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Caring for aged people: The influence of personal resilience and workplace climate on 'doing good' and 'feeling good'

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Abstract

Aims: This study examines the impact of personal resilience on the well-being of care workers and how perceptions of the quality of care provided and the social climate in the organization influences this relationship. We examine quality of patient care as both a mediating and outcome variable to better understand if 'doing good' (quality of care) leads to 'feeling good' (personal well-being).

Background: As an ageing population and the care for the elder has become an increasing challenge to many societies, developing and retaining a professional care workforce through effective management is vital in providing care services.

Design: A cross-sectional regression design was used in the study.

Methods: In 2017 we surveyed care workers in twenty Australian aged care facilities. The sample consistent of 194 usable questionnaires. Using regression techniques, we constructed an interaction term (resilience X social climate) and investigated its impact on well-being (the outcome variable) and quality of care (the mediator variable).

Results: Our results reveal that quality of care is important as an outcome variable particularly in a supportive climate where high personal resilience positively influences quality of care. Quality of care is also important as a mediating variable as it provides a conduit through which high personal resilience fosters well-being, especially in a supportive climate. Our results support the argument that 'doing good' leads to 'feeling good'.

Conclusion: These findings contribute to our appreciation of the important outcomes of resilience in the aged care context and its influence on perceived performance and carer well-being.

Keywords

adult nursing, Australia, carers, management, quality of care, nurses

Summary Statement

Why is this research or review needed?

- The Australian Productivity Commission (2011) reports that the Australian aged care sector has been subject to dramatic increases in demand for residential care, whilst simultaneously struggling with a shortage of skilled workers.
- It is predicted there will be further, unprecedented increases in the demand for aged care services over the next two decades, as the baby boom generation enter their declining years.
- Carers report high levels of stress and burnout and facilities experience difficulties in retaining experienced nurses and professional.

What are the key findings?

- Social climate moderates the direct relationship between resilience and quality of client care.
- Carer well-being is directly influenced by high personal resilience and indirectly via their perception of the quality of care delivery.
- The direct influence of resilience on well-being is only evident for carers with high personal resilience.
- The indirect influence via quality of care is evident for all carers, but is stronger for carers with high personal resilience.

How should the findings be used to influence policy/practice/research/education?

- By exploring the process of how employee resilience influences the quality of care, this study highlights the importance of resilience and organizational support in

improving employee well-being and the quality of care provided to aged care residents.

- Resilient carers working in a supportive work environment provide better care to residents and report higher levels of well-being. Managers may facilitate a supportive work environment through greater investment in formalised human resource management practices and leadership skills training.
- Facility managers need to consider workforce strategies to increase the resilience of carers as an important lever in addressing increasing burnout and turnover rates.

Introduction

Australia's aged care providers are facing a 'perfect storm'. The Australian Productivity Commission (2011) reports that the Australian aged care sector has been subject to dramatic increases in demand for residential care, whilst simultaneously struggling with a shortage of skilled workers. It is predicted there will be further, unprecedented increases in the demand for aged care services over the next two decades, as the baby boom generation enter their declining years (Productivity Commission, 2011). At the same time, there is considerable evidence which infers that being a professional carer working in residential aged care facilities is a challenging occupation, in part due to resource constraints and occupational risks. Consequently, carers report high levels of stress and burnout and facilities experience difficulties in retaining experienced nurses and professional carers (Cheng et al., 2013; Johnstone, 2007). In this study, we posit that resilient carers possess the coping mechanisms required to manage the adversity they face during their working day, improving not only their own well-being and longevity, but also the quality of care they provide to residents.

Resilience is the 'developable capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress and increased responsibility' (Luthans, 2002, 702). Improving the resilience of nurses and care workers improves their ability to cope with the increasing demands of their workplace (Cooke and Bartram, 2015; Jackson et al., 2007; Hodges et al., 2005; Tusale and Dyer, 2004; Parse, 1998). There is growing interest among healthcare and nursing management scholars on how resilience can be developed at workplace settings, to support healthcare workers in the face of adversity. However, we know little about the precise mechanisms through which resilience has an impact on the quality of care provided and how this perceived level of care is related to worker well-being (Jackson et

al., 2007). Two studies suggest that quality of patient care delivery is positively associated with clinician well-being (Wallace et al., 2009; Firth-Cozens, 2001). There has been limited research in the nursing context, examining how personal resilience has an impact on nurse and care worker attitudes and behaviours, as well as the influence of organizational factors on these relationships. The importance of this research gap is heightened, given the growing evidence that resilient workers are more likely to be high performers and less likely to quit their jobs (Cooke, Cooper, Bartram, Wang and Mei, 2016). We contribute to this research gap by hypothesising that the social climate of a workplace enhances the benefits of a resilient workforce, through the shared perceptions of an organization's social environment, which in turn shapes employee's interactions and behaviours. Understanding the complex interplay between an employee's resilience, the quality of care provided, perceptions of social climate and employee well-being are critical in the aged care sector. A clearer understanding of these relationships will facilitate improved management of work demands and enhance the welfare of both carers and residents and improve the efficacy of human resource management (HRM) practices and other support mechanisms.

In this study, we build on Glomb et al.'s (2011) notion that by 'doing good', care workers 'feel good' and argue that providing a high quality of care to residents in aged care facilities heightens the positive affect of the carer. To do this, we examine three hypotheses underpinned by Jackson et al.'s (2007) notion of personal resilience as a strategy for surviving and thriving. To test the hypotheses, we surveyed 194 nurses and Personal Care Assistants (PCAs) employed at 20 residential aged care facilities operating in Victoria, Australia.

Residential aged care in Australia

In Australia, the direct care of aged residents is provided via a combination of registered nurses (who have completed a 3-year undergraduate degree study); enrolled nurses (who have completed a mandatory 12 to15-month program); and personal care assistants (PCAs), who may be qualified (a Certificate III qualification requiring 6 weeks of study) and other unqualified care staff (Wells and Ellis, 2010). Over the last decade, the staffing profile of residential aged care facilities has changed considerably, with an increasing reliance on PCAs to provide a basic care to residents. Between 2007 and 2012, the proportion of PCAs working in residential aged care facilities increased from 58% to 68% of the direct care workforce.

During the same period, the proportion of Registered Nurses decreased from 21% to 15% (Wells and Ellis, 2010). The Aged and Community Services Australia (ACSA) claims that there will be a serious workforce shortage in the residential aged care sector by the end of this decade, estimating the need for 'an additional 37,620 (FTE) care workers ….from 2013 to 2023' (Aged and Community Services Australia, 2015, 10).

Research evidence suggests that the aged care workplace is characterised by adversity (e.g., Martin and King, 2008; Sargeant, Harley & Allen, 2010; Kaine, 2012). Aged care marks a transition for an individual, from living independently to requiring permanent residential and nursing care services. Aged care staff witness the progressive functional decline of residents, with little or no chance of meaningful recovery. Their roles encompass attending to residents and their families, often through difficult and distressing times (Polk, 1997). These demanding working conditions are intensified by the nature of care work itself and the high levels of emotional labor endemic to these occupations (Reynolds et al., 2000). Work intensification, often unattractive terms and conditions of employment, negative employee attitudes and increasing work stress and burnout are now common artefacts of work in the healthcare sector (Holland et al., 2013; King et al., 2013; Yau et al., 2012; Poghosyan et al., 2010; Jackson et al., 2007). Moreover, the sector is increasingly reliant on casual employees to provide services, primarily to contain labour costs (Martin and King, 2008) and also to overcome staff shortage by drawing on (international) students as part-time workers (Cooke and Bartram, 2015). A consequence of these conditions is the erosion of carers' commitment to and engagement with the facility and often with their profession itself. Carers who are dedicated to servicing a resident's physical, emotional and social needs often garner intrinsic satisfaction from their work but can be adversely affected by increasing work intensity and poor working conditions (King et al., 2013). Several studies identified high staff turnover rates in the aged care sector (Sargeant et al., 2009; Martin and King, 2008).

These challenges will undoubtedly intensify as demand for these services increases, particularly with respect to the recruitment and retention of care staff, necessitating strategies to manage the antecedents of nurse and care worker well-being more effectively. Personal resilience has been identified as an important factor in determining how care staff traverse the ever-present adversity in their work (Cameron and Brownie, 2010; Hodges et al., 2005; Tedeschi and Calhoun 2004; Tusale and Dyer, 2004); and could be used as a strategy for carers to cope with and even thrive in such conditions (Jackson et al., 2007).

Resilience, social climate and quality of care

We propose that personal resilience will be positively associated with perceived quality of care and that this relationship will be moderated by employee's perceptions of social climate of the aged care facility. Jackson et al. (2007) argues that resilience can enable an individual to positively respond to adversity, through the formation of positive and nurturing professional relationships, maintaining positivity and developing emotional insight. Rutter (1985, 608) suggests that 'the promotion of resilience does not lie in avoidance of stress, but rather in encountering stress at a time and in a way that allows self-confidence and social competence to increase through mastery and appropriate responsibility'. Despite the perceived, practical benefits of resilience very few empirical studies examine the linkages between resilience, in-role performance and their impact on employee well-being (Wang et al., 2014; Cooke et al., 2016).

We define employee resilience a set of skills and attributes that can be developed through organizational interventions (for example, Wang et al., 2014; Cooke et al., 2016). Following the work of Wang et al. (2014), employee resilience is comprised of nine dimensions: vision, determination, interactions at work, relationships, problem solving, self-organization, self-confidence, flexibility, adaptability and proactivity. Initial research using this conceptualisation of resilience establishes a similar connection between employee resilience and in-role performance (Cooke et al., 2016). Much of the research on employee resilience has been shaped by positive psychology (Youssef and Luthans, 2007). Luthans (2002) argues that personal resilience, a dimension of Psychological Capital, is a determinant of worker performance. Studies have demonstrated that PsyCap influences employee attitudinal and behavioural outcomes, including employee performance (Avey et al., 2011; Luthans et al., 2005; Luthans et al., 2010). Avey et al. (2011) propose that resilience can encourage employees to exert additional effort through greater perseverance to attain their goals and thereby increase performance output. Demonstrating effort is an important dimension of worker performance (Campbell et al., 1993). Workers with high levels of resilience will likely counter adversity with positivity and perseverance, thereby signifying effort in their work.

However, despite these connections between resilience and performance, there is a paucity of research examining the relationship between personal resilience and quality of care provided

by clinicians, especially aged care workers. We argue that the personal resilience of nurses and carers will have a positive impact on the quality of care provided in aged care facilities. Quality of care comprises both technical (application of professional knowledge and skills) and interpersonal (relationships between patients and healthcare professionals and the contextual aspects of care) aspects (Donabedian, 1980; Leggat et al., 2010).

Social context is acknowledged as an important foundation for the development of the behaviours and thought processes critical to fostering resilience (Lengnick-Hall et al., 2011). Social climate is defined as 'the collective set of norms, values and beliefs that express employees' views of how they interact with one another while carrying out tasks for the firm' (Prieto & Santana, 2012, p. 193). Following Collins and Smith (2006), in this paper, we characterize and operationalize social climate by trust, cooperation and shared codes and language that exist among individuals in an organizational context. Developing resilient employees must be understood in the context of the broader social systems where the employee is situated (Coutu, 2002; Lengnick-Hall et al., 2011). Lengnick-Hall et al. (2011) contend that employee resilience is strengthened under conditions of psychological safety, social capital, diffuse power and accountability and broad resource networks, which encourage strong interpersonal networks which foster rapid and flexible responses to change. Supportive climates engender positive employee attitudes (Rogg et al., 2001) and enhance employee performance (Eisenberger et al., 1990). Employee resilience is strengthened when the climate is supportive, as employees will be encouraged to learn and grow by accepting challenges without fear of retribution for failures and are likely to recover after adversity or setbacks (Luthans et al., 2008). Tusaue and Fredrickson (2004) argue that social support is an important factor in fostering resilience and a study by Healy and McKay (2000) found that resilience was promoted amongst nursing graduates as a result of exposure to challenging clinical situations in an environment of collegial support. Therefore, Lengnick-Hall et al. (2011) argue that a climate which promotes shared trust, mutual dependence and organizational citizenship behaviours can augment the positive outcomes of employee resilience.

We argue that a social climate of trust and cooperation between care workers, clinicians, managers and supervisors will strengthen the relationship between resilience and quality of care. A strong network of support, information exchange and camaraderie will act to strengthen the effect of personal resilience and quality of care, especially in a context of the adversity prevalent in the aged care sector. Therefore, we posit that:

Hypothesis 1: Social climate will moderate the direct relationship between resilience and the quality of client care.

Resilience, social climate and well-being

Employee well-being is a multi-dimensional construct, comprising psychological, physical health and social elements (c.f., Kooij et al., 2013; Grant et al., 2007). Wallace et al. (2009, 1716) argue that 'growing evidence points to important negative consequences of physician ill health to health-care systems by affecting recruitment and retention of physicians, workplace productivity and efficiency and quality of patient care and patient safety'. Choi et al (2011) and Rickard et al (2012) found that working in healthcare settings characterized by adversity resulted in poor mental and physical health outcomes, turnover and declining patient care.

Empirical research shows that resilience is positively associated with well-being. For example, Britt et al. (2001) found that personal hardiness (resilience) enabled soldiers to elicit meaning in their work, which resulted in improved well-being. Ferns et al. (2005) report that a lack of personal and job resilience resulted in increased biopsychosocial strain amongst participants. Drawing on Conservation of Resources Theory (COR), Avey et al. (2010) argue that resilience (via psychological capital) represents a positive state that predicts employees' positivity in relation to their well-being. According to COR Theory (Hobfoll, 2002, 312), individuals 'seek to obtain, retain and protect resources and that stress occurs when resources are threatened with loss or are lost or when individuals fail to gain resources after substantial investment'. Work-related resources, such as resilience, are an important means to achieve goals and success and are critical to influencing worker's primary resources such as well-being (Westman et al., 2005). Furthermore, as argued earlier, a strong social climate will intensify the impact of resilience. Therefore, we contend that:

Hypothesis 2: Social climate will moderate the direct relationship between resilience and well-being.

Quality of patient care, resilience, social climate and well-being

Given that clinicians and care workers may be drawn to this work by altruistic motives, we argue that positive perceptions of quality of care they provide may lead to higher evaluations

of work-related well-being. For many, altruistic motives attract them to a career in nursing and sustains their commitment to caring. Lane (1987) posits that this sense of 'vocation' or 'calling' augments the care provided to patients. The desire to care for others is an essential ingredient to enhancing the quality of care provided (Raatikainen 1997).

Building on positive psychology (Seligman 2002), we argue that providing a high quality of care to residents in aged care facilities heightens the positive affect of the carer. In other words, by 'doing good', they 'feel good' (Glomb et al. 2011). By savouring positive experiences through techniques such as sharing positive experiences with others, self-congratulation and building memories of positive events, an individual's positive affect is enhanced (Smith, Harrison, Kurtz and Bryant 2014; Bryant and Veroff 2007; Bryant, Smart and King 2005). By corollary, a carer's perceptions of the quality of care they provide is inextricably linked to perceptions of their personal well-being. If a carer perceives delivering a high quality of care to clients, it will in turn have a positive impact on perceptions of their personal well-being. Despite these findings, there is limited examination of the link between perceptions of quality of patient care and work-related well-being among aged care workers.

As in Hypothesis 1, we argue that social climate will moderate the indirect relationship between resilience and well-being, through its influence on the relationship between resilience and quality of care.

Therefore, we argue that:

> *Hypothesis 3: Social climate will moderate the indirect relationship between resilience and well-being via its influence on the resilience - quality of care relationship.*

The Study

Aim

In this study, we hypothesise that the social climate of a workplace enhances the benefits of a resilient workforce, through the shared perceptions of an organization's social environment, which in turn shapes employee's interactions and behaviours. Understanding the complex interplay between an employee's resilience, the quality of care provided, perceptions of social climate and employee well-being are critical in the aged care sector. To do this, we examine quality of patient care as both a mediating and outcome variable to better understand if 'doing good' (quality of care) leads to 'feeling good' (personal well-being). A clearer understanding

of these relationships will facilitate improved management of work demands and enhance the welfare of both carers and residents and improve the efficacy of human resource management (HRM) practices and other support mechanisms (See Figure 1 for the mediated moderation model).

Design

A cross sectional regression study design was used.

Data

To test these hypotheses, a survey of care workers employed at residential aged care facilities in Victoria, Australia was conducted. Data were collected between January - March 2017. A random sample of 20 residential aged care facilities were included in this study, all of which are owned by the same corporate entity. Of these 20 facilities, 14 were located in metropolitan Melbourne and six in regional areas of Victoria. With the assistance of the Facility Manager, a total of 745 questionnaires were randomly distributed to registered nurses, enrolled nurses and PCAs across these 20 residential facilities. The questionnaires and accompanying documentation were placed in staff's mailboxes where possible, or were distributed to relevant staff during meetings. A sealed submission box was left in a staff common room at each Facility and was collected five weeks after the distribution of the survey. This questionnaire consisted of a series of questions about the carer's perception of the quality of care they provide, their current well-being, perceptions of their levels of personal resilience and social climate in the organization. A range of demographic questions were included, such as: their age, gender, occupation, the average numbers of hours they work per week and whether their facility was located in a metropolitan area. A total of 209 questionnaires were received, however missing data reduced the sample size to 194. This equates to a response rate of 26%. The characteristics of respondents are presented in Table 1 below.

A census of the Commonwealth funded aged care workforce, sponsored by the Federal Department of Health and Ageing, was conducted in 2012 (King et al., 2012). The results of this study provide the most accurate description of the characteristics of aged care workers in Australia. The study reports that the residential aged care facilities are dominated by female carers (with males comprising 10% of the direct care workforce). The median age of residential care workers was 48 years and 35% of the carers were born overseas. About 72%

of aged care workers were employed on a permanent, part-time basis. Compared with the characteristics of our sample, this suggests that our sample approximates the characteristics of the broader population of aged care workforce in Australia.

Measures

Each multi-item variable was constructed by taking the mean of its component items. All items are listed in the Appendix.

Outcome Variable

Work-related well-being. Employees responded to seven statements related to their personal feelings of workplace-related well-being (Demerouti and Bakker, 2008). A sample item is: 'There are days when I feel tired before I arrive at work' (reverse-coded), alpha = .81.

Outcome variable / Mediator

Employee perception of the quality of patient care s/he provides. Employees were asked to evaluate the quality of care they offered their patients in relation to ten issues (Bartram et al., 2012). Sample items are: 'Your ability to make residents comfortable and reassure them'; 'Amount of peace and quiet you provide to residents' (1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent), alpha = .92.

Predictor Variable

Employee resilience. Employees responded to eight statements related to their personal ambition and determination (Wang et al., 2014). Sample items are: 'I know what I want to achieve during my lifetime'; 'I have a strong determination to achieve certain things in my lifetime' (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree), alpha = .93.

Moderator

Social climate. Employees responded to eight statements related to the social climate in their care facility (Prieto and Santana, 2012). Sample items are: 'Employees have confidence in other employees' intentions and behavior'; 'Employees are skilled at collaborating with each other to diagnose and solve problems' (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree), alpha = .93.

Control Variables

Our analysis also included several control variables to improve generalizability and to reduce

the chance that unmeasured variables could explain the results. Control variables were drawn from extant literature and comprised employee age (continuous: 19 to 68 years), occupational group (1 = registered nurse, 0 = otherwise), part-time worker (1 = yes, 0 = no) and care facility location (1 = metropolitan area, 0 = otherwise).

Ethical considerations

The study was approved by both the University Human Research Ethics Committee and the aged care organization.

Validity and reliability of the study

Principal components analysis with varimax rotation was employed to conduct an exploratory factor analysis of all the items drawn from the four multi-item variables (quality of patient care, organization climate, resilience and well-being). The items loaded on the four associated separate factors. We moved on to assess the discriminant validity of these measures. We used AMOS (Arbuckle, 1997) to conduct a confirmatory factor analysis of a four-factor model with latent variables representing well-being, quality of care, resilience and organization climate. This generated $\chi^2 = 893.96$ (df = 489), $p < .01$. Indices showed a good fit to the data (CFI = .91; IFI = .91; RMSEA = .06). CFI and IFI values that are closer to 1 reflect better-fitting models (Byrne, 2001) and values of .08 or less for RMSEA indicate good fit (Dilalla, 2000). In addition, we compared the four-factor model against a three-factor model (with a single latent variable representing quality of patient care and resilience). The single factor model generated $\chi^2 = 1708.90$ (df = 492), $p < .01$ (CFI = .71; IFI = .72; RMSEA = .11). Thus, the four factor model fit the data significantly better than the three-factor model: $\Delta\chi^2$ (df = 3) = 814.94, $p < .01$. The means, standard deviations and correlations for all variables included in the regression analyses are shown in Table 2.

Data Analysis

We used regression techniques and bias-corrected bootstrapping with PROCESS macros for SPSSX (Hayes, 2013; Preacher et al., 2007). We constructed an interaction term (resilience X organization climate) to capture the moderating influence of climate on resilience and investigated its influence on quality of care and well-being. PROCESS automatically centres the variables used to construct the interaction term. The inclusion of multiplicative terms in regression analyses might raise concerns about multicollinearity, but the variance inflation factors (VIF) associated with the predictor and moderator variables were low, none reaching 1.8. These results indicate very low levels of multicollinearity (Hair et al., 1998).

Results

Hypothesis 1 - *organization climate will moderate the direct relationship between resilience and quality of care* - was tested by using quality of care as an outcome variable and regressing it on the interaction (alongside controls and main effects). Using quality of care as an outcome variable, the regression results are reported in Table 3, model 3(a). The interaction coefficient was significant (b = .21, p < .05). To better understand the interaction result, using Dawson (http://www.jeremydawson.com/slopes.htm), we calculated profile plots (see Figure 2). Higher levels of resilience generated greater quality of care in contexts of supportive organisation climate (b = .67, p < .01) and also, but to a significantly less extent, in contexts of poor organisation climate (b = .44, p = 01). Hypothesis 1 was supported.

We moved on to investigate Hypothesis 2 - *organization climate will moderate the indirect relationship between resilience and well-being via its influence on the resilience - quality of care relationship* - by using moderated-mediation regression with well-being as an outcome variable and quality of care as a mediator. Well-being was regressed on the interaction (alongside controls, main effects and mediator). The results are reported in Table 3, model 3(b). With regard to Hypothesis 2, the interaction coefficient was significant (b = .18, p < .05). Using Dawson (http://www.jeremydawson.com/slopes.htm), we calculated profile plots (see Figure 3). PROCESS results indicated a significant indirect effect of the interaction: index of moderated mediation = .43, p < .05, 95% CI [0.0015-0.1057]. PROCESS results also showed that higher levels of resilience generated greater quality of care in contexts of supportive organization climate (b = .11, p < .05, 95% CI [0.0241-0.2684]) and also, but to a lesser extent, in contexts of poor organization climate (b = .05, p < .05, 95% CI [0.0050 0.1346]. Hypothesis 2 was supported.

With regard to Hypothesis 3, the coefficient on the mediator (quality of care) was significant (b = .21, p < .05). PROCESS results indicated a significant indirect effect of the interaction: index of moderated mediation = .43, p < .05, 95% CI [0.0015-0.1057]. They also showed that, via indirect effects, higher levels of resilience generated greater well-being in contexts of good organization climate (b = .11, p < .05, 95% CI [0.0241-0.2684]) and also, but to a lesser extent, in contexts of poor organization climate (b = .05, p < .05, 95% CI [0.0050 0.1346]. Hypothesis 3 was supported.

Discussion

The results answer our research questions. The findings are important in relation to quality of care. They show that quality of care is important as an outcome variable: in a supportive climate, high personal resilience positively influences quality of care. It is also important as a mediating variable: it provides a conduit through which high personal resilience fosters well-being, especially in a supportive climate. The results are also important in relation to personal well-being. They indicate that, in a supportive climate, high personal resilience also positively influences personal well-being directly. The results show that 'doing good' (increase in quality of care) leads to "feeling good" (increase in personal well-being).

Knowledge contributions

The study contributes to our understanding of the antecedents of quality patient care and carer well-being in several ways. First, the findings highlight an important link between employee resilience and the quality of patient care delivered by carers. To date, our understanding of the factors that contribute to the quality of care provision in healthcare settings has focused on the technical aspects of care delivery, with relatively little attention given to the socio-emotional factors which might improve diagnostic and therapeutic processes (Eaton, 2000). Second, the study highlights the moderating effects of supportive social climates environments, particularly for resilient carers. Our study suggests that a high social climate in the organization coupled with quality of care produces high levels of personal resilience and well-being. Whilst the antecedents and consequences of personal resilience of employees is gaining momentum, the conceptualization and empirical validation of employee resilience is still in its infancy, particularly in the aged care context. Thus, the examination of carer resilience in the context of aged care informs a theoretical and practical problem.

This study contributes to extending our knowledge about the effective management of carers in the aged care sector. Few studies have examined this cohort of healthcare workers, who face a unique set of workplace demands which distinguish them from mainstream healthcare service workers.

Practical implications

The findings of this study have practical implications for aged care managers and the development of a resilient workforce. Our findings suggest that supporting carers to reflect on the quality of patient care they provide will have a positive influence on carer's well-being. Resilient carers working in a supportive environment where trust and collaboration are

important to providing better care to residents and report higher levels of well-being (Prieto and Santana, 2012; Wang et al., 2014). This finding is significant in light of the current narrative of acute levels of stress, burnout and high rates of turnover in the sector. Improving resilience amongst carers through systematic HRM practices (e.g., training and development, high quality work, appropriate rostering and supportive leadership) and investing in a supportive social climate may be an important lever to address high burnout and turnover rates (Cooke and Bartram, 2015; Cooke et al., 2016; Lengnick-Hall et al., 2011). Initiatives may be informal, such as initiating a dialogue between managers and front-line caring staff about their perceptions of the care they provide, through to more formalised interventions, including self-rated performance and personal reflection and action plans. Drawing on the notion of savouring espoused by Bryant and Veroff (2007), initiatives which promote the sharing of positive experiences with others; the building of memories to allow for reflection on positive events; and self-congratulation may serve to increase the positive affect achieved through the delivery of high-quality patient care.

Limitations and future research directions

Our study contains several conceptual and methodological limitations. First, the data were collected from a single source, raising concerns about common method variance. However, this is a rich data-set that has investigated well-being from a novel perspective and encourages future research regarding carer resilience for future research. Whilst common method variance was shown not to be an issue of concern in this study, any subsequent research should consider collecting multi-source data including measures of quality of patient care from residents and supervisors and objective measures of resilience and well-being. Second, the aged care facilities included in this study are owned by a common corporate entity. Therefore, the sample size and scope of this study did not enable to exploration of the consequences of carer resilience across multiple aged care providers. Moreover, a larger sample size may uncover gender differences amongst carers and may identify different patterns of results across facilities of different sizes and in different locations. Third, we only considered one level of analysis in this study – care workers in aged care facilities. It does not consider the interplay between workers, supervisory relationships and organizational level processes. Fourth, the study is cross sectional and the data were collected at one point in time. Future studies could apply longitudinal designs to further explore the changing nature of these relationships.

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Conflict of interest

No conflict of interest has been declared by the authors.

Author contributions

All authors meet at least one of the following criteria (recommended by the ICMJE:http://www.icmje.org/ethical_1author.html) and have agreed on the final version:

1. substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
2. drafting the article or revising it critically for important intellectual content.

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Table 1: Sample Characteristics

Occupational Group	
Registered Nurse	20.4%
Enrolled Nurse	12.2%
Personal Care Worker	67.3%
Work Fraction	
Full-time	17.3%
Part Time	82.7%
Gender	
Female	97%
Male	3%
Age	
Less than 30 years	5.5%
30 to 39 years	17.5%
40 to 49 years	20.0%
50-59 years	33.0%
60-69 years	21.0%
More than 70 years	3.0%
Average age	50.26 years
Country of Birth	
Australia	46%
Other	54%
English is primary language	59.4%
Average length of tenure at Facility	5.9 years
Average hours worked per week	30.17 hours

Table 2: Descriptives and correlations of model variables

	Mean	SD	1	2	3	4	5	6	7
1. Age	46.97	11.94	----						
2. Occupation	0.33	0.47	.15*	----					
3. Part-time	0.83	0.38	.02	-.09	----				
4. Metropolitan	0.64	0.48	-.13*	.14*	-.11	----			
5. Resilience	4.26	0.61	-.15*	-.01	-.08	-.02	----		
6. Org climate	3.64	0.68	-.08	-.03	-.05	.25**	.44**	----	
7. Quality of care	4.31	0.55	-.21**	.02	-.09	-.01	.43**	.27**	----
8. Wellbeing	3.72	0.72	-.05	-.03	-.01	.17*	.25**`	.34**	.27**

N=194

Table 3: Regression Results

	3(a)	3(b)
	Quality of care	**Well-being**
	b	b
	(SE)	(SE)
Constant	0.38**	5.57**
	(0.76)	1.19
Controls		
Age	-0.01	0.01
	(0.00)	(0.00)
Occupational status	-0.04	0.02
	(0.04)	(0.06)

Part-time	-0.09	0.08)
	(0.09)	(0.13)
Metropolitan hospital	-0.04	0.07
	(0.08)	(0.11)
Predictor		
Resilience	-0.36**	-0.05**
	(0.18)	(0.25)
Moderator		
Organization climate	-0.76**	-0.79**
	(0.22)	(0.32)
Mediator		
Quality of care	----	0.20*
	----	(0.10)
Interaction		
Resilience X	0.21*	0.18*
organization climate	(0.06)	(0.10)
R-square		

* p < .05, ** p < .01

N = 194

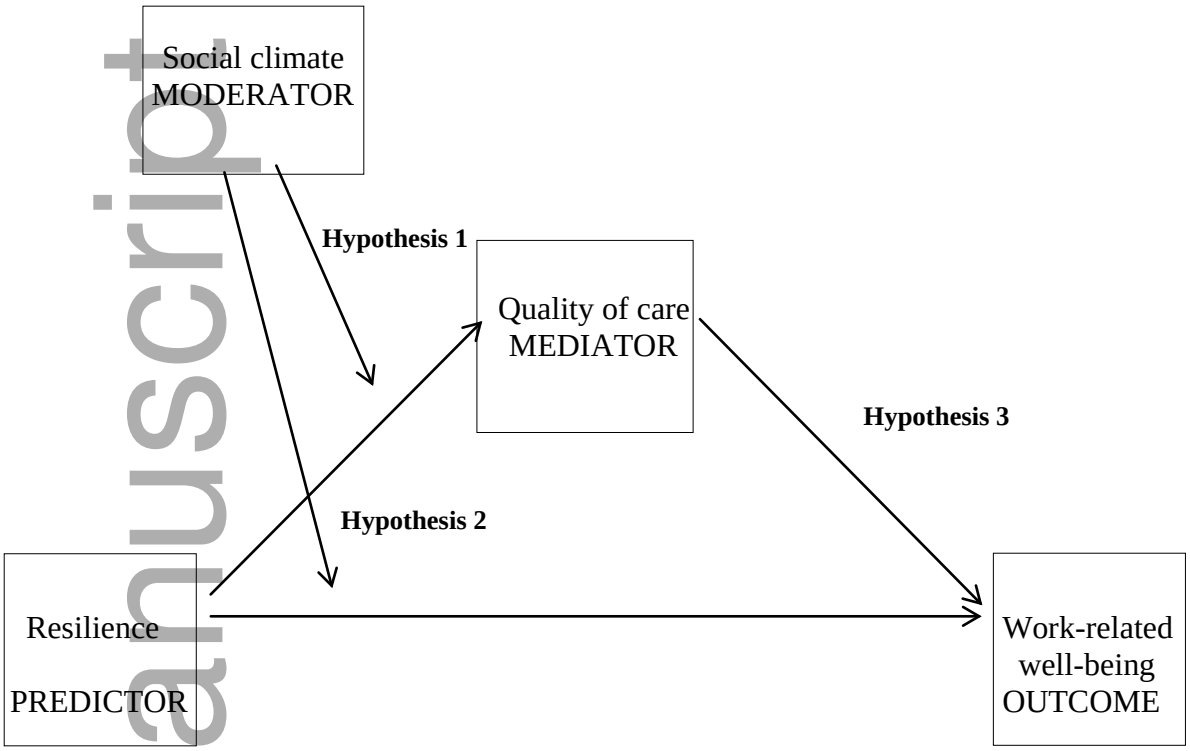

Figure 1: The moderated mediation model

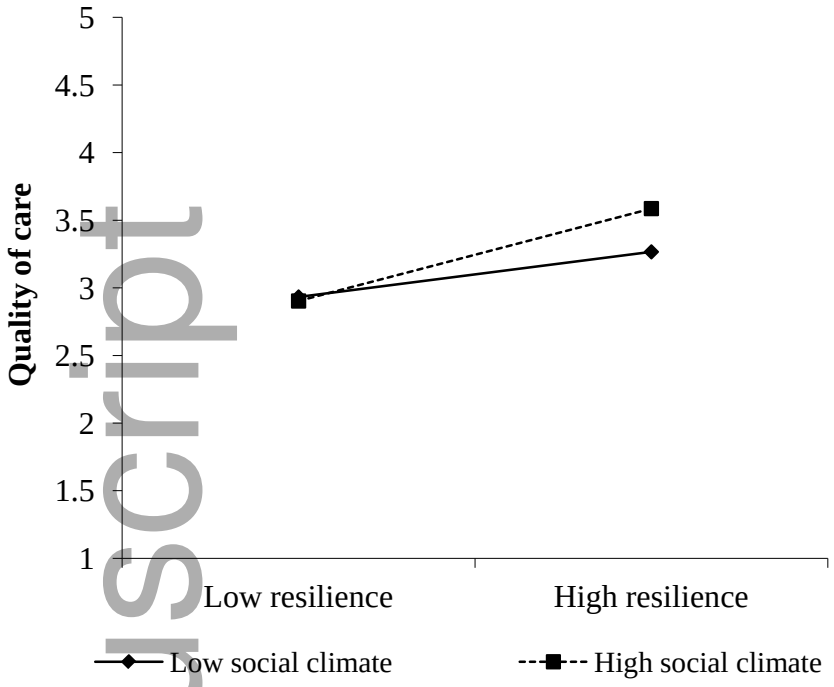

Figure 2: The relationship between employee resilience and quality of care, under varying conditions of social climate

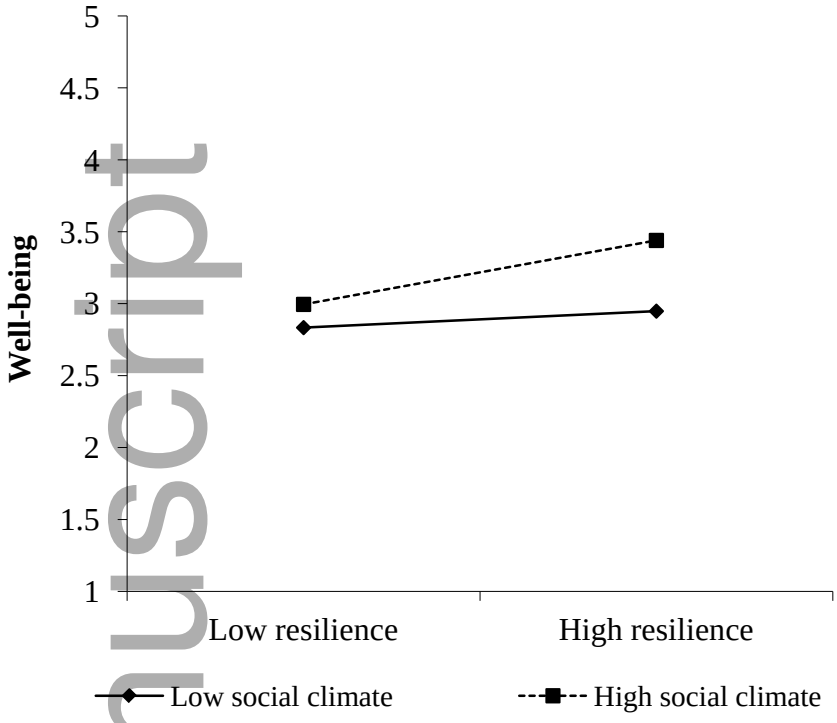

Figure 3: The relationship between employee resilience and well-being, under varying conditions of social climate