxiety was just more of a real, visceral feeling'* in comparison to his depressive symptoms that felt more like a *'looming black cloud or being stuck in the mud'*.

Participants also described a variety of extrinsic and contextual factors that contributed to them becoming aware of their anxiety. For twenty-three-year-old Harry, the intervention of a school counsellor *'reaching out for a chat'* provided a safe and supportive space which encouraged him to finally disclose what he had been experiencing, breaking through the self-protections he built by concealing his anxiety. Twenty-one-year-old Sun reflected that as his friends disclosed their anxieties to him around school performance, university and career prospects, he was able to identify similar symptoms in himself. Sun recalled that as his friends shared their insights surrounding anxiety, it motivated him to search for answers to his own anxiety experiences online:

> So basically my friends have the same, they do feel the same way sometimes.....So I ask my friends and they say it's anxiety and stuff like that. So after that I started researching and learning more about it.
>
> (Sun, 21 years)

Through this extensive journey to better understand the onset of their anxiety, and the ways in which it functioned and fluctuated, the young men started to see anxiety as an important part of their lives and identity.

Responding to anxiety

Accepting anxiety

As the realities of participant's anxiety experiences started to crystallise over time, some described feeling helpless as they conceived the possibility of a life-long course of anxiety over which they would have little control. For some young men, this powerlessness over the constant *'push, pull'* of their anxiety led them to ultimately accept, rather than resist, the inevitability of these ongoing anxiety experiences. Twenty-four-year-old Adi described feeling defeated and hopeless amid years of ineffectual therapy and medications:

> I think it was just desperation or fatigue even of just, for so many years and talking to so many different GPs and therapists and different medicines, I was just like, "Okay, I'm sick of this."
>
> (Adi, 24 years)

For Adi, conceding to the possibility of ongoing and unmanageable anxiety symptoms seemingly came as a last resort, following unsuccessful quests for curative effects to end his anxiety symptoms completely. However, other young men described making an intentional or conscious decision to move forward to focus on effectively managing symptoms as they arose. Twenty-two-year-old Oscar spoke of focusing on and leveraging the positive aspects of his anxiety to his advantage, stating that although anxiety still had a significant impact on his friendships and ability to work effectively, it had also compelled him to feel more grounded in times of calm:

> There are days where I just feel really bad about myself and I feel really down and I have to acknowledge that...But at the same time, it also keeps me grounded to kind of appreciate when I am feeling really good. And I really take that on, that when I'm just feeling really positive and I'm don't feel as anxious, I appreciate that a lot more.
>
> (Oscar, 22 years)

Integrating anxiety as an important part of their self-identity, some young men described confronting and challenging restrictive masculine and cultural ideals that had led them to suppress their anxiety symptoms in the first place. Young men from diverse backgrounds became increasingly aware of the burden and impact of significant cultural expectations and familial pressure to deny their anxiety. Twenty-five-year-old Ethan felt he had to hide his anxiety from others and recounted a conversation with his mother, where she told him not to disclose or discuss his anxiety with others because: *'you just don't know how they are going to react after hearing all of these things'*. Twenty-three-year-old Li explained that due to his upbringing in a *'very traditional Asian household...[where there wasn't much emphasis on, "It's okay to be open," and all that type of stuff,'* finally self-disclosing his anxiety, required him to transgress those cultural and masculine norms. This left Li feeling uncomfortable, uncertain and untethered, eroding his sense of belonging and identity. In moving overseas and broadening his social connections, twenty-one-year-old Sun found the freedom to finally acknowledge the challenges he was facing and eventually discuss these challenges with trusted confidants:

> [It was]...only when I left my home and went to study overseas, that I actually started to become more independent and explore myself a bit more, that I started to find avenues to address this issue, anxiety issues, and seek counsellors and things like that.
>
> (Sun, 21 years)

In addition, some young men faced significant difficulty in reconciling anxiety with key tenets of their developing masculine identity (such as fearlessness, toughness and stoicism). For these young men, reframing and renegotiating traditional masculine norms enabled them to overcome the internalised shame and feelings of failure associated with their tendency to suppress anxiety. Twenty-five-year-old Jarred described feeling compelled to *'correct the record;* as the assumption that men do not experience anxiety did not ring true to him, or accurately reflect his anxiety experiences. Nineteen-year-old Mohammed explained transformative reframing where he began

to equate toughness with being open about his anxious experiences. For Mohammed, vulnerability and resilience became normative connections for help-seeking, expressing his anxiety with others and developing a repository of adaptive coping strategies levering his ongoing and effective self-management of anxiety:

> I agree you have to be tough in life, and you have to get up, and all that kind of thing. But part of that is just being brutally honest and open with how you're feeling. So I think really being a man or being a tough person is about just being straight to the point, being blunt and not hiding anything.
>
> (Mohammed, 19 years)

Self-management and coping strategies

Internally, as participants envisioned anxiety as a real and unavoidable part of their self-concept and future, they accepted ongoing informal and formal support including mental health services, intimate partners, friends and family members. They also sought out adaptive coping strategies to better manage symptoms in periods of heightened anxiety. For twenty-five-year-old Callan, legitimising anxiety within himself was the pivotal turning point, encouraging him to seek support through trusted confidants and confide in them about how he was feeling:

> But over time, I just know that it is okay to be sad. It is okay to be worried, as a man. It's okay to have a down moment in your life, and it's okay to disclose it with some- one that you trust.
>
> (Callan, 25 years)

Alongside disclosing and discussing their anxiety with others, the young men spoke of trial- ling coping strategies to effectively manage their anxiety symptoms. Twenty-five-year-old Safir explained that *'rather than just letting it be, "oh fuck, I've got anxiety". What do I do? What I do?'* he embarked on a self-initiated exploration to find adaptive ways to move forward, and *'sit with'* these heightened symptoms of anxiety. The young men detailed a variety of strategies that had been helpful and unhelpful in managing their anxiety symptoms. As shown in Table 3.2, most participants felt that the severity of their anxiety symptoms determined the effectiveness of these coping strategies. Helpful strategies included journaling, physical exercise, being outdoors, and socialising with others.

Twenty-four-year-old Aarun reflected that while he had developed a repository of adaptive coping strategies, they were ineffective for alleviating severe anxiety symptoms and as such he sometimes resorted back to avoiding his anxiety (i.e., resisting anxiety) to temporarily alleviate mounting distress. Twenty-four-year-old Adi stated that he tried very hard to *'catch'* his anxiety before it becomes too severe. Adi explained that he imagined his anxiety on a 1-10 scale, and in detecting small fluctuations in anxiety symptoms as early as possible, some strategies such as meditation, effectively restabilise his anxiety back to *'a two out of 10'*. Rohan, a twenty-two-year- old similarly confirmed;

TABLE 3.2 Coping strategies.

For low to moderate anxiety symptoms	
Helpful coping strategies	Unhelpful coping strategies
Being outdoors	Binge eating
Playing sport/exercising	Increased drug and alcohol use
Journaling	Negative self-talk or criticism
Grounding and breathing exercises	
Talking to others	
Listening to podcasts/music Socialising	
Gaming	
Problem-solving/practical goal setting	
Challenging anxious thoughts Therapy	
Noticing early symptoms	
Meditation	
For moderate to severe anxiety symptoms	
Helpful coping strategies	
Breathing exercises Talking to others	
Distraction (gaming, listening to music, socialising)	
Therapy	
Medication	

> The best thing for me is trying and trying to create the conditions upon which I do not actually experience this sensation in the first place.
>
> (Rohan, 21 years)

In identifying the limits with which they could accept, and effectively cope with their anxiety, some young men expressed the importance of *'staying on-top'* of their anxiety, whereby they tried to identify and intervene with symptoms as early as possible.

DISCUSSION

Despite anxiety disorders being the most prevalent mental illness for men worldwide, this was the first qualitative study to explore and theorise the gendered dimensions of young men's experiences of anxiety. Study findings were used to develop a discrete, three-process grounded theory (Resisting-Reckoning-Responding; Triple R Anxiety Model). This theory situates young men's experiences of anxiety within their broader cultural contexts and highlights the ways young men's social positions (i.e., their gender, age and ethnicity) frame their experiences. Resisting, Reckoning and Responding were differentiated and defined processes that should be understood as interconnected and active, rather than linear in their linkages. The pathways that young men transitioned between processes, and how they interacted with, and responded to their symptoms within and across each process varied, reflecting participants' diverse social contexts. Some

young men remained locked in discrete processes (i.e., resisting anxiety) over a long duration or described reverting back to earlier stages of the model when their coping thresholds were exceeded (i.e., lower coping; Figure 3.1). Our study affords qualitative evidence from a diverse sample of young men to reflect the ways biomedical conceptualisations of anxiety (including stereotypical biases and biomedical determinism) interrelate with masculinities to shape the discursive narratives young men cultivate to comprehend and norm their anxiety experiences.

Homogenised stereotypes characterising anxiety as a hyper-feminine state or pathologised sex trait influenced young men to downplay and deny the severity of their anxiety symptoms initially (i.e., psychosomatic symptoms, shame). For some, dismissing anxiety symptoms proceeded and somewhat determined their level of avoidance and delayed reckoning. Young men who had sought help for anxiety also tended to overestimate the potential for psychotherapy and psychopharmacology to cure and therefore end their anxiety symptoms. de Courville Nicol (2021) references a contemporary *age of anxiety,* whereby our cultural landscape is an 'empowerment-based moral problematisation of widespread emotional in/security' driven by self-help cultures and moral entrepreneurship situated in the turmoil of COVID-19. Moreover, the complexities of modern societies (with increasing social, cognitive and emotional demands) render us normatively and collectively more anxious than ever, in increasingly new ways, with greater expectations of and over-reliance on clinical interventions (de Courville Nicol, 2021). In line with this, for participants in our study, medical terminology and a diagnosis (or self-diagnosis) of an anxiety disorder validated and legitimised their distress, allowing these young men to transcend social (external) and self (internalised) stigmas. Similarly, Clark et al. (2020) reported social and self-stigmas were more commonly directed towards sub-threshold anxiety symptoms, in comparison to clinically diagnosed anxiety amongst young men. Externally, young men also recalled feeling sad or frustrated in response to health professionals, friends and family members downplaying their debilitating anxiety symptoms as normal, or something that they would (and should) overcome. The medicalisation of anxiety in some ways allowed young men to transcend self-blame, exonerating them of culpability for their symptoms and failures to manage (or conceal) those debilitating states. Pathologising anxiety, particularly in the conflation of avoiding anxiety with masculine virtues of suffering or garnering competitive edge, may release young men locked in the resisting anxiety process who are denying its impacts and are sceptical of treatment benefits.

Early evidence in men's anxiety scholarship has suggested a distinct male-type anxiety phenotype, characterised by physical symptoms (i.e., body pains, panic attacks and headaches; Drioli-Phillips, Oxlad, LeCouteur, et al., 2020) which may not be identified with current diagnostic guidelines such as the DSM-5-TR (American Psychiatric Association, 2022). This finding was corroborated by the young men in this study and has important implications for the validity of anxiety prevalence rates, which have consistently found young men are diagnosed with anxiety disorders at a significantly lower rate than young women (World Health Organization, 2014). This reinforces the importance of developing quantitative measurement scales and clinical diagnostic criteria (such as the Male Depression Risk Scale in men's depression; Rice et al., 2013), that adequately capture the presence of anxiety in young men with limited literacy and language surrounding their symptoms and those presenting with unique constellations of symptoms.

Acquiring comprehensive literacy and explicit language was the crucial tipping point that enabled young men to eloquently describe and identify the functioning of their anxiety symptoms. Echoing the findings of Meechan et al. (2021) and Drioli-Phillips, LeCouteur, et al. (2021), the young men in our study understood their anxiety through the lens of their social world, which was inextricably linked to masculinities relating to their gender, age and cultural norms. Participants highlighted a perceived invisibility of anxiety amongst their prominent male role models

(i.e., fathers, grandfathers, friends and brothers), which may in part account for some young men's lack of understanding and education around anxiety disorders. Public health campaigns and resources conveying lived experience stories and testimonials of anxiety within a masculine context, may be an effective means of challenging and counteracting harmful and reductive masculine norms sanctioning masculine status on the absence of anxiety. Further, campaigns and resources centred on the gendered dimensions of young men's anxiety symptoms, impacts and treatment pathways for anxiety may educate and empower them to identify symptoms and unlock their capacity for adaptive responding.

As the young men in our study detailed the course of their anxiety, many described starting to accept, rather than avoid their anxiety symptoms. The core principles of acceptance described by the young men included accepting the volatile and sometimes chronic nature of symptoms, renegotiating and reframing parts of their masculine identity to encompass anxious experiences and becoming more open to, and accepting of, intermittent periods of professional and peer-based support. The importance of acceptance within young men's experiences of anxiety aligns with the guiding principles of Acceptance and Commitment Therapy (ACT), a prominent and effective psychotherapeutic approach in the treatment of anxiety disorders (Hayes, 2004). Practitioners working with young men who experience anxiety should emphasise gender-sensitive acceptance-based practices as an effective means for improving men's understanding of symptoms and capacity to manage heightened episodes of anxiety. Extending upon existing evidence (Eifert et al., 2009), principles of acceptance-based therapies that focus on observing and accepting heightened episodes of anxiety as something that will come and go appear central to young men's adaptive coping, enabling them to manage anxiety symptoms long term rather than searching for a quick fix. Complementary to this, gender-sensitive interventions (i.e., structured, transparent and goal-oriented interventions for men) have been shown to support and engage young men experiencing mental ill health, building rapport and collaboration between the young man and their clinician (Seidler et al., 2018).

Limitations

Findings of this study should be considered in light of several limitations. This study sample encompassed young men at different stages of Resisting-Reckoning-Responding. Therefore, an individual's awareness, understanding and acceptance of anxiety reflect diverse and fluid subjectivities. The cross-sectional design of a temporally framed grounded theory is limited to single data collection points for most participants. Therefore, further research is needed to explore different processes (i.e., noticing and avoiding anxiety) in real-time and amongst young men with emergent awareness and anxiety literacy. Despite broad recruitment efforts (i.e., help-seeking and non-help-seeking young men), most participants within our sample had sought help through mental health services and identified as heterosexual and Caucasian. Whilst between group comparisons were beyond the scope of this study, minority men, particularly gay and bi-sexual young men will likely have unique experiences given they are more commonly diagnosed with an anxiety disorder in comparison to heterosexual men and face unique challenges surrounding the pressures of gender socialisation and masculine norms (Pachankis & Bernstein, 2012). Lastly, our study adopted a transdiagnostic approach (Barlow et al., 2004) to consider the psychology mechanisms underlying anxiety, rather than limiting findings to one specific anxiety disorder (e.g., GAD, Social Anxiety Disorder). While most subtypes of anxiety disorders are highly comorbid, specific anxiety disorders may differ from one another as discrete processes within the Triple R model. Further research is needed to adopt and test this model across all subtypes of anxiety disorders.

Conclusion

Findings from this study highlight the gendered ways anxiety symptoms frame and infiltrate young men's lives. Our study offers the first grounded theory for young men's anxiety that anchors empirical narratives to thickly describe the challenges and potential pathways within this poorly understood phenomenon. Recognising key points for intervention within each discrete process of Resisting-Reckoning-Responding is critical for young men's adjustments, and the prevention, treatment and self-management of anxiety and by extension sustained life quality in the longer term. A nuanced and ongoing consideration of men's anxiety is time-critical given the prevailing global pressures associated with COVID-19 including economic recession, altered and unstable work opportunities and the estrangement of certainty that accompanies those restrictions and espoused post-pandemic freedoms, the sum of which are likely to increase men's anxiety risk.

AUTHOR CONTRIBUTIONS

Krista Fisher: Conceptualization; Data Curation; Formal Analysis; Funding Acquisition; Investigation; Methodology; Project Administration; Writing-original draft. **Simon M. Rice:** Conceptualization; Formal Analysis; Investigation; Methodology; Project Administration; Supervision; Writing-reviewing and editing. **John L. Oliffe:** Formal Analysis; Investigation; Methodology; Supervision; Writing-reviewing and editing. **Kylie King:** Formal Analysis; Supervision; Writing-reviewing and editing. **Zac E. Seidler:** Conceptualization; Formal Analysis; Investigation; Methodology; Project Administration; Supervision; Writing-original draft; Writing-reviewing and editing.

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CONFLICT OF INTERESTS STATEMENT

The authors declare that they have no competing interests.

DATA AVAILABILITY STATEMENT

The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

Ethics approval was received from the University of Melbourne Human Research Ethics Committee (#2021-22091-22006-5) to conduct the study.

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ENDNOTE

[1] In the current manuscript, when referring to sex and sex-differences research (i.e., research that has classified participants based on their biological status at birth of male or female), the term 'male' is used. The term 'men' is used when referring to socially constructed gender and gender-comparison research (i.e., research that has classified participants based on their self-identified gender). This purposeful differentiation acknowledges the ways in which gender and sex interconnect with illness and disease, to illuminate anxiety as diversely experienced, understood and expressed participant state and/or trait. This differentiation and application, and indeed our gender analyses of the data in developing the current grounded theory is in line with gender/sex nomenclature recommendations outlined by Clayton and Tannenbaum (2016).

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

Chapter Summary

The grounded theory study in Chapter 3 addressed the absence of qualitative research in men's anxiety, synthesising the tumultuous and often long-term anxiety struggles of 25 young Australian men. The Resisting-Reckoning-Responding phases are discrete, interconnected, and active rather than linear and defined. This means that the ways anxiety symptoms manifest, and the temporal dimensions through which young men move from the resisting to responding phases are varied. Resisting anxiety is oftentimes comprised of distressing and uncomfortable psychosomatic symptoms (i.e., headaches, nausea and myalgia), which young men initially avoided, concealed or normed, rather than attributing to anxiety or an anxiety disorder. Yet as young men gained insight into the life limiting bounds of their anxiety (reckoning phase), some were prompted towards actions of acceptance, seeking help proactively and employing strength-based adaptive coping strategies, characterised as the responding phase. For many young men, this often led to a greater openness towards, or acceptance of, informal (i.e., friends and family) and formal help-seeking (i.e., professional mental health services).

Chapter 3 demonstrates that young men often delay seeking mental health support for anxiety until they have gained insight and acceptance of their anxiety experiences. However, many young men do present to health services during the resisting phase, experiencing undiagnosed anxiety and/or anxiety disorders, often driven by distressing psychosomatic symptoms or the consequences of maladaptive coping behaviours (i.e., substance use and risk-taking behaviours), which result from concealing, avoiding, or denying their anxiety. This highlights the importance of understanding how young men seek help at different stages of the Triple-R anxiety model and with varying levels of symptom severity. Thus,

Chapter 4 of this thesis builds upon the Resisting-Reckoning-Responding theory to uncover the facilitating factors and processes through which men seek formal mental health support for anxiety.

Chapter 4: Australian Men's Help-Seeking Pathways for Anxiety

Chapter Overview

Building on findings in Chapter 3, the drivers and processes that ultimately lead men to seek help through formal mental health services are explored in Chapter 4. Prior men's mental health research has primarily focused on uncovering why men *don't,* rather than why they *do*, seek help. As such, men's help-seeking pathways for anxiety are poorly understood with the default position being deficit-based (i.e., men don't ask for help) rather than deciphering strength-based masculinities that affirm men's help-seeking. Chapter 4 addresses this knowledge gap by mapping men's pathways to help-seeking for anxiety, uncovering the facilitating factors which propel and precipitate men's treatment trajectories for anxiety. Data were sourced from a large pre-existing cohort dataset that examined men's experiences of counselling and therapy (see: Seidler, Wilson, Oliffe, et al., 2021; Seidler, Wilson, Walton, et al., 2021). Survey responses from 419 Australian men surrounding their impetus for help-seeking for anxiety were thematically analysed. This study was published in *Social Science & Medicine – Mental Health* in March 2024.

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Australian men's help-seeking pathways for anxiety

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ABSTRACT

Globally, there has been a substantial increase in the number of men being diagnosed with anxiety disorders. Despite this, men's mental health research often focusses on uncovering why men *don't,* rather than why they *do*, seek help. Within this context, men's help-seeking pathways for anxiety are poorly understood. This study mapped the help-seeking pathways of 419 Australian-based men for anxiety. Respondents 16 to 77 years-old (*M* = 40.92 years, SD = 15.36) reported multiple instances of help-seeking (*n* = 321, 77%) elaborating on their drivers for help-seeking via an open-text qualitative survey. Thematic analysis of men's responses was used to generate three themes, first detailing common *tipping points* of men's anxiety (namely relationship issues and work stress), and second, the *reclusive causes and consequences* of men's anxiety (burdensome symptoms and unmet expectations). These two themes converged into a third theme of *help-seeking* where defeatist (i.e., resigned abandonment self-management strategies) or defiant (proactive motivation in reaction to new events) motivations propelled men into either assisted or solitary help-seeking pathways. The current study findings afford important insights about the drivers that lead men to seek help for anxiety across the life course. Interventions targeting men's help-seeking for anxiety should accentuate the potential benefits of community- based mental health treatment within the context of men's social connectedness. Such interventions would also benefit from leveraging positive masculine ideals including strength, emotional-control and competition which can be both a barrier to, and driver for, help-seeking in the context of men's anxiety.

1. Introduction

A significant rise in the incidence of anxiety disorders among men has been observed in recent decades. Global estimates of diagnosed anxiety disorders in males have increased from 12.92 million in 1990 (95% Uncertainty Interval [UI]: 10.49, 15.72), to 19.37 million in 2019.
In Australia, 24,004 men (95% UI: 16,300.82, 35,274.78) were diagnosed with an anxiety disorder in 2019, a marked increase from the 19,239 men (95% UI: 14,379.45, 25,302.98) diagnosed with an anxiety 10 years prior in 2009 (Global Burden of Disease Collaborative Network, 2019). This is likely influenced by health promotion efforts to reduce mental health stigma amongst men and improve procedures for the detection and diagnosis of anxiety disorders (Bandelow and Michaelis, 2022). Since 2019, anxiety disorders are the most common mental health condition experienced by Australian men (with similar trends seen in other Western countries), constituting significant physical and

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psychosocial risks across the life-course, including fatigue and/or insomnia, poor nutrition, low levels of physical activity, substance misuse and suicide (De Beurs et al., 2019; Van Hout et al., 2004). Despite this, men's anxiety remains poorly understood and under-researched (Fisher et al., 2022).

Increasingly, researchers have pointed to distinct experiences and expressions of anxiety in men, diverging from Generalised Anxiety Disorder criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR; American Psychiatric Association, 2022). These include isolated psychosomatic symptoms (i.e., headaches, myalgia and/or body tremors, nausea and/or vomiting), low anxiety literacy and high levels of associated shame and guilt (Drioli-Phillips et al., 2020; Fisher et al., 2021). Gender socialisation is central to men's experiences and expressions of anxiety, whereby masculinities shape their understanding of, and responses to anxiety symptoms, particularly how (or if) they seek help (Clark et al., 2020; Gough et al., 2021).

Traditionally, men are socialized in Australian cultures towards embodying masculine ideals of decisiveness, rationality, and fearlessness (Connell, 2020). Whilst only one of many masculinities available to men (Connell, 2020), the traditional archetype is still considered the default standard of masculine expression in Australia (Elliott, 2019). Furthermore, mateship has been □asculinized□□ as integral to Australian masculinities (Pease, 2001). Research substantiates the association between social isolation and mental ill-health among Australian men (Wilson and Cordier, 2013) which form the key rationale for mental health promotion interventions focused on shared activity and mateship (e.g., Men's Shed's; Waling and Fildes, 2017). Worry, inaction, uncertainty, nervousness, and fear — all synonymous with the experience of anxiety —stereotype anxiety as an emasculating debility state and marked departure from masculine norms (Norr et al., 2015). As a result, some men who strictly endorse traditional norms of masculinity perceive experiencing anxiety to be indicative of failure, weakness, or shame (Drioli-Phillips et al., 2021). This can have flow on effects to negatively influence men's mental health literacy, adaptive coping processes and willingness to seek help (Clark et al., 2020; Gallegos et al., 2019).

The resisting, reckoning, responding theory of anxiety (Triple-R model of anxiety; Fisher et al., 2023), provides a frame through which to understand Australian men's distinct experiences of anxiety. Herein, men may experience long term and tumultuous periods of avoidance (resisting), prior to acknowledging, understanding (reckoning) and responding to their anxiety symptoms. The resisting phase involves having to overcome stigma and stereotypes surrounding a collective over-normalisation of anxiety. Herein the colloquial norming of anxiety in modern Australian societies positions uncertainty as commonplace to building resilience (rather than help-seeking) for everyday vulnerabilities (Fisher et al., 2021, 2023). For men from culturally or linguistically diverse backgrounds, cultural norms (often stemming from their familial upbringings), intersect with masculinities to influence men's anxiety experiences and health behaviours (i.e., anxiety stigma, attitudes to- wards help-seeking). As men begin to acknowledge and understand the impact anxiety has on their life experiences, the need to respond and integrate anxiety as a core aspect of their lives emerges (Fisher et al., 2023; Gough et al., 2021). This responding phase encompasses developing a repertoire of coping strategies including an openness towards, or acceptance of informal (i.e., friends and family) and formal help-seeking (i.e., professional mental health services; Fisher et al., 2023).

Traditionally empirical exploration of men's help-seeking has been predicated on the nihilistic assumption that men "*do not, and will not seek help*" (Seidler et al., 2018, p. 98). This stems from the low rates of help-seeking amongst men, relative to women; a finding consistent across different countries, racial and social backgrounds (Gough and Novikova, 2020) and mental health conditions (i.e., depression and anxiety disorders; Oliver et al., 2005).

Whilst research focused on men's help-seeking for anxiety is lacking, early evidence suggests masculinities shape men's pathways to formal and informal help-seeking in a myriad of ways. Gough et al. (2021) interviewed men in the United Kingdom with anxiety indicating they can, and do, talk about anxiety with others, particularly with women in their lives (i.e., partner, mother, sister, friend). However, discussions with male peers appeared more challenging, governed by the bounds of traditional masculinity, which can limit the depth or vulnerability of these help-seeking and help-giving conversations (Gough et al., 2021). Seeking help for anxiety, especially through male peers, therefore requires some men to navigate complex challenges including concerns about being a burden to others or feelings of embarrassment. Fisher et al. (2023) reported that a professional (or self) diagnosis of anxiety can in some ways validate and □asculiniz men's reported distress. This may allow them to transcend self-blame or sentiments of failure, positioning men as culpable, and somewhat responsible, for the anxiety symptoms they were experiencing. Albeit, uncertainty persists regarding the underlying drivers and processes which lead Australian men with anxiety symptoms to engage formal mental health services. The current study aims to illuminate Australian men's pathways to help-seeking for anxiety by uncovering the facilitating factors which propel and precipitate men's treatment trajectories for anxiety.

2. Method

2.1. Study design

This study involved qualitative analysis of responses to an open- ended online survey documenting men's reasons for help-seeking for anxiety, as part of a larger study examining Australian men's experiences of counselling and therapy (see: Seidler et al., 2021; Seidler et al., 2021). Seidler et al. (2021) □asculiniz the opportunities and value of using open-ended qualitative survey data to explore men's experiences of help-seeking for suicidality, garnering in-depth insights from a large and diverse sample. In the present study this approach was used to distil important insights about anxiety from an under-researched sub-group. Open-ended survey data collection may be particularly advantageous in the context of men's anxiety, given men who experience anxiety can be reticent to talk directly about potentially distressing and sensitive anxiety symptoms, or related events such as help-seeking.

2.2. Procedure

Participants were recruited via social media advertisements from Movember, the world's leading men's health charity. Between March and May in 2020, an open-ended survey (which took approximately 15 min to complete) was completed by N = 2009 Australian men aged 16 years and over. Participants were directed to a plain language consent form and survey via the following prompt on Movember's Facebook page: "*Have you ever had counselling or therapy? If you can spare* 15 min, *we'd love to hear from you so we can improve therapy for men.*" Consent and sampling procedures are outlined in Seidler et al. (2021), alongside the qualitative and quantitative items utilised within the survey. A subset of survey participants (n = 419) were included in this study if they selected 'anxiety' from a range of options as their reported reason for help-seeking, via the prompt: "Thinking about your most recent

experience of therapy, what was the main reason you sought help?". Qualitative data was harvested from participant responses to the following open-ended question: "More broadly, in your own words, what led you to seek help from a therapist?" Participants described their experiences of help-seeking in their own words whilst prioritising the most salient components of their most recent pathway to help-seeking (Seidler et al., 2021; Woodgate et al., 2020). Other common primary reasons for seeking help included relationship and/or family issues (n = 301), suicidal thoughts/behaviour (n = 262), low mood/depression (n = 191), and work-related issues (n = 142). A full list of the primary reasons for participants seeking help has been published elsewhere (see Seidler et al., 2021).

2.3. Data analysis

Qualitative data were analysed using principles of reflexive thematic analysis (Braun and Clarke, 2006), recommended for use in analysis of qualitative survey data by Braun et al. (2021). Thematic analysis allows for an open and flexible approach to data coding, which is beneficial when working with large qualitative datasets (Braun et al., 2021). The coding process was inductive, in that codes and themes were generated from the data by constant comparison (Braun and Clarke, 2006). In line with similar studies using reflexive thematic analysis for qualitative data from online surveys (Seidler et al., 2021; Terry and Braun, 2016), the first author □asculinized themselves with the data by reading and re-reading all survey responses to determine a preliminary coding schedule. Following □asculinized□□□, the first author then coded the data, consulting with the study team (MW and ZS) to continually refine and recursively improve the codes. As an example, responses coded to themes of 'interpersonal relationship conflicts', 'comorbid mental health issues', and 'vocational and occupational stresses' were subsumed under the higher-level theme of 'reclusive causes and consequences'. Any disagreement in the coding process was resolved by discussion amongst the study team. Thirdly, themes were identified by comparing and contrasting the codes wherein some codes were subsumed and weighted themes were more fully defined and differentiated.

3. Results

Participants were aged between 16 and 77 years (See Table 4.1; *M* = 40.92; *SD* = 15.36), and most identified as a cisgender man (99%), resided in a metropolitan area (67%; *n* = 280) and were heterosexual (72%; *n* = 302). Most participants were not currently receiving psychological treatment (66%; *n* = 278), and of those men, 27% stated that they were in counselling less than a year ago (*n*=112).

Thematic analysis generated three discrete, yet interconnected, themes which centred on the tipping points, reclusive causes and con- sequences, and help-seeking pathways of men's help-seeking experiences (Fig. 4.1). Diverse situational events (i.e., interpersonal relationship issues and/or breakdown and work stress) in Australian men's lives represented shared tilts towards the need for help-seeking and further mental health support, represented as the first theme of '*tipping points'*. Most respondents also described responding to these tipping points with significant physical (i.e., psychosomatic sensations, insomnia) and psychosocial (i.e., feeling out of control, hopeless, angry, and uncertain) reactions, exacerbated by unmet pressures and expectations. This encompassed the second theme of '*reclusive causes and consequences'*. For most respondents, what occurred next was defeatist or defiant motivations to engage in help-seeking behaviour. This was fuelled for some men by an intrinsic desire for self-betterment and agency, whereas for other men, positive help-seeking behaviours directly resulted from the encouragement or direction of external supports (e.g., friends and family members, doctors or teachers). Both of these help-seeking motivations and pathways were classified under the final theme of '*help-seeking'*.

Table 4.1
Demographic variables for participants.

Variable	Participants n (%) or mean (sd) (*n* = 419)
Therapy experience	
Single experience	98 (23)
Multiple experiences	321 (77)
Age first engaged with therapy	
0–10 years old	20 (5)
11–20 years old	110 (26)
21–30 years old	115 (27)
31–40 years old	90 (22)
41–50 years old	56 (13)
51+ years	28 (7)
When most recent therapy experience occurred	
Currently in treatment	141 (34)
<1 year ago	112 (27)
1–2 years ago	75 (18)
2–5 years ago	53 (13)
5–10 years ago	22 (5)
10+ years ago	16 (4)
Gender	
Cisgender man	416 (99)
Transgender man	1 (<1)
Non-binary	2 (<1)
Age in years, mean (sd)	40.92 (15.36)
Age	
16–25 years	84 (20)
26–40 years	138 (33)
41–60 years	146 (35)
61+ years	51 (12)
Sexuality	
Heterosexual	302 (72)
Gay	81 (19)
Bisexual	32 (8)
Pansexual	1 (<1)
Queer	3 (<1)
Employment	
Employed full time	193 (46)
Employed part time	31 (7)
Employed casually	49 (12)
Unemployed	61 (14)
Retired	34 (8)
Student	51 (12)
Education level	
Some high school	12 (3)
Completed high school	91 (22)
Trade/certificate/diploma	102 (24)
High school	91 (22)
Undergraduate degree	136 (33)
Postgraduate degree	78 (19)
Individual income range	
$0 - $49,999	197 (47)
$50,000 - $99,999	127 (30)
$100,000 - $149,999	70 (17)
$150,000 - $199,999	17 (4)
$200,000 +	8 (2)
Relationship status	
Single/never married	140 (33)
Partnered	65 (16)
Married/de facto	177 (42)
Separated/divorced	32 (8)
Widowed	4 (1)
Indigenous identification	
Nonindigenous	411 (98)
Aboriginal or Torres Strait Islander	7 (2)
Other	1 (<1)
Location of residence	
Metropolitan	280 (67)
Regional	120 (29)
Rural or remote	19 (5)

3.1. Tipping points

Participants commonly described mounting tipping points – diverse but shared tilts towards the need for help-seeking and further mental health support. Interpersonal relationship issues and/or break-ups were the most frequently recounted tipping points. Romantic relationships

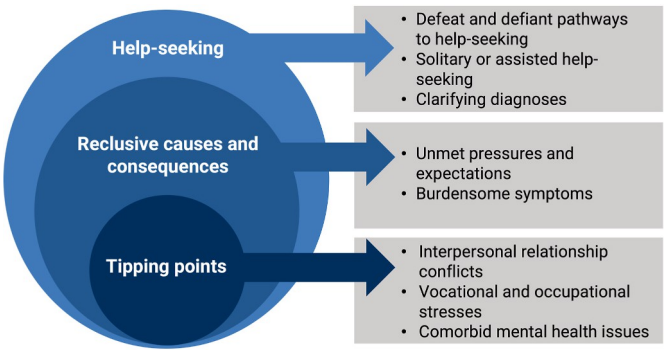

Fig. 4.1. Thematic for men's pathways to help-seeking for anxiety.

Featured (i.e., long term partnerships or marriages) alongside friendships, familial relationships (i.e., parents, children and siblings) and workplace relationships. As interpersonal conflict became more frequent, men recalled increasing anxiety attributed to worries about the future and what may happen if relationships were to break down.

"Issues with my partner at the time. A lot of built-up anxiety and un- certainty about why I was struggling with it." (26-year-old)

Workplace stress and career uncertainty was another shared tipping point. Herein, participants detailed overwhelming and all-consuming work demands, tight deadlines and substantial job responsibilities. A 43-year-old respondent discussed his diagnosis of □asculinize anxiety disorder following his return to work after a Christmas break, where he felt increasingly nauseous and sick in the mornings with no physiological reasoning behind his illness. For many, the perceived pressure and high levels of stress started to infiltrate numerous aspects of their lives including their position as a financial provider in the family unit. These respondents grew increasingly concerned that they could not satisfy the responsibilities required of them, both at work and more broadly in their idealized masculine roles.

"Couldn't sleep at night due to worrying about work. Long term, about would I be able to provide for my family well enough." (37-year-old)

For respondents with comorbid mental health issues, anxiety interacted with other disorders (i.e., depression and substance use disorder) to colour and contort men's experiences and expressions of psychological distress. More specifically, the presence of anxiety heightened the severity, burden and frequency of other symptoms (e.g., suicide ideation) linked to adjacent comorbid mental health disorders.

"I go in and out of depression constantly. I always have crippling anxiety, it never leaves. I manage to keep it at bay somewhat but have regular suicidal ideation and worsens considerably during periods of high anxiety. I suppose I feel what's the point in living with unbearable anxiety and depression especially if I can't manage it." (30-year-old)

3.2. Reclusive causes and consequences

3.2.1. Burdensome symptoms

Men reported increasing psychosomatic symptoms which included body aches and pains, difficulties breathing, chest tightness or panic attacks with fluctuating intensity and frequency. Given the intrusiveness and unpredictability of psychosomatic symptoms (particularly panic attacks), some men resorted to avoiding or completely disengaging with the amplifiers of their anxiety (e.g., social interactions with others and vocation and occupational duties).

"A series of panic attacks that led up to a large panic attack that required me to step down from my regular position at work." (49-year-old)

Additional to troublesome psychosomatic symptoms, some men described frequently experiencing sleep issues or insomnia as a result of their anxiety. Sleep issues were cyclically intertwined with anxiety symptoms in that pervasive worrying, overthinking and ruminations diminished men's sleep quality, and poor sleep ultimately exacerbated patterns of overthinking and ruminating. Some men felt that numerous aspects of their daily functioning (i.e., vocational and occupational performance, social relationships) and in extreme cases their physical health, had deteriorated as a result of poor sleep or insomnia.

"When my worries prevented me to sleep at night. I couldn't relax at all. Not sleeping caused my health to deteriorate." (55-year-old)

Men who experienced long-term or chronic anxiety described the ways in which daily or seemingly frequent consequences of anxiety (i.e., insomnia) accumulated overtime to significantly reduce their overall quality of life and physical and/or mental health outcomes. A 29-year- old respondent described how his *"struggles with daily tasks"* worsened to the extent that they started to impact other areas of his physical and psychological health. These reflections tended to arise with hindsight as men gained increased literacy, awareness and understanding following long-term recurrent or extended periods of anxiety.

"Advice from my doctor after several health concerns that he identified as stemming from anxiety and 'mild' depression." (32-year-old)

3.2.2. Unmet pressures and expectations

For many respondents, tipping points (relationship, work and co- morbid mental health issues) and burdensome anxiety symptoms inflected a disjunction between their external realities and the internal expectations they held themselves to, surrounding who they should be, what milestones they should achieve, and how they should behave. Many men linked these internal expectations to overwhelming external pressures □asculinized□□ in Australian societies as markers of success, including high positions at work, long-term financial stability and being the provider for their family. These external pressures were hedged on core aspects of their Australian masculine identity such as being a good father, husband, or romantic partner. As men's internal expectations intensified (and seemed unfulfilled), many described overwhelming sentiments of failure, which left them feeling fatigued, hopeless, and low in self-confidence. A 39-year-old man labelled these expectations as exhausting and felt his burn-was causing an intensification of his anxieties which he defined as an "*anxiety spiral*".

"Overwhelming non-stop high expectations that are unattainable and tire me out." (27-year-old)

These external pressures and internal expectations intertwined with, and were influenced by idealized masculine roles, identities and relations reified in Australian cultures. Respondents indicated □asculinized□ the need to embody traditional masculine norms, whereby they compared their physical body, identity and personality to idealized social standards of masculinity. Some men described difficulty delineating their self-worth and self-esteem from the overarching tenets of masculinity but reflected in hindsight on the significant pressure they had shouldered.

"I hated everything about myself. My weight, my dick size, my 'lack' of masculinity, my sexuality, my habits, my personality. Everything." (29- year-old)

Rigid alignments to ideals of traditional Australian masculinities led to some respondents viewing themselves as not meeting the masculine

standard (relating to weight, sexuality, and "dick size" for example), which subsequently led them to feel lost and confused regarding their own identity. Many men found it difficult to forge their own sense of self, disentangled from the norms they had been socialized to embody from boyhood. This was particularly evident for men who transgressed traditional masculine norms surrounding sexuality (i.e., gay and bisexual men), gender diversity (i.e., transmen) and family roles (i.e., men responsible for caring duties within a family unit).

"A lot of identity confusion – aimlessness & fear of others' perceptions of myself. Inability to somewhat accept myself as a person overall, especially as a gay man who maybe isn't stereotypically flamboyant." (19-year-old)

A tangling of psychosomatic symptoms and life losses flowing to and from anxiety symptoms ultimately summons men's attention to isolating the driver of those misgivings. Herein, formal help-seeking then became a viable and necessary alternative.

3.3. Help-seeking

3.3.1. Defeat or defiant pathways to help-seeking

Typically, men stated that they reached a juncture with their anxiety experiences, which precipitated their decision to seek help. In some instances, men described resigning to the reality that they were unable to self-manage or cope with their anxiety independently (defeat). Other men described recognising an opportunity for change, which motivated a search for adaptive remedies to combat unending anxiety symptoms and psychological distress (defiant). These defeat and defiant pathways were not mutually exclusive or discrete: Defeat pathways in some in- stances intertwined with, and leveraged defiance. For example, for some men exhaustive and long-term self-management efforts translated into frustration and a reticence towards help-seeking.

Defeat narratives were often nihilistic, and men commonly stated they had lost motivation, direction and optimism in their life. Anxiety was positioned as something beyond their control, and men expressed feeling overwhelmed or consumed by the symptoms they were experiencing and longevity of their anxiety trajectories. A 54-year-old respondent described questioning daily whether *"[he] would ever feel normal again."* He expressed feelings of hopelessness and worthlessness, and sought professional help as a last resort, given anxiety symptoms and his mental health more broadly had continued to deteriorate. A 25- year-old man recalled finally "*surrendering to his anxiety,"* whereby he started to acknowledge the severity of an almost decade-long battle with anxiety symptoms:

"I had issues since high school but was just brushed off as "mood swings" or "puberty" all the way until university. I dropped out due to mental health issues and looked for counselling because [of] a friend who put me in touch with a few different [counsellors] to see who I preferred."

Conversely, defiant pathways centred help-seeking as an opportunity for change and self-betterment. For one 60-year-old respondent, the breakdown of his relationship validated his need for mental health treatment and represented the avenue through which he finally sought help for long standing anxiety issues, therefore framing his help-seeking as a consequence of his significant life changes, namely cumulative in- juries and diminished capacity for self-management:

"I have spent time with this counsellor over the last couple of years ('peeling back the layers' of my experience – healing and expanding), initially dealing with issues related to a relationship breakdown, then personal issues that experience evoked in me, then at a deeper level working on core underlying issues including anxiety" (60-year-old)

Other men described a disjuncture between their desire for deeper connection and intimacy, and the burdensome nature of anxiety symptoms (i.e., unpredictable and intrusive physical and psychological symptoms). A 23-year-old respondent described how formal help-seeking became a viable and necessary alternative to somewhat remedy the loneliness and despair that he was currently experiencing as he struggled to form new relationships:

"I was in a position where I had really low self-esteem and was struggling to talk to others and form new relationships. I was tired of having this barrier ... " (23-year-old)

Anxiety was frequently described as a barrier, obstructing men from their desires and goals in life, including, but not limited to, combatting stress, idleness or under-performance at work and school. A 43-year-old man recalled how he started *"shutting down at work"* and *"knew [he] ... had to go back to a counsellor to debrief"* as the panic attacks he was experiencing during work became more debilitating and restrictive. Unemployed men highlighted the importance of overcoming their anxiety as they tried to navigate the difficulties finding employment. Many stated that the demands placed on them were unsustainable if they couldn't overcome or at least manage their anxiety.

"Anxiety was affecting all aspects of my life and preventing me from being able to do my job. I needed help" (37-year-old)

3.3.2. Solitary or assisted help-seeking

For some men, the decision to seek help was a solitary and independent process. They reflected on intrinsic motivations or desires to regain self-control and described wanting to find reassurance and clinical explanations from health professionals in the midst of heightened uncertainty. A 17-year-old participant described heading "*straight to the school counsellor*" one morning after a big panic attack which was more severe than any he had experienced in the past. A 25-year-old participant indicated that for him, self-harm was *"an objective measure that something was wrong"* so he sought professional help to find more adaptive coping mechanisms.

Men's proactive approaches to help-seeking were commonly described as an attempt "*to get on the front foo*t" of their anxiety, finding positive strategies to prevent their symptoms from getting worse. As such, men saw counselling as a tool to better equip themselves to effectively respond to the stressful or overwhelming events in their life:

"I was heading into uncharted territories, and felt out of my depth. I al- ways suggest counselling to others so [I] ... thought to follow my own advice as I didn't feel I could do it on my own." (27-year-old)

Other men described more specific goals or expectations driving their psychological treatment, which was often to mitigate the consequences of their anxiety and improve their social connectedness. These desired outcomes included targeting what men described as *"social avoidance or withdrawal issues*," and strengthening their networks of social support which were a source of advice and comfort in times of distress.

Alternatively, others sanctioned their help-seeking behaviour as a by-product of extrinsic factors abetted by support (and sometimes pressure) from men's partners, friends, work colleagues and family members. In these instances, men's social supports had detected changes in their mood or behaviour and encouraged them to seek help. Some men described these conversations with romantic partners, friends and family members as a "*crisis*" or "*boiling*" point, in which they finally confronted or □asculini the distress they had been trying to avoid:

"I was drunk and started telling my friends and brother that I had body image issues, so my brother said he was going to tell my parents. I told him I would instead, so I told my parents I was feeling really anxious. This led to me seeking help from a counsellor." (22-year-old)

A 37-year-old respondent described how the encouragement and support of those closest to him helped him □asculini that *"something wasn't right"* and acknowledge the drastic change in his overall affect. This respondent described a stark □asculinize that he wasn't the father he wanted to be and had lost optimism, *"I stopped playing with my children*

and enjoying family life … it all became too much." He stated that whilst he could not see the steps in front of him, he wanted to change, *"if not for myself then for those I love."*

3.3.3. Clarifying diagnoses

Men's uncertainty surrounding their psychosomatic anxiety symptoms frequently underscored their first instance of help-seeking. A 28- year-old participant noted that he initially saw a health professional to "*rule out any underlying physical health conditions*". Some men described disbelief in response to their general practitioners' prognoses that these psychosomatic symptoms could be wholly attributed to an anxiety disorder, particularly when they were experiencing cardiac and respiratory related symptomatology (i.e., increasing heart rate, difficulty breathing):

"I was experiencing what I mistook for heart trouble but it was actually anxiety attacks." (26-year-old)

However, in many instances a diagnostic label of anxiety (particularly when given following extensive diagnostic screening) validated men's experiences, imparting a frame of reference and clinical nomenclature to corroborate the distressing symptoms they were experiencing. Some men also recalled feeling hopeful and optimistic when receiving a diagnosis of anxiety as it precipitated the mental health support and treatment options. Men appeared to be particularly motivated to seek □asculinize mental health support when the treatment options available to them were clearly explained and encouraged or □asculiniz by medical professionals.

"I was experiencing quite extreme □asculinized as part of my anxiety ie. Chest pains, dizziness, arrhythmic heart beats. I had physical disease completely ruled out by my GP, who told me he felt I instead had anxiety. We decided together that it would be best to try combined pharmaceutical and psychological therapy to beat the anxiety." (28-year-old)

4. Discussion

Data from this national survey exploring men's pathways to help- seeking affords valuable insight into the facilitating factors which propel and precipitate Australian men's treatment trajectories for anxiety. The first theme, *tipping points* represented mounting situational stressors (i.e., interpersonal relationship conflicts, work stress) tilting men to- wards the need for further mental health support. In the second theme *reclusive causes and consequences*, psychosomatic symptoms were intertwined with men's perceived inability to meet internal expectations and external pressures, ultimately summoning attention towards identifying the driver of these consequences (i.e., anxiety). The third theme *help- seeking* depicted how men's reclusive causes and consequences of anxiety then converged to propel respondents towards defeat (i.e., resigning to the realities of the severity of anxiety symptoms and limitations of self-management) and/or defiant help-seeking pathways (i.e., embracing opportunity for adaptive change and self-betterment). Men described various pathways of, oftentimes framing their help-seeking for anxiety as either a solitary or supported process, and one where diagnoses could be clarified.

Men's accounts of *tipping points* frequently related to changes in their social worlds including a loss of social connection (loneliness) or social isolation related to interpersonal relationship strain and/or breakdowns. Additionally, Fisher et al. (2023) reported that undiagnosed and untreated anxiety symptoms in men can intensify social disconnection, whereby men may withdraw or isolate from their social networks to conceal uncomfortable and distressing anxiety symptoms and sentiments of shame or perceived failure. This may be particularly characteristic of social anxiety disorder, defined in the DSM-5-TR as a marked, or intense, fear of social situations where an individual may be scrutinized by others (American Psychiatric Association, 2022). The link be- tween social anxiety, social isolation and loneliness is well established (e.g., Eres et al., 2023; Lim et al., 2016; Owczarek et al., 2022), albeit not in the context of Australian men's anxiety specifically. Yet loneliness and social isolation are increasingly common amongst young adults, and greater in Australian males, relative to Australian females (Lim & Australian Psychological Society, 2018). Indeed, Australian men are also significantly less likely to engage with help-seeking services to manage their loneliness (Franklin et al., 2019), potentially fuelling these increased rates of loneliness for men (Bonell et al., 2023). In a longitudinal evaluation of loneliness and social anxiety, Lim et al. (2016) reported that loneliness is predictive of future social anxiety, but conversely, early social anxiety is also an independent predictor of future loneliness (which was not seen for depression or paranoia). Given loneliness and anxiety both constitute concerning risks for poor health outcomes (i.e., cardiovascular disease, dementia, cognitive decline; National Academies of Sciences Engineering and Medicine, 2020) and suicide (Kealy et al., 2021; Moller et al., 2023), it is critical that future research adequately considers, and further disentangles, the discrete yet interconnected nature of loneliness and anxiety in men.

Internal expectations and external pressures surrounding masculinities intertwined with men's burdensome anxiety symptoms in theme two, *reclusive causes and consequences.* Herein, men's anxiety arose from a perceived disjuncture between the realities of their lives and the traditional masculine roles and norms they felt they ought to be embodying as a man in Australian society (i.e., financial provider for the family, good husband). These findings echo the pervasiveness of traditional masculinities as the default and demanded archetype among Australian men (Elliott, 2019). This archetype within the Australian context specifically often revolves around ideals of mateship and strength (Butera, 2008; Connell, 2003; Elliott, 2019; Pease, 2001), often in relation to work and family (Bonell et al., 2023), with failure to uphold this masculine image resulting in crushing internal pressure, and consequently, burdensome anxiety symptoms. Not only did situational stressors ostensibly cause men's anxiety, but in some instances burdensome symptoms further entrenched men's risk of transgressing norms of masculinities, given worry, anxiety and fear are stereotyped as □asculini traits (May, 1996; Robichaud et al., 2003). Participants commonly referred to difficulty living up to familial protector/provider traditions as a cause of their anxiety, and the impact on their educational or occupational outcomes as a consequence. Whilst we did not collect data on participants' cultural backgrounds (beyond their current Australian residence), cultural factors may, at least in part, explain this finding. Indeed, prior qualitative research with Australian men has documented how masculinities and culture can be intertwined in their impact on mental health (Sharp et al., 2023). The mental health of Australian men living in regional communities can also be uniquely impacted by the cultural contexts that permeates regional communities (Bonell et al., 2023). In other cultural contexts outside of Australia, greater endorsement of the traditionally masculine norm of primacy of work has been found to be higher among Asian American relative to Caucasian men (Owen, 2011). These cultural differences in masculine norm adherence could potentially translate into differences in help-seeking behaviour, resulting in different help-seeking pathways for men of diverse cultural backgrounds. Socioeconomic resources may also have played a role here. Just under half of participants (47%) specified their income in the lowest band ($0-$49,999), and as such this may have been a subgroup of men with pronounced anxieties around living up to their role of familial provider, with limited finances available to embody this standard relative to their peers.

Men's pathways to *help-seeking* were forged by the mounting entanglement of burdensome anxiety symptoms and men's perceptions of unmet internal expectations and external pressures. Indeed, men identified anxiety as the driver of these consequences and saw further mental health support as a viable, and in some instances necessary, solution. These consequences of anxiety rendered men in the current study, defeated and/or defiant. In some instances, respondents resigned to the realities of their anxiety (and limits of self-management; i.e.,

defeated). Conversely, defiant pathways to help-seeking involved a proactive outlook on help-seeking as an opportunity for self-betterment, afforded by the potential outcomes of psychotherapy, medication, and ongoing mental health support. It was not entirely clear from participants responses what determined and differentiated men's defeat or defiant positioning of help-seeking. Though deeply implicated were the culmination of causal factors underlying men's symptoms (i.e., hopelessness attached to certain stressors), anxiety literacy, attitudes towards help-seeking and their intrinsic and extrinsic motivations for recovery. Seidler et al. (2021) depicted similar help-seeking pathways for Australian men experiencing suicidality, highlighting "epiphanies" in which men □asculin the limits of self-reliance and came to terms with the impacts of their suicidality on those around them. Past research suggests the □asculinized□□ of anxiety may play an important role in counter- acting pervasive stigma, which downplays men's anxiety symptoms as normal, or something that everyone experiences (Clark et al., 2020; Fisher et al., 2023). Theorists define the □asculinized□□ of anxiety as the pathologizing of introversion and fear, whereby diagnosis, treatment and amelioration are possible and □asculinize (de Courville Nicol, 2021; Rebughini, 2021). Whilst the □asculinized□□ of mental illness has long been debated amongst sociologists (Conrad, 2007; Rogers and Pilgrim, 2021; Szasz, 1960) for some men in this study, receiving a diagnosis of an anxiety disorder afforded an optimistic cross-roads for change, whereby self-management and recovery from anxiety was possible. Yet the □asculinized□□ of anxiety hinges on men's anxiety symptoms being *accurately* identified by health professionals, and *adequately* represented in anxiety disorder resources and health promotion materials. Concerningly, for men who exhibit a gendered expression of anxiety (□asculinized□ by high levels of shame and guilt, psychosomatic symp- toms and chronic recurrent symptoms; Fisher et al., 2021), anxiety symptoms may remain undiagnosed and therefore untreated, unless health professionals move beyond strict diagnostic criteria guidelines (i. e., DSM-5-TR; American Psychiatric Association, 2022). Whilst defeat and defiant pathways to help-seeking for anxiety must be clarified in future research, it's likely that health promotion messages and anxiety disorder awareness resources portraying male-type anxiety as a debilitating yet highly treatable mental health condition may empower more Australian men towards defiant dispositions towards help-seeking.

Future research should also seek to translate and sensitise this help-seeking messaging across different countries (i.e., Western and non-Western countries) and cultural contexts taking into account the vast differences in the availability and accessibility of mental health supports outside of an Australian context. For example, in some countries mental health care is heavily □asculiniz and readily accessible (e.g., Norway, Sweden; Guti´errez-Colosía et al., 2019; Wahlbeck et al., 2011), whereas in others, numerous barriers to care exist and include financial, geographical and capacity issues where service consumers often face extensive wait-times. Differences also exist in the way certain services, such as general practitioners (GP), are perceived by the public. Australian public belief that individuals should seek mental health help from their GPs is not necessarily observed across other countries such as Japan (Jorm et al., 2005). For the men who live in these different social and cultural contexts, and who may be exposed to these significant barriers, messaging implying the treatment amenability of anxiety disorders may leave them feeling hopeless and nihilistic should anxiety disorder treatment not be accessible or supported within their health care services. In addition, health promotion messaging aiming to increase mental health literacy regarding help-seeking (and treatment options) for anxiety would require targeting and tailoring to men from migrant backgrounds. Prior evidence suggests lower mental health literacy and □asculinize of mental health services among men from migrant and culturally-diverse background (Na et al., 2016). Therefore, it appears crucial that health professionals delivering an anxiety disorder diagnosis, and health promotion messaging targeting anxiety, emphasise the vast range of treatment options available for anxiety disorders (including adaptive coping strategies) and highlight the likelihood of recovery and effective self-management.

Some men described *help-seeking* as an extrinsically motivated event, positioning external drivers as pivotal in their decision to seek-help (i.e., help-seeking had occurred at the behest of men's social supports). In these instances, friends, family members, doctor or teachers may have detected changes in men's anxiety symptoms, aiding or empowering their help-seeking behaviour. Some men described these conversations with social supports as confrontational, whereby inter-personal conflicts than then triggered a deeper, emotionally vulnerable conversations around their mental health and wellbeing. The confrontational nature of these interactions reflects the dominance these traditional masculine ideals of stoicism and independence still hold over Australian men (Schlichthorst et al., 2019), with even the idea that they need help from others perceived as a deep challenge to their self-concept. These descriptions also align with past research which has identified the pivotal role of the "other" in men's decisions to seek help for their mental health (Vogel et al., 2007), be that challenging restrictive masculine norms of self-reliance (Seidler et al., 2021) or as "saving graces" directing men to support services in the context of a suicidal crisis (Oliffe et al., 2021, p. 420). However, many men described seeking help for anxiety as a solitary event, intrinsically motivated by a desire for change, self-empowerment, or self-betterment. Scholars □asculinize positive masculinity stress the importance of focusing on masculine norms which serve to promote, rather than impede, positive health behaviours such as help-seeking (Kiselica et al., 2016; Kiselica and Englar-Carlson, 2010). In this study, men describing defiant pathways to help-seeking often did so under the guise of masculine virtues including courage, defiance and/or control, problem-solving and independence. This pivot towards norming help-seeking as courageous and strong was tied to the eventual end game of securing remedy for their anxiety symptoms and ensuring ongoing self-management. Positive masculinity advocates for the flexible and malleable adaption of masculine norms in place of pathologizing traditional masculine norms, affirming that deleterious health outcomes are largely associated with restrictive and rigid adherence to these norms, rather than consequential of norms themselves (Kiselica et al., 2016). Courage, emotion-control, and dominance can predict hardiness and/or resilience (Alfred et al., 2014), which for men with anxiety, may have important implications for interventions and resources attempting to promote men's help-seeking for anxiety and ongoing engagement in psychological services.

4.1. Limitations

It is important to □asculini the limitations associated with this study. First, as themes were generated to reflect cross-sectional data of men's most recent instance of help-seeking, these themes should not be interpreted as discrete (i.e., the reclusive causes and consequences of anxiety can also be attributed to the theme of help-seeking), or linear (i. e., the causes if anxiety do not necessarily lead to the consequences of anxiety which catalyse help-seeking). Second, data collected were limited by the participants interpretation of the question and what they chose to disclose in the survey. As such the depth and length of individual responses varied. It was not possible to probe for additional information, or to clarify participants responses as in other qualitative data collection techniques including interviews or focus groups. Seidler et al. (2021) have however □asculiniz the benefits of using open-text □asculiniz surveys for qualitative data collection with men, contending that allowing men full control over their responses (and how much is shared) alleviates discomfort around potentially sensitive topics such as mental illness. Third, participant responses were abstracted based on a pre-defined list of □asculinize psychiatric terminology (i.e., depression, anxiety, suicidality, stress), whereby men self-selected the reason for help-seeking which resonated most strongly for them. As such, despite using □asculinize anxiety nomenclature throughout this study (and in data collection procedures), participants likely had diverging experiences with and definitions of 'anxiety' ranging from context or situation

specific mental health support (i.e., bereavement, job loss, relationship breakdown) to diagnosed anxiety disorders requiring tailored psychiatric treatment. In addition, it was impossible to identify participants with comorbid anxiety issues (unless integrated to participants responses), making it difficult to discern whether anxiety was a single or nested issue for participants, or one facet of a multitude of mental health issues which may have differential impacts on men's pathways to help-seeking. Finally, the cultural and ethnic backgrounds of participants were not collected within this survey. Therefore, we are unable to determine whether the findings of this study can be □asculinize to culturally and linguistically diverse men. Notably, only 3% of respondents had not completed high school indicating that this sample may have a higher mental health literacy than the general population, and therefore greater knowledge access to psychological services. Variability in the sample regarding therapy experience (first experience compared to life-long therapy attendees for example) was also notable, complicating further the ability of this study to □asculiniz across men of all help-seeking experiences. Further research should consider and explore how men's cultural and socio-economic backgrounds, as well as their previous help-seeking journeys, may impact the gendered dimensions of help-seeking and subsequent pathways to mental health services. This will have important implications for tailoring public health messaging and anxiety resources to culturally and linguistically diverse men.

4.2. Future directions

The ubiquitous experience of anxiety exists on a spectrum from adaptive emotional responses to maladaptive psychopathology (Stein et al., 2017). Men's approaches to help-seeking may therefore vary at differing severities of anxiety experiences. For example, meta-worry (worry about worry) may increase the rates of men presenting to healthcare services and has been shown to facilitate help-seeking behaviour in the context of health-anxiety via attempts to gain reassurance from doctors (Lee-Jones et al., 1997). Yet, shame about worry has been associated with men's concealment and avoidance of anxiety symptoms, engendering maladaptive coping strategies (i.e., substance misuse), social withdrawal and social isolation (Fisher et al., 2023). Future research should therefore explore how specific clinical characteristics and contexts along this spectrum of anxiety differentially in- fluence men's help-seeking attitudes and behaviours. Improved understanding of men's illness trajectories for anxiety can then be used to guide tailored interventions and psychotherapeutic treatment.

Future research should also seek to explore how traditional norms of masculinity, (i.e., competitiveness, courage, defiance/determination and emotional control) can positively influence help-seeking in men, and whether this differs between men's anxiety and experiences of depression or suicidality. Uncovering the contemporary masculine virtues in an Australian context that underpin positive attitudes towards help-seeking for anxiety will garner important insights to sensitise mental health service messaging and public health promotion towards promoting and leveraging Australian men's strengths. Salgado et al. (2019) suggests that mental health interventions focusing on winning at all costs or being one's best (aligned with masculine norms of winning and success) could encourage men's engagement in mental health ser- vices. As such, anxiety disorder interventions developed upon gender transformative principles could position key situations or events (i.e., relationship breakdown, family issues, work stress; the causes of men's anxiety identified in this study), as opportunities for change, empowerment and self-betterment, □asculinize men's self-efficacy and control in the midst of significant life uncertainty and change. As an example, *Doing it Tough* (https://doingittough.org) is an Australian state government imitative established to connect Australian men to local groups and community organisations for support on a range of situations and mental health stressors including mental health, alcohol and drugs, relationship problems, financial difficulties, gambling, and trauma.

Establishing a similar gender-responsive anxiety disorder intervention could connect men with community support services whilst also depicting optimistic stories of men's recovery and self-management, leveraging men's desires for deepening, initiating and maintaining positive social relationships as a key outcome. Future research should also explore men's treatment pathways once they *do* engage mental health services or anxiety, more specifically, how men experience psychotherapeutic treatment for anxiety disorders and the effectiveness of treatment across the life course. Social disconnection and isolation (i.e., relationship break down and/or strain) was a prominent cause of Australian men's anxiety. A desire for greater social connection motivated many men in this study to seek help. Given the well-founded association between social isolation, loneliness, and anxiety (Lim et al., 2016), it is crucial future research considers loneliness through the gendered lens of masculinities (Ratcliffe et al., 2023) to contextualize and effectively interrupt men's anxiety. Additionally, efforts to reduce men's anxiety need to nuance the role of these risk factors in tailoring potential remedies. Indeed, masculine norms influences men's experiences of loneliness and social connection; as Ratcliffe et al. (2023) suggests, masculine norms can both amplify loneliness through norming a reluctance to communicate vulnerably with others, and mitigate loneliness by providing masculine men with specific □asculinized spaces for social connection such as sporting teams or pubs (Emslie et al., 2013). Therefore, interventions targeting men's anxiety should instead seek to challenge men's mal- adaptive cognitive distortions (about themselves and their place in the world) which impede and restrict men's ability to connect with others (Lim et al., 2021; Masi et al., 2011). This may have a two-fold effect, reducing both loneliness and men's anxiety, which have both been found to have deleterious physical and psychological implications for men across the life course (Fisher et al., 2022; Taylor et al., 2023).

4.3. Conclusion

Unprecedented global events and uncertainties have defined the last half decade, and the benefits and risks of this recent history continue to emerge. One benefit is men's discussions and self-disclosures about anxiety – normed within the context of events and challenges collectively experienced. However, the risk amid these destigmatizing effects is that anxiety gets positioned as being within men's resiliencies and self-control. Now, more than ever interventions targeting men's anxiety should accentuate the need for and benefits of mental health treatments. The pathways mapped In the current study go some way toward highlighting the potential for tapping positive masculine virtues to norm Australian men's help-seeking for anxiety as a strength-based, asset-building practice.

Data availability statement

The data are not publicly available due to privacy or ethical restrictions.

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cRediT authorship contribution statement

Krista Fisher: Writing – original draft, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Simon M. Rice:** Writing – review & editing, Supervision, Investigation, Formal analysis, Conceptualiza- tion. **Michael J. Wilson:** Writing – review & editing, Methodology, Formal analysis, Data curation, Conceptualization. **Ruben Benakovic:** Writing – review & editing. **John L. Oliffe:** Writing – review & editing,

Supervision, Formal analysis. **Andreas Walther:** Writing – review & editing. **Paul Sharp:** Writing – review & editing. **Zac E. Seidler:** Writing – review & editing, Supervision, Project administration, Methodology, Formal analysis, Conceptualization.

Declaration of competing interest

The authors declare that they have no competing interests.

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Chapter Summary

Chapter 4 thematically analysed the survey responses from 419 Australian men who had sought mental health support from a counsellor. Findings detailed how the tipping points and reclusive causes and consequences of men's anxiety converged to propel them toward defeat or defiant help-seeking pathways. Men expressed wanting to overcome or combat their anxiety (defiant) and/or resigning to the realities of their anxiety experiences, succumbing to psychological treatment as a last resort (defeat). In some ways, external sources (i.e., men's family, partners and medical professionals) functioned as saving graces and played a critical role in getting men into treatment. Whereas other men described help-seeking as an intrinsic or internal undertaking, motivated by self-betterment, self-empowerment, and self-improvement. Chapter 5 will now explore young men's health service engagement in the context of ambulance services, examining their clinical profiles of anxiety presentations and classifying typologies.

Chapter 5: Young Men's Anxiety Presentations to Australian Ambulance Services

Chapter Overview

As described in Chapter 4, men's pathways to help-seeking and trajectories to treatment can be tumultuous, spanning many months and years. Chapter 3 also indicated that young men in the resisting phase often experience undiagnosed and untreated anxiety disorders, with many employing maladaptive coping strategies (i.e., drug and alcohol use, social withdrawal, and risk-taking behaviour) to self-treat, avoid, conceal or deny anxiety symptoms. The inclination to conceal anxiety, combined with maladaptive coping behaviours, frequently results in young men presenting to emergency medical services (i.e., ambulance services) in crisis, rather than seeking mental health promotion supports. As such, ambulance surveillance systems offer unique data and opportunities to report trends among young men experiencing anxiety symptoms. This chapter reports findings from a four-phase mixed-methods study of electronic Patient Care Records (ePCRs) from the Australian National Ambulance Surveillance System (NASS; Lubman, Heilbronn, et al., 2020). Specifically, the clinical characteristics and contexts (i.e., typologies) of young men's anxiety-related presentations to ambulance services in Victoria, Australia are distilled and described herein. This study is currently under review at the *Journal of Anxiety Disorders* (IF: 10.3).

Young Men's Anxiety Presentations to Australian Ambulance Services

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Abstract

Young men experiencing anxiety risk traversing traditional norms of masculinity, a tension that risks under-diagnosis – and, by extension, under-treatment. Within this context, young men frequently present to ambulance services with acute psychosomatic anxiety symptoms, implicating extensive, and resource exhaustive diagnostic tests to differentially diagnose and clinically manage potentially life-threatening conditions (i.e., myocardial infarction, dyspnoea, asthma, and stroke). This four-phase mixed-methods study developed and tested a coding framework to describe and interpret clusters within data from the Victorian arm of the Australian National Ambulance Surveillance System (NASS). Six hundred and ninety-four young men aged 15–25 years with an anxiety-related ambulance attendance in 2019 were analysed in the present analyses. Study findings revealed that the most common clinical characteristics in young men's anxiety presentations were psychosomatic symptoms, alcohol and drug use, and situational stressors. Three typologies for young men's anxiety presentations: 1) Psychosomatic-Anxiety, 2) Anxious-Substance Use and 3) Complex-Anxiety, were evident across severities. Findings highlight the need for tailored assessments to effectively triage young men experiencing anxiety and engage them with appropriate mental health services.

Introduction

An estimated 114 million men have been diagnosed with an anxiety disorder in their lifetime, equating to 3% of the global population (Global Burden of Disease Collaborative Network, 2019). Alongside being the most prevalent mental health condition for men, anxiety disorders are a leading cause of mental health-related disability worldwide (Kessler et al., 2010). Moreover, sub-threshold and undiagnosed anxiety symptoms that may be mild, atypical, masked, or brief but recurrent, are estimated to be twice as common as threshold anxiety disorders, often causing similarly debilitating impairments in psychosocial functioning and healthcare costs (Haller et al., 2014). When undetected and untreated, anxiety in young men can be a *gateway* (Bushnell et al., 2019) to more complex and comorbid mental health challenges including depression, substance use, and suicide (Nock et al., 2010; Weitoft & Rosén, 2005).

Despite the high prevalence and significant impact of young men's anxiety and/or anxiety disorders, it remains an under explored area in young men's mental health. There is however growing evidence to suggest a male-type anxiety phenotype, characterised by high levels of shame and guilt, physical symptoms (i.e., myalgia, panic attacks and headaches) and chronic recurrent symptoms (Drioli-Phillips, Oxlad, Feo, et al., 2020; Fisher et al., 2021). This phenotype resides outside the diagnostic criteria for Generalised Anxiety Disorder (DSM-5-TR; American Psychiatric Association, 2022; ICD-11; World Health Organization, 2022a). Strong alignment to traditional masculine norms (i.e., invulnerability, fearlessness, stoicism; Connell & Messerschmidt, 2005) reinforces this male-type anxiety, and in young men, this has been shown to negatively impact anxiety literacy and awareness of anxiety symptoms, while heightening endorsement of maladaptive coping strategies (i.e., drug and alcohol use, social

withdrawal and risk-taking behaviour), shame and stigma (Clark, Hudson, Rapee, et al., 2020; Fisher et al., 2023). This may underlie young men's inclination to conceal anxiety symptoms, in lieu of utilising formal mental health help-seeking: Only 15% of young Australian men with clinically significant anxiety symptoms utilise mental health services (Merikangas et al., 2011). As unidentified and untreated anxiety symptoms diffuse and/or exacerbate, many young men present to emergency medical services (i.e., ambulance services) in acute states of uncertainty, heightened distress or with unexplained physical symptoms, subsequently identified to be an anxiety disorder (Dark et al., 2017; Prince, 2021).

Between 2014 and 2017 in Australia, anxiety-related presentations were the primary reason for ambulance call-outs responding to men's mental health concerns (10.3%; Turning Point, 2019), with similar trends seen across other Western countries (Europe; Buccelletti et al., 2013; United States; Dark et al., 2017). Psychosomatic symptoms of anxiety (i.e., sweating, shortness of breath, chest pain and nausea) closely mimic life-threatening conditions such as myocardial infarction, dyspnoea, asthma, and stroke (Australian Institute of Health Welfare, 2022; Yap et al., 2020). Consequently, diagnostic screening for a range of conditions is often undertaken, requiring significant time and resources. When diagnosed, treatment for young men's anxiety disorders in emergency settings can be sub-optimal. Treatment following ambulance and emergency department presentations related to anxiety typically includes acute pharmacological treatment (i.e., anxiolytics [benzodiazepines]; Buccelletti et al., 2013; Dark et al., 2017; Wulsin et al., 2002), and referral to primary care teams (i.e., general practitioners or psychologists). Despite reducing severe anxiety symptoms in the short-term, anxiolytics show little evidence in preventing recurrent presentations of anxiety, and are associated with iatrogenic harms (Dark et al., 2017).

Ambulance services are a key contact point to triage, manage, respond to, and care for young men experiencing psychological distress owing to anxiety. This is particularly pertinent for young men who may otherwise avoid (or are unable to access) formal mental health services, or young men inadequately supported via community mental health services (i.e., young men from low social economic backgrounds, migrant and refugee young men, Aboriginal and Torres Strait Islander young men). Identifying patterns in young men's anxiety presentations to ambulance services (including symptoms, psychosocial triggers, and the role of masculinities) is essential to not only provide insights surrounding the critical inflection point of an acute anxiety crisis, but young men's experiences of anxiety more broadly. Understanding how anxiety manifests and the needs of young men during an anxiety-related ambulance attendance, requires detailed exploration and investigation to improve the accuracy of anxiety disorder diagnoses, the effectiveness of paramedic care procedures during an ambulance attendance and the triage and/or care pathways for young men following an anxiety presentation. Further, contextualising and understanding young men's anxiety-presentations *downstream* (during an ambulance attendance and in emergency settings), informs what prevention approaches and early intervention strategies are required *upstream* to effectively reduce the overall burden of anxiety in young men.

This study aims to leverage the National Ambulance Surveillance System (NASS; Lubman, Heilbronn, et al., 2020) to fill this substantial gap, elucidating the specific characteristics and contexts of young men's anxiety presentations to ambulance services. The NASS monitors and maps mental health and alcohol and other drug related presentations attended by ambulance services in Australia (Lubman, Heilbronn, et al., 2020). Data within the NASS are sourced from electronic Patient Care Records (ePCRs), with coverage across four of six Australian states and two internal territories.

This data source provides rich information including contextual observations made by paramedics at the scene, patterns in clinical presentations as well as co-occurrence of other mental health symptomology and alcohol or other drug use (Lubman, Heilbronn, et al., 2020; Lubman, Matthews, et al., 2020). Population-based data within the NASS provides access to profile young men experiencing anxiety symptoms who would otherwise go overlooked and unidentified. The present study analysed ePCR data within the NASS to identify the clinical characteristics and contexts (i.e., typologies) of young men's anxiety presentations to ambulance services in Victoria, Australia.

Method

Study Design

Preregistered on the Open Science Framework (https://osf.io/j8myw/), the present study used a four-phase, mixed-methodology cross-over study design (Östlund et al., 2011) guided by emerging techniques for combining large qualitative and quantitative datasets (termed "big qual"; Brower et al., 2019). We adhered strictly to our preregistered aims and study design.

National Ambulance Surveillance System Data Acquisition

Data within the NASS are imported into a purpose-built system whereby a team of specialised research assistants manually screen ePCRs to code for mental health symptoms, relevant risk indicators, and self-harm (type, intent, and method; Lubman, Heilbronn, et al., 2020). Cases are classified as an "anxiety-related attendance" if anxiety symptoms were described in ePCRs preceding (last 24 hours) or during the ambulance attendance. Anxiety symptoms are defined as overwhelming and intrusive worry, and/or panic symptom profiles. Case identification, coding and inclusion criteria have been detailed in the NASS mental health and self-harm modules protocol (Lubman, Heilbronn, et al., 2020) and related study manuscripts and project reports

(Ogeil et al., 2021; Scott et al., 2018; Wilson et al., 2020).

Data Collection and Sampling

A sample of 694 young men (aged 15–25 years of age), with an anxiety-related ambulance attendance between 1 January 2019 to 1 January 2020, were obtained from the Victorian arm of NASS (Lubman, Heilbronn, et al., 2020). Victoria is the second most populated state in Australia, with a population of 326,875 young men aged 15–25 years in 2019 (Australian Bureau of Statistics, 2021). We employed a maximum variation sampling approach (Sandelowski, 1995) to ensure the sample was sufficiently large and rich enough to allow for meaningful sub-sample analyses (i.e., location of residence, hospital transportation status). Considering the global coronavirus pandemic (COVID-19) which emerged in 2020, 12-month data were limited to 1 January 2019 to 1 January 2020 due to the likelihood of COVID-19 biasing the characteristics and contexts of young men's anxiety presentations. Ethics approval was obtained from the Eastern Health Human Research Ethics Committee (E122-0809).

Data Analysis

Guided by similar empirical studies analysing big qual datasets (Markides et al., 2022; Prevett et al., 2021) and methodology (Brower et al., 2019; Namey et al., 2008), this study design encompassed four phases: 1) developing the coding framework, 2) testing the coding framework, 3) identifying clusters within and across the coded data, and 4) interpreting the clusters. Qualitative framework analysis was used to develop (phase one) and test (phase two) the coding framework. This coding framework was then converted to a binary dataset, and hierarchical cluster analyses were undertaken to identify clusters within these data (phase three). Finally, thematic analysis (Braun & Clarke, 2021a, 2021b) was undertaken to interpret data within each of the clusters (phase four). The itemised process undertaken within each of the four phases and an

overview of framework analysis, hierarchical analysis and thematic analysis are outlined in Supplementary File 8.

Phase One: Developing the Coding Framework

Stage one and stage two of Ritchie and Spencer's framework analysis guidelines informed phase one: Development of the coding framework (Ritchie & Spencer, 2002). The first author gained an overview of the data by reading 300 paramedic ePCRs (defined as the pilot sample), randomly selected from the study sample. ePCRs from the pilot sample were reviewed and analysed by the first author to identify codes that related to the clinical characteristics of young men's anxiety presentations (e.g., shortness of breath, social stressors, involvement of alcohol or drug use) to inductively establish a coding framework. The first author and study team reviewed codes inputted into NVivo Version 12 to reach salience on the coding framework, patterns and categories identified within the data.

Phase Two: Testing the Coding Framework

To test the established coding framework, the remaining ePCRs within our sample (n=394) were deductively coded using the coding framework in accordance with stages three to five of Ritchie and Spencer (2002) framework analysis guidelines. Data were then charted using NVivo's matrix software according to codes and case demographics (e.g., location of residence, transportation status) to identify similarities and differences in patterns within the data. Chi-square analyses (with Bonferroni-adjusted p values for all analyses) evaluated proportional differences within the coding framework across sub-sample comparison groups (i.e., sub-samples based on case demographics; metropolitan and regional young men, young men transported to hospital and those remaining at home). Effect sizes were examined according to Cramer's V (φ_c), where 0.1 is considered a small effect, 0.3 a medium effect, and 0.5 a large effect

(Cohen, 2013). Qualitative findings were distilled to determine the optimal number of clusters for hierarchical cluster analysis.

Phase Three: Identifying Clusters Within the Data

As per Henry et al. (2015), the sample was sufficiently powered to undertake hierarchical cluster analysis. Following phase two, the coding framework was transformed into a binary dataset and extracted from NVivo. Each code was transposed into a numerical variable with 1 equating to the presence of a code, and 0 indicating an absence (i.e., if a young man's ePCR referenced shortness of breath in the anxiety-related presentation, this would be transposed into a 1 for the code "shortness of breath"). Hierarchical cluster analysis was undertaken in RStudio using the *hclust* function, specifying Euclidian distance and Ward linkage (Markides et al., 2022; Plasse et al., 2007). To validate the optimal number of clusters in the data (initially inferred at phase two), the distribution of codes across the clusters as well as the dendrogram were cross tabulated with young men's ePCRs,

Phase Four: Interpreting Clusters Within the Data

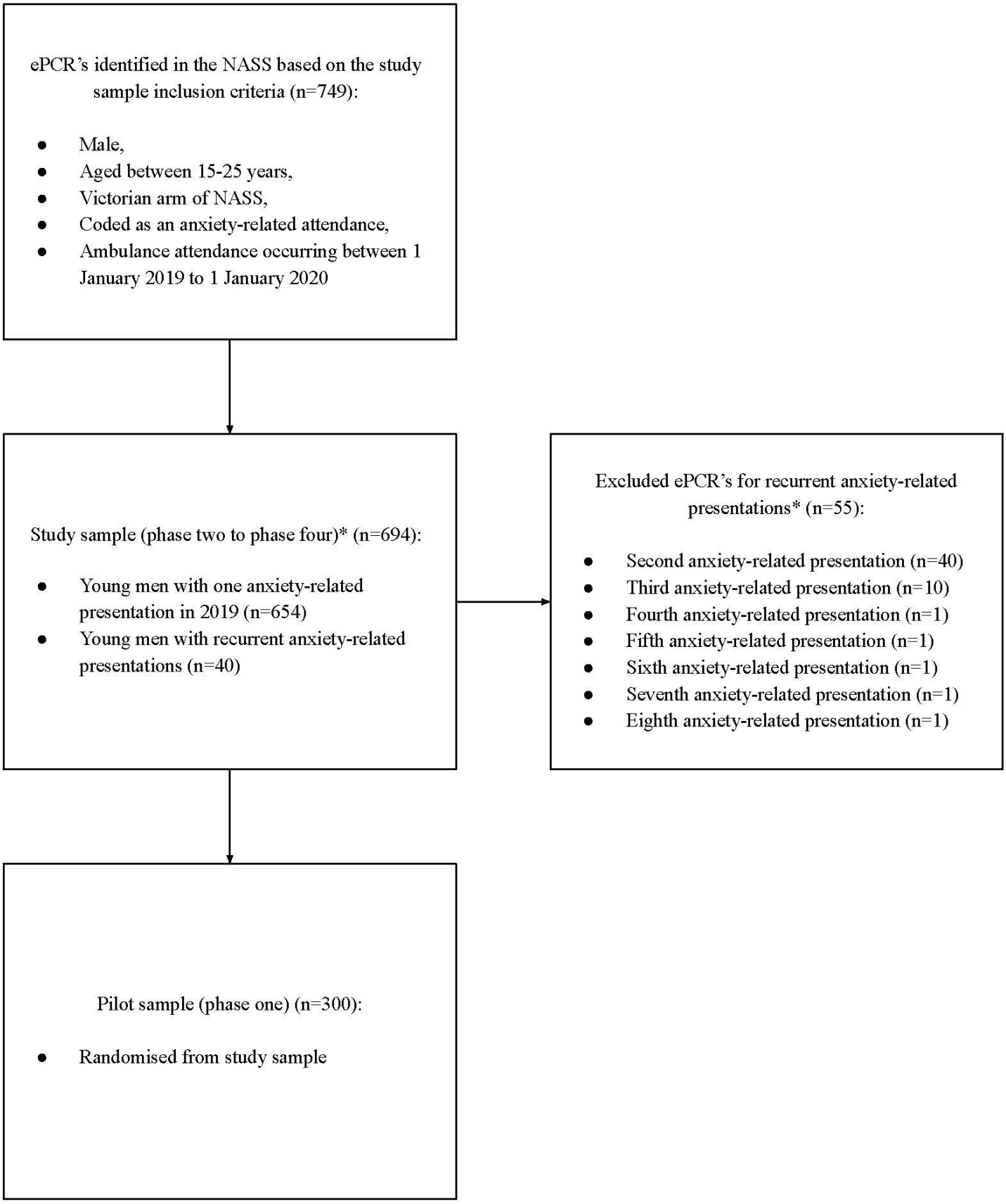
Data were thematically analysed for all young men within each cluster. In line with Braun and Clarke (2021a), the first author identified themes within each cluster by comparing and/or contrasting them across data within each cluster. To ensure the reliability of findings, the first author consulted the study team every month to review and reach salience on identified themes. Findings were distilled to reflect the differing typologies of young men's anxiety presentations. Pseudonyms are used within this paper to maintain participants' anonymity.

Results

Within the NASS, between 1 January 2019 to 1 January 2020, there were 749 young-male anxiety-related ambulance attendances in Victoria, Australia. A statistical

linkage key 581 (SLK-581) developed by the Australian Institute of Health and Welfare (2016) was used to identify recurrent anxiety presentations across a 12-month sample in 2019 (*n*=749 ePCRs). This key is commonly used across population-wide Australian databases or registries and contains elements of unique patient identity (i.e., first name, date of birth, sex) without being directly linkable to the patient (Australian Institute of Health Welfare, 2016). Forty young men had more than one anxiety-related ambulance attendance within the 12-month period (Figure 5.1). The first anxiety-related presentation for each unique individual was retained and 55 ePCRs (7.34%) were removed, leaving 694 unique young men with anxiety-related presentations (*M*age = 20.56 years, *SD* = 2.84). The clinical characteristics of the study sample are outlined in Table 5.1.

Figure 5.1. Study sample selection from National Ambulance Surveillance System.



Note. *Identified by individual SLK-581 to distinguish recurrent presentations. ePCR'S=Electronic Paramedic Case Report. NASS=National Ambulance Surveillance System. SLK-581=Statistical Linkage Key 581.

Table 5.1. Clinical characteristics of young men's anxiety-related ambulance presentations.

Variable	**Pilot sample** Phase one **n (%)** (*n* = 300)	**Study sample** Phase two, three and four **n (%)** (*n* = 694)
Violence, threat, aggression reported	26 (8.67)	66 (9.51)
Patient residential location[a]		
Metropolitan	222 (74.00)	518 (74.64)
Regional	78 (26.00)	176 (25.36)
Substance use		
Alcohol involved/mentioned	49 (16.33)	112 (16.14)
Alcohol intoxication-related attendance[b]	22 (7.33)	78 (11.24)
Illicit or pharmaceutical drug-related attendance	83 (27.67)	209 (30.12)
Amphetamine	22 (7.33)	47 (6.77)
Cannabis	30 (10.00)	65 (9.37)
Cocaine	8 (2.67)	22 (3.17)
Ecstasy	8 (2.67)	23 (3.31)
GHB	N<5*	5 (0.67)
Heroin	N<5*	N<5*
Ketamine	N<5*	N<5*
Benzodiazepine	N<5*	16 (2.31)
Opioid analgesic	N<5*	N<5*
Non-opioid analgesic	N<5*	N<5*
Opioid substitution	N<5*	N<5*
Pharmaceutical stimulant	N<5*	N<5*
Unknown/Other substance	10 (3.33)	10 (1.44)
Alcohol and/or illicit or pharmaceutical drug-related overdose[c]	5 (1.67)	5 (0.72)

Transportation to hospital		
Ambulance transported to hospital	197 (65.67)	458 (65.99)
Transported to hospital by other means	N<5*	5 (0.72)
Not transported to hospital	101 (33.67)	231 (33.29)
Transport not required[d]	38 (36.89)	80 (33.76)
Patient refused transport[d]	27 (26.21)	61 (25.74)
Patient referred to LMO for follow up[d]	19 (18.45)	57 (24.05)
Current mental health symptoms		
Depression symptoms reported	9 (3.00)	28 (4.03)
Psychosis symptoms reported	N<5*	13 (1.87)
Current suicidality and self-harm		
Suicide attempt involved/mentioned	6 (2.00)	12 (1.73)
Self-harm reported	9 (3.00)	15 (2.16)
Suicide ideation reported	29 (9.67)	79 (11.38)
Stated/evidenced[e]	6 (17.14)	11 (12.09)
Evidenced but denied[e]	N<5*	8 (8.79)
Plan disclosede	9 (25.71)	30 (32.97)
No plan disclosed[e]	N<5*	7 (7.69)
Unknown[e]	12 (34.29)	35 (38.46)
History of mental illness		
History of general anxiety reported	183 (61.00)	426 (61.38)
History of depression reported	82 (27.33)	195 (28.10)
History of PTSD reported	7 (2.33)	24 (3.46)

Note. *Obfuscation was required to protect patient anonymity. [a]Residential location by postcode and coded in accordance with local government areas. [b]Subset of alcohol involved/mentioned cases. Alcohol intoxication-related attendance classified if patient reports consuming more than four standard alcoholic drinks and paramedic discerned intoxication (i.e., breath smells of alcohol, slurred speech, unsteady gait).[c]Overdose classified as a score of <9 on the Glasgow Coma Scale. [d]Subset of not transported to hospital cases. [e]Subset of suicide ideation reported cases. LMO = Local Medical Officer. PTSD = Post Traumatic Stress Disorder.

Clinical Characteristics of Young Men's Anxiety Presentations

The coding framework included 11 codes. Three codes related to procedures utilised by the paramedic (i.e., recommending follow up/referral to family doctor, breath coaching and/or reassurance and sedation). The remaining eight codes reflected the clinical characteristics of young men's anxiety presentations (see Table 5.2). Across the study sample, the most common clinical characteristics in young men's anxiety presentations were psychosomatic symptoms (i.e., shortness of breath and/or hyperventilation, cardiac chest pains, body tingling, tremors and numbness, dizziness), involvement of alcohol and drug use (i.e., pharmaceutical and illicit drugs), social or situational stressors (i.e., relationship breakdown or strain, job loss, financial hardship, housing issues, work and school pressure) and past anxiety attacks or episodes.

As seen in Table 5.2, proportions of codes within the clinical characteristics coding framework were equivalent across the pilot and study sample, indicating sufficient concordance of the coding framework for use in the study sample. Similar proportions across regional and metropolitan young men as well, suggest the clinical characteristics involved in young men's anxiety presentations did not vary based on their location of residence. However, young men who were transported to hospital, in comparison to those who were not, had higher rates of self-harm and suicide ($\chi^2 = 49.18$, df (1), $p =< .001$, $\varphi_c = .266$), anger, aggression and violence ($\chi^2 = 8.16$, df (1), $p = .003$, $\varphi_c = .111$) and psychosomatic symptoms ($\chi^2 = 13.43$, df (1), $p =< .001$, $\varphi_c = .139$).

Table 5.2. Proportions of code occurrence in coding framework across sub-sample comparisons.

	Inter-rater reliability of coding framework			Location of residence			Transportation status		
Codes	Pilot sample (%)	Study sample (%)	Chi-square	Regional (%)	Metro (%)	Chi-square	Transported (%)	Not transported (%)	Chi-square
Sudden onset	3.88	3.94	χ^2=0.20, df (1), p=.659, φ_c=.017	4.51	3.76	χ^2=0.44, df (1), p=.507, φ_c=.025	3.18	5.51	χ^2=5.26, df (1), p=.022, φ_c=.087
Involvement of drug and alcohol use	16.69	16.52	χ^2=0.29, df (1), p=.657, φ_c=.017	13.52	17.52	χ^2=3.51, df (1), p=.061, φ_c=.071	17.79	13.94	χ^2=8.38, df (1), p=.004, φ_c=.110
Psychosomatic symptoms	39.07	40.19	χ^2=2.68, df (1), p=.004, φ_c=.129	39.27	40.50	χ^2=0.78, df (1), p=.378, φ_c=.033	38.13	44.41	χ^2=13.43, df (1), p<.001*, φ_c=.139
Self-harm and suicide	6.60	6.93	χ^2=0.25, df (1), p=.615, φ_c=.019	7.94	6.60	χ^2=0.83, df (1), p=.364, φ_c=.034	9.93	0.81	χ^2=49.18, df (1), p<.001*, φ_c=.266
Anger, aggression, and violence	5.95	5.12	χ^2=1.13, df (1), p=.289, φ_c=.040	6.44	4.68	χ^2=2.15, df (1), p=.142, φ_c=.056	6.04	3.24	χ^2=8.16, df (1), p=.003*, φ_c=.111
Social stressor	11.51	12.37	χ^2=4.52, df (1), p=.211, φ_c=.081	11.16	12.77	χ^2=2.09, df (1), p=.555, φ_c=.055	11.28	14.59	χ^2=4.80, df (1), p=.187, φ_c=.083
Past anxiety attacks or episodes	10.09	9.65	χ^2=0.79, df (1), p=.675, φ_c=.034	10.52	9.36	χ^2=0.91, df (1), p=.633, φ_c=.036	8.26	12.48	χ^2=9.15, df (1), p=.010, φ_c=.115
Involvement or mention of formal mental health services	6.21	5.28	χ^2=1.45, df (1), p=.229, φ_c=.046	6.65	4.82	χ^2=2.28, df (1), p=.131, φ_c=.057	5.40	5.02	χ^2=0.37, df (1), p=.541, φ_c=.023

Note. *Significant at $p < .004$ using Bonferroni adjustment for multiple comparisons.

Typologies of young men's anxiety presentations

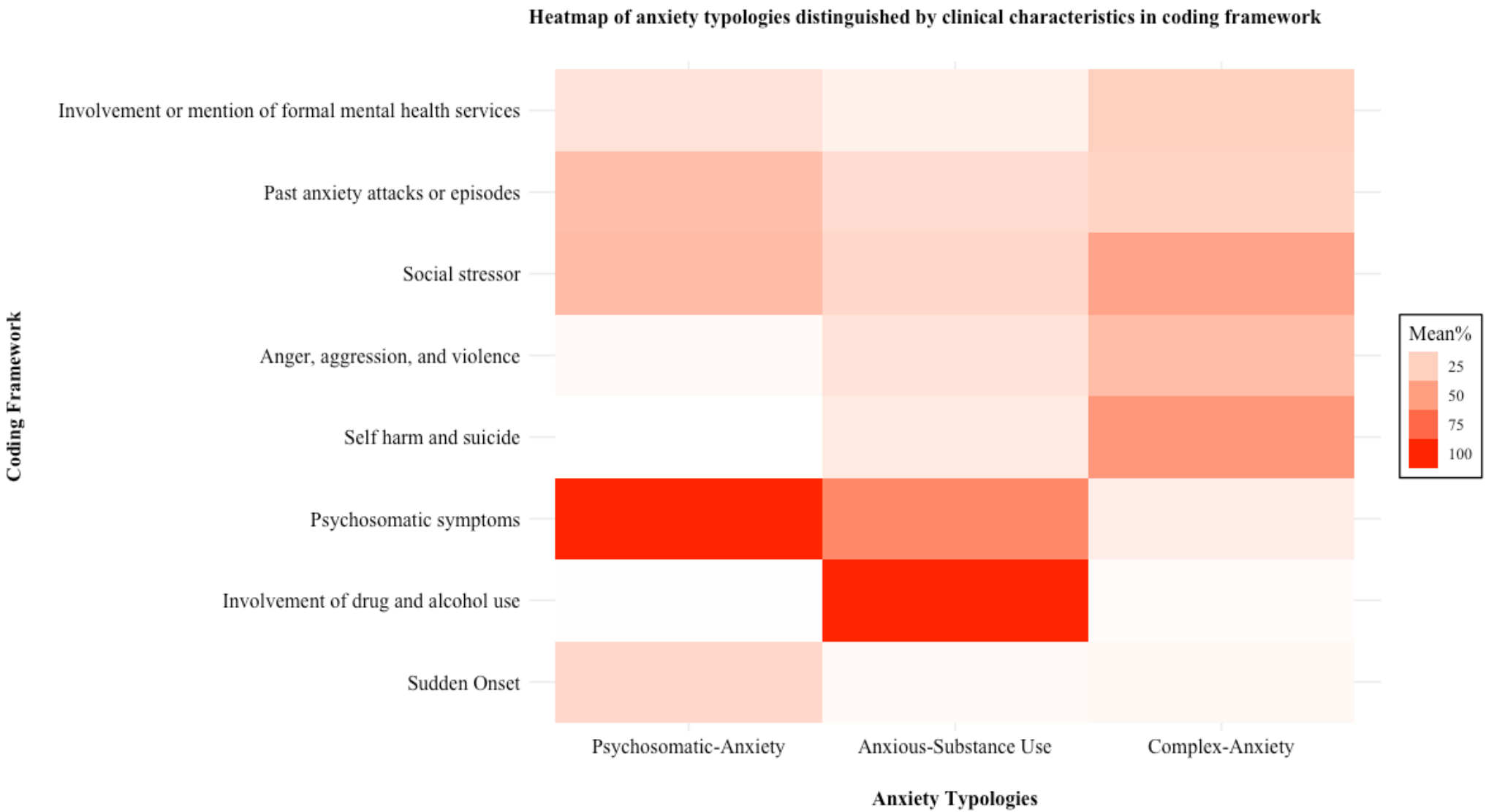
Using hierarchical cluster analysis, three clusters were identified in the study sample reflecting distinct typologies of young men's anxiety presentations (see dendrogram in Supplementary File 9). The proportions of codes in the coding framework varied across these three typologies, as depicted in the heatmap presented in Figure 5.2. The first typology, Psychosomatic-Anxiety (n = 301), typically involved a sudden onset of severe psychosomatic symptoms with heightened uncertainty. Second, Anxious-Substance Use (n = 247) presentations were intertwined with recent alcohol or drug use, which both precipitated and perpetuated young men's anxiety symptoms. Lastly, Complex-Anxiety (n = 146) saw young men presenting to paramedic services with significant deteriorations in their mental health including self-harm, suicidal ideation, and suicidal behaviour.

Psychosomatic-Anxiety: Episodic and S Psychosomatic Symptoms

The psychosomatic-anxiety typology was typically associated with intense, acute, and severe psychosomatic symptoms. The most prominent psychosomatic symptoms were cardiac complaints (i.e., stabbing chest pains, chest tightness, heart palpitations, tachycardia) and respiratory difficulties (i.e., shortness of breath, hyperventilation, fainting) which in extreme circumstances precipitated dizziness, body tremors and nausea. Kevin, a 19-year-old young man was sitting at the dinner table when he:

> had an anxiety attack with hyperventilation. [Kevin] began to have tingling in arms and legs as well as central abdominal pain. [Kevin] laid down in bed and hyperventilation and abdominal pain continued. [Kevin] was not coping and his mother called Ambulance Victoria.

Figure 5.2. Anxiety Typologies Heatmap



Many young men conveyed to paramedics that they were concerned about the types of psychosomatic symptoms they were experiencing and feared they may be associated with a physical or life-threatening condition. Twenty-three-year-old Darren told paramedics that he thought he was having a heart attack. Darren was at home gaming when his heart started to race and he experienced chest tightness. "[Darren] denied recent illicit substance use/increased caffeine and had nil previous episodes of anxiety." Darren was then teary in the ambulance upon being transported to the hospital explaining to paramedics that he is a carer for his wife, who has mental health issues and has been under increasing stress lately.

Psychosomatic anxiety symptoms often manifested suddenly and unexpectedly. This frequently occurred in social settings including work, or social gatherings with friends and family members. This was particularly distressing for 22-year-old Joshua who was on a tram home from work when he experienced sudden tetany in his hands and feet. Joshua was witnessed by a bystander having involuntary muscular spasms (shaking) in his hands for approximately two minutes. Joshua was alert but extremely anxious and asked the bystander for help during this time: "[Joshua] states he was breathing rapidly, his heart was racing, and he experienced altered sensation to his extremities. [Joshua] spoke minimal English but told paramedics he needed to be talked to and reassured."

For some young men like Joshua, anxiety symptoms manifested suddenly or "out of the blue" whereas other young men reported a history of anxiety to paramedics, with some having recurrent similar presentations of anxiety. Twenty-one-year-old Eric described intermittent heart palpitations over the last three days that had become increasingly severe, burdensome, and frequent. Eric conveyed to paramedics that he felt these heart palpitations were "related to his anxiety issues". Usually, Eric felt in control

of these feelings and said palpitations usually dissipated over time; however, he reached out to paramedic services as he "was unable to do this today and reports feeling like his heart is thumping against his chest." Similarly, 24-year-old Angus had become increasingly stressed and anxious over the preceding three weeks, stating that he "has daily episodes of palpitations and associated nausea, clamminess and dizziness, up to twenty times a day."

Young men with a history of recurrent psychosomatic presentations had often previously engaged with, or were currently engaging with, professional mental health services. Many described presenting to medical practitioners (i.e., general practitioners [GPs], cardiologists, neurologists, gastroenterologists) to have psychosomatic symptoms investigated for physical pathologies, yet following long-term and inconclusive diagnostic testing, they were referred to mental health services. Twenty-five-year-old Wesley had been experiencing ongoing left sided chest pain which he described as "constant in nature". Wesley also explained to paramedics that he has had:

> three to four 'panic attacks' each week over the last months, and five days ago presented to an emergency department where he was discharged with NAD [no abnormality detected] and recommended to follow up with his GP, who had also discharged Wesley with NAD.

For 19-year-old Blake his "almost daily symptoms since seventeen" had been investigated by Holter monitor and stress test for supraventricular tachycardia (SVT) but similarly "there is no evidence of cardiac-related complications and SVT has not been proven."

Paramedics played a critical role in investigating and delineating the aetiology of psychosomatic symptoms, undertaking physical examinations and vital observations to exclude cardiac or respiratory related pathology. Sixteen-year-old Mitch's shortness of breath and chest pains had resolved following breath coaching with paramedics, and he

was left in the care of his family and girlfriend at home. Mitch stated, "he was feeling much better" and he agreed to a plan with paramedics to follow up with his GP tomorrow for mental health management.

Anxious-Substance Use: Substance Use Related Anxiety

For young men with an Anxious-Substance Use typology, anxiety symptoms directly related to recent alcohol and/or other illicit and pharmaceutical drug use (including poly-substance use). Young men typically sought emergency assistance due to dosage changes to a particular substance (including drug supply issues), increasing the quantity of substances injected, inhaled, or ingested, or following first-time drug use. Twenty-five-year-old James was unable to talk to paramedics due to severe hyperventilation and anxiety, and James's friends stated he had used methamphetamines, cocaine and benzodiazepines with no sleep for five days before calling paramedic services for severe chest pains and shortness of breath:

> [James] consumed a 'line of cocaine' and shortly after began to panic, hyperventilate, and complain of chest pains, so friends called 000. On arrival [James]…was extremely anxious, hyperventilating and grabbing his chest, making it very difficult to assess.

Alcohol and drug use had a cyclical effect on young men's anxiety symptoms. In some cases, it was described as the causal factor in anxiety-presentations that manifested after, and due to, alcohol and/or drug use. Twenty-three-year-old Joseph "suffers from chronic alcoholism" and walked to a nearby family member's house stating he was having a seizure.

> On arrival [Joseph] was sitting upright on the couch, had gross upper body tremors and said he believed he had a seizure early this morning after drinking 'a lot of wine at 3am' and had not been taking his [anxiety] medication.

Young men with substance-induced anxiety symptoms frequently reached out to emergency services with concerns that they may be experiencing an adverse physical

reaction to a particular drug. This uncertainty could be so severe that some young men reported feeling unsafe, scared, and paranoid.

For other young men, the interconnection between their anxiety symptoms and substance use was harder to delineate as it appeared to exacerbate pre-existing anxiety issues. Young men disclosed using cannabis and anxiolytics (i.e., diazepam and alprazolam) to manage longstanding anxiety and to alleviate worry and/or rumination, severe psychosomatic symptoms (i.e., cardiac chest pain and shortness of breath) and aid sleep. Adam, a 21-year-old man was reported to have consumed a substantial amount of diazepam whilst driving home, "following the onset of 'anxiety attack' CCP (central chest pains), SOB (shortness of breath) and hands and feet tingling) at work." Adam then reached out to paramedic services as he was concerned that his psychosomatic symptoms of anxiety had not dissipated, and worried that he may have taken too much diazepam. Like Adam, many young men sought help calling emergency services independently. Young men stated that they were unable to calm themselves down or felt professional mental health intervention was now necessary and time critical. Twenty-one-year-old Mark was spotted on the train tracks by a public service officer, who described him as increasingly upset, anxious and remorseful verbalizing "I just want help to get clean and off [methamphetamines]."

For others, friends, family members, work colleagues or housemates called for emergency services on their behalf, stating to paramedics that they were concerned for the young man's safety or the safety of those around them. Social supports reported to paramedics that they had noticed changes in the young man's behaviour, in some instances describing him as unresponsive or acting erratic and agitated, aggressive, and occasionally violent. For 16-year-old Xavier a verbal and physical altercation had ensued with his father, after Xavier had taken LSD, prompting a neighbour to call

paramedic services for additional support: "[Xavier] subsequently became anxious, exuberant, and agitated… [Xavier's] father tried to reassure him, but when this failed, [Xavier's] father reported that he was forced to restrain him."

Paramedics' primary role in treating young men presenting with this substance use-anxious typology was around de-escalation and calming or reassurance. Police were also involved if young men were displaying or threatening violent behaviours towards oneself or others, or if a physical or verbal altercation had ensued.

Complex-Anxiety: A Situational Breaking Point

Young men with a complex-anxiety typology presented to paramedic services with a significant risk profile and deterioration in their mental health, including disclosures of self-harm, suicidal ideation, and suicidal behaviour. Sometimes this decline was sudden, particularly in light of a significant life event (i.e., relationship breakdown, bereavement, job loss, housing relocation) or if young men had limited literacy, awareness, and insight surrounding their mental health. Owen, an 18-year-old young man, presented to paramedic services with acute cardiac syndrome and superficial self-harm injuries. Owen's father had called paramedic services after he came home to Owen crying and hyperventilating, describing that:

> He feels like his head will explode and that he cannot describe how he is feeling…[Owen] stated that he hasn't spoken to anyone about how he feels, however upon questioning [Owen] states he has been feeling anxious and could not describe why.

Similarly, 18-year-old Nick was distressed and hyperventilating when paramedics arrived, and he had difficulty communicating what had happened. Nick eventually stated to paramedics that "an incident had happened yesterday, which resulted in him having thoughts of suicide and self-harm," but Nick was not willing to provide any additional information or be transported to hospital for mental health follow

up.

For many young men, anxiety symptoms were compounded by co-morbid mental health challenges including anhedonia, paranoia, hallucinations and insomnia, which they stated to paramedics, had been mounting over a period of weeks, months or even years. Comorbid psychiatric diagnoses (i.e., major depression, bipolar disorder, borderline personality disorder, substance use disorder, autism spectrum disorder) and histories of suicidal ideation or past suicide attempts, were repeatedly disclosed to the paramedics in attendance, but some young men stated they were reluctant, or were not able, to talk to social supports about their mental health challenges. For 19-year-old Ahmed, "anxiety symptoms had been building up for a couple of weeks and [Ahmed] stated he felt like he didn't have anyone to reach out to as he felt he would be a burden."

However, for young men living with family members or romantic partners, social supports were commonly involved in the paramedic presentation. Young men's social supports provided important background to paramedics surrounding mental health histories, particularly if the young man was unable to do so himself. In these instances, social supports often initiated the call to paramedic services following a disclosure of suicidal thoughts or plans by the young man to loved ones. For 25-year-old Leo:

> [Leo] lives with his parents. [Leo's] parents state he has been feeling increasingly anxious for the past three days. Parents state [Leo] was taken to the hospital three days ago by parents but left before being assessed by the doctor. Parents today found [Leo] curled up on the floor of his bedroom and stating to parents that he wanted to [kill himself]. [Leo] states that he still feels suicidal and that it has been getting increasingly worse for the last three months. [Leo] states today that he has a current plan involving suicide and has access to means.

Social stressors often exacerbated and/or triggered young men's anxiety symptoms. Many young men reported recent distressing social stressors to paramedics

which marked a significant change or disruption to the young men's lives. This included important life events such as a distressed or disrupted intimate partner relationships, loss of employment, housing difficulties or schooling and exam stress. Adi, a 23-year-old student presented to university student support services with "severe anxiety and revealed a suicide plan." Adi had become increasingly distressed and proceeded to self-harm requiring police restraint, where he was sectioned (under Section 351 of the Australian Mental Health Act 2014) and transported to the hospital. Adi told paramedics that he was experiencing increased stress with upcoming university exams and worried he would fail. For 19-year-old Sam, unstable housing combined with his girlfriend relocating for work had placed him under significant financial stress causing stress and anxiety. "[Sam] states he then sent a message to his girlfriend stating he was going to kill himself, and [Sam's] girlfriend then reached out to his friends and family who found [Sam] and called paramedics for assistance."

A proportionally smaller group of young men described significant social challenges, including precarious housing, family violence, unemployment, and criminal convictions. These social challenges impeded young men's access to ongoing mental health treatment. Consequently, even if young men were involved in, or known to, mental health services, ongoing engagement in psychological treatment for anxiety was difficult and sometimes ineffective. Twenty-year-old Jason presented to paramedic services with superficial self-harm injuries, stating that "he had [self-harmed] to 'distract himself' from emotional pain and that he was feeling very alone tonight." Jason was in contact with local child and youth family services and a review by the Prehospital Response of Mental health and Paramedic Team (PROMPT) was requested by paramedics to "review the effectiveness of [Jason's] current management plan which was previously developed by his case worker." However, Jason stated to PROMPT and

the paramedics in attendance that finding permanent accommodation was his primary concern.

The combination of social stressors and comorbid mental health issues culminated in feelings of desperation and hopelessness as 19-year-old Ahmed conveyed to paramedics “I just want this to be over” and stated that “he didn’t feel safe being at home with his thoughts.” Twenty-five-year-old Nathan had taken an overdose of prescription medication stating, “he had been struggling with his own thoughts and feelings of anxiety and depression and that it had reached a breaking point.” Paramedic services were the nexus of young men’s desperation and distress, often intervening to de-escalate suicidal crises, providing short-term debriefs to social supports. and triaging young men to receive emergency mental health services.

Discussion

This study explored the characteristics and contexts of young men’s anxiety presentations to ambulance services in Victoria, Australia, using population-based data from the NASS. To the best of our knowledge, this is the first study to fully integrate framework analysis, hierarchical cluster analysis, and thematic analysis to convert qualitative clinical data (ePCRs) into a quantitative dataset, whereby the binary variables are inductively derived from the data itself. The most common clinical characteristics reported in paramedic records pertained to psychosomatic anxiety symptoms (i.e., shortness of breath and/or hyperventilation, cardiac chest pains, body tingling, tremors and numbness, dizziness), involvement of alcohol and drug use, social or situational stressors and past anxiety attacks or episodes. Findings identified three typologies of young men’s anxiety presentations Psychosomatic-Anxiety, Anxious-Substance Use, and Complex-Anxiety, which existed across varying severity and mapped the clinical symptomology of young men’s anxiety and associated risks.

Men's anxiety research, and theory-based models of men's anxiety, provide considerable depth to the gendered elements of masculine socialisation which underlie the discrete, yet interconnected typologies of young men's anxiety identified in this study. For example, Fisher et al., (2023, p. 8) highlighted a perceived "invisibility of anxiety" amongst men, whereby outdated stereotypes norm anxiety as a foreign or forbidden masculine experience. A juxtaposition between traditional masculine norms and anxiety in young men (evidenced in the emerging field of men's anxiety research; Clark, Hudson, Rapee, et al., 2020; Fisher et al., 2021) may contribute to the limited insight and high levels of uncertainty associated with the Psychosomatic-Anxiety typology: Young men in this study frequently described psychosomatic symptoms to paramedics but rarely connected these physical manifestations to anxiety.

The Anxious-Substance Use typology in this study demonstrated a cyclical nature between anxiety and substance use, whereby young men's misuse of alcohol and drug use precipitated and perpetuated the anxiety symptoms they were experiencing. In past research, sentiments of shame and a perceived failure to embody masculine virtues have been attributed to young men avoiding, disregarding or denying psychosomatic symptoms of anxiety, defined as the Resisting Phase of anxiety (Fisher et al., 2023). Increased alcohol and drug use is commonly cited as one such avoidance strategy employed by men to alleviate or conceal ongoing anxiety concerns (Robinson et al., 2009), further evidenced by the Anxious-Substance Use anxiety typology. The use of alcohol and drugs to cope with (or reduce) anxiety can underlie the high rates of comorbidity between anxiety-disorders and substance-use disorders in men (Andersson et al., 2021; Bolton et al., 2006) highlighting the crucial need for *integrated* approaches to specialty treatments of men's mental health issues and substance use in clinical care.

Substance use has been classified as an indirect act of self-harm in past research,

alongside other impulsive behaviours including physical (i.e., jumping off a roof), situational (i.e., high-speed driving) and sexual (i.e., unprotected sex) risk taking, whereby the intent of self-harm acts is often ambiguous (Walsh, 2012). Despite a lack of research dedicated to the gendered elements of men's self-harm (Tofthagen et al., 2022), there is evidence to suggest men's impulsive behaviours (where men may not directly state self-harm intentionality), tend to be overlooked or dismissed in clinical settings, normed as a masculine expression of aggression or risk-taking behaviours (Green & Jakupcak, 2016). The Complex-Anxiety typology provides insight into the co-occurrence of self-harm and suicidality with men's anxiety (Fisher et al., 2022). Perhaps the involvement of alcohol and drug use wasn't routinely disclosed by young men or captured by paramedics in anxiety presentations that involved self-harm and suicidality. Alternatively, this may serve as early evidence that young men's anxiety, concomitant with substance-use, has a differential clinical profile in comparison to young men disclosing self-harm or suicidal ideation and behaviours. Given males constitute up to 80% of suicide fatalities and approximately 75% of substance use-related fatalities (including drug overdoses; Global Burden of Disease Collaborative Network, 2019), understanding how these psychological crises may differ, and uncovering men's patterns of contact with emergency healthcare services preceding, during and following a crisis, is critical.

Limitations

Paramedic data within the NASS is collected for operational rather than research purposes. Data from NASS only captures what the patient (or bystander) discloses to the paramedic and what is written into the notes as clinically relevant to the attendance (Lubman, Heilbronn, et al., 2020). As such, information which may relate to the clinical characteristics and context of young men's anxiety presentations (i.e., mental health history or the social and/or situational stressors which preceded and contributed to

young men's anxiety symptoms) may not have been recorded.

Similarly, given ePCRs are objective documentations reporting young men's physiological and/or psychological issues, important subjective data surrounding the paramedic interpretations of anxiety and treatment decision making (i.e., whether the young man was transported to hospital or referred onto community follow up) were not always captured. This is an important consideration given gendered assumptions and biases among healthcare practitioners can influence clinician's identification, engagement, and response to men in distress (Almaliah-Rauscher et al., 2020; Seidler, Rice, River, et al., 2018).

NASS data only captures anxiety presentations if an ambulance had been dispatched. As such the clinical profiles of young men's anxiety included in this study may be particularly severe (i.e., central chest pain), given emergency call operators had determined that emergency ambulance dispatch was required.

The classification system used in the NASS for coding anxiety is not directly equivalent to the diagnostic criteria outlined in the DSM-5-TR (American Psychological Association, 2022) or ICD-11 (World Health Organization, 2022a). As a result, it was impossible to derive whether anxiety classifications from the NASS align with symptoms of a formal anxiety disorder or delineate between different sub-types of anxiety disorders (e.g., social anxiety disorders, generalised anxiety disorders, panic disorders). Consequently, there is a possibility that what is categorised as anxiety within the NASS could also be related to other mental health issues or physical health conditions.

Additionally, recurrent anxiety presentations were removed from this study, meaning that for young men who presented to ambulance services with more than one anxiety related presentation within the 12-month period, only their first presentation

was retained. Therefore, study findings must be leveraged to investigate whether the three typologies identified in this study translate and replicate for young men with recurrent anxiety presentations, and for young men who call emergency health services with anxiety related concerns, but do not require an ambulance.

Future Directions

The importance of this study lies in its nuanced exploration of young men's anxiety presentations to ambulance services, which extends beyond what has been previously understood in the field of men's mental health. By identifying and analysing distinct anxiety typologies 'Psychosomatic-Anxiety,' 'Anxious-Substance Use,' and 'Complex-Anxiety' this research offers critical insights into the different ways anxiety symptoms manifest and are experienced by young men in crisis situations. This specificity can assist in the development of tailored anxiety prevention strategies for young men and direct emergency and community mental health service delivery to ensure the unique needs of each typology are adequately addressed.

Identifying and understanding these anxiety typologies has several practical implications for mental health interventions and service delivery: The gendered elements of young men's anxiety should be considered to ensure anxiety presentations are triaged and treated effectively. For example, young men with a 'Psychosomatic-Anxiety' typology presenting with high levels of uncertainty and severe psychosomatic symptoms could benefit from increased gender sensitised psychoeducation (surrounding men's anxiety) and resources focused on self-management strategies. Providing targeted interventions that address their symptoms and help them manage uncertainty may reduce recurrent presentations and prevent comorbid mental health issues. Whereas for young men with 'Complex-Anxiety' (particularly those presenting with suicidality and self-harm), immediate triaging to emergency mental health services is vital.

Recognising the urgency and complexity of these presentations ensures young men can be triaged appropriately to receive comprehensive and multi-disciplinary mental health care.

This study highlights the need for future research to link men's anxiety (and more specifically men's anxiety presentations to ambulance services) to long term physical and mental health outcomes and uncover how/if this varies across different social determinant such as gender, cultural and socio-economic backgrounds). Future research should also determine linkages between mental health outcomes and service use pathways in men's anxiety typologies. Understanding men's referral pathways and health care interactions within and across Psychosomatic-Anxiety, Anxious-Substance Use and Complex-Anxiety typologies could inform future interventions triaging young men based on their short-term and long-term mental health needs. This would have significant policy and mental health systems implications, allowing governments, researchers, and mental health services to refine and formulate preventative mental health strategies and treatment pathways for men most at risk.

Paramedics played a key role in investigating psychosomatic symptoms, crisis management (both for the young man presenting with anxiety and bystanders who may be at the scene) and triaging young men into appropriate health specialist and/or mental health services. Given the key role paramedics play in managing young men experiencing an anxiety crisis, their procedures, preparedness and attitudes/stigma warrant further exploration. Current research indicates paramedics may feel inadequately prepared to handle men's mental health presentations, particularly those involving alcohol and drug use (McCann et al., 2018). Moreover, paramedics do not routinely provide information on mental health help-seeking options, self-management, or prevention strategies to men, yet those who do, report doing so on an unplanned or

intermittent basis (Turning Point, 2019). The lack of information provision and gap in the linkages to follow up mental health supports for young men with anxiety, provides clear scope for paramedic interventions which, when necessary, divert men away from emergency services to brief psycho-education interventions for anxiety and help-seeking/management options available (and most appropriate) to them.

Conclusions

This study provides unique insights into young men's anxiety, a phenomenon much overlooked and misunderstood. Made available in the typologies of young men's anxiety presentations to ambulance services are numerous intervention points and triage considerations to aptly tailor first responder mental health supports. Herein, health service policies and public health resources might also adjust to improve paramedic preparedness to respond and, where appropriate, direct young men to effective services while simultaneously reducing demands on emergency mental health services.

Chapter Summary

Chapter 5 explored the clinical characteristics and contexts of 694 young men (aged between 15-25 years), who presented with anxiety-related symptoms to an Australian ambulance service in Victoria in 2019. Young men's presentations to ambulance services commonly involved severe and unexplained psychosomatic symptoms (i.e., shortness of breath and/or hyperventilation, cardiac chest pains, body tingling, tremors and numbness, dizziness), alcohol and other drug use and increasing uncertainty or situational stressors. Mixed-methods analysis (involving qualitative and quantitative techniques) outlined three distinct typologies of young men's anxiety presentations: Psychosomatic-Anxiety, Anxious-Substance Use and Complex-Anxiety. In investigating and typologising young men's anxiety presentations, Chapter 5 established ambulance services as a key contact point to triage, manage, respond to, and care for young men experiencing anxiety. Chapter 6 will now conclude with a comprehensive summary of the overarching thesis findings, detailing the implications of this research on men's anxiety scholarship, clinical care, and interventions, as well as outlining a structured agenda for future research.

Chapter 6: Discussion: Advancing Men's Anxiety Research, Clinical Care and Interventions

Chapter Overview

This chapter discusses the findings of Chapters 2, 3, 4 and 5 and details future directions for the field, focusing on gaps in empirical evidence, the development of gender responsive models of care, and the innovative possibilities for young men's anxiety interventions. This chapter also proposes an agenda for future research. This three-step research agenda guides considerations for an upstream young men's anxiety intervention (Step 1), which could be implemented into ambulance services (Step 2) to evaluate its long-term effectiveness, efficiency, and equity (Step 3). This chapter then closes with the overall thesis conclusions.

Summary of Thesis Key Findings

The body of work presented in this thesis contributes foundational understanding and insights surrounding young men's anxiety, a field long overlooked in men's mental health scholarship. As highlighted in the introduction of this thesis (Chapter 1), there had been limited empirical work into the gendered elements of anxiety and anxiety disorders in men. This is despite global prevalence rates highlighting the significant, and increasing, burden of disease attributed to anxiety disorders in males over the last three decades (Global Burden of Disease Collaborative Network, 2019). Prior to 2020, sex differences research had predominated to differentiate anxiety in males and females. Absent however were important nuances and diversities that exist in and across men. One consideration is age, or more specifically the challenges unique to young men (defined as men aged 15–25 years in Chapters 3 and 5), given they are more likely than older male peers to adhere to traditional norms of masculinities, forging and framing their anxiety experiences. To address the absence

of gender-based research identified in Chapter 1, the remaining chapters answered four primary research questions: 1) *What qualitative and quantitative evidence exists on men's anxiety and/or anxiety disorders?* (Chapter 2); 2) *How do young men experience anxiety?* (Chapter 3); 3) *What drivers and processes lead men with anxiety to seek help through formal mental health services?* (Chapter 4); 4) *How do young men experiencing anxiety engage in health care settings?* (Chapter 5).

Outcomes of this thesis included the first systematic review examining men's experience of anxiety (Chapter 2), a world-first grounded theory of young men's anxiety (Chapter 3), ascertaining men's pathways to formal mental health help-seeking for anxiety (Chapter 4) and characterising typologies of young men's anxiety presentation to ambulance services (Chapter 5). Through the lens of young men's gender socialisation, the diverse qualitative methodologies utilised within these studies serve to illuminate young men's lived experiences, improving our collective understanding of the ways anxiety and anxiety disorders manifest and impact men and how they seek help (and self-manage) symptoms over time. Knowledge gains from this body of work have implications for broadening mental health resources and health promotion campaigns, tailoring psychological treatment for young men's anxiety disorders, and directing an agenda of future research to further investigate the physical and psychological health outcomes associated with young men's anxiety.

Chapter 2

Chapter 2 began by summarising the results of the first systematic review of men's anxiety. This landmark review has laid the foundation for the remainder of the thesis, synthesising quantitative and qualitative evidence in the field of men's anxiety to date. Specifically, this systematic review answered the primary research question: *What qualitative and quantitative evidence exists on men's anxiety and/or anxiety disorders?*

Four secondary research questions were also answered: 1) *What are men's experiences of anxiety?* 2) *What constitutes help-seeking in men with anxiety disorders?* 3) *What coping strategies are commonly associated with men's experience anxiety disorders?* and 4) *Is there evidence for a specific role of masculinity in men's anxiety disorders?* The results demonstrated that some men report anxiety symptoms that diverged from current Generalised Anxiety Disorder diagnostic criteria outlined in the DSM-5-TR (American Psychiatric Association, 2022), providing early evidence for a male-type anxiety phenotype (Fisher et al., 2021).

In sex-differences studies (comparing males and females anxiety symptoms via psychometric measures) males tended to report higher rates of physical or psychosomatic symptoms, whereas females' anxiety symptoms were more commonly attributed to an emotional or interpersonal experience (Auerbach et al., 2012). Young men in particular often specified the perceived importance of self-reliance when experiencing increasing anxiety symptoms. When young men did seek help, it was more likely to be through informal supports (i.e., partner, friends and family) rather than formal mental health services (i.e., counsellor, psychologist, social worker). Several factors contributed to young men's reluctance and/or hesitance to seek help from formal mental health services including; young men's adherence to masculine norms of self-reliance (i.e., the belief that they shouldn't show or tell anyone else about their anxiety), concerns surrounding therapist confidentiality (i.e., not wanting their parents to know that they went to a school counsellor) low anxiety literacy (i.e., not knowing what anxiety disorders were) and low awareness of the treatment options available to them (Clark et al., 2018). Men were also more likely to employ problem-based styles relative to emotion-based styles, meaning they searched for solutions or ways to fix and solve their anxiety, rather than seeking emotional support from others to dispel distressing

emotions (Byrne, 2000). Coping strategies were affixed to men's gender socialisation as evidenced in observational studies whereby boys were socialised from a young age to handle and respond to their anxiety in ways that aligned with traditional norms of masculinity (i.e., maintaining fearlessness, toughness, and stoicism to conquer anxiety, worry and fear; Stevenson-Hinde & Shouldice, 2013). Masculinities were interwoven with men's subjective experiences of anxiety, denoting meaning (i.e., how men understand and perceive of their anxiety symptoms) and patterns of responding. Young men, compared to young women, were more likely to attribute sentiments of shame, self-blame, and failure to their anxiety symptoms, perceiving a contradiction between their anxiety experiences and the traditional masculine norms they believed they ought to be upholding (Clark, Hudson, Rapee, et al., 2020; Drioli-Phillips, Oxlad, LeCouteur, et al., 2020). However, the paucity of qualitative evidence surrounding men's subjective experiences of anxiety (particularly from the perspective of young men), denoted little lived experience data from men themselves: A significant direction for future research, as well as the chapters that followed in this thesis. In conclusion, Chapter 2 highlighted young men as a critical sub-population for future research. Chapter 2 also evidenced the need for high quality qualitative evidence to determine how young men experience anxiety, how these experiences may change over time, and the ways young men resolve and navigate masculinities in relation to their anxiety.

Chapter 3

The grounded theory study outlined in Chapter 3 addressed the absence of subjective experience research. This study distilled 25 young Australian men's experiences of anxiety to create a world-first grounded theory: Resisting-Reckoning-Responding (or the Triple-R anxiety model; Fisher et al., 2023). The three phases within the Triple-R anxiety model depict the processes through which young men became

aware of, understood, and responded to their anxiety over time, gilded and guided by masculinities. The Resisting-Reckoning-Responding phases were discrete processes, interconnected and active, rather than linear and defined. Therefore, the ways anxiety symptoms manifested, and the temporal dimensions through which young men moved from the Resisting to Responding phase varied. Resisting anxiety is oftentimes comprised of psychosomatic symptoms (i.e., headaches, nausea and myalgia), described as distressing and uncomfortable by young men. Initially the young men did not attribute these symptoms to anxiety or an anxiety disorder. Typically, young men reflected on reactively avoiding or concealing these debility states rather than attempting to question what these symptoms were and why they might be arising.

Reckoning anxiety tended to ensue as young men gained comprehensive literacy and language for their symptoms. The Reckoning phase was largely brought on by a diffusion of anxiety (symptoms occurring more frequently and in an increasing number of contexts), eliciting introspective and sometimes retrospective meaning making. Herein, the young men searched for answers to try and make sense of their anxious experiences and what was happening to them. This process of meaning making was imbued with men's socialisation, inextricably linked to their gender, age and cultures. Specifically, many young men valued and normed their male role models (fathers, brothers, friends) and public figures as free of anxieties. This led them to initially perceive of anxiety as a foreign or abnormal masculine construct. As young men gained insight into the ways anxiety was limiting their quality of life and overall functioning, some were prompted towards acceptance, seeking help proactively, and employing strength-based adaptive coping strategies, characterised by the Responding phase. For many young men this involved renegotiating and reframing their masculine and cultural

identities to ultimately accept anxiety, not as something of a personal failing, but as a periodic, manageable, and malleable state.

As demonstrated in Chapter 3, decisions to seek mental health support for anxiety were often prolonged and confined to the Responding phase, conditional on young men having insights and acceptance of their anxiety experiences. Nonetheless, many young men still presented to health services in the Resisting phase with undiagnosed anxiety. These symptoms were typically catalysed by disconcerting psychosomatic symptoms or masked with maladaptive coping behaviours (i.e., substance use, risk-taking behaviours) associated with the concealment, avoidance and/or denial of anxiety. As such, the need to illustrate and distinguish men's pathways to help-seeking was evident. Chapter 4 addressed this gap by answering the following research question: *What drivers and processes lead men with anxiety to seek help through formal mental health services?*

Chapter 4

Chapter 4 mapped men's pathways to help-seeking for anxiety, illuminating the facilitating factors which propel and precipitate men's treatment trajectories for anxiety. This study unveiled how young men's help-seeking may function (and manifest) across the life course. Prior research had exclusively focused on identifying why men *don't,* rather than why they *do*, seek help for anxiety. As such, men's help-seeking pathways for anxiety were poorly understood and had been narrowly considered from a deficit rather than a strength-based perspective. Survey responses from 419 Australian men (who had sought mental health support from a counsellor) detailed how the tipping points and reclusive causes and consequences propelled them towards help-seeking and the need for further mental health support. The tipping points of men's anxiety varied but were predicated on situational change (i.e., interpersonal relationship strain or

breakdown, unemployment, financial stress) initiating the manifestation of, or an increase in, men's anxiety symptoms. Tipping points were diverse but represented shared tilts towards the need for help-seeking and further mental health support. Reclusive causes and consequences of men's anxiety encompassed increasingly burdensome psychosomatic symptoms which depleted men's social and occupational functioning.

Men's masculine identities (including gendered social roles such as financial providers for the family) were jeopardised by these tipping points and burdensome psychosomatic symptoms. Traditional masculine norms denoted internal expectations and external pressures, moulding men's anxieties around masculine expectations to be and act in masculine ways and achieve masculine pillars of success. Herein, the tipping points and reclusive causes and consequences of men's anxiety converged to propel them towards help-seeking choices. Men expressed either wanting to overcome or combat their anxiety (defiant) and/or resigning to the realities of their anxiety experiences, feeling defeated in the wake of supposedly unsuccessful coping strategies and self-management, succumbing to psychological treatment as a last resort (defeat). Intrinsic and extrinsic factors acted as catalysts for help-seeking, abetting help-seeking as either a solitary or assisted process. For men reflecting on assistance, external sources (i.e., men's family, partners and medical professionals) functioned as saving graces and played a critical role in getting them into treatment. Whereas other men described help-seeking as an intrinsic or internal undertaking, motivated by self-betterment, self-empowerment, and self-improvement. These men often sought help under the guise of masculine virtues of strength, control, defiance and dominance: Wanting to *control*, rather than *be controlled* by their anxiety. As was the case for many men in this study, courage, emotion-regulation, and dominance can predict hardiness and/or resilience

(Alfred et al., 2014). For men with anxiety, these concepts may have important implications for interventions and help-seeking resources. Yet the ways in which men presented to health services remained unknown. Or more specifically, young men's patterns of engagement and utilisation of health services in the context of rising anxiety required further investigation. This constituted the central focus of Chapter 5.

Chapter 5

Chapter 5 answered the primary research question *How do young men experiencing anxiety engage with health care settings?* Chapter 5 uncovered the clinical characteristics and contexts of young men's anxiety presentations to ambulance services in Australia, employing an innovative four-phase mixed-methodology to characterise typologies. In doing this, Chapter 5 identified ambulance services as a priority healthcare setting in the context of young men's anxiety. The paramedic records of 694 young men aged between 15–25 years presenting with anxiety-related concerns to Australian ambulance services were analysed. Results indicated that young men's anxiety-related presentations to ambulance services commonly involved severe and unexplained psychosomatic symptoms (i.e., shortness of breath and/or hyperventilation, chest pain, body tingling, tremor and numbness, dizziness) and alcohol and other drug use. Mixed-methods analysis outlined three distinct typologies of young men's anxiety presentations: Psychosomatic-Anxiety, Anxious-Substance Use and Complex-Anxiety. Psychosomatic-Anxiety presentations involved a sudden onset of severe psychosomatic symptoms and adjacent uncertainty surrounding these symptoms. Many young men expressed concern to paramedics, fearing their anxiety symptoms may be underpinned by a physical or life-threatening condition (i.e., "[Darren] worried he was having a heart attack"; pg. 95). Anxious-Substance Use presentations were characterised by problematic alcohol and/or drug use, precipitating anxiety symptoms. Intoxication was

often concomitant with behaviour changes including agitation, aggression and violence. Finally, Complex-Anxiety represented significant deteriorations in young men's mental health encompassing self-harm and suicidal thoughts and behaviours, amplified by significant social and situational life stressors. In investigating and typologising young men's anxiety presentations, Chapter 5 established ambulance services as a priority healthcare setting in the context of young men's anxiety: a key contact point in the triage, management, and care for young men experiencing anxiety.

Implications of Thesis Findings

This thesis provides evidence about the gendered nature of young men's anxiety experiences and help-seeking. Wide reaching implications for future research, clinical models of care and young men's anxiety interventions follow. A need remains to broaden men's mental health campaigns and resources to encompass young men's unique experiences of anxiety. Similarly, further research is needed into male-specific manifestations of anxiety, and whether clinicians should be supported to better identify such presentations. The below sections present a summary of thesis implications for the field of men's anxiety more broadly, including addressing current data gaps and limitations.

Gaps in Empirical Evidence

Men's anxiety scholarship must continue to prioritise within group research across diverse populations of men. Further, men's subjective experiences and descriptions of anxiety must be at the foreground and forefront of men's anxiety research, advancing rich qualitative studies and embedding lived experience into the co-design, co-development and co-dissemination of quantitative studies including intervention trials. This will ensure the field of men's anxiety moves into an arena where the gendered dimensions of men's anxiety can be properly considered. For

example, scholarship within the field of men's depression has evolved from a *cul de sac* of sex-based ideologies, offering richer theoretical and clinical conceptualisations of the gendered dimensions of men's experiences of depression (Seidler, Rice, River, et al., 2018). Men's anxiety research should therefore leverage existing scholarship (including men's depression research and the Resisting-Reckoning-Responding theory outlined in Chapter 3; Fisher et al., 2023) to advance empirical understanding (and existing theoretical models) of men's anxiety across critical at-risk male subpopulations. This needs to include culturally and linguistically diverse men, Aboriginal and Torres Strait Islander men, GBTQIA+ men and older men. Such theorical exploration must ensure ample consideration is given to the ways men's race, culture, and social determinants of health (including socio-economic status) intersect with their experiences and expressions of anxiety (Hofmann et al., 2010). Men from culturally diverse backgrounds are likely to have varied expressions and experiences of anxiety which has significant implications for the detection, management, and treatment of anxiety disorders (Heinrichs et al., 2006). As such, prioritising the recruitment and involvement of culturally diverse men in research will help contextualise the intersections of masculinities and culture across a vast array of social determinants of health, distilling practices, relations and structural influences to address men's health inequities (The Lancet, 2019). Such diversity and inclusion will help transcend binary sex-based research, and the ever-present reliance on white, college-aged, middle-class men as study participants (Courtenay, 2002). These approaches are likely to encourage increased awareness of the nuanced ways men express and manage anxiety, improving the gender sensitive and culturally appropriate assessment, detection, diagnosis and treatment of men's anxiety.

Robust, rigorous and well-designed quantitative studies are also necessary to ascertain associations between anxiety and the aetiology (and severity) of other co-morbid psychiatric conditions (i.e., depression and substance use), and physical health issues (i.e., poor sleep and nutrition, sedentary lifestyles). Longitudinal research should be prioritised to determine the course of men's anxiety across the lifespan. This is critical given anxiety disorders have been defined as a *gateway* disorder (Bushnell et al., 2019), predicting and perpetuating other mental health issues in men, including depression (McDermott et al., 2022), substance misuse (Marmorstein et al., 2010), body dysmorphia (Pritchard et al., 2021) and suicidality (Weiss et al., 2016). Longitudinal research seeking to identify and track the trajectory of anxiety-related behaviours on men's mental health outcomes could be achieved through already existing national cohort samples of men. Some examples of large publicly available datasets include the Canadian Community Health Survey (CCHS; Gravel & Béland, 2005), the US National Epidemiologic Survey on Alcohol and Related Conditions (NESARC; Hasin et al., 2007) and Ten to Men: The Australian Longitudinal Study on Male Health (Pirkis et al., 2017). Rather than analysing anxiety as a dichotomous variable (i.e., the presence or absence of anxiety), researchers could consider the anxiety spectrum (as both an emotional experience and pathological disorder) to better explore its role and interactions with physical and psychological comorbidities. Additionally, high-quality randomised studies are desperately needed to evaluate psychoeducation and men's health campaigns, or future clinical care initiatives.

Gender Responsive Models of Care

The clinical characteristics of young men's experiences and expressions of anxiety (as outlined in Chapters 2, 3, 4 and 5 of this thesis) present empirical evidence for a distinct male-type anxiety phenotype. This is characterised by psychosomatic

symptoms (i.e., myalgia, body aches and tremors, headaches, nausea), high levels of shame and guilt (Fisher et al., 2021), low anxiety literacy, and a tendency to revert to concealing or avoiding anxiety symptoms (Fisher et al., 2023; Fisher et al., 2021). Chapter 5 yielded additional insights on the male-type anxiety phenotype in an emergency setting, indicating the high prevalence of alcohol and/or drug use in young men's experiences of anxiety, and a disabling and distressing sudden onset of symptoms. According to current diagnostic criteria for an anxiety disorder, three or more anxiety symptoms (i.e., restlessness, fatigue, difficult concentrating, irritability, muscular tension, and sleep disturbance) must occur "more days than not for at least 6 months," for a diagnosis of generalised anxiety disorder. By comparison, four of more panic symptoms (i.e., cardiac palpitations, sweating, trembling and/or shaking, shortness of breath, feelings of choking, chest pains, nausea, dizziness, chills or heat sensations, paresthesias, derealisation, fear of losing control or fear of dying), followed by "one month of persistent worry about panic symptoms and substantial changes in behaviour to avoid panic symptoms" must be present for a diagnosis of panic disorder within the DSM-5-TR (American Psychiatric Association, 2022, pp. 236, 250). Consequently, while a significant number of young men in Chapters 3 and 5 of this thesis experienced and exhibited debilitating anxiety symptoms, symptom profiles may not meet the threshold for an anxiety disorder diagnosis (beyond the context of their current psychological distress). Given early evidence suggesting young men may experience unique constellations of anxiety symptoms, future research is needed to explore male-type anxiety experiences and the ways in which they may diverge from current psychometric scales and diagnostic criteria for anxiety disorders. This is imperative to accurately capture, measure and reflect the true prevalence and implications of young men's anxiety globally. As an example, increased exploration and

understanding of presenting symptomology for depression in men (i.e., irritability, aggression, substance use), through numerous high-quality qualitative studies, led to the development of psychometric measures capturing men's levels of externalizing symptomology, such as the Male Depression Risk Scale (MDRS-7; Rice et al., 2013; Rice et al., 2020). Notably, a more nuanced understanding of men's depression motivated text revisions within the DSM-5 (DSM-5-TR; American Psychiatric Association, 2022), offering an important new phenological statement surrounding diagnostic considerations for major depressive disorders in men, stating: "Men with depression, however, may be more likely than depressed women to report greater frequencies and intensities of maladaptive self-coping and problem-solving strategies, including alcohol or other drug misuse, risk taking, and poor impulse control" (American Psychiatric Association, 2022, p. 190; Rice et al., 2022).

Amid a requisite unified global research effort to corroborate or challenge this male-type anxiety phenotype, current thesis findings advocate for a transdiagnostic approach to the classification of anxiety disorders within the DSM-5-TR and ICD-11 for young men (American Psychiatric Association, 2022; World Health Organization, 2022a). Transdiagnostic perspectives allow researchers and clinicians to explore the underlying psychological mechanisms in sub-threshold anxiety disorders across all diagnostic categories of anxiety disorders (i.e., worry, repetitive thinking and fear-based emotion), rather than limiting research or clinical treatment to one diagnosed sub-type of anxiety disorders (Barlow et al., 2017).

Clinicians must endeavour to engage young men locked in the Resisting phase of the Triple-R anxiety model (outlined in Chapter 3). Some young men may continue to resist anxiety over a long duration, reverting to avoiding or concealing anxiety if their thresholds for coping are exceeded (Fisher et al., 2023). Given the Resisting anxiety

process is imbued with concealment and avoidance, the detection and discernment of anxiety symptoms is complex, both for young men themselves and the mental health professionals working with them. This is particularly evident in emergency care or ambulance settings (Chapter 5), whereby young men's Psychosomatic-Anxiety presentations can be increasingly severe, often requiring considerable paramedic time and medical resources to undertake multifarious diagnostic tests and investigations. Frequently, data presented in Chapters 3, 4 and 5 of this thesis gave rich context to these diagnostic journeys, recounting how young men's anxiety symptoms had been overlooked initially, or dismissed as a psychosomatic condition (i.e., cardiac, gastrointestinal, respiratory condition), even when no abnormalities were detected via diagnostic testing. Only as young men gained language and literacy surrounding their anxiety experiences were they able to engage in processes of retrospection and introspection, recounting how they concealed or avoided their anxiety symptoms initially due to feelings of shame or perceived failure. Therefore, the detection and treatment of anxiety hinges on young men's anxiety symptoms being *accurately* identified by health professionals, and *adequately* represented in anxiety disorder resources and health promotion materials. This will ensure collective medical and community literacy surrounding young men's anxiety: a critical prerequisite to upskill health care professionals in screening for, and diagnosing, anxiety in men.

The characteristics of young men's anxiety presentations vary across a spectrum of diverging clinical severities, thus demanding targeted and tailored clinical approaches. Upstream intervention efforts are imperative and should be prioritised given clinical interventions and treatments become increasingly complex for young men with comorbid anxiety. Severe anxiety symptoms in young men (and men in general) are often intertwined with substance use and/or self-harm and suicidal thoughts and

behaviours, which can lead to *diagnostic overshadowing* (Kaufman & Baucom, 2014). This is the tendency for anxiety to be overlooked and undertreated in prioritisation of more salient and immediately life-threatening mental health conditions (i.e., substance use disorder, depression, psychosis; Kaufman & Baucom, 2014). Albeit disregarding anxiety in treatment planning may result in an attenuated anxiety treatment response, which subsequently maintains and aggravates the presence of such comorbid substance use and self-harm behaviours. This highlights the crucial need for an integrated approach to speciality treatment in men's mental health issues to more effectively address and ultimately treat anxiety disorders in clinical care.

Innovation in interventions could be informed by findings from this thesis. For example, insights from Chapter 5. Young men with a Psychosomatic-Anxiety typology would likely benefit from increased psychoeducation resources, focused on improving awareness and literacy surrounding young men's anxiety experiences. Leveraging strength-based masculine virtues identified in Chapter 4 (i.e., strength, dominance, courage), may be particularly pertinent to young men with Psychosomatic-Anxiety encouraging help-seeking and ongoing engagement in health services. For example, public health campaigns could be developed with prominent male public figures (i.e., athletes, actors, social media influencers), who recount their subjective experiences of anxiety to describe how anxiety symptoms and anxiety disorders may manifest (i.e., psychosomatic symptoms) and the ways these experiences can change over time. Such resources should also include information on self-management strategies to reduce young men's uncertainty (associated with severe and distressing psychosomatic symptoms) and lessen recurrent anxiety presentations to emergency services (i.e., ambulance services). By comparison, young men exhibiting the Anxious-Substance Use typology may require a broader treatment approach, whereby clinicians integrate

evidence-based psychotherapeutic treatment aiming to mitigate young men's debilitating anxiety symptoms with clinical approaches targeting alcohol and other drug use. For Complex-Anxiety presentations involving suicidality and self-harm, triaging young men to emergency mental health services is vital. Herein, the priority for clinical intervention should be around improving access to Safewards (Bowers et al., 2014), mitigating psychological crises where possible and empowering and/or supporting young men's social supports to effectively care for, assist and respond to loved ones in psychological crises.

Future Possibilities for Men's Anxiety Interventions

Gender-responsive interventions for anxiety that respond to young men's anxiety experiences and symptoms are paramount. Gender-responsive interventions (i.e., transforming the harmful gender norms, roles and relations which affect gender-based health inequities) extend upon gender-sensitive interventions (i.e., leveraging or conforming to existing gender norms to enhance intervention specific outcomes or engagement) to consider and target the gender norms, roles, and relations that shape men and women's health outcomes (UNICEF-IRC, 2020). Key findings from this thesis surrounding the gendered elements of young men's anxiety and anxiety disorders could be leveraged to develop upstream gender-responsive interventions to better reach, respond tom and retain men in anxiety disorder treatment (see Future Research Agenda below for an example). Calls to prioritise gender-responsive interventions in men's mental health more broadly are growing (Galdas et al., 2023), extending the breadth of evidence that supports the benefits of gender-sensitive interventions. For example, gender-sensitive mental health programs that use male-orientated language, build genuine rapport, connection and collaboration, and hold a clear goal-oriented focus have been shown to support engagement (Rice et al., 2018; Seidler, Rice, Ogrodniczuk, et al.,

2018). A range of gender-sensitive resources exist (e.g., HeadsUpGuys; Ogrodniczuk et al., 2018; Real Men. Real Depression; Rochlen et al., 2005), alongside gender-sensitive interventions (e.g., Men's Shed; Ballinger et al., 2009; MATES in Construction; Gullestrup et al., 2011; Healthy@Work; Jarman et al., 2015; Men's Stress Workshop; Primack et al., 2010). These relate to men's depression, stress and resilience, and provide evidence-based examples to guide young men's anxiety interventions. Given existing men's mental health resources and interventions are gender-sensitive rather than responsive, future young men's anxiety interventions could strive to directly address masculinities and young men's gender socialisation as a key determinant of health outcomes owing to anxiety. Such interventions should inbuild strategies to target and transform restrictive masculine norms upstream rather than merely sensitising pre-existing anxiety resources and interventions to be "male-friendly".

Public health campaigns targeted towards young men may be particularly effective. Such mental health promotion efforts should seek to challenge and transform restrictive masculine norms which position anxiety as emasculating (Clark et al., 2018). As reported in Chapter 3, many young men downplay and/or deny the severity of their anxiety symptoms initially, either to uphold one's supposedly threatened masculine identity or because of a collective over normalisation of anxiety whereby anxiety is dismissed as "normal," or something that everyone experiences. As such, messaging that emphasises the treatment amenability of anxiety may assist in validating and legitimising anxiety symptoms experienced by young men, allowing them to transcend social (external) and self (internalised) stigmas. Promoting young men's lived experience of anxiety may be an effective means of achieving this. These testimonies might usefully highlight relatable examples of how young men from diverse backgrounds self-manage and seek help for anxiety, normalising the experience of

anxiety within a masculine frame of reference. Lived experience stories and broader health promotion efforts should leverage healthy masculinities (i.e., flexible conformity to efficacious norms of stoicism, toughness and control), to not only serve as a buffer against negative cognitive distortions attributed to anxiety (views about oneself and the world; Bruch, 2007) but also empower young men's actions towards self-betterment and self-empowerment (as described in Chapter 4), for example, by reframing young men's openness towards help-seeking as strength-based and courageous in defiance of anxiety symptoms and disorders. Similarly, anxiety interventions could position key periods of change or social milestones in young men's lives as opportunities for self-betterment (i.e., relationship breakdown, vocational and/or occupational transition), empowering them to take control over situational or long-term struggles with anxiety.

Mental health resources and interventions targeting young men's informal supports (i.e., partners, family and friends) are also likely to be effective in the prevention, identification, and management of anxiety. Informal sources of support play a significant role in improving the knowledge surrounding mental health symptoms, and positively influencing attitudes towards formal mental health care (Calear et al., 2021; Rickwood et al., 2007). The gendered frames of male help-giving influence young men's normative help-seeking attitudes and behaviours, as well as their reception to the assistance of others (McKenzie et al., 2018). Challenging overtly restrictive practices of male help-giving has the capacity to promote reciprocal mental health support amongst young men that is devoid of indebtedness and promotes openness towards both formal and informal help-seeking (Lauzier-Jobin & Houle, 2021).

Young men's anxiety interventions and resources should consider integrating the following principles of informal support targeted towards their friends and family. Firstly, knowledge and literacy surrounding the diversity in young men's anxiety

symptoms and disorders must be prioritised. This is particularly important given emerging evidence reported earlier (Chapters 2 and 3) regarding the male-type anxiety phenotype, which falls outside of current diagnostic classification. Secondly, strategies that promote positive and productive help-giving behaviours must be outlined to upskill friends and family in providing informal support that is both *needed* and *wanted* by young men experiencing anxiety (Gough et al., 2021). This can only be determined by first understanding the *needs* and *wants* of young men themselves and providing them opportunities to openly discuss their subjective experiences. For male peers specifically, already existing ideas of male camaraderie (i.e., helping out your mates and having each other's backs) can be leveraged to help promote this, as shown in broader mental health interventions (Liddle et al., 2021). One example of an informal support intervention could be upskilling fathers to become more effective help-givers to better acknowledge, and support anxiety experienced by their sons. Similar work has been undertaken with fathers and daughters, aiming to optimise girls' physical health and social-emotional wellbeing (Dads And Daughters Exercising and Empowered [DADEE]; Morgan et al., 2015; Morgan et al., 2019). Lastly, informal support is most effective when it "proceeds, co-occurs and survives" therapeutic treatment (Lauzier-Jobin & Houle, 2021, p. 6). Hence, rather than replacing the need for formal support, informal support should parallel therapeutic treatment for young men with anxiety, including initial help-seeking, engagement, mental health outcomes and recovery. For example, support groups for young men with anxiety could be particularly effective, centred around activities and social initiatives that promote connection and cohesiveness (such as sports or special interest groups) in addition to regular one-on-one psychotherapy with a clinician.

Overall Strengths and Limitations of This Thesis

Strengths

Considerable thought and planning were given to sampling techniques across each of the four studies in this thesis. Primary data collection (Chapter 3), secondary data analysis of pre-existing literature (Chapter 2), cross-sectional data (Chapter 4) and population-based cohort studies (Chapter 5) provided complementary methodologies to understand young men's experiences of anxiety and/or anxiety disorders. Participants were recruited through clinical and community domains (i.e., social media, ambulance surveillance systems, youth mental health services) which ensured diversity across symptom severity and sociocultural background of study participants. This was done to provide a holistic overview of young men's anxiety experiences, encompassing divergent clinical complexities and comorbid mental health concerns. Data sampling procedures were also carefully designed to represent various contexts in which young men seek help for anxiety (i.e., community and emergency mental health services, informal supports) to derive their help-seeking pathways. In parallel, diverse methods and data analytic techniques were employed to address the research questions posed by this thesis. This is particularly evident in Chapter 5, whereby an innovative research design was developed, encompassing four distinct aspects. This study design integrated framework analysis, hierarchical cluster analysis, and thematic analysis to amplify young men's lived experiences (qualitative) whilst also harnessing the power of big data (quantiative; see Brower et al., 2019; Namey et al., 2008). Such novel mixed-methods analytic techniques have significant utility beyond the scope of this thesis: Blending qualitative and quantitative methodologies enables a rich and nuanced understanding of young men's lived experiences while also making large sample size for data collection a

possibility, surpassing the traditionally small sample sizes adopted for qualitative research.

Limitations

The limitations of each of the studies included in this thesis have been discussed in detail in the individual chapters. There are however overarching limitations that should be considered when interpreting thesis findings. Firstly, it is possible that the transdiagnostic approach to anxiety disorders adopted throughout this thesis may have overlooked unique aspects, or nuances, relative to specific diagnoses of anxiety disorders. As the scholarship within men's anxiety grows, future research must delve into the particularities of young men's anxiety experiences and expressions across diagnostic categories. Moreover, qualitative theories of young men's anxiety and empirical evidence surrounding the ways they may seek help for, and cope with anxiety, should be differentially examined for specific presentations of anxiety disorders, determining how differential diagnostic categories of anxiety disorders differ from one another and exploring these nuances across diagnostic categories within differential sub-populations of men (younger men relative to older men).

Additionally. the nomenclature of anxiety often fails to distinguish its dimensional nature (i.e., existing on a spectrum from adaptive emotional response and maladaptive psychopathology). At some points in this thesis, the nomenclature between anxiety (as an adaptive emotional response) and anxiety disorders (maladaptive psychopathology) could have been more clearly differentiated. It is important to consider that anxiety, as an adaptive emotional response, may not necessarily warrant clinical intervention or mental health support and thus should be distinguished from young men's unique experiences of anxiety disorders.

As identified in Chapter 2, men's anxiety scholarship to date has lacked consistency and precision in self-report anxiety measurement scales. A risk here is for conflation between anxiety disorder diagnosis and high self-report anxiety symptom scores (i.e., diagnosing anxiety disorders verse screening for anxiety symptoms). This thesis did not distinguish young men experiencing an anxiety disorder from those who may instead have fluctuating self-report anxiety symptom scores, reflecting an acute (yet normative) emotional response (e.g., sudden panic, heightened arousal and agitation) to high situational stress or state-based uncertainty common in adolescence. This is important as the ways in which acute anxiety symptoms manifest (and thus need to be identified and responded to by mental health clinicians) vary from a threshold anxiety disorder that meets current anxiety disorder diagnostic criteria.

The studies in this thesis are largely limited to Australian, cis-gendered, educated young men from high socio-economic backgrounds. Young men from culturally and socially diverse backgrounds may possibly have varied expressions and experiences of anxiety. This could have implications for the detection, management, and treatment of anxiety, as well as the generalisability of thesis findings. Thus, additional work is needed to determine and address the ways that factors important to identity (e.g., young men's gender identification and sexuality, financial instability, remoteness and cultural and linguistic diversity) intersect with anxiety experiences and help seeking. A lack of diversity, equity and inclusion in men's mental health scholarship more broadly has been widely acknowledged, with mounting calls to transcend an over reliance on homogenised samples of white, college-aged, middle-class men (Mauvais-Jarvis et al., 2020).

Future Research Agenda

A potential future research agenda for young men's anxiety is proposed below, specifically relevant to the focus of the studies comprising this thesis. This research agenda would work towards addressing a key objective arising from thesis findings, specifically: *The need to reach young men and their informal supports, as early as possible, to improve collective awareness, understanding and acceptance of men's anxiety.* A secondary longer-term outcome of this future research agenda would work towards reducing the burden of young men's anxiety presentations on ambulance services (i.e., reducing the costly toll on paramedic resources and added demand on an increasingly overrun ambulance systems for an ultimately unnecessary reason), diverting young men towards digital, community and informal support services and empowering them to self-manage their anxiety symptoms. This future research agenda is outlined in Figure 6.1 and proposes a three-step research plan overarched by (and contributing to) the ongoing evaluation and validation of the gendered experience of anxiety in young men, as evidenced in this thesis (male-type anxiety and the anxiety typologies). More specifically, this research agenda would work towards developing an upstream young men's anxiety intervention (suite of psychoeducation resources and a male-type anxiety screening tool; Step 1) which could then be implemented into acute care settings including ambulance services (a priority health care setting in the context of young men's anxiety presentations) and community mental health care (a primary health care setting in the context of young men anxiety presentations; Step 2). A longitudinal data linkage study could then be undertaken to evaluate the long-term effectiveness, efficiency, and equity of the young men's anxiety intervention (Step 3).

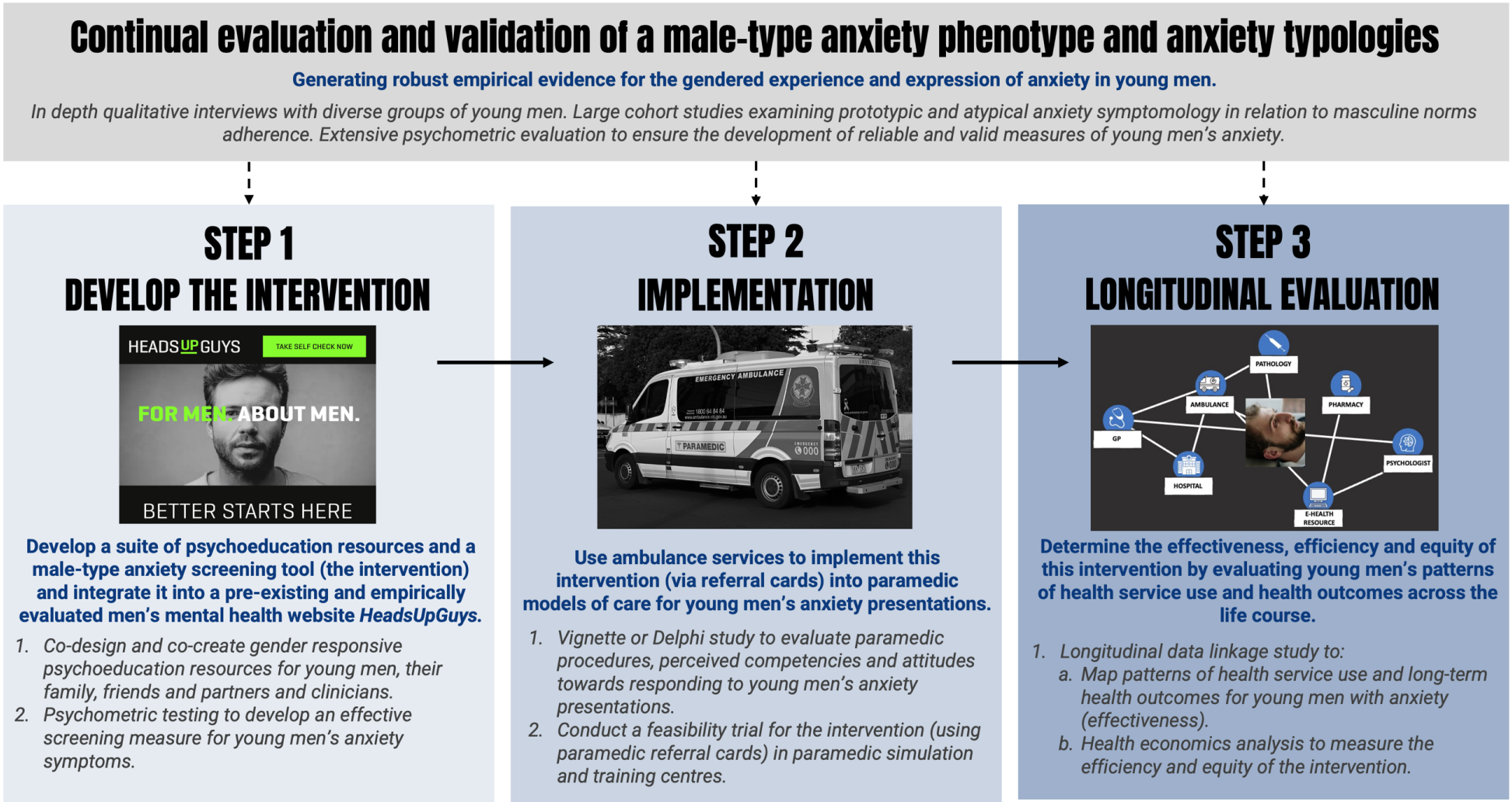


Figure 6.1 Proposed three-step future research agenda for young men's anxiety.

Step 1: Develop an Upstream Intervention for Young Men's Anxiety

There is considerable opportunity and need to develop a gender responsive upstream intervention for young men's anxiety. This intervention could contain a suite of co-designed and co-created psychoeducation resources for young men's anxiety (targeted towards young men themselves and their informal and formal supports). This intervention could also contain a screening tool to detect anxiety symptoms and disorders in young men. Psychoeducation resources should work to legitimise anxiety disorders as a serious, yet treatable condition and leverage strength-based masculine norms (as discussed in Chapter 5) including power, courage, and strength to promote positive masculinities and engage young men wanting more support for their anxiety, but reluctant to take the first step. It would also be beneficial to help young men develop repertoires of effective coping mechanisms.

This young men's anxiety intervention could be housed on a pre-established and empirically validated men's mental health website (with high global reach and a rising volume of users) HeadsUpGuys (https://headsupguys.org/; Ogrodniczuk et al., 2018; Ogrodniczuk et al., 2021). HeadsUpGuys is a free e-mental health resource for men developed by world renowned clinicians, researchers and mental health advocates in the field of men's mental health. HeadsUpGuys offers various self-help strategies, information about depression, tips for professional help-seeking and a screening tool for men's depression. The scope of HeadsUpGuys could be expanded to reach and serve young men with anxiety. The ongoing evaluation and validation of the male-type anxiety phenotype identified in Chapters 2 and 3 of this thesis (i.e., psychosomatic symptoms, significant guilt and shame, avoidance and/or concealment of distress and anxiety symptoms) could inform the development of a similar screening tool for young men's anxiety.

Extensive psychometric research is needed to determine the reliability and validity of current anxiety measures (e.g., GAD-7) in the context of young men's anxiety. Depending on the outcomes of this psychometric evaluation it may be necessary to create a new gendered male-type anxiety screening tool to more accurately capture a male-type anxiety phenotype. This upstream anxiety intervention could then be implemented into ambulance services (a priority health care setting in the context of young men's anxiety; explored in Chapter 5) to improve patient care pathways and models of care for young men with anxiety.

Step 2: Implementation of the Intervention Into Paramedic Models of Care

Ambulance services are often the first responders for young men experiencing an acute anxiety crisis. For some young men, this anxiety attendance may be their first interaction with health services and constitutes a critical inflection point for effective and tailored mental health support. Despite this, paramedics responding to anxiety presentations is sub-optimal (and ultimately costly and unnecessary) with treatment procedures limited to recommending primary care follow up (i.e., general practitioner or psychologist care), acute pharmacological treatment (i.e., anxiolytics [benzodiazepines], sedation), or triage onto other emergency services (i.e., emergency department, crisis assessment and treatment team [CATT]; Ambulance Victoria, 2023).

Young men also encounter disrupted triage pathways when transported to increasingly overburdened emergency services. Herein, anxiety is classified as low risk or a non-urgent mental health concern. This means that young men presenting to hospital with acute anxiety symptoms are typically discharged from ambulance or emergency mental health services to general practitioners, private mental health clinicians, or left in the care of their friends and family. Given this clear gap in information provision and follow up care for young men, distributing the intervention

developed in Step 1 during an ambulance attendance would likely streamline young men's patient care pathways and improve overall anxiety literacy including the various help-seeking options available to them.

A referral card to the HeadsUpGuys website could be easily distributed by paramedics at low cost and with little burden on ambulance services. Paramedic training hubs present an optimal opportunity to conduct a feasibility trial, embedding the dissemination of this upstream anxiety intervention into standard models of care for young men's anxiety. Simulation centres have been established in numerous Australian tertiary institutions, allowing postgraduate and qualified paramedics to undertake ongoing professional development (Monash University, n.d.; Williams MP, 2023). Additionally, these novel technologies and innovations in digital health will make it possible to integrate emerging evidence surrounding a male-type anxiety phenotype and the anxiety typologies (identified in Chapter 4) into paramedic training through virtual and interactive simulations (Halabi et al., 2022).

Step 3: Longitudinal Evaluation of the Intervention

Considering traditional masculine norms can motivate the concealment and avoidance of anxiety (Chapter 2 and 3), young men experiencing these symptoms are often at increased risk of adverse outcomes across the life course including suicide and substance use (Chapter 4). Surprisingly, despite the high prevalence of young men presenting to health services with anxiety concerns, little consideration has been given to the long-term mental health outcomes and patterns of health service use following young men's first instance of help-seeking. Longitudinal data linkage studies are therefore urgently needed to advance men's anxiety scholarship.

Linking ambulance data with existing population-based hospital, mortality, geographical, health-economic, and socio-demographic datasets would be one way to

gain important insights surrounding young men's anxiety at a population level. As an example, Partners in Prevention: Understanding and Enhancing First Responses to Suicide Crisis Situations (PiP) is a population-wide linked dataset, established to investigate the health pathways of individuals in Queensland, Australia following a suicide-related call to police or paramedics (Meurk et al., 2022). A Victorian data linkage initiative (HealthLinks: Chronic Care) has also been established to follow long-term health outcomes and recurrent acute hospital admissions for patients with chronic health care needs, deriving a prediction model for risk of re-admission (Victorian Government Department of Health, 2022; Ferrier et al., 2017). Research in Step 3 of this future research agenda could therefore use longitudinal data linkage studies to evaluate the effectiveness, efficiency and equity (Hinrichs-Krapels & Grant, 2016) of the young men's anxiety intervention developed in Step 1 to determine if (and how) the uptake of the intervention changes young men's patterns of health service use and improves health outcomes across the life course.

Data linkage studies could also facilitate health equity measurement to uncover the distribution and uptake of the intervention within diverging at-risk sub-groups of young men. Such efforts to better understand broad social determinants of health (i.e., gender, culture and socio-economic backgrounds) in the context of young men's anxiety would identify what young men are most at risk of deleterious physical and mental outcomes owing to anxiety. This would highlight key priority areas for health policy and governing funding allowing researchers and clinicians to lobby for tailored health promotion messaging and health service resourcing.

Overall Thesis Conclusions

Despite anxiety being the most common mental health condition experienced by men globally, the landscape of men's anxiety scholarship was notably sparse, restricting

our empirical conceptualisations to reductive sex-based assumptions and biological determinism. By leveraging novel methodologies that focus on the diversity *within* young men, the gendered dynamics of their experiences and expressions of anxiety have been identified. Most notably, this thesis pioneered the development of the world's first men-specific grounded theory of anxiety. This unravelled the transformative phases through which young men journey from resisting to responding to anxiety symptoms, a transition characterised by a process of reckoning (i.e., gaining awareness and understanding of their anxiety).

Thesis findings evidenced a male-type anxiety phenotype, divergent from current anxiety disorder diagnostic criteria in DSM-5-TR. With further research and new insights into this putative phenotype, clinicians may be better able to identify anxiety in young men who may otherwise go undiagnosed and untreated. Moreover, this thesis has identified men's distinct pathways to help-seeking for anxiety and uncovered their patterns of health service engagement for anxiety in a priority healthcare setting, ambulance services. Greater attention to young men's help-seeking behaviours and patterns of health care engagement and utilisation has the capacity to enhance the delivery of tailored and effective care to men with anxiety. The knowledge gained from this thesis, and the identification of future research gaps lay the foundations for a promising future research agenda.

Significant potential exists to develop, implement and evaluate novel upstream interventions for young men's anxiety. Such interventions could leverage thesis findings to co-create and co-design a suite of gender responsive psychoeducation resources for young men's anxiety and develop a screening measure for male-type anxiety. This holds the promise of not only alleviating men's suffering, but also significantly reducing the

burden on health care services (such as ambulance services) whereby young men will continue to present with anxiety if they fail to receive the care they need.

A considered and integrated commitment to knowledge translation was adopted throughout this PhD to ensure tangible and translatable findings were disseminated far beyond the scope of academia. In recognising the mental health promoting possibilities of these findings, dissemination strategies were purposefully adopted to communicate these findings in a digestible and highly impactful way. These strategies ensured cutting-edge learnings on young men's anxiety were disseminated to those most likely to reap its benefits specifically, health service providers, schoolteachers, community sporting coaches, young men's informal supports, but most importantly to young men themselves. Thesis findings were shared via numerous invited presentations and keynotes, short videos promoting papers on social media, international conferences, research clusters, and community panel events. This ongoing dedication to knowledge translation is integral to the lobbying of upstream interventions for young men's anxiety, particularly those outlined in the future research agenda. Further, ongoing efforts to remain at the forefront of the design and delivery of this future research agenda, will be critical to bridging the gap between academic inquiry and real-world application. Only then can we advocate for systems change and empower young men and their communities towards a more equitable and mentally healthy world. The ultimate legacy of this research (and the future research agenda which may follow) is to extend far beyond academia, offering innovative opportunities for clinicians, policymakers, and informal supports to create meaningful impact on the lives of young men grappling with anxiety. Most notably, unravelling the complexities of young men's anxiety experiences will ultimately serve to empower young men to better navigate and enhance their own mental health. As a result, meaningful change can occur for generations to come.

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Appendices

Supplementary File 1: OVID PsycINFO Search Strategy

1. exp Human Males/ (44,450)
2. (male or males or men or mens or father* or brother* or boyfriend* or husband* or mate or mates or boy or boys).ab,ti,sh. (785,549)
3. anxiety.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh] (242,136)
4. exp Anxiety/ (75,665)
5. "anxiety disorders".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh] (44,906)
6. exp Anxiety Disorders/ (53,448)
7. "anxiety management".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh] (1,314)
8. exp Anxiety Management/ (771)
9. "anxiety intervention".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh] (85)
10. "anxiety treatment".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh] (541)
11. (experienc* or experiences).ab,ti. (676,337)
12. exp "Experiences (Events)"/ (88,217)
13. ("seek* help" or "help seek*" or help-seek*).ab,ti. (12,178)
14. exp Health Care Seeking Behavior/ (8,450)
15. exp Help Seeking Behavior/ (14,004)
16. exp Health Care Utilization/ (16,259)
17. ("health care seeking behav*" or "help seeking behaviour" or "health care utili$ation").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh] (5,259)
18. "pathways to treatment".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh] (109)
19. (masculin* or "traditional masculin*" or "masculine gender norm" or "gender role conflict" or "gender role strain" or "gender norm" or "gender social norm").ab,ti. (20,872)

20. exp Masculinity/ (9,479)
21. exp Sex Roles/ (17,918)
22. 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 (771,261)
23. 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 (263,513)
24. 1 or 2 (788,057)
25. (women* or woman* or female*).ab,ti. (579,529)
26. 24 not 25 (467,587)
27. 22 and 23 and 26 (5,995)
28. 22 and 23 and 24 (11,851)
29. limit 28 to (human and (180 school age <age 6 to 12 yrs> or 200 adolescence <age 13 to 17 yrs> or "300 adulthood <age 18 yrs and older>" or 320 young adulthood <age 18 to 29 yrs> or 340 thirties <age 30 to 39 yrs> or 360 middle age <age 40 to 64 yrs> or "380 aged <age 65 yrs and older>" or "390 very old <age 85 yrs and older>") and yr="1990 -Current") (7,946)
30. limit 27 to (human and (180 school age <age 6 to 12 yrs> or 200 adolescence <age 13 to 17 yrs> or "300 adulthood <age 18 yrs and older>" or 320 young adulthood <age 18 to 29 yrs> or 340 thirties <age 30 to 39 yrs> or 360 middle age <age 40 to 64 yrs> or "380 aged <age 65 yrs and older>" or "390 very old <age 85 yrs and older>") and yr="1990 -Current") (3,780)

Supplementary File 2: National Institute of Health Quality Assessment

The National Institute of Health (NIH) observational cohort and cross-sectional tool for study quality ratings of included quantitative studies

	NIH 01	NIH 02	NIH 03	NIH 04	NIH 05	NIH 06	NIH 07	NIH 08	NIH 09	NIH 10	NIH 11	NIH 12	NIH 13	NIH 14	Total	Quality rating (good, fair or poor)
Auerbach et al. (2012)	Yes	Yes	NR	Yes	No	Yes	Yes	NA	No	Yes	No	NA	CD	No	6	Fair
Bender et al. (2012)	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	NA	NA	No	4	Poor
Berger et al. (2013)	Yes	Yes	NR	Yes	No	No	No	No	No	No	No	NA	NA	No	3	Poor
Bruch (2007)	Yes	No	NR	Yes	No	No	No	No	No	No	No	NA	NA	No	2	Poor
Byrne (2000)	Yes	No	NR	Yes	No	No	No	No	No	No	No	NA	NA	No	2	Poor
Clark et al. (2020)[a]	Yes	Yes	NR	Yes	No	No	No	Yes	No	No	No	NA	NA	No	4	Poor
de Anda et al. (1997)	Yes	No	NR	Yes	No	No	No	No	No	No	No	NA	NA	No	2	Poor
Duchesne and Ratelle (2016)	Yes	Yes	CD	Yes	No	Yes	Yes	Yes	No	Yes	No	NA	No	No	7	Fair
Gallegos et al. (2019)	Yes	Yes	NR	Yes	Yes	No	No	Yes	No	No	No	NA	NA	No	5	Poor
Garcia-Lopez et al. (2008)	Yes	No	NR	Yes	No	Yes	No	Yes	No	No	No	NA	NA	No	4	Poor
Iwamoto et al. (2012)	Yes	Yes	NR	Yes	No	No	No	No	No	No	No	NA	NA	Yes	4	Poor

Maddock et al. (2017)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	No	No	7	Fair
Pachankis and Goldfried (2006)	Yes	Yes	NR	No	No	No	No	No	No	No	No	NA	NA	No	2	Poor
0Pavlova and Kholmogorova (2017)	Yes	Yes	NR	NR	No	No	No	No	No	No	No	NA	NA	No	2	Poor
Rice et al. (2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	Yes	NA	No	No	Yes	No	9	Good
Yang et al. (2018)	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	NA	NA	Yes	5	Poor
Jones (1999)	Yes	No	Yes	Yes	No	No	No	No	No	No	No	NA	NA	No	3	Poor
Moscovitch et al. (2005)	Yes	No	Yes	Yes	Yes	No	No	No	No	No	No	NA	NA	No	4	Poor
Clark et al. (2020)[b]	Yes	Yes	NR	Yes	No	No	No	No	No	No	No	NA	NA	No	3	Poor
Ren et al. (2020)	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	NA	NA	Yes	6	Fair

Note. NIH01= Was the research question or objective in this paper clearly stated? NIH02= Was the study population clearly specified and defined? NIH03= Was the participation rate of eligible persons at least 50%? NIH04= Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants? NIH05= Was a sample size justification, power description, or variance and effect estimates provided? NIH06= For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured? NIH07= Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed? NIH08= For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as continuous variable)? NIH09= Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants? NIH10= Was the exposure(s) assessed more than once over time? NIH11= Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants? NIH12= Were the outcome assessors blinded to the exposure status of participants? NIH13= Was loss to follow-up after baseline 20% or less? NIH14= Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)? CD= Cannot Determine, NA= Not Applicable, NR= Not Reported.

[a]Clark, L. H., et al. (2020) Anxiety Specific Mental Health Stigma and Help-Seeking in Adolescent Males. [b]Clark, L. H., et al. (2020) Investigating the impact of masculinity on the relationship between anxiety specific mental health literacy and mental health help-seeking in adolescent males.

Supplementary File 3: Critical Appraisal Skills Programme Quality Assessment

The Critical Appraisal Skills Programme (CASP) ratings of study quality for included qualitative studies

	CASP01	CASP02	CASP03	CASP04	CASP05	CASP06	CASP07	CASP08	CASP09	CASP10	Criterion met (out of 10)
Clark et al. (2018)[a]	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	9
Clark et al. (2018)[b]	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	9
Drioli-Phillips et al. (2020)[c]	Yes	Yes	Yes	CD	Yes	NA	Yes	Yes	Yes	Yes	8
Kierski (2014)	Yes	Yes	No	No	No	Yes	No	No	Yes	Yes	5
Drioli-Phillips et al. (2020)[d]	No	Yes	Yes	CD	Yes	NA	Yes	Yes	Yes	Yes	7
Maddock et al. (2017)	Yes	Yes	Yes	Yes	Yes	No	CD	Yes	Yes	Yes	8

Note. CASP01 = Was there a clear statement of the aims of the research? CASP02 = Is a qualitative methodology appropriate? CASP03 = Was the research design appropriate to address the aims of the study? CASP04 = Was the recruitment strategy appropriate to the aims of the research? CASP05 = Was the data collected in a way that addressed the research issue? CASP06 = Has the relationship between researcher and participants been adequately considered? CASP07 = Have ethical issues been taken into consideration? CASP08 = Was the data analysis sufficiently rigorous? CASP09 = Is there a clear statement of findings? CASP10 = How valuable is the research (Is the research valuable)? CD = Cannot Determine, NA = Not Applicable.

[a] Clark, L. H., et al. (2018) Barriers and facilitating factors to help-seeking for symptoms of clinical anxiety in adolescent males. [b] Clark, L. H., et al. (2018) Capturing the attitudes of adolescent males' towards computerised mental health help-seeking. [c]Drioli-Phillips, P. G., et al. (2020) Men's talk about anxiety online: Constructing an authentically anxious identity allows help-seeking. [d]Drioli-Phillips, P. G., et al. (2020) I Feel Abused by My Own Mind: Themes of Control in Men's Online Accounts of Living With Anxiety.

Supplementary File 4: PRISMA Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	6-7
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	6-7
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	N/A
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	Supplementary File 2
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	7
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Supplementary File 1
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	8-9

Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	9
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	8-9
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	10
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	Table 1; Table 2
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	9-10

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	9-10
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	N/A
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	Figure 1
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	Table 1; Table 2
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	Supplementary 3; Supplementary 4

Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	Table 1; Table 2
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	N/A
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	12-13
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	23-26
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	30
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	31
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	1-2

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

For more information, visit: **www.prisma-statement.org**.

Supplementary File 5: Interview Schedule

Section 1: Experiences of anxiety

- Please start by telling me a little bit about yourself and your history of anxiety?
- How would you define anxiety?
- Does anxiety impact your life? If so, how?
- Can you remember when you first noticed your anxiety? What happened?
- How would you describe your symptoms of anxiety?
- What questions do you think GP's or mental health professionals should be asking to detect anxiety in young men?
- Have these experiences of anxiety changed overtime? If so, how?
- Do you feel like your anxiety is associated with any other mental health concerns (such as depression or suicidal thoughts or behaviour?)
- Do you think being a man influences your experiences of anxiety? If so, how?

Section 2: Coping strategies for anxiety

- How do you manage anxiety when it arises?
- How/where did you learn about these coping strategies?
- Have these coping strategies changed over time? Why do you think this may be?
- Why do you think you cope with anxiety in these ways?
- Can you identify any coping strategies that may be, or have been unhelpful in regard to managing your anxiety?

Section 3: Informal support family

- Have you told your family members about your anxiety?

NO

- Is there a reason why you have not discussed your anxiety with a family member?
- Do you feel a family member may be able to support you with your mental health? Why or why not?
- How do you think a family member may respond if you discussed your anxiety?
- Do you think being a man may influence these conversations? If so, how?

YES

- Who was the first person that you told?
- Why did you talk to your family member?
- How long did it take you to tell them about your anxiety (what got in the way/what prompted you to tell them)?
- Do you remember what you said during the conversation?
- How did they respond to you talking about your anxiety? Did you feel like this response was helpful?
- How did you feel before, during and after this conversation?
- What kind of support were you looking for from your family member?
- Do you think being a man influences these conversations? If so, how?

Section 4: Informal support friends

- Have you told your friends about your anxiety?

NO	**YES**
• Is there a reason why you have not discussed your anxiety with a friend? • Do you feel a friend may be able to support you with your mental health? Why or why not? • How do you think friends may respond if you told them about your anxiety? • Do you think being a man may influence these conversations? If so, how?	• Who was the first person that you told? • Why did you talk to your friend? • How long did it take you to tell them about your anxiety (what got in the way/what prompted you to tell them)? • Do you remember what you said during the conversation? • How did they respond to you talking about your anxiety? Did you feel like this response was helpful? • How did you feel before, during and after this conversation? • What kind of support were you looking for from your friend? • Do you think being a man influences these conversations? If so, how?

- How, if at all, do you think help from family and friends may be different to help from psychologist or mental health professionals?
- Informal support may also extend beyond the scope of family and friends, have you received help from any other sources of informal support (ie., coaches, teachers, mentors, community leaders?) If so, can you tell me about this.

Supplementary File 6: Extended Methods

Procedure

The first author conducted all 28 interviews between October 2021 and March 2022. Participants provided verbal consent at the beginning of the interview to having their interviews audio-recorded (via Dictaphone) and transcribed, and to ensure they had an adequate understanding of study aims, participation requirements and withdrawal rights. Interviews were semi-structured and guided by an interview schedule (see Supplementary File 1) exploring topics of anxiety symptoms (what these looked and felt like to the young man), the impacts and chronicity of these experiences as well as questions surrounding how they coped with anxiety when it arose. The interview schedules were developed in consultation with a lived experience of anxiety working group, comprising three young men. The interviews ranged in time from 25 to 70 minutes (*Mtime* = 45 minutes). The first author wrote reflexive memos and field notes at the end of each interview and consulted the last author after every interview. At the completion of the interview, professional help-seeking resources were offered to all participants, and they were re-imbursed with a $30 Mastercard voucher for their time.

Data analysis

Data analysis occurred in three over-arching phases in line with constructivist grounded theory approaches (open, focused and theoretical coding; Charmaz, 2014). NVivo 12 Plus was used for data storage and coding in addition to reflexive journaling, memo-ing, mind-maps, sketching, and storyboarding (see Supplementary File 3). Data collection and analysis occurred concurrently, and analyses began as soon as the interview transcripts were received.

Firstly, the author performed line-by-line coding[5] on all transcripts and consulted other study team members weekly to discuss the codes and labels that were emerging (i.e.,

long-term onset, physical symptoms, definition of anxiety, co-morbidities). A sub-set of transcripts (n = 8, 28.57%) were also coded by the last author and consensus was derived through conversations about the data and preliminary interpretations regards basic social processes. Line-by-line coding produced 125 initial codes. Interview questions were adjusted based on emergent findings during data collection (e.g., prompting a deeper introspection from participants to consider whether anxiety impacted the way they saw themselves, and if so, what meaning they attributed to their anxiety; Corbin and Strauss, 2008).

Focused coding involved study team members reviewing the list of initial codes to reorganise and recategorize codes (i.e., how anxiety changes overtime, severity and impact of anxiety, anxiety being a hidden experience) into overarching categories (i.e., resisting anxiety, reckoning with anxiety, responding to anxiety).[8] Data collection and analysis took place until data saturation[9] was reached at 25 interviews.

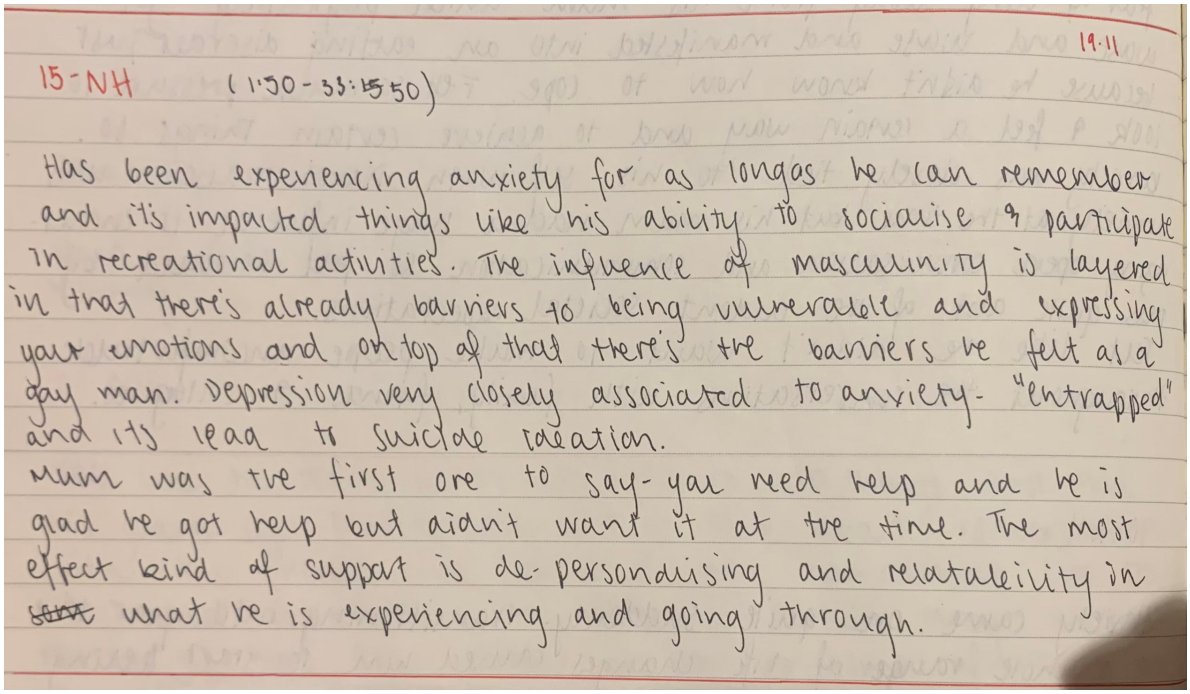
Focused coding involved study team members reviewing the list of initial codes to reorganise and recategorize codes (i.e., how anxiety changes overtime, severity and impact of anxiety, anxiety being a hidden experience) into overarching categories (i.e., resisting anxiety, reckoning with anxiety, responding to anxiety). Using a constant comparison approach data were interpreted with categories focused on exploring similarities and differences. The focused coding stage identified 41 broad codes which were condensed into five categories (i.e., resisting anxiety, reckoning with anxiety, responding to anxiety, time, and masculinities). Data collection and analysis took place until data saturation (i.e., no new codes were arising from data analysis) was reached at 25 interviews.

Lastly, for theoretical coding all co-authors met to discuss and consider the relationships between categories and ensure the theory was grounded in the data and conveyed via gerunds to signal the basic social processes comprising the findings.

Ethical considerations

Ethics approval was received from a Human Research Ethics Committee to conduct the study. A risk management protocol was developed amongst the study team to ensure that if any distress or suicide risk was identified in participants within the interviews, it would be managed by referral to mental health clinicians connected with the study. All participants were offered an opportunity to debrief at the conclusion of the interview and given information detailing the mental health services available to them.

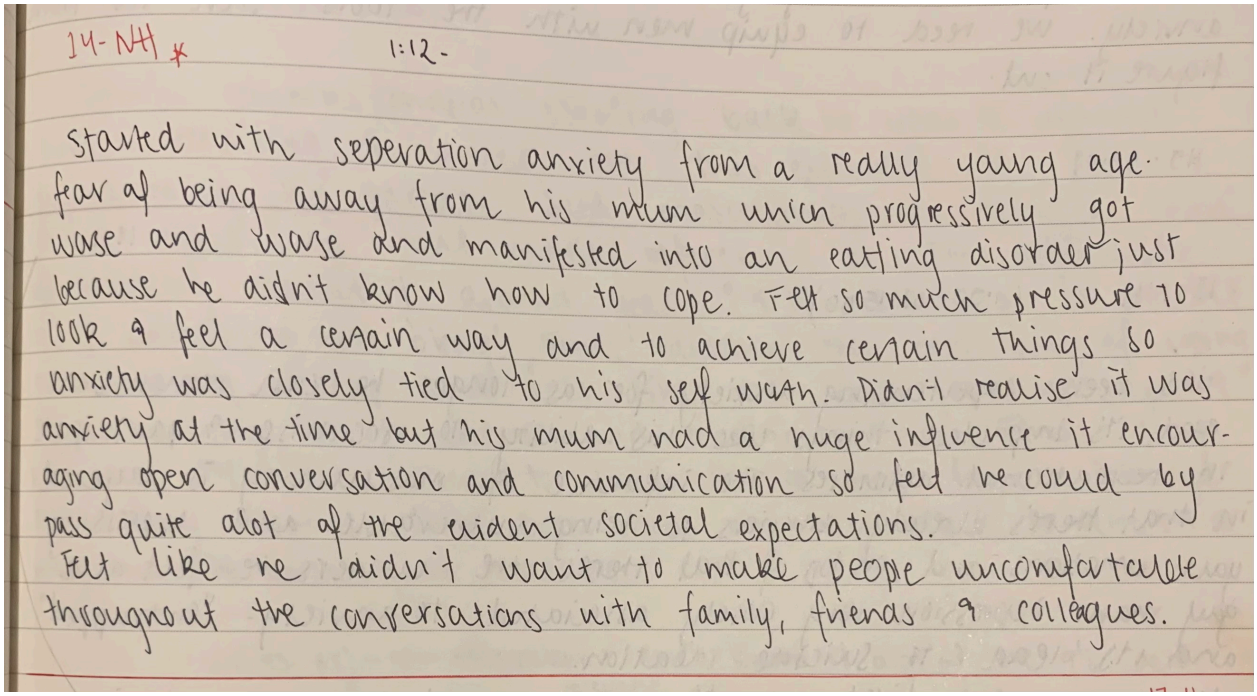
Supplementary File 7: Open, Focused and Theoretical Coding



15-NH (1:50-33:50)

19.11

Has been experiencing anxiety for as longas he can remember and it's impacted things like his ability to socialise & participate in recreational activities. The influence of masculinity is layered in that there's already barriers to being vulnerable and expressing your emotions and on top of that there's the barriers he felt as a gay man. Depression very closely associated to anxiety- "entrapped" and its lead to suicide ideation.
Mum was the first one to say- you need help and he is glad he got help but didn't want it at the time. The most effect kind of support is de-personalising and relatableility in ~~what~~ what he is experiencing and going through.



14-NH *

1:12-

Started with seperation anxiety from a really young age. fear of being away from his mum which progressively got worse and worse and manifested into an eating disorder just because he didn't know how to cope. Felt so much pressure to look & feel a certain way and to achieve certain things so anxiety was closely tied to his self worth. Didn't realise it was anxiety at the time but his mum had a huge influence it encouraging open conversation and communication so felt he could by pass quite alot of the evident societal expectations.
Felt like he didn't want to make people uncomfortable throughout the conversations with family, friends & colleagues.

Fig 1. Field notes for participant 14 and 15.

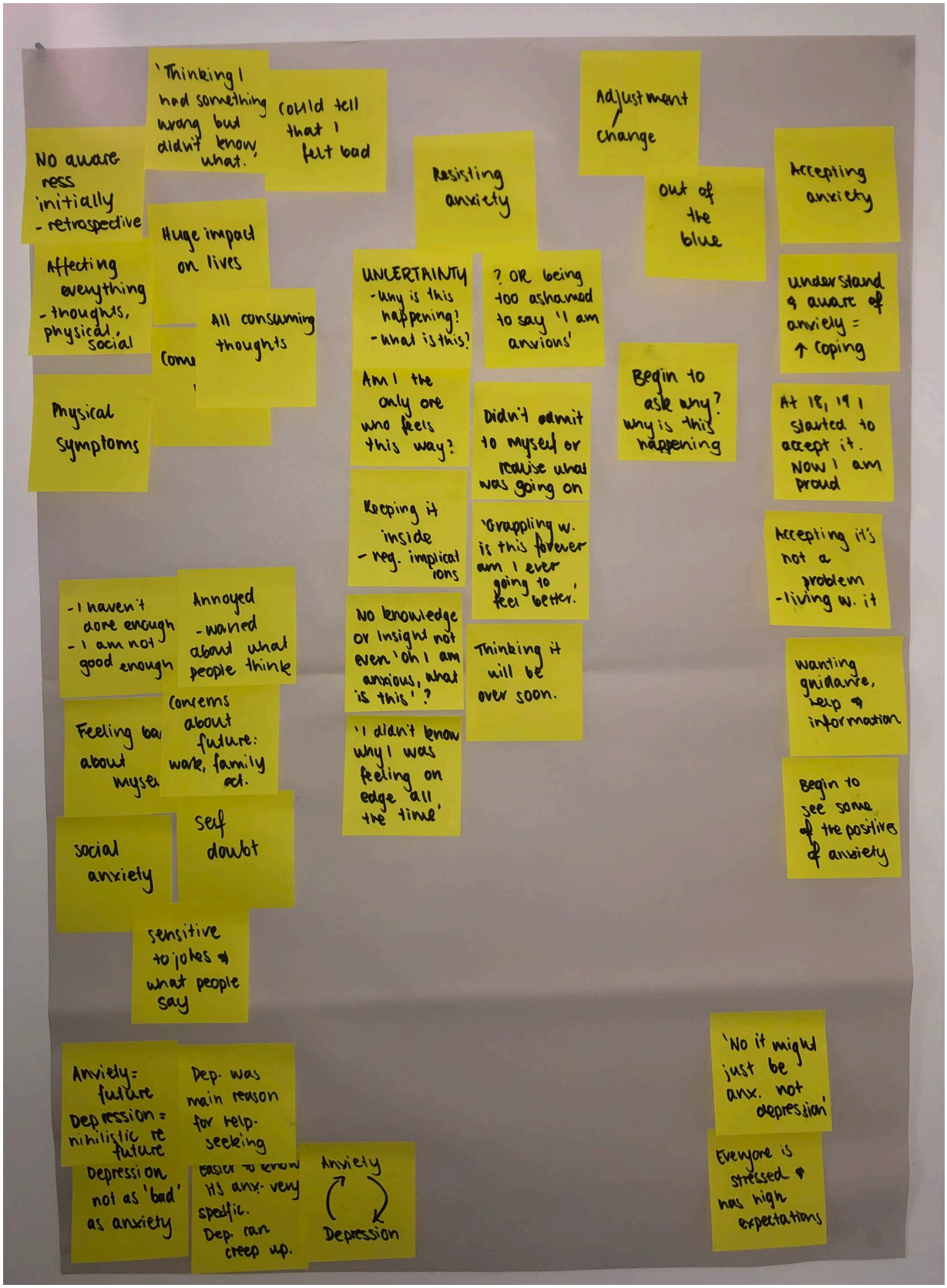


Fig 2. Focussed coding

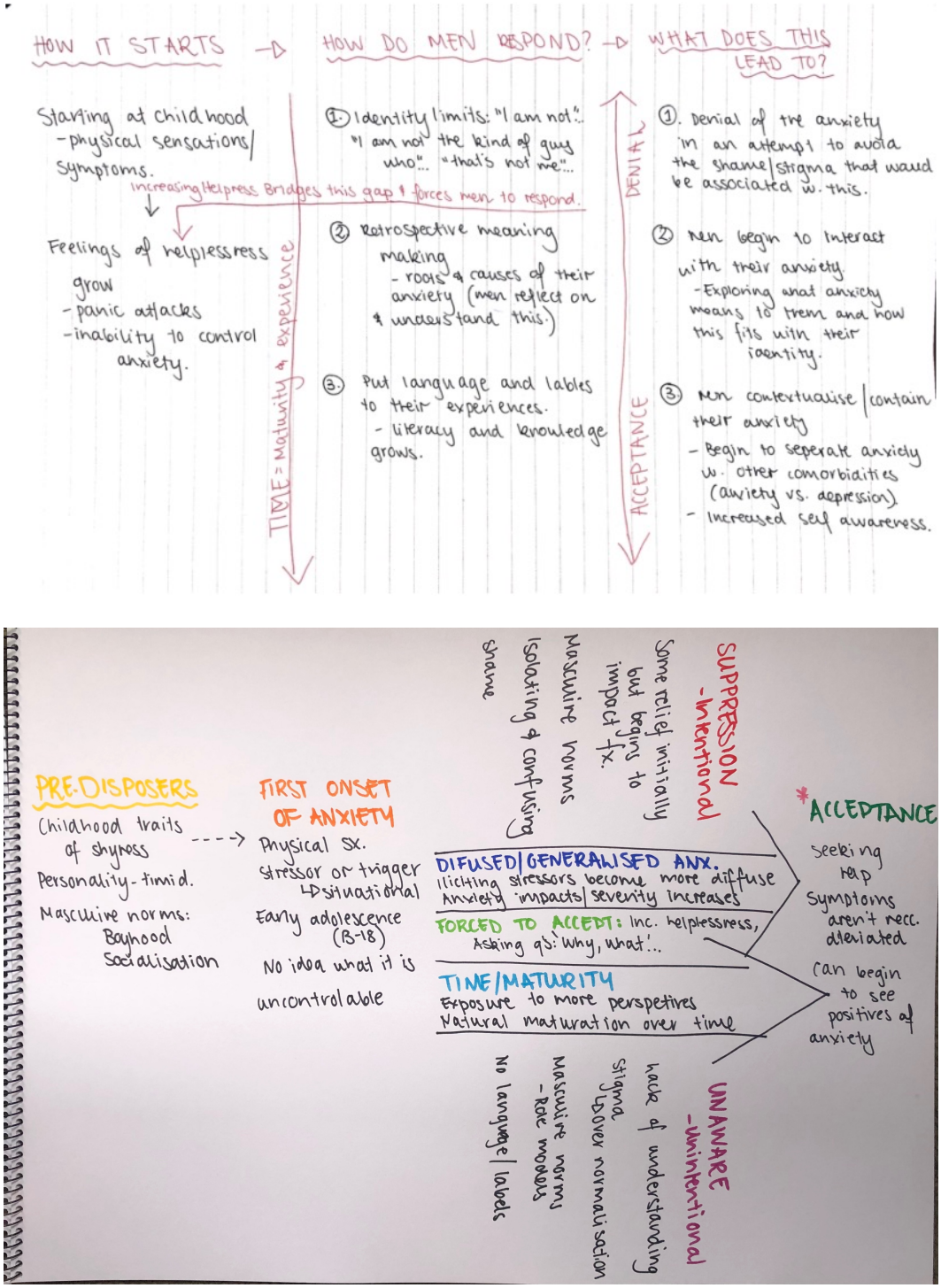


Fig 3. Theoretical coding mind maps

Supplementary File 8: Extended Data Analysis

Data Analysis

Data analysis occurred across four phases: 1) developing the coding framework, 2) testing the coding framework, 3) identifying clusters within the data and 4) interpreting clusters within the data. The four phases employed both qualitative (framework analysis [FA] and thematic analysis [TA]) and quantitative techniques (hierarchical cluster analysis [HCA]). An overview of FA, HCA and TA and the itemised processes undertaken for each analysis are outlined below.

Phase One: Developing the coding framework

Stages one and two (familiarisation and identifying a thematic/coding framework) of Ritchie and Spencer (2002) framework analysis guidelines informed the development of our coding framework. The first author gained an overview of the data by reading 300 paramedic ePCRs (defined as the pilot sample), randomly selected from the study sample (n = 694). Secondly, ePCRs from the pilot sample were reviewed and analysed by the first author, to identify codes which related to the clinical characteristics of young men's anxiety presentations (e.g., shortness of breath, social stressors, involvement of alcohol or drug use) to inductively establish a coding framework. NVivo 12 Plus was used for data storage and coding, in addition to memos, notes, and reflexive journaling. The first author and broader study team reviewed NVivo codes to reach salience on the coding framework and themes identified within the data.

Phase Two: Testing the Coding Framework

Stages three to five of Ritchie and Spencer (2002) guidelines directed the subsequent testing of the established coding framework. The coding framework was systematically applied to deductively analyse the remaining ePCRs within our sample (n = 394). All ePCRs were then categorised in NVivo according to indexing references

(i.e., codes; psychosomatic symptoms, involvement of alcohol or drug use, suicide ideation and self-harm). The data were then charted using NVivo's matrix software according to codes and case demographics (e.g., location of residence, transportation status) to identify overarching similarities or differences in thematic patterns within the data. Chi-square analyses evaluated proportional differences within the coding framework across sub-samples comparison groups (i.e., sub-samples based on case demographics; metropolitan and regional young men, young men transported to hospital and those remaining at home). For all chi-square tests the significance level was set at $p < .004$ to accounting for multiple comparisons (i.e., significance level of $p = .05$ divided by 11 comparisons). Lastly, the first author and broader study team reviewed NVivo matrices, charts, and memos to reach salience on patterns and connections within the data. Qualitative findings were distilled to determine the optimal number of clusters for hierarchical cluster analysis.

Framework Analysis

FA is a qualitative methodology initially developed for large scale applied social policy research by Ritchie and Spencer in the 1980s, although it is now commonly used for medical and mental health research. Ritchie and Spencer first defined FA as "an analytical process which involves a number of distinct though highly interconnected stages" (Ritchie & Spencer, 2002, p. 117). Despite FA being classified as a systematic and disciplined qualitative methodology, reflexive analysis is still essential to determine meaning, salience, and connections in the data (Gale et al., 2013). FA is considered an abductive process (i.e., combining both inductive and deductive coding processes; Meyer & Lunnay, 2013; Tavory & Timmermans, 2014). In line with similar studies (Gale et al., 2013; Namey et al., 2008), our analysis was inductive initially (i.e., data-driven; Namey et al., 2008), and themes were derived from progressive coding

electronic Patient Care Records (ePCRs; i.e., constantly comparing and/or contrasting line-by-line codes), to create a coding framework of overarching themes (constituting phase one of this study). A deductive approach (i.e., theory-driven; Namey et al., 2008) was then employed in phase two, whereby the established coding framework was then systematically applied to the remaining dataset, and codes were charted and mapped for interpretation across the entire sample (Gale et al., 2013). As outlined in Brower et al. (2019), utilising both inductive and deductive qualitative techniques in data analysis maximises data validity and reliability.

Guided by the principles developed by Ritchie and Spencer (2002), FA contains five key stages: 1) familiarisation, 2) identifying a thematic framework, 3) indexing, 4) charting and 5) mapping and interpretation. In this study, the five stages were split across phase one and two to reflect the division of inductive and deductive processes and the sample size utilised (i.e., randomised subset $n = 300$ or full sample $n = 694$). Familiarisation and identifying a thematic framework (stage one and two of FA) occurred in phase one of this study, and indexing, charting, and mapping and interpretation (stages three to five of FA) occurred in phase two. NVivo 12 Plus was used for data storage, coding, and charting in addition to memos, notes, and reflexive journaling.

1. Familiarisation: A subset of $n = 300$ ePCRs were randomly generated from the sample of $n = 694$. The subset size was determined in line with previous qualitative studies utilising ambulance data (Nielsen et al., 2020; Wilson et al., 2020) and guided by Guest et al. (2006) conceptualisation of data saturation, defined as "the point in data collection and analysis when new information produces little or no change to the codebook" (p. 65). The first author gained an overview of the data by reading all $n = 300$ paramedic ePCRs. Trained researchers working on the NASS

were consulted to understand data collection methods and coding processes. The first author took notes and memos to detail key ideas as they became more familiar with the data.

2. Identifying a thematic framework: The randomised subset of *n* = 300 ePCRs were reviewed and analysed by the first author, to identify codes relating to the clinical characteristics of young men's anxiety presentations (i.e., shortness of breath, uncertainty and social stressors, presence or alcohol or drug use). These codes were used to inductively establish a coding framework through which remaining data can then be "sifted and sorted." (Ritchie & Spencer, 2002, p. 180). The framework was refined throughout the inductive analytic process (i.e., shortness of breath and cardiac pain codes were submerged under psychosomatic symptoms) and became reflective of diverse experiences and individual circumstances (i.e., broader categories created for sudden onset of psychosomatic symptoms). The first author consulted broader study team members for input on the thematic framework.
3. Indexing: The established coding framework was then systematically applied to the deductively analyse remaining ePCRs (*n* = 394), and ePCRs were categorised in NVivo according to indexing references (i.e., codes; psychosomatic symptoms, involvement of alcohol or drug use, anger and aggression as distress, past anxiety attacks or episodes, suicide ideation and behaviours). Any uncertainty or ambiguity in indexing was discussed in fortnightly study team meetings.
4. Charting: Data were then charted using NVivo's matrix software according to framework codes (clinical characteristics of the anxiety presentations) and case demographics (e.g., location of residence, transportation status, history of mental illness) to identify overarching similarities or differences in thematic patterns in the data. For example, under the theme sudden onset of symptoms, sub-themes (e.g.,

psychosomatic symptoms, shortness of breath, lack of understanding), were individually charted according to young men's residential location (i.e., regional or rural) and transportation status (i.e., whether they were or weren't transported to hospital).

5. Mapping and interpretation: Lastly, the first author and broader study team reviewed NVivo matrices across the full sample of young men and subsequent sub-samples as determine by case demographics (i.e., metropolitan and regional young men). The first author and broader study team reviewed codes, notes, charts, and memos to reach salience on overarching clinical characteristics across cases. Data were charted using the NVivo's matrix software according to the framework codes (clinical characteristics) and case demographics (e.g., location of residence, transportation status, history of mental illness). Chi-square analyses were then run to test for significance in the proportional difference of co-occurrence of codes across participant sub-samples (i.e., metropolitan and regional young men, young men transported to hospital and those remaining at home and lastly men with a disclosed history of mental illness and those without). Interpretation involved analysing the presence of overlapping and/or interconnected clinical characteristics in anxiety presentations, to identify overarching thematic patterns in the data. Findings were distilled to determine the optimal number of clusters for HCA.

Phase Three: Identifying Clusters Within the Data

As per Henry et al. (2015) the sample was sufficiently powered to undertake hierarchical cluster analysis. Following phase two, the coding framework was transformed into a binary dataset and extracted from NVivo (which depicted the distribution of code occurrence for each young man across data). Each code was transposed into a numerical variable with 1 equating to the presence of a code, and 0

indicating an absence (i.e., if a young man's ePCR referenced shortness of breath in the anxiety-related presentation, this would be transposed into a 1 for the code "shortness of breath"). Hierarchical cluster analysis was undertaken in RStudio using the *hclust* function, specifying Euclidian distance and Ward linkage (Markides et al., 2022; Plasse et al., 2007). To validate the optimal number of clusters in the data (initially inferred at phase two), the distribution of codes across the clusters as well as the dendrogram were cross tabulated with young men's ePCRs.

Hierarchical Cluster Analysis

HCA is an agglomerative (i.e., bottom-up approach) methodology that identifies clusters of similar observations within a dataset (Aldenderfer & Blashfield, 1984). Cluster analysis was first developed by Driver and Kroeber (1932) and is defined as a statistical methodological for "sorting data into groups, such that the degree of natural association is high among members of the same group and low between members of a different group" (Anderberg, 1973). Over the last decade, there has been growing interest and support for the use of cluster analysis as a secondary quantitative methodology for qualitative analysis (e.g., Guest & McLellan, 2003; Henry et al., 2015; Macia, 2015; Markides et al., 2022; Plasse et al., 2007; Prevett et al., 2021). HCA is the most widely used clustering methodology for qualitative data and has been shown to produce similar levels of accuracy as K-means clustering and latent class analysis, even with samples as small as 20 (Henry et al., 2015). Guest and McLellan (2003) first used HCA to look for patterns in a binary dataset derived from coded qualitative data within a grounded theory study. Guest and McLellan (2003), Macia (2015), Markides et al. (2022), Prevett et al. (2021) and Henry et al. (2015) have all shown clustering approaches to provide useful information to researchers regarding co-occurring categories of codes in large qualitative datasets, differentiating sub-samples of

participants within a large study sample. Furthermore, HCA is advantageous in that it provides a rigorous and replicable procedure for qualitative analytical processes, which would otherwise be left to reflexive and subjective interpretation by the researcher (Prevett et al., 2021). As per Henry et al. (2015) our sample was sufficiently powered to undertake HCA. After developing and testing the coding framework (phase one and two), it was transformed into a binary dataset (which depicted the distribution of codes across all cases) and extracted from NVivo. Each code (e.g., shortness of breath, uncertainty and social stressors, involvement of alcohol or drug use) was transposed into a variable with 1 equating to the presence of a code, and 0 indicating an absence. HCA was undertaken in RStudio using the *hclust* function, specifying Jaccard index and Ward linkage (Markides et al., 2022; Plasse et al., 2007). To confirm the optimal number of clusters (initially identified at phase two), the distribution of codes across the clusters and well as the dendrogram were cross tabulated with individual ePCRs.

Phase Four: Interpreting Clusters Within the Data

Data were thematically analysed for all young men within each cluster. In line with Braun and Clarke (2006), the first author identified themes within each cluster by comparing and/or contrasting them across data within each cluster. To ensure the reliability of findings, the first author regularly consulted the broader study team to review and reach salience on identified themes. Findings were distilled to reflect the differing typologies of young men's anxiety presentations. Pseudonyms are used within this paper to maintain participants' anonymity.

Thematic Analysis

Following the identification of clusters (phase three), data within each cluster were analysed using TA (Braun & Clarke, 2006). In line with Braun and Clarke (2006) the first author identified themes within each cluster, comparing and/or contrasting them

across clusters. To ensure the reliability of findings, the first author regularly consulted the broader study team to review and reach salience on themes identified within the data. Findings were distilled to determine the differing typologies of young men's anxiety presentations.

Supplementary File 9: Hierarchical Cluster Analysis Dendrogram