



Which factors affect healthcare professionals' person-centred attitudes in dementia?

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Abstract

This study examined which factors affect healthcare professionals' person-centred care (PCC) attitudes in dementia. The design was quasi-experimental, independent measures with three independent variables: burnout, job strain and PCC environment. The dependent variable was PCC attitudes. There were 59 participants, 8 males and 51 females [$M = 36.39$, $SD = 12.00$]; the age range was 19-60 years. Burnout was measured by the Maslach Burnout Inventory (Maslach & Jackson, 1986), job strain was measured by the Strain in Dementia Care Scale-Section 1 (Edberg, Anderson, Wallin & Bird, 2015) and person-centred organisation/environment was measured using the Person-Directed Care -Environment subscale (White, Newton-Curtis & Lyons, 2008). The dependent variable was measured by the Attitudes Towards Dementia Questionnaire -Personhood Scale (Lintern & Wood, 1996). Multiple regression analysis showed that high burnout increased PCC attitudes and high job strain decreased PCC attitudes. PCC environment did not significantly affect PCC attitudes. Overall the results were congruent with previous literature. This study adds to a limited knowledge base, highlighting how factors such as job strain can significantly reduce PCC attitudes, and demonstrating the need for effective interventions to reduce the potentially detrimental influence of job strain on PCC. This study also highlights the importance of perceived personal/professional accomplishment as a buffer against the negative effects of emotional exhaustion and depersonalisation, and as a precipitator of PCC attitudes.

Key Words: Person-centred care, Person-centred care attitudes, Burnout, Job strain.

Introduction

According to Mitchell and Agnelli (2015) the prevalence of dementia is increasing exponentially, hence dementia has become a growing public health and policy concern. Downs and Bowers (2014) define dementia as a group of syndromes, which encompass progressive cognitive decline, leading to social and behavioural dysfunction predominantly associated with ageing. Additionally, Higgs and Gilleard (2016) state dementia causes impairments in the basic infrastructure of one's individual agency, communication, reasoning, judgement, and awareness. They further state dementia has an overwhelming effect on one's personal identity and 'self-hood'. Moreover, Moyle, Murfield, Griffiths and Venturato (2011) assert the impact of dementia extends beyond the individual experience and can have a detrimental effect on formal and informal caregivers. Furthermore, the quality and provision of care received significantly impacts the residents' and staff's physical and psychological health, well-being and quality of life (Pitfield, Shahriyarmolki & Livingston, 2011).

Therefore, to vastly improve the care provisions given to individuals with dementia, policy and practice has moved from the dominant biomedical model to a person-centred approach to care, focussing on the personhood of the individual (Higgs & Gilleard, 2016). Person-centred care (PCC) was brought to fruition by Rogers (1961), however this became a central tenet of dementia care by Kitwood (1997) who viewed the current paradigm as denying the personhood of the individual. Kitwood's (1997) body of work focussed on the broader psychosocial needs of the individual, and according to Innes and Manthorpe (2013) such individualised care moved away from previous provisions, which viewed individuals with dementia and their needs as homogenous. Furthermore, PCC has been viewed as a humanitarian framework, which respects the individual (Innes & Manthorpe, 2013).

Additionally, Kitwood's (1997) PCC is influenced by three factors; personhood, malignant social psychology and positive person work. Firstly, personhood is defined as 'a status or standing bestowed upon one human being, by others, in the context of social relationships and social being. It implies recognition, respect and trust' (Kitwood, 1997, p. 8). Secondly, malignant social psychology refers to behaviours which undermine an individual's well-being and personhood, for example treachery and banishment (Kitwood, 1997). Furthermore, Chenoweth et al. (2009) assert malignant social psychology increases responsive behaviours including agitation, distress, aggression and violence. These symptoms are significantly reduced with staff's PCC attitudes and provisions (Chenoweth et al., 2009). Likewise, responsive behaviours increase the risk of burnout (Vogel et al., 2017). In contrast, Testad et al. (2010) did not find any relationship between agitation and carer burnout level. However, Schmidt et al. (2014) state responsive behaviours are exhibited in 90% of dementia residents, thus highlighting the possibility of malignant social psychology. Moreover, when healthcare professionals view responsive behaviours as the resident communicating an unmet need, PCC rather than mechanisms of restraint are utilised (Kor et al., 2018). Thirdly, Kitwood (1997) offered an alternative to malignant social psychology, known as positive person work. This is behaviour of others that enhances the individual's well-being and personhood, which is vital to providing PCC and reducing responsive behaviours (Brodaty et al., 2003).

Kitwood (1997) theorised there were psychological needs of individuals with dementia, which are present in all other human beings. However, these needs are more exaggerated when one has dementia due to a greater vulnerability and compromised communication abilities. These psychological needs include comfort, attachment, inclusion, occupation and identity, which must be met to maintain the individual's personhood. Moreover, Rosvik et al. (2013) assert PCC has become a powerful rhetoric; however, the implementation of PCC is yet to come to fruition as evidenced by research highlighting long-term dementia care facilities are task-focussed in contrast to person-centred. The findings of the aforementioned study are concerning as personhood is strongly mediated by the attitudes of the perceiver. Therefore, healthcare professionals' attitudes towards PCC will influence the resident's sense of personhood (Ven et al., 2013).

Attitudes explained through latent processes describe how psychological processes manifest into behaviours (Allport, 1935). A prominent conceptualisation of attitudes is offered by Katz and Stotland (1959) who view attitudes as mediating responses between the individual and the social situation. Attitudes have been theorised to comprise of cognitive, conative and affective components; in care, Astrom (1990) states the cognitive aspect forms how the individual perceives the resident, establishing an image and opinion. The affective component comprises of the negative and positive feelings towards the resident and the conative component comprises of the interaction between the cognitive and affective components, which influence behaviour and responses to the patient. Hence, it is essential to address PCC attitudes of staff working in dementia care to improve provisions (Nilsson et al., 2012). Furthermore, Kang et al. (2011) assert positive PCC attitudes of healthcare professionals in dementia care improve PCC provisions. Likewise, Kitwood (1997) states dementia unfriendly environments comprise of negative staff attitudes, communication and care practices, which increase the discomfort of residents. Additionally, Norbergh, Dahl, Hellze and Asplund, (2006) suggest that positive attitudes lead to behaviours, which incorporate positive person work, enhancing the individual's psychosocial wellbeing, overall health, and satisfaction.

Additionally, Roen et al. (2018) state PCC attitudes of staff are essential to study, as they influence the relationship between staff and residents. This study analysed individual and organisational factors affecting PCC provisions, however attitudes were not explicitly measured; it is therefore difficult to determine idiosyncratic motivation to provide PCC, affecting the real-world applications and intervention success, as attitudes directly influence behaviours (Ajzen, 1988). However, Zimmerman et al. (2005) examined attitudes of healthcare professionals and found both environmental and individual factors significantly influenced PCC such as level of education, job satisfaction and self-efficacy. Thus, Zimmerman et al. (2005) asserted it is paramount for the research base to significantly extend the body of research regarding the nature of the relationship between attitudes and provision of care. Uncovering which factors influence PCC attitudes is paramount as such factors influence residents' quality life by affecting the provision of PCC and increasing staff turnover; the latter has a detrimental effect on residents with dementia as meeting new care workers can cause distress, further affecting their quality of life (Coogler et al., 2007). However, Zimmerman et al.'s design was cross-sectional, thus it cannot infer causality, significantly affecting the impact it may have on policy, practice and the knowledge base, which is a common limitation within this area of study (Barbosa et al., 2015).

Additionally, the effect of limited knowledge on staff's attitudes and the factors that influence these attitudes (Travers, Beattie, Khan & Fielding, 2013), combined with methodological limitations (Pitfield et al., 2011) may explain the inconsistency of results regarding the factors affecting PCC attitudes. It has been theorised that there are a range of factors affecting healthcare professionals' PCC attitudes towards residents with dementia, however robust findings are yet to come to fruition (Hunter et al., 2016). Nevertheless, organisational PCC culture (Caspar & O'Rourke 2008), burnout (Westermann, Kozak, Harling, & Nienhaus, 2014), job strain (Edberg, Anderson, Wallin & Bird, 2015) and specific dementia training (Sjogren, Lindkvist, Sandman, Zingmark & Edvardsson, 2015), have found relatively consistent results, nonetheless robust effects have only emerged for education/training, suggesting higher education levels and training increase positive PCC attitudes (Hunter et al., 2016; WHO, 2012; Kada et al., 2009). However, studies have shown some inconsistencies in their understanding and retention of PCC post-intervention (Colomer & DeVries, 2013; Surr et al., 2017; Hanson, 2014; Galvin, 2010).

Furthermore, Burshnic, Douglas and Barker (2018) state there is a lack of research examining the effect of the organisation culture on PCC. Additionally, their study highlighted that successful and consistent PCC in residential care homes are influenced to a greater extent by organisational factors than by individual factors. Likewise, individual factors are exacerbated by organisational factors. However, there were limitations of this study such as an insufficient sample size, and threats to internal validity and generalisability as this study was specific to Michigan nursing facilities. Nonetheless, this study adds to a limited knowledge base. Likewise, Beeber et al. (2013) examined the relationship between individual and organisational factors, finding that both had a significant influence on PCC, highlighting the importance of examining both organisational and individual factors potentially influencing PCC provision. This study found healthcare professionals with supervisors who were empathetic, reliable and prioritised interpersonal relationships, had significantly lower job strain, higher job satisfaction and PCC attitudes. However, direct workers perceived their job as more burdensome than supervisors, had lower personal/professional accomplishment and higher depersonalisation, which could be related to a higher degree of direct work with residents, subsequently increasing burnout (Vogel et al., 2017). Although the findings from this study highlight the importance of examining a vast array of variables, which may influence attitudes and provisions of care, the latter was not explicitly measured.

A study by Kadri et al., (2018) demonstrated direct care workers felt a lack of support, respect and influence over their work conditions, leaving them at risk for depersonalisation, an aspect of burnout. Hence, this study highlights the significance of researching into factors which affect staff's ability to provide PCC, specifically direct workers' emotional well-being due to maladaptive organisational support. Thus, Kadri et al., (2018) argued for PCC to be a consistent philosophy of care, the personhood and well-being of staff must be recognised by the organisation, as treating staff without dignity and viewing them as incapable of autonomy, juxtaposes the core values of PCC, which staff are expected to provide (Kitwood, 1997). However, this study utilised interviews and did not specifically ask questions related to staff personhood, thus not all staff would have spontaneously spoken about this topic. Moreover, this study did not directly measure staff's PCC attitudes, which Kitwood (1997) states should be a focal point of research, however such research is scarce, affecting the efficacy and extent of interventions (Brownie & Nancarrow, 2013).

In addition, the physical environment in dementia care settings has been highlighted as an essential component of PCC, increasing residents' quality of life, personhood and psycho-social well-being (Lee et al., 2016). Brooker (2003) implemented person-centred environment in their model of PCC, which focuses on the well-being of the resident. Similarly, environmental conditions were highlighted as a key contributing factor of PCC (McCormack, 2004; McCormack & McCance, 2010). Furthermore, a variety of studies highlighted specific environmental factors, which contribute to residents' emotional well-being such as visually tailored stimulation (Lee & Morelli, 2010), colour contrasts (Chaudhury, Hung, & Badger, 2013), privacy and personalisation (Zeisel et al., 2003), and outside spaces such as gardens (Innes, Kelly, & Dincarslan, 2011; McGilton, Rivera & Dawson, 2003; Olsson, Lampic, Skovdahl, & Engstrom, 2013). However, Lee et al. (2016) argued that there is a lack of research on how the psycho-social environment affects staff's perceptions, well-being and PCC provisions. Additionally, their study highlighted the physical environment increases staff's PCC provisions, job satisfaction, and general well-being. Nevertheless, this study did not examine how the psycho-social environment affects staff's PCC attitudes, which are pivotal in providing PCC (Willemse et al., 2015).

Looi et al. (2014) argue PCC is affected by socio-political paradigms, as government policies have distorted the PCC model, valuing autonomy and decision-making considerably more than individual authentic values. This affects organisation culture and structure, facilitating a hotel rather than a home-style environment. Thus, it is essential to examine how person-centred the environment is and how this affects staff's attitudes as years of austerity and funding cuts are likely to affect how person-centred the care environment is (Stranz & Sorrensdotter, 2016). Furthermore, Boyden (2015) asserts having a homely atmosphere in a care home stimulates the mind and increases self-worth. Equally, research has shown that the quality of life of residents improves in this atmosphere. This study demonstrated staff felt certain parts of care home settings had a negative effect on the individual's well-being. Furthermore, staff experience restrictions in engaging with residents due to organisational factors, which negatively affects residents. However, this study was qualitative and utilised open-ended interviews. Similarly, Sjogren et al. (2017) state organisational factors such as leadership style, supervision, shared vision of care, and effective communication increase PCC provisions.

Moreover, successful implementations of PCC models depend on successful leadership, management stability, team cohesion, effective communication and investment in staff training and education, which are not consistent in residential facilities (Rokstad et al., 2013). Cost concerns and resistance of senior leaders is the most significant barrier to culture change success (Brownie & Nancarrow, 2013). However, utilising PCC rather than task-orientated approaches decreases job strain and increases work satisfaction, thus there is a bi-directional relationship between job strain and PCC approaches (Sjogren et al., 2015). Therefore, one can infer improving PCC provisions should improve staff-wellbeing and decrease both burnout and job strain in dementia care staff (Edberg et al., 2015). The research base indicates the majority of staff report being satisfied with their work and often find it rewarding, whilst simultaneously reporting feeling stressed and strained (Edberg et al., 2015). Additionally, commonly reported factors increasing strain are predominantly related to organisational and management problems including staff shortages, insufficient emotional support, unsupportive leadership styles, overwhelming workloads,

competing demands, job uncertainty and decreased level of autonomy (Edvarsson et al., 2009).

According to Karasek and Theorell (1990) job strain is conceptualised as concurrent high demands, low perceived control in one's work environment and reduced social support, which cause psychological stress and subsequently ill-health. Johnson (1986) implemented social support as a third factor, mitigating the effects of job strain caused by low demand-control. Furthermore, the implementation of social support has been evidenced in the research base; Backman et al. (2018) demonstrated a relationship between positive leadership styles, increased social support and reduced job strain. Moreover, Sjogren et al. (2015) theorise a balance between demand and control allow staff to utilise and prioritise PCC approaches, focussing on meeting the psycho-social needs of the individual with dementia. Additionally, Edberg et al., (2015) demonstrated high job strain increases residents' responsive behaviours, which has been associated with fewer PCC attitudes (Brodaty et al., 2003).

A study by Sandberg et al. (2018) demonstrated staff wanted to do more for residents than resources would allow, subsequently affecting the quality of care provisions, leading to job strain. However, this study could not yield conclusive results due to its small sample size and convenience sampling. Furthermore, the concept in the aforementioned study causing job strain is referred to as stress of conscience, which is stress caused by not being able to provide the care that one feels is paramount, subsequently causing a troubled conscience (Juthberg et al., 2007). Similarly, this is related to burnout as emotional exhaustion typically occurs due to not being able to provide the care they deem appropriate, known as following their work conscience (Glasberg et al., 2007; Juthberg et al., 2007). Additionally, Wallin and colleagues' (2013) study demonstrated paraprofessionals such as carers and nurse assistants reported a higher degree of job strain and stress of conscience and a more negative perception of the work environment. These individuals also reported lower PCC provisions.

Wallin et al. (2013) state when nurses in residential care perceive their job as unsatisfactory, they present with distanced work attitudes, which increases the risk of resident responsive symptoms. Their study found a caring climate and PCC were related to higher job satisfaction. Moreover, variables associated with decreased job satisfaction include feeling physically exhausted, worried or restless after work, feeling sad or depressed and sleep problems. However, this study was cross-sectional and thus cannot infer causality (Langdrige & Hagger-Johnson, 2013). A study by Schmidt et al. (2014) demonstrated that job satisfaction mediates the relationship between work exposure, attitudes and behaviours such as turnover and intent to leave. However this study's sample size was insufficient, thus increasing the risk of a type 2 error (Field, 2013).

Job strain has a myriad of negative outcomes for the professional, one of the most detrimental and prevalent being burnout (Hasson et al., 2008). Burnout is a syndrome which manifests due to emotional strain within one's work environment (Maslach et al., 1996). Maslach and Jackson's (1986) theory of burnout is the most widely utilised conceptualisation, defining burnout as a continuous emotional state characterised by three factors: emotional exhaustion, diminished personal/professional accomplishment and depersonalisation. Emotional exhaustion is described as feelings of overwhelming emotions in one's work environment and

concurrent depletion of energy. Diminished personal/professional accomplishment encompasses significant decline in the individual's competence and personal/professional achievement regarding their work. Depersonalisation is regarded as a coping mechanism for emotional exhaustion, leading to impersonal and negative attitudes of their service-users (Maslach, 1982). Thus, burnout in healthcare professionals increases negative outcomes for service-users (Woodhead, Northrop & Edelstein, 2016).

According to Pitfield et al. (2011) providing care for individuals who have dementia is both physically and emotionally exhausting and includes a strenuous physical and psychological workload. Likewise, professionals working in dementia have one of the highest levels of burnout (Vogel et al., 2017). Additionally, intense connections with residents, which is a requirement of PCC, has been identified as a stressor that increases the risk of burnout significantly (Maslach, 1982). Furthermore, Aloha et al. (2017) highlight the impact of burnout on the individual, stating burnout increases the risk of type 2 diabetes, heart disease, premature death, musculoskeletal pain and depression. Thus, it is paramount to improve interventions to decrease burnout in professionals working in dementia care. However currently little is known on how to treat or prevent burnout (Shirom, 2011). Likewise, studies have highlighted certain individuals are more at risk of burnout, such as those with personality traits of high neuroticism, low extraversion, conscientiousness and agreeableness (Mattila et al., 2007; Swider & Zimmerman, 2010). However, research has identified PCC attitudes, PCC provisions and a person-centred environment reduces residents' responsive behaviours and decreases burnout whilst increasing job satisfaction (Lintern et al., 2009; Ven et al., 2013; Barbosa et al., 2015). In contrast, in a study by Willemse et al. (2015) staff members who were more person-centred had significantly higher levels of emotional exhaustion. Contrastingly, a study by Hunter et al. (2016) highlighted staff burnout significantly affects provision of PCC in dementia. However, this study did not measure depersonalisation as significant contributor of burnout (Hunter et al., 2016). Also, this study did not obtain a sufficient sample size (Hunter et al., 2016). Nonetheless, it is not known at present the extent that individual and environmental factors independently increase the risk of burnout, although research suggests burnout occurs due to the effect of both factors (Vogel et al., 2017).

Duffy, Oyebode and Allen (2009) assert staff working in dementia care experience considerable levels of work strain, which increases the risk of burnout. However, some staff are able to overcome these feelings in a positive manner, remaining empathetic whilst others feel exhausted, powerless, hopeless and experience low self-esteem (Astrom, Nilsson, Norberg, Sandman, & Winblad, 1991). According to Astrom (1990) the ideal caregiver should have PCC attitudes and high empathy levels, leading to deep emotional connectivity with service-users. However, this can increase the risk of burnout significantly, hence negative attitudes may emerge in caregivers (Pitfield et al., 2011). Additionally, when the work environment increases the strain on staff by shortages and time pressures, staff subsequently report feeling frustrated, stressed, exhausted and guilty, all of which increase the risk of burnout and are prevalent in dementia care (Gladman et al., 2012; Byers & France, 2008). Furthermore, a study by Jeon et al., (2012) highlighted the relationship between PCC and burnout; when a PCC model was implemented burnout levels significantly decreased and staff who felt they were supported by their management had lower depersonalisation - a detrimental component of burnout - thus highlighting the role of the organisation regarding degree of staff burnout. Nevertheless, this study did not

find a significant change in staff's attitudes towards dementia. However, Jeon and colleagues did not measure attitudes using the ADQ, which could have affected the reliability and validity of the results as it is unclear whether PCC attitudes were measured. The knowledge base on the effect of burnout on PCC has yielded inconsistencies (Chamberlain et al., 2016), which Cooper et al. (2016) assert is related to weak study designs within the research base and heterogeneity of studies. Cooper et al. (2016) further state that to overcome the detrimental problem of professional burnout more methodologically rigorous study designs are required.

PCC is essential for increasing the emotional well-being of both healthcare professionals and residents (Innes & Manthorpe, 2013), however the research base has highlighted that PCC is yet to come to fruition and be utilised consistently. Thus current care provisions are having a detrimental effect on individuals with dementia and the professionals who care for these individuals (Rosvik et al., 2013). Moreover, a core element of PCC, personhood, is strongly influenced by professionals' attitudes towards the individual and PCC (Ven et al., 2013), however healthcare professionals' PCC attitudes and the factors which affect such attitudes have been insufficiently studied (Travers et al., 2013). Hence Nilsson et al. (2012) assert it is paramount to increase the knowledge and understanding of which factors affect PCC attitudes. Furthermore, the body of research on PCC attitudes suffers from many methodological weaknesses; for example, staff are often overlooked in research, especially direct care workers, who are vital in the provision of PCC (Kadri et al., 2018). Additionally, measurement of provision of care dominates the research base, whereas attitudes are understudied (Hunter et al., 2016). Likewise, research into how individual and organisational factors interact and alter PCC attitudes of staff is insufficient (Roen et al., 2018). Moreover, social desirability is seldom controlled, calling into question the validity of results, especially when measuring sensitive data from questionnaires (Van de Mortel, 2008).

Similarly, specific factors theorised to affect PCC provision and attitudes are insufficiently studied and lack methodological rigour. Organisational factors have been significantly overlooked, requiring greater analysis, as organisational culture has been shown to affect PCC (Burshnic et al., 2018). Furthermore, although the effect of burnout has been studied extensively, studies suffer from a myriad of methodological limitations (Cooper et al., 2016) and the relationship between burnout and PCC attitudes is understudied (Chamberlain et al., 2016). Likewise, job strain has been shown to affect PCC attitudes (Sjogren et al., 2015), however research on the relationship between job strain and PCC provisions and PCC attitudes is insufficient, and requires further analysis (Pol-Grevelink et al., 2012). Consequently, the present study aimed to increase the insufficient knowledge base on factors affecting staff's PCC attitudes, which is paramount to increasing PCC provisions and the efficacy of interventions. Furthermore, this study aimed to overcome certain methodological weaknesses such as the influence of social desirability, inherent in this area of research. Thus, due to limited and insufficient quality of research (Barbosa et al., 2015; Kim & Park, 2017; Edvardsson, Winblad & Sandman, 2008), prevalent in burnout, job strain and PCC environment concurrent with a lack of research on attitudes, this study aimed to extend the knowledge base with a detailed analysis of factors affecting healthcare professionals' PCC attitudes in dementia.

Hypothesis one: There is a relationship between healthcare professionals' PCC attitudes and job strain.

Hypothesis two: There is a relationship between healthcare professionals' PCC attitudes and burnout.

Hypothesis three: There is a relationship between healthcare professionals' PCC attitudes and organisational culture.

Method

Design

This study utilised a quasi-experimental independent measures design, with three independent variables: burnout, job strain and person-centred organisation/environment. Burnout was measured by the Maslach Burnout Inventory: Health Services Survey [MBI:HSS] (Maslach & Jackson, 1986), job strain was measured by the Strain in Dementia Care Scale [SDCS]-Section 1 (Edberg, Anderson, Wallin & Bird, 2015) and person-centred organisation/environment was measured using the Staff Assessment Person Directed Care [PDC]-Environment subscale (White, Newton-Curtis & Lyons, 2008). The dependent variable was PCC attitudes of healthcare professionals working in dementia care, measured by the Approaches to Dementia Questionnaire [ADQ]-Person-Centred (Lintern & Wood, 1996). This design has been utilised consistently in previous research and has shown reliability (Hunter et al., 2016).

Participants

This study utilised convenience sampling. Participants were recruited from one care home as well as among friends, family, associates and social media. Inclusion criteria included being 18 years of age or above, having worked in their current role for a minimum of three months, and being classed as a healthcare professional who provides direct care to residents with dementia. Exclusion criteria comprised of not meeting the inclusion criteria not having the capacity to provide informed consent. Healthcare professionals were utilised as Kitwood (1997) states those who provide direct care to individuals with dementia are paramount, and are therefore an essential population to research. Moreover, Kadri et al. (2018) assert that direct care workers in dementia have been overlooked in the research base. A prospective power analysis indicated that $N = 85$ to detect a medium effect size of $R^2 = 0.13$ for a power of .80, according to Cohen's (reported in Clark-Carter, 2010) conventions for effect size. In this study, $N = 59$ (8 males and 51 females), age range of 19-60 ($M = 36.39$; $SD = 12.00$) and 52 received training, while 7 did not receive training.

This study gained ethical approval from Teesside University's Ethical Approval Committee and adhered to the British Psychological Society's (2009) ethical guidelines and BPS Human Research Ethical Guidelines (2014). Likewise, all participants gave informed consent and were informed of their right to withdraw until the specified date. To protect anonymity and confidentiality all participants provided a unique code, which could also be utilised to identify their data if they chose to withdraw. Additionally, support organisations for any distress were provided on the debrief form. Data could only be accessed by the researcher to protect confidentiality.

Materials

Online Surveys (www.onlinesurveys.ac.uk) was utilised for this study, which included 5 questionnaires and one page with questions on demographic details. The link sent to each participant automatically took them to the information sheet, followed by a consent. Once participants had given consent, they answered the demographic questions, comprising of age, gender, whether they worked directly with residents and dementia or PCC training. The participants completed the SDRS-5, (, MBI: HSS, SDCS-Section 1, ADQ-Personhood Subscale and PDC-Environment, and were then debriefed.

Questionnaires were utilised, as the population studied experiences high burnout, job strain and time constraints (Moyle et al., 2011). Moreover, Langdridge and Hagger-Johnson (2013) state questionnaires are an efficacious method of measuring attitudes and behaviours of participants and also increase generalisability and the ability to detect causation, which is paramount to informing policy and practice. However, the risk of social desirability is higher with questionnaires and this risk significantly increases when sensitive data is being measured (Demetriou, Ozer & Essau, 2015). To minimise the influence of extraneous variables and increase validity of the results the SDRS-5 (Hays et al., 1989) was utilised, however due to recruitment limitations, high scoring data could not be excluded. Moreover, the SDRS-5 (Hays et al., 1989) was utilised as it has shown high consistency and reliability (Langdridge & Hagger-Johnson, 2013). The ADQ-Personhood Subscale (Lintern & Woods, 1996) was used as it has been evidenced to have internal consistency and reliability, likewise it is an efficacious questionnaire for measuring staff' attitudes in dementia care (Kada et al., 2009). The hopefulness subscale was not utilised as this study only aimed to measure PCC attitudes (Kada et al., 2009). The SDCS-Section 1 (Edberg et al., 2015) was utilised as other psychometric tools measuring job strain are not specific to dementia. According to Martinez, Suarez-Alvarez, Yanguas, and Muniz (2016) the PDC-Environment subscale (White et al., 2008) is one of the most dominant questionnaires used to measure how person-centred the environment/organisation is and has shown high reliability and sufficient internal consistency. The MBI: HSS (Maslach & Jackson, 1986) was applied, as it is the most widely used psychometric tool for measuring healthcare professional burnout levels and can measure all three components (Loera, Converso & Viotti, 2014).

The ADQ-Personhood scale (Lintern & Woods, 1996) has 11 items measured on a five-point Likert scale: strongly agree (1) to strongly disagree (5). Higher scores indicate higher levels of personhood and PCC attitudes; one item was reversed. The SDCS-Section 1 (Edberg et al., 2015) titled: situations, thoughts and feelings in the care of persons with dementia, has 27 items, two scales (frequency and stress) and five subscales (lack of recognition, frustrated empathy, balancing competing needs, balancing emotional involvement and difficulty understanding and interpreting). Four-point Likert scales are used in both subscales. Frequency is measured as follows: How frequently do you experience these situations, thoughts or feelings? Never (1) to Very Often (4). Stress measurements include: When they do occur, how much stress does it cause you? None (1) to High Stress (4). High scores on both subscales indicate high job strain. The SDRS-5 (Hays et al., 1989) uses a 5-point Likert-scale, higher scores indicating higher social desirability; measures are 'definitely true' to 'definitely false'. All extreme scores were recorded as 1 and those within range were recorded as 0, question 1 and 5 extreme answers were 'definitely true' and questions 2-4 extreme answers were 'definitely false'. The PDC-Environment subscale (White et al., 2008) has 15 items measured on a 5-point Likert scale and comprise of: Rarely or none of the time (1) to All or almost all of the time (5). Questions 1-4 have the statement: "Thinking about the people in your care, how often": Questions 5-15 have the statement: "Thinking about your work". Higher scores indicate higher person-centred organisation/environment. The MBI: HSS (Maslach & Jackson, 1986) has 22 items measuring the three components of burnout, emotional exhaustion, depersonalisation and personal/professional accomplishment. It uses a 7-point Likert scale: How Often: 0-6; Never (0) to Everyday (6). Personal/Professional accomplishment items were reversed.

Procedure

Approval was obtained from Teesside University's Ethics Committee prior. No monetary incentive was offered. All documents and questionnaires regarding this study were uploaded onto Online Surveys. The link to the study led directly to the study information page. Participants had to click 'continue', which took them to the consent form. Participants were required to answer 'Yes' to the inclusion criteria previously mentioned. Those who wished to take part and met the criteria clicked 'Yes' and continued onto the next page; without giving consent one could not continue with the study. Participants were then taken to the demographic details page and could only click 'continue' from this point onwards if all required fields were completed. Following this, participants answered the SDRS-5, MBI: HSS, SDSCS-Section 1, ADQ-Personhood subscale and PDC-Environment subscale. Participants were then debriefed and provided with information for support organisations should they require them. Completion took approximately 40 minutes, and participants accessed these questionnaires online in a place and at a time suitable for themselves.

Results

The results of this study demonstrated a positive relationship between PCC attitudes and burnout, thus individuals with higher burnout concurrently reported higher levels of PCC attitudes. Additionally, a negative relationship between PCC attitudes and job strain emerged, demonstrating those with high job strain had low PCC attitudes. No other variables significantly affected PCC attitudes. An analysis of the burnout subscales showed only personal/professional accomplishment significantly affected attitudes.

The predictor variables job strain, burnout and person-centred environment, age, and outcome variable, PCC attitudes, were analysed utilising multiple regression analysis.

Table 1.

Mean and standard deviation of independent and dependent variables.

<i>Independent & Dependent Variables</i>		
	<i>Mean</i>	<i>SD</i>
Job Strain	3.96	.36
Person-centred Environment	3.48	.93
Burnout	1.54	.98
Person-centred Attitudes	1.55	.35
Age	36.39	12.00

Mean and standard deviation were within normal range. Thus, a multiple regression analysis was conducted.

Table 2.

Predictors in multiple regression model of person-centred attitude.

	<i>B</i>	<i>T</i>	<i>P</i>
Burnout	.417	2.654	.010
Person-centred Environment	-.067	-.433	.667
Job Strain	-.321	-2.257	.028
Age	-.091	-.714	.479

The multiple regression model had an adequate fit ($R^2 = .20$), and there was a significant overall relationship between predictors and outcome $F(4, 54) = 3.434$, $p < .05$. With the other variables held constant, burnout was positively related to PCC attitudes and job strain was negatively related to PCC attitudes (see Table 2).

Table 3.

Predictors in multiple regression model of burnout subscales and Person-centred attitude.

	<i>B</i>	<i>T</i>	<i>P</i>
Emotional-Exhaustion	-.019	-.517	.607
Depersonalisation	.071	1.377	.174
Personal/Professional Accomplishment	.130	2.215	.031

Further analysis on the predictor burnout three subscales was conducted. The multiple regression model had an adequate fit ($R^2 = .16$); this analysis highlighted a significant overall relationship between predictors and outcome $F(3, 53) = 4.435$, $p < .01$. With the other variables held constant, the only significant predictor was Personal/Professional Accomplishment, which had a positive relationship with PCC attitudes. Additionally, all subscales of burnout showed a positive correlation with PCC attitudes.

The influence of social desirability was assessed by conducting an ANCOVA with three IVs, burnout, PCC-Environment and Job Strain; and one DV, PCC attitudes, with social desirability as a covariate. Social desirability had an influence on both the PCC-environment and burnout.

Discussion

The results of this study are congruent with the hypotheses and previous literature, demonstrating a relationship between burnout, job strain and PCC attitudes reported by healthcare professionals (Brodaty et al., 2003; Sjogren et al., 2015). However, person-centred environment did not significantly affect staff's PCC attitudes, which could be explained by the study not reaching the required power to obtain a medium effect size (Cohen, 1988). Similarly, the heterogeneity of the sample may have affected the results (Makikangas & Kinnunen, 2016), as the term 'healthcare professionals' encompasses a multiplicity of occupations and the questionnaire utilised was tailored towards staff working in residential care homes (White, Newton-Curtis & Lyons, 2008). Likewise, the ANCOVA analysis highlighted social desirability was significant for PCC environment, therefore the degree of social desirability may have influenced responses.

Furthermore, the relationship between burnout and PCC attitudes was positive, thus healthcare professionals with high burnout concurrently reported higher PCC attitudes, which has been evidenced in previous research (Pitfield et al., 2011; Willemse et al., 2015) and theory (Maslach, 1982; Astrom 1990). Moreover, the results indicate those with lower levels of burnout have lower PCC attitudes, a finding corresponding with Astrom (1990). This may be because those with fewer PCC attitudes do not deplete their emotional and physical resources, and therefore do not experience emotional exhaustion. In contrast, research has identified that PCC increases professionals' PCC attitudes, decreases burnout and increases job satisfaction (Lintern et al., 2009; Ven et al., 2013; Barbosa et al., 2015). Nonetheless, congruent with the results of this study, it has been theorised that professionals with high PCC attitudes provide PCC provisions. However, this leads to emotional exhaustion, a facet of burnout, due to the physical and psychological toll of providing consistent PCC, as professionals use their emotional and physical resources to meet the needs of the resident (Pitfield et al., 2011; Maslach, 1982). In addition, this is often exacerbated by organisational factors, whereby the individual's perception of care provision is not compatible with organisational resources (Sjogren et al., 2015).

Nevertheless, the results of this study regarding burnout could be explained by the spill-over effect, whereby greater levels of personal stress increase the risk of occupational burnout. Thus, personal stress could have caused occupational burnout, which may not affect one's beliefs and subsequently attitudes regarding PCC, as one's job role is not the sole cause of one's strain (Cohen-Mansfield, 1995). Woodhead et al., (2016) examined the source and function of support and stress, finding that both substantially contributed to level of burnout, similarly finding personal stress was significantly higher than occupational stress, although this did not particularly affect burnout level. However, their study was specific to rural areas, and urban areas may have differing results due greater levels of personal stress (Berry & Okulicz-Kozaryn, 2011).

An in-depth analysis of the variable burnout was conducted, examining the relationship between the three subscales and PCC attitudes. However, only personal/professional accomplishment had a significant relationship with PCC attitudes; the higher personal/professional accomplishment the greater PCC attitudes were. Moreover, a new finding in this study emerged: the higher scores on emotional

exhaustion, depersonalisation and personal/professional accomplishment the greater PCC attitudes were. This was an unexpected finding for depersonalisation, which juxtaposes PCC (Kitwood, 1997). One potential explanation for this finding lies in the influence of personal/professional accomplishment possibly mitigating the effect of depersonalisation and emotional exhaustion on PCC attitudes (Maslach et al., 1996).

According to Duffy et al., (2009) the knowledge base has highlighted a relationship between personal/professional accomplishment, self-efficacy and burnout. The concept of self-efficacy stems from Bandura's (1977) social learning theory and refers to the belief one has the ability to achieve goals. Perceived self-efficacy is an attribute that can be increased (Bandura, 1986). Moreover, Bandura (1997) theorised the belief of whether one can cope in a specific situation is the most significant factor contributing to one's emotions and behaviours. The concept of self-efficacy has been researched in dementia care; for example, Gottlieb and Rooney (2003) demonstrated higher self-efficacy increases positive mood and reduces health problems in healthcare professionals working in a dementia setting. Moreover, higher self-efficacy increases the individual's ability to cope in stressful situations. Thus self-efficacy may decrease emotional exhaustion and increase personal/professional accomplishment (Duffy et al., 2009).

Alarcon et al., (2009) state personal/professional accomplishment is positively related to emotional stability, agreeableness, conscientiousness, extraversion and openness to experience, and therefore would act as a protective factor preventing emotional exhaustion turning into depersonalisation. However, another explanation for this finding could be due to personality type (Aloha et al., 2017). Furthermore, both personality traits (Aloha et al., 2017) and personality types (Geuens et al., 2015) can affect professional burnout. Additionally, Geuens et al. (2015) state type D personality includes traits such as negative affectivity, social inhibition due to fear of rejection or disapproval and burnout susceptibility. Thus, the positive correlation between depersonalisation and PCC attitudes may be explained by the complex components of type D personality (Mommersteeg et al., 2012). This may explain the positive correlation between depersonalisation and PCC attitudes as such individuals are at higher risk of experiencing negative affectivity, leading to cynicism, which is an element of depersonalisation. Thus, such individuals would score highly on burnout. However, social inhibition may have influenced participants' responses to the ADQ, due to fear of disapproval related to social desirability, evidenced by social desirability being a problematic feature of the ADQ (Gerritsen et al., 2018). Nonetheless, Jeon et al. (2012) emphasise that the ADQ is the preferred and most appropriate questionnaire for measuring person-centred attitudes specific to dementia.

In addition, compassion fatigue may explain how high burnout increased person-centred attitudes in the present study, as those with compassion fatigue may feel exhausted, depersonalised and have decreased professional/personal accomplishments (Kolthoff et al., 2017). However, this would not typically change their attitudes towards PCC, although it could affect provision. Kolthoff et al. (2017) state that compassion fatigue, also referred to as secondary traumatic stress, is the combination of emotional, mental and physical exhaustion leading to feelings of sadness, energy depletion, helplessness, fatigue, hopelessness and cynicism regarding one's work-life, social world and self. Individuals with compassion fatigue relish their role, but they struggle to maintain an emotional connection with their residents.

A direct relationship has been identified between job strain and burnout in the literature (Hasson et al., 2008), which was confirmed in the present study as these variables had a strong positive relationship. However, burnout increased PCC attitudes and job strain reduced PCC attitudes (Hasson et al., 2008). Additionally, it has been theorised that burnout is an outcome of job strain (Wallin et al., 2013), when Knapp's (1988, p. 181) definition of job strain is utilised as being 'the wear and tear itself' and Knapp's (1988, p. 181) definition of stress as 'the cause of wear and tear'. Thus, from this perspective job stress causes job strain, which leads to a multiplicity of negative psychological and physical outcomes, including increased risk of professional burnout (Wallin et al., 2013). Also, a study by Sandberg et al. (2018) demonstrated staff wanted to do more than what they were able to for the residents, affecting the quality of care and subsequently causing job strain, possibly explaining the contrasting findings regarding the effects of burnout and job strain on attitudes. In addition, when professionals' beliefs and attitudes regarding care provision are not congruent with available organisational resources, this causes a phenomenon referred to as 'stress of conscience', related to both burnout and strain, and could have affected the results of this study (Sandberg et al., 2018; Glasberg et al., 2007; Juthberg et al., 2007; Edberg et al., 2008). Moreover, in Wallin and colleagues' (2013) study paraprofessionals such as carers and nurse assistants reported a higher degree of job strain and stress of conscience, and a more negative perception of the work environment; these individuals also reported lower PCC provision, in line with the present study.

Edvardsson et al. (2009) state that the stressors of working in dementia care include exposure to dying and death combined with frustrated ideals regarding actual and desired care provision (Decker, 1997). Some theorists have asserted that stress may be experienced as strain if the individual has low self-esteem, emotional instability, low social support and few or maladaptive coping strategies (Fagin et al., 1996). Also, the ability to comprehend their situation and view it as meaningful, referred to as a sense of coherence, prevents stress from manifesting into strain (Antonovsky, 1987). According to Revicki et al. (1991) strain comprises of internal and external dimensions; the latter are lack of support and recognition or devaluation, leading to the former; feelings of irritation, frustration and dissatisfaction. Moreover, prolonged job strain leads to burnout, which is theorised to be the most severe consequence of strain (Maslach et al., 1996).

Edberg et al. (2008) assert that the strain of caring for individuals with dementia is a highly-cited phenomenon, which has been shown to affect care provision. Furthermore, a significant cause of strain is the need to provide physical assistance and safeguarding measures for the individual's health and well-being, which at times may not be congruent with PCC, and these practices sometimes occur against the will of the resident even though they are intended to ensure their safety. Likewise, research indicates responsive behaviours prevalent in dementia care significantly increase job strain (Rodney, 2000). Additionally, Edberg et al.'s (2008) qualitative study highlighted the desire to provide PCC, but the resources and ability to do so were a significant barrier, which led to caused significant strain. These concepts are also related to stress of conscience, emotional exhaustion and moral distress. Likewise, one theme that emerged was the need to protect the resident, highlighting the gap between theory and real-world applications, which has become a growing concern (Surr et al., 2017). Furthermore, the balancing of competing needs was a significant theme, which relates to the theory-practice paradigm (Surr et al., 2017).

Moreover, Edberg and colleagues' study did not find responsive resident behaviours as an emerging theme, which is incongruent with the research base, and when this topic was discussed it regarded only the professionals' difficulties in understanding the residents' needs. Also, environmental factors such as varied patient care expectations, management style, a lack of support from staff, home-work conflicts and feeling that their training was insufficient concerning work demands affect job strain and PCC (Wallin et al., 2013).

Edberg et al., (2015) state most staff in dementia care find their job satisfying and rewarding and simultaneously report significant job strain (Brodaty et al., 2003; Castle et al., 2006). Furthermore, the paradoxical nature of working in dementia care being both rewarding and stressful may explain the results, which demonstrated that the higher degree of burnout the higher PCC attitudes are. Moreover, Edberg et al., (2015) state that increased job strain increases residents' responsive behaviours; this may explain the results of the current study whereby job strain decreased PCC attitudes, as higher job strain is known to cause higher responsive behaviours, which has been associated with fewer PCC attitudes (Brodaty et al., 2003). Similarly, Sjogren et al. (2015) state that increased job strain is related to less PCC.

Backman et al. (2018) suggest that a prominent model of job strain/stress is Karasek's (1979) demand-control model, whereby job stress is caused by two factors: demand, which comprises of psychological demands of the job role, and control or decision latitude. According to Karasek and Theorell (1990), job demand is the degree of psychological or workload stressors from the work environment and control is the degree of control one has within their job. Sjogren et al. (2015) assert that it is important that the professional feels a balance between demand-control, leading to job satisfaction rather than strain. Thus more research is required to understand how to ensure theory meets practice. Moreover, studies have indicated that stress of conscience is associated with increased burnout, highlighting a relationship between burnout and PCC. In the present study one could infer that professionals had high PCC attitudes, which led to high stress of conscience, burnout and job-strain as they could not provide the level of PCC they feel is essential.

Limitations

There were certain limitations of the current study; for example, it did not reach the required power to obtain a medium effect size (Cohen, 1988), and this may have affected the results of the study. In addition, there was significant occupational heterogeneity within this study's sample, which, as Wallin et al., (2013) emphasise, can cause contradictory results. This should be kept in mind when making inferences based on this study's results. Furthermore, non-experimental cross-sectional studies are not able to infer causality, thus longitudinal experimental studies would significantly improve the efficacy of this study (Field, 2013) and could influence interventions to address some of the problematic characteristics in dementia care. Likewise, the use of self-report questionnaires significantly increases the risk of response bias, social desirability, lack of introspective ability and idiosyncrasy of questionnaire items (Langdrige & Hagger-Johnson, 2013). For example, Edberg et al. (2008) state the concept of job strain is not well defined, with some researchers arguing that dissatisfaction, stress and strain are all synonymous; this can significantly affect the research base as the definition of a construct directly influences how it is operationalised and subsequently measured (Maltby et al., 2017). Moreover, a battery

of questionnaires can lead to response burden, affecting the validity of the results (Rolstad, Adler & Ryden, 2011).

Additionally, ANCOVA analysis demonstrated social desirability affected both burnout and PCC environment but due to limited sample size, high scoring data were not removed. However, a criticism of the knowledge base is the significant lack of measuring social desirability (Van de Mortel, 2008); hence this study highlights the importance of examining the degree of social desirability in this population. Therefore, future studies should exclude data which scores high on the SDRS-5. Furthermore, social desirability was expected to some degree due to sensitive data collection (Demetriou, Ozer & Essau, 2015).

Equally, Makikangas and Kinnunen's (2016) study highlighted a significant level of heterogeneity in burnout symptom manifestation and given the small sample size of the current study, this could have affected the results. Moreover, their study found atypical burnout types such as emotional exhaustion and vigour co-occurring, highlighting the complexity of burnout and its paradoxical nature as shown in the results of the present study; such atypical manifestations could have been present in this study, however this was not controlled for.

Future Directions

This study has highlighted some important directions for future research to improve the knowledge base. For example, as burnout is a complex construct with significant heterogeneous manifestations it is paramount for future studies to control for and analyse this, considering factors such as the spill-over effect of personal stress and how this would affect PCC attitudes (Cohen-Mansfield, 1995) and atypical manifestations of burnout (Makikangas & Kinnunen, 2016). This would clarify which manifestation is most detrimental to the individual and their PCC attitudes. Moreover, examining personality types and traits could improve the knowledge base on populations that are more susceptible to burnout and tailor interventions towards preventing or overcoming this detrimental problem. This is paramount due to the negative consequences burnout can have on the individual (Aloha et al., 2017). Additionally, Geuen et al., (2015) state that such interventions should be prioritised in high-risk areas such as geriatric care. Likewise, Cooper et al. (2016) assert that individual factors known to buffer or precipitate burnout should be examined before employing individuals for such roles.

This study highlighted how the interrelated concepts, job strain and burnout can have juxtaposing effects on the individual. Hence future research is required to understand which associated subscales of both job strain and burnout are strongly related and how these affect PCC attitudes. However, as personal/professional accomplishment was significant in the present study it may have reduced the effect of burnout. Thus future research should examine how personal/professional accomplishment mitigates the effect of job strain, emotional exhaustion and depersonalisation, acting as a protective factor for PCC attitudes. Likewise, longitudinal studies may demonstrate at which point personal/professional accomplishment is depleted from the other factors and depersonalisation occurs, which would theoretically decrease PCC attitudes (Duffy et al., 2009).

Moreover, there has been a lack of research on self-efficacy and formal dementia carers. Thus, future research could examine this relationship further and its influence on PCC attitudes and provision, as Evers, Tomic and Brouwers (2001)

highlight that self-efficacy increases perceived personal/professional accomplishment, and hence could increase or maintain PCC attitudes. Furthermore, Duffy et al. (2009) found self-efficacy was associated with each factor of burnout, asserting that self-efficacy is a buffer against emotional exhaustion and depersonalisation. This could explain the results of the current study if participants had high self-efficacy, which one can infer, due to the positive relationship between self-efficacy and personal/professional accomplishment.

Additionally, both burnout and compassion fatigue can affect provisions of care (Kolthoff et al., 2017), however future studies should examine this further by measuring the effect of compassion fatigue on both PCC attitudes and provisions. Furthermore, if healthcare professionals are not provided with the opportunity and resources to be person-centred this may lead to the professional de-valuing PCC, reducing their PCC attitudes as a coping strategy, as seen in the relationship between job-strain and PCC attitudes in this study. Thus, qualitative studies could examine this concept and the relationship between job strain, stress of conscience, change in attitudes and whether this occurs due to depersonalisation as a coping strategy or de-valuing PCC, as the results of this study also highlighted burnout and job strain were strongly correlated.

Similarly, a buffer against stress of conscience and job strain is organisational and environmental support; thus future studies should examine leadership and management style, resources, opportunity, support, supervision and a caring culture for residents and staff. Likewise, Wallin et al. (2013) state that both an organisational person-centred approach and leadership and management styles contribute to stress, strain, emotional exhaustion and stress of conscience, asserting that studies must examine the whole work situation and not just one area. Future studies should therefore examine the PCC environment, work culture, climate and management and leadership styles to understand how the organisation/environment can affect residents and staff. Additionally, the degree of responsive behaviours the carer experiences can increase job strain (Brodaty et al., 2003). However, research suggests professional responses to certain dementia-related behaviours are idiosyncratic. Therefore a qualitative approach could be more appropriate for understanding the relationship between behaviours of residents and job strain (Bird et al., 2007). Furthermore, other factors such as attitudes to care (Jenkins & Allen, 1998) are associated with job strain and in the current study higher level of job strain was associated with lower PCC attitudes. However, future studies could examine if this relationship is bi-directional, whereby low PCC attitudes increase job strain.

Finally, this study highlighted the importance of measuring and controlling for social desirability; future studies could examine further the degree of social desirability within the ADQ items to improve its validity. Similarly, to address the problem of social desirability, future research could analyse factors which affect healthcare professionals' attitudes and provisions of PCC qualitatively; this would also provide rich in-depth data, significantly broadening the knowledge base.

Despite the limitations of the present study, the significant results add to a limited knowledge base. Moreover, this study has demonstrated the importance of ensuring healthcare professionals' perceived personal/professional accomplishments are high, thus acting as a buffer against emotional exhaustion and depersonalisation. Likewise, this study has highlighted both emotional exhaustion and depersonalisation can correlate positively with PCC attitudes when personal/professional

accomplishments act as a barrier. Furthermore, the knowledge base has indicated job strain and burnout are interrelated concepts or that the latter is an outcome of the former. However, this study has shown these concepts must differ to some degree or be mediated by another factor, as the effect on PCC attitudes contrast. Additionally, job strain had a negative impact on PCC attitudes, highlighting the importance of effective interventions to be developed in order to prevent negative outcomes for both the residents and care providers. Equally, a limitation of this study may inform future research of how essential it is to measure social desirability and address this problem by removing the high-scoring data or by utilising qualitative research methods. Furthermore, when examining the effects of a person-centred environment, it is paramount to address all aspects of the environment. This has been demonstrated by the current study, as PCC environment did not significantly affect PCC attitudes, although job strain negatively affected PCC attitudes. However, job strain occurs from the work environment and is most likely to occur due to organisational factors, such as available resources for carers to provide PCC. Thus, some factors of the organisation may be person-centred, such as personalised rooms. Nevertheless if resources are depleted, PCC will not be utilised.

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