

Well-being in Healthcare: Psychological Well-Being, Burnout, and Work Engagement in Long-  
Term Care Employees

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By

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## Abstract

The Job Demands-Resources (JD-R) model posits that both job demands and job resources affect employee well-being, including the experience of burnout or work engagement. More recent studies adding to the model suggest that personal resources also contribute to these work-related outcomes. A personal resource that has not been examined in the JD-R model is psychological wellbeing (PWB), which encompasses thriving through the existential challenges of life to actualize human potential, and reflects qualities of self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, and autonomy. The purpose of this study is to extend the JD-R model by examining the potential of PWB to inform the model. This work was done within the Canadian LTC context, which has not yet been examined using this model. A convenience sample of 327 LTC employees (110 nurses and 214 nursing assistants; three people chose not to disclose their status), completed a questionnaire assessing burnout, work engagement, job demands, job resources, and PWB. Simultaneous regression was used to examine the relationship between job demands and burnout, and job resources and work engagement, according to the JD-R model. Moderation analysis using PROCESS (Hayes, 2013) was used to ascertain whether PWB contributed to the model as a moderator of either burnout or engagement. Findings were as follows: (i) certain job demands (i.e., workload, emotion load, and role conflict) contribute significantly to burnout in LTC; (ii) certain job resources (i.e., autonomy, relationship with coworkers, relationship with supervisor, and participation) contribute significantly to work engagement in LTC; (iii) PWB moderates the relationship between job demands and burnout; (iv) PWB does not moderate the relationship between job resources and work engagement. These results extend the JD-R model to the Canadian LTC setting. They provide information about the kinds of demands and resources that relate to burnout and work engagement in LTC, and they confirm that PWB is an important personal resource for LTC nurses and nursing assistants, since it moderates (buffers) the relationship between job demands and burnout. These results have implications for promoting work engagement and reducing the likelihood of burnout in LTC.

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## Overview

The Canadian population is aging, resulting in increased pressure on long-term care (LTC) homes, which provide continuous, indefinite care for those who can no longer care for themselves (Banerjee, 2007). It is estimated that the number of people over 65 will rise from 15.3% of the population in 2013 to 23% in 2030, and to between 24% - 28% in 2063 (Statistics Canada, 2015), with the number of people aged 80 years and older expected to quadruple by 2045 (Statistics Canada, 2015). Currently, 57% of the population over the age of 85 resides in LTC facilities (CIHI, 2011). Examining resident characteristics in LTC in the Prairie Provinces, Estabrooks et al., (2013) found that residents averaged 85 years of age, with high rates of cognitive impairment and physical dependency, with over 60% of residents having some form of dementia. Age increases the risk of certain diseases, including degenerative and chronic diseases (Spillman & Lubitz, 2000). In Canada, 747,000 people are living with dementia, a disease for which age is the biggest risk factor, and it is estimated that this number will grow to 1.4 million by 2031 (Alzheimer's Society of Canada, 2015). Projections indicate that between 29% and 49% more LTC beds will be required by 2031 (Doupe et al., 2011).

In a changing LTC context, a logical question to ask is, "How are LTC employees coping with these changes?" Experiences within the workplace can have a deep influence on people's lives, as full-time workers spend most of their waking hours at work. Employee well-being can be conceptualized as the degree to which an individual experiences burnout or engagement in their work. The Job Demands-Resources (JD-R; Schaufeli, Bakker, & Van Rhenen, 2009) model posits that both job demands and job resources affect employee well-being. More recent studies adding to the model suggest that personal resources also contribute to these work-related outcomes. One such resource is psychological wellbeing (PWB), which encompasses thriving

through the existential challenges of life to actualize human potential, and reflects qualities of self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, and autonomy. The primary objective of this study was to extend the JD-R model by examining the potential of PWB to inform the model. Understanding the relationship between job demands and burnout, job resources and work engagement, as well the potential contributions of PWB to employee wellbeing, may further help to understand how negative outcomes, such as burnout, can be reduced and how positive outcomes, such as engagement in work, can be enhanced, in LTC. This may, in turn, help to address contemporary concerns in LTC, such as improving absenteeism, turnover, and resident outcomes (Ben Natan, Lowenstein, & Eisikovits, 2010; Laschinger & Leiter, 2006).

The study was completed within the Canadian LTC context, where the JD-R model has not heretofore been applied. Given that the majority of LTC employees are nurses and nursing assistants (NAs), the study focused strictly on these two groups. Nurses are licensed, or regulated, health providers. NAs (also: nursing aides, care aides, continuing care aides, health workers, or personal support workers) are unlicensed, or unregulated, care providers. In the context of their work, both nurses and NAs may be involved in providing psychosocial care and assisting with activities of daily living such as bathing, washing, dressing, and toileting. However, nurses have a broader range of responsibilities (e.g., assessment, safe administration of medications or other interventions, coordination of communication, documentation). Further, in LTC contexts, nurses are generally responsible for the care of approximately four times as many residents as NAs. The net effect of differences in duties and staffing ratios is that nurse and NA roles, though overlapping and interdependent, are fairly distinct, raising the possibility that experiences of work might differ too. Thus, a further aim of the study was to examine whether

the wellbeing of nurses and NAs in LTC differed sufficiently to warrant separate consideration within the JD-R model.

## **Chapter 1: The Canadian Long-Term Care System**

Nurses and Nursing Assistants (NAs) in LTC face a variety of demands each day, ranging from minor stressors to life-and-death situations. The support and resources necessary to deal with these stressors is more limited in some LTC homes than in others. In some instances, workplace factors including poor supervisory relationships, low levels of autonomy, and inadequate staffing levels act to increase the demands of this work environment. Another current challenge in LTC is that a clear majority of LTC residents have dementia, and since residents with dementia often exhibit responsive behaviours (i.e., behavioural and psychological symptoms often associated with an underlying reason that can be difficult to discern), LTC nurses and NAs face additional challenges (e.g., ongoing assessment and problem-solving) and risks (e.g., being hit) in their work, often with relatively little related training or formal support. High levels of work strain are known to be associated with poorer employee well-being, including the development of burnout. Generally, LTC homes are known to have high levels of nurse and NA absenteeism and turnover. Overall, there are concerns about the potential for such demands to have negative consequences for nurse and NA well-being.

One of the major complaints of LTC employees, and particularly nurses and NAs, is that they often “work short” (i.e., are under-staffed). Two issues contributing to staff shortages within LTC are absenteeism and turnover. Both can be seen as withdrawal behaviours, as they often originate in the desire to leave a dissatisfying job (Cohen & Golan, 2007). Absenteeism is defined as not reporting for work when scheduled, and is problematic as it is associated with increased expenses (Buschak, Craven, & Ledman, 1996), decreased nursing morale (Haun, Vivero, Leach, & Liuzza, 2002), and poorer patient care (Castle & Ferguson-Rome, 2015; Duffield et al., 2011; Taunton, Hope, Woods, & Bott, 1994). In Canada, healthcare employees

are 50% more likely to be absent from work than employees in other sectors (CIHI, 2005). Absenteeism can be an early indicator of intention to leave (Cohen & Golan, 2007). Staff turnover significantly reduces staffing levels for nurses and NAs (Kash, Castle, Naufal, & Hawes, 2006) because it can be difficult to adequately replace and train staff when turnover rates are high. Factors contributing to staff turnover include high patient-to-provider staffing ratios, an authoritarian style of management, poor supervisory relationships, low levels of autonomy, and lack of acknowledgement for work (Bowers, Esmond, & Jacobson, 2003). Furthermore, high levels of employee turnover leads to increased costs of employee replacement, reduced quality of resident care, and lower staff satisfaction, since the workload associated with providing resident care often increases until the positions are filled and new employees are sufficiently trained (Castle & Engberg, 2005; Harrington et al., 2000).

High levels of work strain can also have negative consequences to employee well-being (Aiken et al., 2001). Many factors contribute to work strain, for example, some major sources of stress for nurses in LTC include working short-staffed, high workload, having non-health professionals determine their role expectations, and being responsible for patient outcomes, whereas stress-inducing factors for NAs include understaffing, and a high workload (Lapane & Hughes, 2007). Although not specific to LTC, Aiken et al. conducted a study of 711 hospitals in five countries, examining issues of organizational climate and nurse outcomes. Results from Canada showed that 35% of nurses felt that management was responsive to their concerns, 37% felt that there were enough staff to complete the required work, and 32% agreed that they could participate in developing their own schedules. Additionally, 33% of nurses were dissatisfied with their job and 36% had high levels of emotional exhaustion. These results suggest that work strain is a substantial concern for the Canadian healthcare workforce.

Some LTC nurses believe that ageist attitudes penetrate society, contributing to substandard working conditions in LTC compared to other areas of health-care (Carr & Kazanowski, 1994; Moyle, Skinner, Rowe, & Gork, 2003). In some instances, LTC nurses may experience greater levels of job dissatisfaction than nurses in other settings, due to factors such as low levels of staff cohesiveness, lower staffing levels, higher workload, and poor relationships with administrators (Carr & Kazanowski, 1994). McGilton, Boscart, Brown, and Bowers (2014) found that factors such as low flexibility in decision-making, lack of resources, low staffing levels leading to a higher workload, and lack of supportive leadership contribute to job dissatisfaction in nurses. Conversely, factors that contribute towards nurses' lower intention to leave include the ability to participate in creating a schedule that helps to maintain a work-home balance, a supportive work environment (Prentice & Black, 2007), as well as meaningful and supportive relationships with colleagues and opportunity for professional development (McGilton, Boscart, Brown, & Bowers, 2014).

Among NAs, workplace factors relating to job dissatisfaction include a lack of opportunity for professional growth, poor supervision, poor communication with managers, lack of recognition, and lack of appreciation (Castle, Degenholtz, & Rosen, 2006; Parsons, Simmons, Penn, & Furlough, 2003; Zhang et al., 2014). Conversely, factors such as effective nurse supervision (McGilton, Chu, Shaw, Wong, & Ploeg, 2016), a supportive work environment, higher autonomy in decision-making, empowerment, sufficient time to complete tasks, as well as the availability of facility resources contributes to job satisfaction, lower intention to leave, and lower job stress in NAs (Chamberlain, Hoben, Squires, & Estabrooks, 2016; see Squires et al., 2015 for a review).



In a Canadian study, Morgan et al. (2012) documented high levels of combative behaviour within LTC, as nearly 90% of the 112 NAs who participated in their study reported at least one incident of slapping, squeezing, punching/hitting, or shoving/pushing within the previous month, and nearly 20% reported more than 10 incidents within the same period. The majority of LTC workers do not have specialized training to manage behavioural and psychiatric symptoms, although over 80% of LTC residents have a psychiatric diagnosis (CCSMH, 2006). NAs in Canada are nearly seven times more likely to experience combative behaviour from residents and are four times more likely to become mentally exhausted than those in Nordic countries, where staffing levels are higher (Banerjee et al., 2008). Aiken, Clarke, Sloane, Sochalski, and Silber (2002) found that higher emotional exhaustion was significantly related to higher patient-to-nurse ratios, with nurses in homes with higher patient-to-nurse ratios significantly more likely to experience burnout.

Despite experiencing challenging behaviours, nurses and NAs can grow emotionally attached to residents. NAs often describe residents as “family” and aspire to care for them in the same way they would care for their own parents or grandparents (Dodson & Zincavage, 2007). NAs see themselves as ensuring the well-being of those who can no longer take care of themselves (Rodriquez, 2011). Rodriquez points out that these attachment bonds give NAs’ work meaning and dignity. Nonetheless, this can also lead to confusion between the overlapping roles of paid employee and substitute family. For instance, NAs experience time pressure in their work (Bowers, Luring, & Jacobson, 2001; Dodson & Zincavage, 2007; Lopez, 2006a). Many NAs would like to focus on developing relationships with LTC residents, and see this as one of their primary roles and a determinant of quality of care, yet time constraints and heavy workload often means they have neither the energy nor the availability to converse with residents (Bowers,

Esmond, & Jacobson, 2000; Hunter, Hadjistavropoulos, & Kaasalainen, 2016; Mallidou, Cummings, Schalm, & Estabrooks, 2013), leading to a sense of frustration (Anderson et al., 2005). Although nurses often do not spend the same amount of time in direct interaction with residents, they too express that caring relationships with residents add value and meaning to work and contribute to their decision to remain in LTC, despite the difficult characteristics of work environment (McGilton et al., 2014; Moyle et al., 2003; Prentice & Black, 2007).

Overall, these results show that responses to the challenges of work in the LTC environment are complex and multifaceted. Both nurses (Reineck & Furino, 2005) and NAs (Chamberlain et al., 2016) report high levels of satisfaction as well as high levels of burnout, exhaustion, and frustration. Furthermore, these seemingly opposite responses can coincide. Although nurses may find the intrinsic reward of nursing to be satisfying, work environment issues, such as increased workload, decreased staff levels, and increased regulations can contribute to frustration and exhaustion (Reineck & Furino, 2005). Reineck and Furino observed that although 75% of nurses in their study reported general work satisfaction, 72% reported exhaustion and 59% reported frustration at the same time, and suggested that this may lead to early retirement and increased turnover among nurses. In summary, nurses and NAs in LTC operate in a challenging work environment; thus, it is important to find ways to understand the impact of these demands and the factors that contribute to employee well-being, operationalized in this study as levels of burnout and work engagement.

## **Chapter 2: Burnout**

The concept of job burnout emerged as a social problem in the 1970s, when psychiatrist Herbert Freudenberger observed that many social service workers experienced a loss of commitment and motivation as well as a gradual emotional depletion, often accompanied by mental and physical symptoms (Schaufeli, Maslach, & Marek, 1993). Burnout is a metaphor for the draining of energy, drawn from the image of a flame that lacks the resources to keep burning and is therefore extinguished. This metaphor aptly describes the depletion of resources necessary to maintain an employee's meaningful contribution to the workplace (Schaufeli, Leiter, & Maslach, 2009).

Burnout is an extended response to chronic interpersonal and emotional work stressors. Maslach and Goldberg (1999) suggested burnout is primarily a product of the situational context although it is expressed on an individual level; however, Bakker and Costa (2014) argue that individual factors, such as personality and coping style, also play a significant role in the development of burnout. Burnout is characterized by the experiences of emotional exhaustion, depersonalization or detachment, and feelings of reduced personal efficacy (Schaufeli & Greenglass, 2001). Emotional exhaustion is an affective state characterised by depleted emotional resources and a lack of energy, and may occur whether or not people feel effective in their jobs. As the most often observed symptom of burnout, emotional exhaustion is usually what people refer to when they describe themselves as "burnt out" (Maslach, Schaufeli, & Leiter, 2001). Depersonalization refers to negative, cynical attitudes and feelings about one's service recipients that arise as a consequence of psychological overprotection from further strain, where workers become overly detached and might view their service recipients as deserving of their lot in life (Schaufeli & Greenglass, 2001). It is a deliberate attempt to distance oneself from one's

service recipients by actively ignoring their unique human qualities as this is thought to make their demands easier to manage (Maslach et al., 2001). Finally, reduced personal accomplishment, sometimes referred to as reduced personal efficacy, is the tendency to evaluate oneself negatively and experience increased dissatisfaction with one's accomplishments on the job, as well as a heightened perception of failure to make work-related progress. Workers with a low sense of personal accomplishment feel ineffective and incompetent (Schaufeli & Greenglass, 2001). A strong link has consistently been shown between emotional exhaustion and depersonalization across a wide range of organizational settings; however, the proposed link between emotional exhaustion, depersonalization and reduced accomplishment is less clear (Maslach et al., 2001).

The three components of burnout were once considered to proceed in sequence, with emotional exhaustion leading to depersonalization, which in turn led to decreased personal accomplishment (Leiter & Maslach, 1988; see also, Maslach, 2003). Later research partially supported this idea, showing that environmental demands (for example, workload or interpersonal conflict) increase the risk of exhaustion, which in turn contributes to depersonalization. However, further study also showed that reduced personal accomplishment occurred in parallel to exhaustion and depersonalization rather than in sequence (Leiter, 1993; Posig & Kickul, 2003). Further, the presence or absence of work resources (for example, social support or autonomy) has a greater effect on personal accomplishment than does the presence or absence of environmental demands (Leiter, 1993). Thus, personal accomplishment is predicted by different factors than exhaustion and depersonalization.

The validity of the measurement of burnout has therefore been re-examined since the publication of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981), with some

researchers questioning whether personal accomplishment is a core construct of burnout (Kalliath, O'Driscoll, Gillespie, & Bluedorn, 2000; Green & Walkey, 1988; Shirom & Melamed, 2006). Reduced personal accomplishment can be interpreted as an antecedent of burnout (Ventura, Salanova, & Llorens, 2015), a consequence of burnout (Koeske & Koeske, 1989), or a personality characteristic akin to self-efficacy (Cordes & Dougherty, 1993). Personal accomplishment has shown low correlations with exhaustion and depersonalization, and among these three facets of burnout it also has the weakest correlations with organizational variables (Halbesleben and Buckley, 2004; see Lee & Ashforth, 1996 for a review). Personal accomplishment tends to reflect individual characteristics to a greater degree than exhaustion and depersonalization; thus, it may be the least suggestive of burnout (Chana, Kennedy, & Chessell, 2015). Additionally, the MBI focuses only on emotional aspects of exhaustion, whereas some have suggested that measures of burnout-related exhaustion should also include physical and cognitive aspects (e.g., Kristensen, Borritz, Villadsen, & Christensen, 2005; Schaufeli & Taris, 2005).

As a result of these critiques of the MBI, other measures of burnout have more recently been formulated. The Copenhagen Burnout Inventory (CBI; Kristensen, Borritz, Villadsen, & Christensen, 2005) consists of three dimensions: personal burnout, work-related burnout, and client-related burnout. However, this measure focuses on physical and psychological exhaustion experienced as a result of these three domains of life and does not measure the disengagement or detachment aspect of burnout. The Oldenburg Burnout Inventory (OLBI; Demerouti, Bakker, Vardakou & Kantas, 2003) has two dimensions: “exhaustion” and “disengagement from work”. Exhaustion covers not only emotional exhaustion as in the MBI, but also physical and cognitive exhaustion resulting from affective, physical, and cognitive strain. Disengagement refers to

experiencing negative attitudes towards work and distancing oneself from one's work. The authors argue that depersonalization is one form of disengagement; however, disengagement also applies to issues such as identification with one's work. Professional efficacy is not included as this is seen as falling outside the construct of burnout. Thus, among the MBI, the CBI, and the OLBI, the OLBI has the best match to advances in the conceptualization of burnout.

### **Burnout in Healthcare Contexts**

Although burnout is a personal experience, it is specifically related to the workplace (Maslach, 2003). Situational work variables have been found to be more predictive of burnout than personal variables (Maslach & Goldberg, 1999). Burnout occurs over time as a function of a personal reaction to aspects of the work environment (Leiter, 1993) and often results in decreased commitment to work, job dissatisfaction, absenteeism, and turnover (Aiken et al., 2001; Aiken et al., 2002; Leiter & Maslach, 2009; Maslach & Goldberg, 1999).

Within the healthcare context, a number of workplace variables have been linked to burnout. Aiken et al. (2001) found that less than 40% of nurses in both the US and Canada endorsed the views that managers take the opinions of nurses into account, are responsive to their concerns, and acknowledge their contribution to patient care. In addition, less than a third of nurses in Canada said they were given the opportunity to contribute to decisions about how their shifts were scheduled. The majority of North American nurses reported an increase in the number of patients assigned to them in the past year. In Canada, 33% of nurses experienced job dissatisfaction, and 36% experienced burnout. A further study found that 43% of American nurses who experienced high burnout also planned to leave their job within the next year, while only 11% of those who were not experiencing burnout intended to leave within the year (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). The possibility that burnout mediates the relationship

between characteristics of the work environment and turnover intentions was supported by a Canadian study showing that burnout has implications for staff retention levels, as it can result in high turnover (Leiter & Maslach, 2009).

LTC is a physically and emotionally demanding environment in which staff face stressors not experienced in other settings, such as caring for a high number of residents with dementia who may exhibit challenging behaviours, caring for residents who need assistance with activities of daily living, managing the physical demands of regularly having to lift or turn residents, and facing the declining health and death of residents (Hasson & Arnetz, 2008; Morgan, Semchuk, Stewart, & D'Arcy, 2002), and these stressors can contribute to the development of burnout (Chamberlain et al., 2017; Woodhead, Northrop, & Edelstein, 2016). LTC NAs often feel pressure to keep up with work demands and feel there is not enough time to complete their tasks, which might cause distress if they feel unable to meet residents' needs (Morgan et al., 2002). A survey of 95,000 American nurses in hospital and other healthcare settings revealed that 37% of nurses in LTC reported feeling burnt out, compared to 22% in other non-institutional settings who did not care for patients directly, such as those in public and community health (McHugh, Kutney-Lee, Cimiotti, Sloane, & Aiken, 2011).

In summary, burnout refers to the experience of exhaustion and depersonalization towards one's service recipients, it can be measured, and it surfaces in many work environments. Some research suggests that LTC employees might be particularly at risk compared with employees in other health care settings. However, as employee well-being is more than the experience of burnout, one must also consider positive experiences of work, including work engagement.

### **Chapter 3: Work Engagement**

Research on employee wellbeing has recently expanded beyond burnout to include positive aspects, including work engagement. The concept of work engagement developed from earlier work on job satisfaction, employee commitment, and organizational behaviour; however, in contrast to these original constructs, work engagement has the advantage of encompassing the two-way relationship between employer and employee, making it broader in scope (Kompaso & Sridevi, 2010), and similar to the construct of burnout.

Engagement was originally defined by Kahn (1990) as a personal process in which employees associate themselves with their work roles and engage in task behaviours that promote a connection to work. People who are engaged express themselves cognitively, physically, and emotionally in their work roles (Kahn, 1990). Kahn argued that engaged employees put effort into their work because they personally identify with their work. More recently, Nelson and Simmons (2003) defined work engagement as feeling positive emotions towards work, finding work personally meaningful, evaluating one's workload as manageable, and having hope about one's future at work. Similarly, Macey and Schneider (2008) suggested that engagement involves passion about work and commitment to work, as well as a willingness to increase effort to contribute to the success of the organization. Furthermore, in a qualitative study of work engagement of community health nurses, Vinje and Mittlemark (2008) defined work engagement as "searching for, experiencing, and holding on to the meaningful work that enables one to live one's values" (p. 200). Schaufeli, Salanova, González-Romá, and Bakker (2002) define work engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (p. 74). Engagement is thus an affective and motivational response to work (Simpson, 2009).



Schaufeli et al. (2002) argue that work engagement consists of three dimensions of vigor, dedication, and absorption, and is characterized by both high levels of energy and a strong identification with work. Vigour is typified by mental resilience and high levels of energy, persistence in the face of difficulties, and the willingness to work hard. Dedication goes beyond involvement, and is characterized by a sense of enthusiasm, significance, pride, inspiration, and challenge in one's work. Absorption is considered as a state of full concentration and being deeply engrossed in one's work, often accompanied by a sense that time passes quickly. Engaged employees are likely to perform better at work as they often have positive emotions, experience better health, are able to create their own work and personal resources, and influence their colleagues to become more engaged (see Bakker & Demerouti, 2008, for a review).

Engagement is associated with positive organizational and workforce outcomes. High work engagement contributes to organizational outcomes such as commitment to the organization, positive attitudes towards one's own work, low turnover intention, low levels of absenteeism, and increased job satisfaction (Demerouti, Bakker, De Jonge, Janssen & Schaufeli, 2001; Schaufeli & Bakker, 2004a; Schaufeli et al., 2009; Shuck, Reio, & Rocco, 2011). Work engagement also contributes to job performance (Salanova, Agut, & Peiro, 2005), motivation, and initiative (Sonnentag, 2003). Engaged workers are diligent; when they experience fatigue they describe it as pleasant, as it is associated with positive achievements (Schaufeli & Salanova, 2008). At the level of the individual employee, beneficial outcomes including health, well-being, and positive social relationships have likewise been found (Schaufeli, Taris, & Van Rhenen, 2008).

In contrast, low work engagement is costly to organizations. For instance, one Gallup study estimated that disengaged employees cost American companies between \$250 and \$350

billion per year (Rath & Conchie, 2008). Furthermore, Gallup (2013) found that only 16% of Canadian employees are engaged, with 70% not engaged and 14% actively disengaged. This seems to be less true of service workers; Gallup found that 28% of service workers are engaged, 52% not engaged, and 20% actively disengaged. Gallup points out that people who are “not engaged” are unlikely to give full effort to their work; thus, increasing engagement within this large segment of the workforce provides opportunities for increasing productivity.

Initial studies on work engagement assumed it to be the opposite of burnout, therefore, consisting of the dimensions of energy, involvement, and efficacy, as opposites to the burnout dimensions of exhaustion, cynicism, and lack of personal accomplishment (Maslach & Leiter, 1997). As such, Maslach and Leiter considered that engagement could be measured using the opposite profile of MBI scores. However, Schaufeli et al., (2002) argued that work engagement is an independent concept with unique defining characteristics – negatively related to burnout but independent of it (similar to positive and negative affect, which have been discussed as independent and negatively correlated states rather than opposite ends of the same continuum; Russell & Carroll, 1999). As such, both states should be analysed independently of each other, because an employee who is not burned out is not necessarily engaged (Schaufeli & Bakker, 2004b). The definition of work engagement by Schaufeli et al. (2002) has become widely used, giving coherence to the study of work engagement (see García-Sierra, Fernández-Castro, & Martínez-Zaragoza, 2016; Keyko, Cummings, Yonge, & Wong, 2016, for reviews).

### **Work Engagement in Healthcare Contexts**

Research has only recently begun to focus on work engagement in healthcare. To illustrate, one of the first reviews (Simpson, 2009) did not identify enough research on engagement in nursing to draw meaningful conclusions. Nevertheless, since this time, there has

been sufficient new research on work engagement in healthcare to generate content for two recent reviews (García-Sierra et al., 2016; Keyko et al., 2016). One of the key recommendations from Simpson's (2009) review was to promote consistency in defining and measuring work engagement in healthcare by relying on the definition by Schaufeli et al. (2002). Later reviews (García-Sierra et al., 2016; Keyko et al., 2016) suggest that this recommendation was heeded, as the most frequently used measure of work engagement in more recent studies is the Utrecht Work Engagement Scale developed by Schaufeli et al. (2002).

To date, studies of engagement within the healthcare context have largely focused on the antecedents of engagement. For example, the review by García-Sierra et al. (2016) organized antecedents of engagement into three categories: organizational antecedents, individual antecedents, and the impact of nurse managers. Organizational antecedents comprise areas of work life (i.e., workload, control, reward, community, fairness, and value congruence between the employee and organization), structural empowerment (i.e., access to resources, support, and information), and social support (i.e., organizational and team support). Individual antecedents include personal traits, professional characteristics, family issues, and work orientation. The impact of nurse managers was influenced by leadership strategies, such as authentic leadership or transformational leadership. Keyko et al. (2016) also focused on factors contributing to work engagement, this time using the JD-R model as a guide, and identified six: the organizational climate, job resources, professional resources, personal resources, job demands, and demographic variables, demonstrating that both organizational and personal resources influence work engagement.

The workplace climate appears to be an important consideration in the study of work engagement. For example, Jenaro, Flores, Orgaz, and Cruz (2011) found that quality of working

life, workplace satisfaction, and low stress associated with patient care predicted engagement, and Freaney and Tiernan (2009) concluded that a pleasant atmosphere created by feeling part of a community was fundamental to nurse engagement. In other work, learning opportunities, organization of work, and autonomy were important to engagement (Adriaenssens, De Gucht, Van Der Doef, & Maes, 2011; Sarti, 2014). Finally, several studies have concluded that various forms of support are associated with engagement. These include general social support, perceived organizational support, supervisor support, co-worker support, and teamwork (Adriaenssens et al., 2011; Brunetto et al., 2013; Sarti, 2014).

In Canada, most research on engagement has focused on conditions driven by managers, including authentic leadership and structural empowerment. These qualities are associated with engagement of health care workers (Bamford, Wong, & Laschinger, 2013; Cho, Laschinger, & Wong, 2006; Giallonardo, Wong, & Iwasiw, 2010; Laschinger et al., 2009; Wong, Laschinger, & Cummings, 2010). Other research has considered how a range of organizational values and practices, including control, workload, community, rewards, fairness, and values, influence the engagement of Canadian healthcare workers. Each of these factors is also associated with engagement (Bamford et al., 2013). One last topic of study in Canada has been personnel considerations. Professional practice, nursing management, collaboration with physicians, and staffing resources significantly predicted work engagement (Sawatzky & Enns, 2012).

In healthcare environments, employee engagement is associated with a number of positive outcomes. Nurses high in well-being, including engagement, are committed to nursing and are likely to remain in nursing (Brunetto et al., 2013). Cultivating engagement is seen as a way to reduce the shortage of nurses and NAs by creating a work environment that has the ability to attract and retain care providers (Fasoli, 2010). Engaged nurses contribute to safe, high

quality patient care (Lashinger et al., 2006; Van Bogaert et al., 2013) as well as the delivery of ethical care (Keyko, 2014).

In summary, work engagement, characterized by high levels of energy and a strong identification with work, is both influenced by the workplace and has beneficial outcomes for the workplace. In healthcare, such outcomes include workforce stability and quality patient care. Empirical research suggests that, like burnout, work engagement is a vital component of employee wellbeing. Increasingly, models of employee wellbeing are taking this into account.

## **Chapter 4: Models of Employee Well-Being**

As research on employee well-being has developed, researchers have turned their focus to generating theoretical models of employee well-being that comprehensively explain the causes and effects of well-being. Widely used are the Conservation of Resources model, the Job Demands-Control model, and the Job Demands-Resources model.

### **Conservation of Resources Model**

The Conservation of Resources Model (COR; Hobfoll, 1989, Hobfoll, 2001; Hobfoll & Freedy, 1993) highlights the significance of motivational processes and utilization of resources by proposing that individuals will strive to obtain, retain, and protect their valued resources. Hobfoll (1989) suggests there are four types of resources: objects, conditions, personal characteristics, and energies. These are either valued in their own right (e.g., self-esteem or health) or as means to obtaining other valued items (e.g., money or social support). There are two main principles with the COR model; first, that people will invest their resources to protect themselves from negative outcomes and to cope with threatening conditions, and second, that people will not only protect these resources but will also strive to accumulate them. These two principles lead to three proposed outcomes. The first is that those who have greater access to resources are less vulnerable to resource loss. The second is that not only are those who lack resources more vulnerable to resource loss, but initial loss will also create future loss. This predicts a loss cycle that gains strength and momentum as losses accumulate. The third is the opposite of the second, in that those who possess resources are both able to gain further resources, and to create extra potential for future gain, leading to a cycle of gain. However, as loss has more effect on the individual than gain, loss cycles will be more accelerated and have

more impact. Thus, according to the COR model, avoiding burnout involves both maximizing resource gains and minimizing resource losses.

The originator of the COR model, Hobfoll (1989), introduced the complementary idea of resource caravans, whereby having specific major resources is usually connected to having other major resources; similarly, lacking specific major resources is often connected to lacking other major resources. Thus, resources such as social support and self-efficacy are therefore often found together, with one apparently acting as a 'building block' for the other. They may also disappear with one another.

Psychological stress occurs when an individual's resources are threatened with loss, when resources are actually lost, or when resources are not gained after a significant resource investment (Westman, Hobfoll, Chen, Davidson, & Laski, 2004). For example, an employee might sacrifice leisure time in order to work longer hours and gain a promotion at work. If this promotion does not happen, the loss is intensified as not only the opportunity for advancement is lost, but also the opportunity to invest this time in family and friends, or in other desired ways. Hobfoll (2001) suggests that threats to resources might be perceived from work demands or insufficient work resources. Continued threats to resources (i.e., chronic stress) can lead to an intensifying spiral of loss, and the development of burnout. As resource loss is disproportionately more potent than resource gain, people are often more likely to avoid loss than to attempt to achieve gains (cf. Tversky & Kahneman, 1974).

### **Job Demands-Control Model**

An early model of work stress is the job demands-control model (JD-C; Karasek, 1979). According to the JD-C model, job strain is caused by both high job demands, such as workload or time pressure, and low job control, which is the level of autonomy the employee has in the

workplace. As such, conditions of high demand and low control exacerbate job strain and create potential for burnout. Thus, according to the model, employees who have the authority to decide how to meet their job demands are less likely to experience job strain. Despite the intuitive appeal of this model, which promotes employee autonomy, it has been criticized. One critique is that stress resulting from lack of resources is not accounted for by the model; it does little good to be given the authority to meet job demands if adequate resources are not in place to support this (Westman et al., 2004). Moreover, Leiter and Maslach (2004) found that although workload and control do have a central role in predicting burnout, they are not sufficient in themselves. Additionally, evidence for the moderating effect of control on the negative effects of high demands is inconsistent, possibly suggesting a limited effect of job control on the impact of job demands (Van der Doef & Maes, 1999). It is unclear from these inconsistent findings why control is thought to be the most important resource in this model, disregarding the effects of other resources that may moderate the effects of high demands. In the same way, it is unclear why workload is used as the most important job demand (Bakker & Demerouti, 2007). Research in the area of burnout indicates a more complex picture of potential predictors, such as physical, psychological and emotional demands of work, as well as social and supervisory support (see Alarcon, 2011; Bakker & Costa 2014; Halbesleben & Buckley, 2004 and Lee & Ashforth, 1996 for reviews). Because of these factors, the JD-C model seems to oversimplify the process leading to burnout.

### **The Job Demands-Resources Model**

The job demands-resources (JD-R) model describes the processes that lead to burnout and work engagement (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Influenced by the JD-C model, the JD-R model is intended to be applied in a flexible manner that allows



specification of the specific demands and resources within diverse employment settings. The JD-R model is also the first model of employee well-being to include both burnout and work engagement. Similar to the JD-C model, the JD-R model assumes that a balance of positive and negative features in the work environment (i.e., job resources and demands) is associated with the well-being and health of employees. However, unlike the JD-C model, the JD-R model assumes that any demand or resource has the potential to affect employee well-being and health.

Within the model lies the assumption that although every occupation has its own risk factors for job stress, these factors can be classified into two categories: job demands and job resources. Job demands are the physical, psychological, social, or organizational aspects of work that require sustained psychological or physical effort and are associated with physical or psychological costs; for example, high workload or irregular working hours. Job demands may not initially be perceived as negative but may become stressors when meeting those demands requires a high degree of effort from which the employee fails to fully recover. Job resources are physical, psychological, social, or organizational aspects of work that assist achievement of work goals, help reduce job demands and the associated psychological or physical cost, or stimulate personal growth, learning, and development. These may be located at the organizational level (e.g., job security, opportunities for advancement), interpersonal relations (e.g., supervisor support), work organization (e.g., level of participation in decision making), or at the task level (e.g., task significance; Bakker & Demerouti, 2006).

In summary, job demands require effort or change and can eventually lead to burnout, whereas resources can help reduce demands, accomplish work tasks, enable personal growth, and lead to work engagement. Corresponding to the definition of resources in the COR model, job demands are negatively valued and job resources are positively valued aspects of the work

environment. As such, a wide variety of aspects of the work environment can be integrated into a relatively simple model in which multiple job demands coupled with a lack of job resources is associated with an increased probability of employee burnout.

The JD-R model further suggests that job demands and resources trigger two different underlying processes in the development of job strain and motivation: a health impairment process and a motivational process (Demerouti et al., 2001; Llorens, Bakker, Schaufeli, & Salanova, 2006). The health impairment process is activated when chronic job demands deplete physical and mental resources and thus result in a state of exhaustion and general health problems (Bakker, Demerouti, & Schaufeli, 2003; Demerouti, Bakker, Nachreiner, & Schaufeli, 2000). In contrast, the motivational process is activated when available job resources lead to higher levels of work engagement and organizational commitment and lower levels of disengagement associated with burnout. The presence of job resources is also thought to buffer (moderate) the negative effect of job demands, in that employees with more resources are better able to deal with demands and therefore experience fewer psychosocial problems (Bakker et al., 2003; Demerouti et al., 2000). As such, job resources are not only necessary to manage job demands but are important in maintaining an engaged, motivated workforce. This is similar to the COR theory description of resources that are valued either in their own right or as a means to protect other resources (Hobfoll, 1989). This “buffer hypothesis” was originally emphasized in the JD-C model (Karasek, 1979), which suggested that control might moderate the impact of high job demands. Whereas inconsistent empirical support was found for the buffering effects of control on outcomes associated with a demanding work environment in the JD-C model (Van der Doef & Maes, 1999), more empirical support is available to support a buffering effect of job resources, in general, in the JD-R model (Lewis & Dollard, 2003).

**The Job Demands-Resources Model and Burnout.** Several studies have supported the JD-R model, finding effects in different occupations of different job demands and resources on psychosocial outcomes such as depression and burnout (Hakanen, Schaufeli, & Ahola, 2008), absenteeism (Schaufeli, Bakker, & Van Rhenen, 2009), and turnover (De Lange, De Witte, & Notelaers, 2008). Burnout, in particular, is consistently predicted by the presence of job demands and the lack of job resources, as suggested by the JD-R model (Maslach et al., 2001).

More recently, the JD-R Model has been applied in long-term care settings. For example, Demerouti, Bakker, Nachreiner, & Schaufeli (2000) studied the relationship between job demands, job resources, and burnout among nurses working in hospital and long-term care settings. They found that job demands were related to exhaustion (a facet of burnout); specifically, the more patient demands, time pressure, physical and cognitive workload, problems with shift-work schedule, and unfavourable work conditions, the more exhaustion the nurses reported. However, exhausted nurses did not necessarily disengage themselves from their work. Rather, higher levels of disengagement were seen in nurses who lacked sufficient job resources, including performance feedback, task variety, job control, support from supervisors, participation in decision-making, and rewards.

A major study of the JD-R model in LTC contexts took place in 2003. Bakker et al., (2003) tested the model by surveying 3,093 employees across four long-term care homes. The job demands considered in the study included workload (e.g., time pressure), physical demands (e.g., working in a bending position or being on one's feet all day), problems with planning (e.g., last minute changes to work schedules), emotional demands, sexual harassment, and patient harassment<sup>1</sup>. Job resources included autonomy, social support, coaching by supervisor,

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<sup>1</sup> The use of terms such as "patient harassment" in LTC is controversial today, as LTC residents are predominantly cognitively impaired, and increasingly, insufficient support of physical and cognitive disability has been identified

possibilities for professional development, performance feedback, and financial rewards. Bakker et al. (2003) found that job demands were positively related to exhaustion, whereas job resources were negatively related to disengagement and positively related to personal accomplishment. The effect of job demands on exhaustion was stronger when participants had access to fewer resources; similarly, the effect of low levels of job resources on disengagement was stronger if participants had a high level of job demands. The results suggest that when job demands are high, LTC employees principally experience higher levels of exhaustion, whereas disengagement and personal accomplishment are affected to a lesser degree. When job resources are low, LTC employees experience higher levels of disengagement and reduced personal accomplishment, but exhaustion is less affected. In situations of high job demands and low resources, employees are more likely to develop exhaustion, disengagement, and reduced personal accomplishment; i.e., burnout.

A further study in long-term care showed similar results. Xanthopoulou et al. (2007) examined how the interaction between job demands (physical demands, emotional demands, workload, and patient harassment) and job resources (opportunities for professional development, autonomy, performance feedback, and social support) affected exhaustion and disengagement. These job characteristics had already been identified as important to long-term care workers (Bakker et al., 2003). Structural equation modeling showed that job demands were the strongest predictor of exhaustion whereas lack of job resources was the strongest predictor of disengagement. Specifically, emotional demands and patient harassment were found to be the best predictors of exhaustion, whereas autonomy, social support, and opportunities for professional development proved to be the most important moderators of the impact of job

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as a contributing factor to challenging behaviours in this population. However, when this term was used in the original studies, I have not changed it.

demands on exhaustion and disengagement. Thus, results supported the JD-R model, including the idea that job resources moderate the effects of job demands on negative employee outcomes.

**The Job Demands-Resources Model and Work Engagement.** As described in the JD-R model, job resources are thought to be linked to work engagement through a motivational process. Job resources may be intrinsically motivating, since they fulfill basic needs, or extrinsically motivating, since a resourceful work environment may motivate employees to achieve their work goals.

In a study of teachers at different educational levels, Bakker, Hakanen, Demerouti, and Xanthopoulou (2007) found that job resources of supervisor support, appreciation, innovativeness, and organizational climate moderated the negative effect of high levels of student misconduct on work engagement. Job resources of job control, supervisory support, information, social climate, and innovative climate were also positively related to work engagement in a sample of over 2,000 Finnish teachers (Hakanen, Bakker, & Schaufeli, 2006). In other occupations, a three-year study of 2,555 dentists showed that job resources directly influenced work engagement, which additionally predicted organizational commitment (Hakanen, Schaufeli, & Ahola, 2008). Similarly, the presence of job resources helped dentists with high levels of workload to cope with high demands and stay engaged with their work (Hakanen, Bakker, Demerouti, 2005). When employees perceive that job resources remove obstacles at work, they become more engaged in their work, which leads to a better service climate (Salanova, Agut, & Peiró, 2005).

Within the healthcare context, a longitudinal study of 409 health-care workers over a period of two years showed that job resources of job control, management quality, and organization-based self-esteem predicted work engagement (Mauno, Kinnunen, & Ruokolainen,

2007). Additionally, job resources of autonomy, social support, and self-development opportunities were shown to moderate the effects of the job demands of work overload, emotional demands, and work-life imbalance in nurses (Gabel-Shemueli, Dolan, & Ceretti, 2014). Few studies have focused on LTC; however job resources of learning opportunity, supervisor support, and co-worker support significantly predicted work engagement in this environment (Sarti, 2014). Furthermore, Schaufeli and Bakker (2004a) found a positive relationship between the job resources of social support, performance feedback, and supervisory coaching, and work engagement in employees from a LTC home.

In summary, the JD-R model is a comprehensive model of employee well-being, built on the foundation of previous models, and incorporating both burnout and work engagement. The JD-R model is now widely used to determine antecedents and consequences of burnout and work engagement as it is flexible and allows specification of specific demands and resources within diverse work settings. Although relatively little research has been conducted within LTC, the currency of the JD-R and the compatibility of research on LTC workforce issues with the JD-R model, suggest that it provides an ideal theoretical base from which to explore associations between job demands, job resources, and well-being among LTC nurses and NAs.

## Chapter 5: The Nature of Job Demands and Resources in Long-Term Care

### Job Demands

Many different job demands have been studied as antecedents of burnout. In the LTC context, the following demands are considered relevant: workload (i.e., the pace and amount of work associated with providing resident care in LTC), emotional workload, and role stress (Bakker et al., 2003; Bowers, Luring, & Jacobson, 2001; Rai, 2010).

**Workload.** Workload is one of the most often included antecedents in studies of burnout, and a heavy workload has been shown to be a strong predictor of the exhaustion dimension of burnout (e.g., Demerouti et al., 2001; Greenglass, Burke, & Fiksenbaum, 2001; Huang, Wang, & You, 2015; Maslach et al., 2001; Rai, 2010). In the JD-C model, workload is considered the most important work-related stressor. Workload has been defined as the perception of the demands of work in terms of the amount of work, the time available to complete the work, and the speed with which it is necessary to complete the work (Rai, 2010). The work of employees in LTC involves a number of activities to support resident care, and LTC employees often perceive a heavy workload due to staff shortages and time pressure (Knopp-Sihota et al., 2015; Lopez, 2006a; Mallidou, Cummings, Schalm, & Estabrooks, 2013).

**Emotional Workload.** Emotion work has been defined as the quality of interactions between employees and clients where appropriate emotional expression is a job requirement (Zapf, 2002). Although frequent interactions with people may be demanding in itself, the need to regulate emotion during these exchanges may exacerbate this demand. Emotion work occurs in the context of interpersonal interactions, when emotions are used to influence the emotions, behaviours, or attitudes of others (Morris & Feldman, 1997). Emotion work also includes conforming emotion displays to those that are prescribed. When the expression of emotion

differs from felt emotions, a sense of emotional dissonance occurs (Morris & Feldman, 1997). This concept is particularly apt for LTC nurses and NAs as their work cannot simply be described in terms of physical and cognitive demands. A large portion of LTC nurse and NA work is to interact with patients and families using emotional involvement and empathy; therefore, management of emotions is central to LTC work (Lopez, 2006b). Displaying emotions that are not genuinely felt has been shown to be related to burnout, possibly due to the effort of emotional regulation, in which one attempts to modify the expression of emotion to meet work demands (Brotheridge & Grandey, 2002).

**Role Stress.** Role ambiguity and role conflict are job demands often connected to the development of burnout (e.g., Acker, 2003; Peiró, González-Romá, Tordera, & Mañas, 2001; Örtqvist & Wincent, 2006; Rai, 2010). All employees have specific roles within the organization, with expectations about certain behaviours for certain positions. These expectations prescribe behavioural requirements for each role; however, when expectations are ambiguous or conflicting, role stress can result (see Örtqvist & Wincent, 2006 for a review). Role ambiguity is the extent to which employees are unclear about their own role expectations, whereas role conflict occurs when expectations incompatible with the reality of the role are placed on employees (Acker, 2003). Both role conflict and role ambiguity are commonly related to emotional exhaustion and disengagement (Acker, 2003; Garrosa, Moreno-Jiménez, Rodríguez-Muñoz, & Rodríguez-Carvajal, 2011; Lee & Ashforth, 1996; Levert, Lucas, & Ortlepp, 2000; Posig & Kickul, 2003).



## **Job Resources**

Among numerous possible job resources, the following have been identified as particularly salient to LTC nurses and NAs: autonomy, participation, and social support (Bakker, et al., 2003; Sarti, 2014; Scott, Sochalski, & Aiken, 1999).

**Autonomy.** Autonomy is a job characteristic that allows for self-determination and independent decision-making on the job (Schreurs & Taris, 1998); in other words, the degree to which employees have control over the way in which their jobs are done. Autonomy is negatively associated with disengagement (Demerouti et al., 2000; Sargent & Terry, 2000) and positively associated with work engagement (Mauno et al., 2007) and job satisfaction (Finn, 2001).

**Participation.** Participation is the ability to participate in management decisions that affect the way in which one's job is performed. It is closely related to autonomy (Posig & Kickul, 2003) as both autonomy and participation address subjective evaluations about the extent to which the work environment allows for personal control. Participation has been negatively related to depersonalization (Demerouti et al., 2000; Posig & Kickul, 2003) as well as shown to moderate the effect of job demands on job satisfaction and on burnout (Willemse et al., 2012).

**Social support.** Social support has often been studied as a resource that might reduce the onset of burnout and increase work engagement. There is strong evidence for a significant negative relationship between social support and burnout (e.g., Baruch-Feldman, Brondolo, Ben-Dayana & Schwarz, 2002; Schaufeli & Greenglass, 2001; Woodhead, Northrop, & Edelstein, 2016). Social support is thought to moderate the adverse effects of stress and job demands by decreasing the tendency to disengage from work, although it may not affect the development of exhaustion (Peeters & Le Blanc, 2001). Additionally, social support has been linked to work

engagement (e.g., Hakanen et al., 2006; Schaufeli & Bakker, 2004a; Sarti, 2014). When employees feel valued and important, they are less likely to become disengaged from their work (Schaufeli & Greenglass, 2001). Additionally, supervisors and work colleagues can provide relevant feedback as well as practical and emotional support directly related to a particular stressor (Greenglass & Burke, 2002).

***Supervisory support.*** Within the workplace, social support may take the form of supervisory support and co-worker support. High levels of supervisor support can mitigate the negative effect of job demands and reduce levels of burnout (Larrabee et al., 2003; Moore, 2000; Sargent & Terry, 2000). Supervisor support may also positively affect work engagement (Demerouti et al., 2001; Klusmann, Kunter, Trautwein, Lüdtke, & Baumert, 2008; Othman & Nasurdin, 2013). Specific to LTC, supervisor support is associated with work engagement (Sarti, 2014), reduced job stress (McGilton, Hall, Wodchis, & Petroz, 2007) and higher levels of mental health in NAs (Liang, Hsieh, Lin, & Chen, 2014).

***Co-worker support.*** Co-worker support is a potential source of social support that has not been extensively evaluated. Whereas Othman and Nasurdin (2013) found no effect of co-worker support on work engagement in nurses, others have found that co-worker support is helpful. For instance, co-worker support seems to contribute to employment continuity (Coomber & Barriball, 2007; Hayes et al., 2012) and to work engagement in LTC caregivers (Sarti, 2014). Co-worker support has also been labelled and studied as teamwork. Within LTC, co-workers play an important role in achieving daily goals (Moyle et al., 2003; Tourangeau, Cranley, Spence Laschinger, & Pachis, 2010); therefore, co-worker support may be expected to have a role in nurse and NA well-being. Further, there is a strong association between teamwork and

autonomy, suggesting synergy rather than conflict between the two (Rafferty, Ball, & Aiken, 2001).

### **Summary**

The JD-R model suggests that job demands function to increase employee burnout, and job resources both increase engagement in work and moderate the impact of job demands on burnout (Bakker et al., 2005; Xanthopoulou et al., 2007). Some of the job demands considered most relevant to LTC are workload, emotional workload, and role stress. Some of the job resources considered most relevant to LTC are autonomy, participation, and social support. Beyond job resources, personal resources have recently been introduced into the JD-R model (Xanthopoulou et al., 2007). Consequently, there is a need for further study of the interrelationships between job demands and resources, personal resources, and nurse and NA wellbeing. This is particularly true in LTC, given the low volume of research to date on the JD-R model in this setting.

## **Chapter 6: Personal Resources and the Job Demands-Resources Model**

Personal resources have been defined as aspects of the self that encourage persistence through obstacles and challenges, and contribute to a self-perceived ability to successfully interact with, influence, and control the environment (Hobfoll, Johnson, Ennis, & Jackson, 2003). Thus, personal resources can influence personal perceptions of coping ability and can protect against strain caused by the work environment (Liu, Prati, Perrewe, & Ferris, 2008). Although these resources are not always named directly in models of organizational health, they have a long history of study in relation to these models and their precursors.

An early social cognitive theory proposed that individuals interpret and respond to potentially stressful situations through a process of cognitive appraisal. According to Lazarus and Folkman (1984), stress occurs when the demands on an individual exceed the available resources as appraised by the individual. Lazarus (1996) argued that stress is not created from either the environment or the individual alone but rather the interaction between a particular environment and a particular person. Thus, the individual's personal frame of reference is an important factor in appraising an event as stressful. It is possible that a tendency to perceive events as benign or challenging rather than threatening is one of the ways by which personal resources might help to mitigate the effects of job demands.

One of the first models of organizational health, COR theory, also alluded to personal characteristics as potential resources (Hobfoll, 1989, 2002). For instance, COR theory emphasized employees' agency, assuming that employees use resources to protect themselves from detrimental outcomes and strive not only to protect but also accumulate resources. COR theory also suggested that possessing certain resources (e.g., close attachments, self-efficacy) tends to generate other resources (e.g., social support), which may result in positive outcomes

and a spiral of gain. Conversely, COR theory proposed that loss of personal resources from coping with one job demand might reduce the ability to deal with another job demand, leading to a spiral of loss. For example, if coping with job demands leads to a loss of energy, the loss in energy might be interpreted as a lack of reciprocity by supervisors and colleagues, who might then reduce their levels of support in response (Daniels & Guppy, 1997).

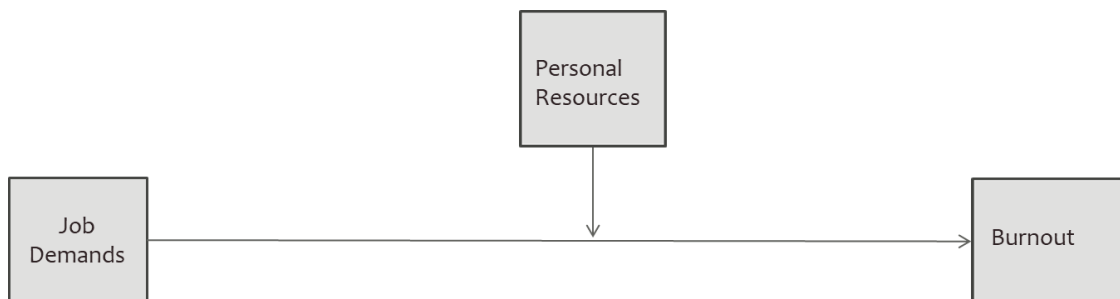
Attention has recently turned to the relationship of personal resources with burnout and work engagement. The few available studies to date seem to confirm the potential of this line of research. For example, mental health and internal locus of control have been associated with work engagement (Fiabane, Giorgi, Sguazzin, & Argentero, 2013), whereas anxiety, depression, passive coping, and external locus of control were associated with burnout (Maslach et al., 2001). In a study drawing on the JD-R model, professional self-efficacy was found to influence the perception of different job demands, which then predicted levels of burnout and work engagement (Ventura, Salanova, & Llorens, 2015). Other work using the JD-R model has found work engagement to be associated with personal resources including resilience, optimism, self-efficacy, and active coping (Bakker et al., 2008).

Within the healthcare context, self-transcendence (recognition of a reality apart from oneself, seeing oneself in perspective against this reality, and drawing meaning from something or someone other than oneself) is associated with increased work engagement in acute care nurses (Palmer, Griffin, Reed, & Fitzpatrick, 2010) as well as with decreased levels of burnout in hospice and oncology nurses (Hunnibell, Reed, Quinn-Griffin, & Fitzpatrick, 2008). Critical reflective practice (i.e., being mindful of oneself during professional situations and processing the cognitive, affective, behavioural, and moral components of situations in order to learn and develop) is positively associated with work engagement in intensive care unit nurses (Lawrence,

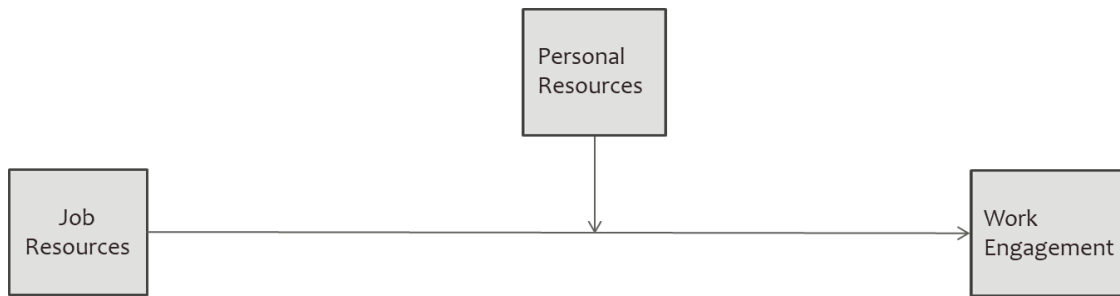
2011). These studies of personal resources in healthcare suggest that abilities to consider the meaning of one’s work against the breadth of one’s experiences might be relevant to the wellbeing of health care providers.

### **Personal Resources as Moderating Variables in the Job Demands-Resources Model**

The JD-R model postulates that the interaction of demands and resources contributes to employee well-being. Specifically, job resources are assumed to moderate the effect of job demands on the development of burnout. A moderator variable affects the direction and/or the strength of the relationship between two other variables (Baron & Kenny, 1986), in this case, weakening or “buffering” the effect of job demands on burnout. For this reason, the proposed moderating role of job resources on burnout in the JD-R model has sometimes been referred to as “the buffer hypothesis”. Although job resources have been the main focus of this line of investigation, recently, some studies have focused on whether the buffer hypothesis extends to personal resources, and whether these should also be incorporated into the JD-R model. The question posed in these studies is, “Do personal resources weaken the relationship between job demands and burnout?” (see Figure 1). In parallel fashion, the potential role of personal resources in enhancing the association between job resources and work engagement has also been examined recently (see Figure 2).



*Figure 1.* Conceptual model of the relationship between job demands, personal resources, and burnout.



*Figure 2.* Conceptual model of the relationship between job resources, personal resources, and work engagement.

Use of the JD-R model to examine the moderating effects of personal resources on the relationship between job demands and burnout is confined to just a few studies (Bakker & Demerouti, 2014). In one study, a strong intrinsic work value orientation (i.e., as opposed to extrinsic work outcomes such as status or income) moderated the relationship between workload and burnout, and the relationship between job resources and burnout (van den Broeck, van Ruysseveldt, Smulders, & de Witte, 2011). In another study conducted in a healthcare setting, employees' beliefs about their employers' support for using their personal strengths at work moderated the relationship between job demands and absenteeism (van Woerkom, Bakker, & Nishii, 2015). In a third study, compassion satisfaction, defined as the fulfillment professional caregivers feel when helping others (Stamm, 2005), moderated the relationship between role overload (a job demand) and job strain (Tremblay & Messervey, 2011). Each of these studies provides either direct or indirect support for the buffer hypothesis, as illustrated in Figure 1.

Some parallel work has proceeded outside the context of the JD-R model. For example, Hui and Lee (2000) found a moderating effect of organizational self-esteem (pride in work) on the relationship between organizational uncertainty (i.e., job insecurity and anticipation of organizational change) and absenteeism. In a one year longitudinal study, Mäkikangas and Kinnunen (2003) found that optimism moderated the relationship between job demands and

mental distress. A 10-year longitudinal study examined the effects of three personal resources (self-esteem, self-perceived competence, and a sense of coherence) on burnout (Kalimo, Pahkin, Mutanen, & Topipinen-Tanner, 2003). Coherence is the extent to which people perceive life events as manageable, comprehensible, and meaningful (Antonovsky, 1984). Results showed that during this period, those who did not exhibit burnout had a more positive work environment and higher levels of all three personal resources. Of the personal resources, a strong sense of coherence was the greatest determinant of differences in burnout levels. Specifically, the sense of coherence had increased from the initial ten-year score in those without burnout, but had weakened in those exhibiting burnout (suggesting that coherence buffered effects of work environment on burnout). High levels of self-esteem and self-perceived competence also appeared to moderate against burnout, possibly due to greater belief in one's capability and significance. These studies, too, lend support to the buffer hypothesis.

Within the healthcare context, Laschinger and Fida (2014) examined how psychological capital (a constellation of personal resources such as self-efficacy, hope, optimism, and resiliency) affected the development of burnout in nurses over a period of one year, and found that psychological capital was associated with lower levels of burnout. In a study of nurse wellbeing, the personal resource of emotional intelligence moderated the effect of stress on burnout (Görgens-Ekermans & Brand, 2012). Within the LTC context, Duffy, Oyeboode, and Allen (2009) found that self-efficacy was significantly negatively associated with burnout, and had more explanatory value in predicting burnout than some work resources.

Work to explore whether personal resources can enhance the relationship between job resources and work engagement (as in Figure 2) is very limited. A two-year longitudinal study by Xanthopoulou, Bakker, Demerouti, & Schaufeli (2009) suggests the potential of this line of



evaluation. Xanthopoulou et al. (2009) identified reciprocal relationships among personal resources (self-efficacy, organizational-based self-esteem, and optimism), job resources (autonomy, supervisory coaching, performance feedback, and opportunities for personal development), and work engagement. They argue that employees who receive job resources are likely to have both the means and the motivation to be more engaged at work. Additionally, employees with personal resources are more likely to evaluate themselves positively and adapt well at work. Thus, personal and job resources are mutually related, and both influence work engagement. For instance, employees who have job resources feel more able to meet work goals. In addition, employees with high levels of personal resources might feel more engaged in work. It is therefore possible that when job resources and personal resources interact with each other (e.g., when an employee's personal resources allows that employee to maximally activate job resources), work engagement is more likely to result. More research is needed to evaluate whether personal resources moderate the relationship between job resources and work engagement (see Figure 2) across all employment settings, including healthcare.

The study of the effect of personal resources on employee well-being is relatively new. As such, there are relatively few studies examining how personal resources can interact with the work environment to impact the development of burnout, and research focused on the significance of personal resources to work engagement is next to absent. Within this sparse literature, though, a focus on the significance of finding meaning and keeping work in perspective can be discerned (Hui and Lee, 2000; Kalimo et al., 2003; Tremblay & Messervey, 2011; van den Broeck et al., 2011). This parallels a recent movement in psychology to examine wellbeing from an existential perspective.

## Chapter 7: Psychological Wellbeing as a Personal Resource

There is a trend in psychology to preferentially study the factors contributing to dysfunctional human behaviour rather than the study of healthy, normal psychological functioning and the factors leading to psychological well-being and wellness (Ryff & Singer, 1998). Psychological research has often focused on the effects of negative affect and mental illness rather than well-being. Myers (2000) pointed out that the number of publications on negative affect outnumbered that on positive affect by 14:1. Positive psychology is a relatively recent counter-movement, in which researchers study the strengths and virtues of individuals and communities that enables them to survive and thrive (Seligman & Csikszentmihalyi, 2000). Although early research related the idea of mental health to the absence of negative states, such as depression or anxiety, proponents of positive psychology argue that well-being is more than the antithesis of ill-being (Cloninger, 2006; Kahneman, 2003; Ryff, 1989). In other words, just as physical health is more than the absence of disease, so psychological well-being is more than the absence of psychological pathology. These researchers therefore argued that mental health should be conceptualized as the presence of wellness rather than the absence of disease.

Initial studies on well-being tended to focus on subjective well-being, which is one's level of happiness, positive affect, lack of negative affect and life satisfaction (e.g., Diener, 1994). However, research on well-being can be categorized into two broad topics: hedonic well-being that focuses on the experience and maximization of happiness or pleasure and the avoidance of pain, and eudaimonic well-being that focuses on the actualization of human potential (see Ryan & Deci, 2001, for a review). Although the terms *subjective well-being* and *psychological well-being* are sometimes used interchangeably to describe these conditions (e.g., Wright & Cropanzano, 2004); more correctly, subjective well-being (SWB) reflects a global assessment of life quality and emotional valence, and refers to hedonic well-being, whereas

psychological well-being (PWB) is best used to describe thriving through the existential challenges of life, and refers to eudaimonic well-being (Keyes, Shmotkin, & Ryff, 2002).

Proponents of PWB emphasize the need to appreciate the tension between positive and negative aspects of living as well-being is often about the joining of these two, rather than emphasizing one over the other (Ryff & Singer, 2008). Larsen, Hemenover, Norris, and Cacioppo (2003) highlight the health benefits of co-activation of positive and negative emotions, which allow individuals to gain understanding and mastery over stressful and traumatic experiences. Although subjective well-being can fluctuate according to life experiences, PWB emphasizes more stable and adaptive aspects of human functioning (Ryan & Deci, 2001). PWB may sometimes be increased through adversity as personal growth often occurs as a result of encounters with disappointment, obstacles, and failure (Ryff, 2014). This requires finding the inner resources to persevere. Self-knowledge, or an awareness of one's limitations and vulnerabilities, may be increased, and positive relations with others may be enriched through life's difficulties (Ryff, 2014). PWB is therefore not due to a life free of challenges or obstacles, but one lived in spite of those limitations (Ryff & Singer, 2008).

In attempting to define PWB, Ryff and Singer (1998) studied the philosophical arguments on optimal human functioning, ranging from Aristotle to Bertrand Russell, and concluded that health is the overall presence of the positive in the mind as well as the body. Ryff (1989) recognized the need for a theoretically-derived construct of PWB, and outlined a model of psychological well-being that draws upon and integrates psychological theories of functioning, including Maslow's (1968) theory of self-actualization, Allport's (1961) concept of maturity, Erikson's (1959) psychosocial stage model, Roger's (1961) fully functioning person, Jahoda's (1958) criteria of positive mental health, as well as Aristotle's Nichomachean Ethics

(Ryff & Singer, 2008). Ryff found that six dimensions often occurred in literature regarding life-span development, mental health, and personal growth. These dimensions are self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, and autonomy. Together, they encapsulate wellness that includes positive evaluations of oneself, the belief that life has purpose and meaning, a sense of continual personal growth and development, enjoying good relationships with others, and the ability to manage one's own life and the surrounding environment effectively (Ryff, 1989). They form the foundation of Ryff's multidimensional model of PWB, and they are all derived from elements of the guiding psychological theories (Ryff & Singer, 2008).

The dimension of *self-acceptance* originates in the Greek admonition to know yourself, i.e., to accurately know our own motivations, actions, and feelings. However, contemporary psychological theorists further included the need for positive self-regard. Jahoda (1958) defined this as a central feature of mental health, Maslow (1968) saw this as a characteristic of self-actualization, Rogers (1961) as a sign of optimal functioning, and Allport (1961) as a sign of maturity. Erikson (1959) highlighted the importance of the acceptance of self, both the present self and the past self. Jung, too, stressed the need to come to terms with the shadow, i.e., the dark side of one's self. Self-accepting individuals acknowledge that the self contains both positive and negative aspects but hold a positive attitude towards themselves while attempting to accurately perceive their action, emotions, and motivations. Self-acceptance is therefore a richer concept than that of self-esteem as it involves awareness and acceptance of both strengths and weaknesses (Ryff, 1989).

*Purpose in life* is derived from existential perspectives, particularly Frankl's (1959/2006) search for meaning through adversity. Frankl developed the therapeutic method of logotherapy,

which aims to help people find meaning and purpose even as they experience suffering in life. Although Frankl proposed the will to meaning in dark or difficult situations, other theorists emphasized meaning in life under less stressful situations. For example, Jahoda (1958) emphasized the importance of personal beliefs that give a sense of meaning and purpose in life and Allport (1961) argued that maturity included an understanding of life's purpose, including a sense of intentionality and directedness. Russell (1930/1958) proposed the concept of zest, which is actively engaging with and reflecting on one's life. With maturity should come a sense of comprehension of life's purpose and meaning (Ryff, 1989).

*Personal growth* is concerned with self-actualization, as articulated by Maslow (1968), and is primarily concerned with the realization of human potential, conceptualized as a dynamic process of continued personal development, the ability to improve the self and change in ways that reflect increasing personal effectiveness and self-knowledge (Ryff & Singer, 2008). Rogers (1961) saw a fully functioning person as open to experience and continually developing rather than achieving a fixed state. Erikson (1959), too, emphasized continued growth through different life periods. The need to grow and develop is therefore central to optimal psychological functioning (Ryff, 1989).

*Positive relations with others*, as a dimension of psychological well-being, is derived from descriptions by many psychological theorists of the interpersonal realm and is a key feature necessary for healthy development (Ryff & Singer, 2008). The ability to have warm, trusting relationships with others and to identify with and be concerned about others is stressed as a necessary part of well-being (Ryff, 1989). For example, in his sixth and seventh stages of human development, Erikson (1959) emphasized forming close relationships with others (i.e., intimacy) and guiding and directing others (i.e., generativity) as necessary to adult development.

*Environmental mastery* is one's ability to choose or create an environment suitable to one's needs as well as the perceived ability to manipulate and control the immediate environment (Ryff, 1989). Jahoda (1958) defined this ability as key to mental health. One of Allport's (1961) criteria of maturity was the ability to participate in spheres beyond oneself. Life-span developmental theorists, such as Erikson (1959), emphasized the importance of the ability to manipulate and control one's environment as well as act on and change the surrounding world through various physical and mental activities. Thus, positive psychological functioning included active participation in and mastery of one's environment. This parallels constructs such as self-efficacy; however the emphasis on creating an environment suitable to one's personal capacities and needs is particular to environmental mastery (Ryff, 2013).

*Autonomy* emphasizes the regulation of behaviour from within (i.e., internal locus of control), independence, and self-determination, whereby one evaluates oneself according to personal standards and not the standards of others (Ryff, 1989). Maslow (1968) described self-actualizers as showing autonomous functioning and Jung (1933) highlighted a process of individuation in which one no longer subscribes to the collective laws, fears, and beliefs of others. Additionally, life-span developmental theorists, such as Erikson (1959), emphasized the process of turning inward during one's later years, which includes gaining freedom from everyday societal norms.

Ryff's (1989) model of PWB has been used in the areas of development and aging (e.g., Grossbaum & Bates, 2002), family experiences (e.g., Ahrens & Ryff, 2006), personality correlates (e.g., Gross & John, 2003), health and biological research (e.g., Schleicher et al., 2005), and clinical and intervention research (e.g., Keyes, 2002). For example, PWB is associated with better endocrine regulation, immunity, and cardiovascular function. Specifically,

lower levels of salivary cortisol, cardiovascular risk (i.e., lower waist-hip ratios, lower levels of glycosylated haemoglobin, and lower total/HDL cholesterol ratios), and pro-inflammatory cytokines (i.e., lower inflammation response to psychological stress) were observed in people with higher levels of PWB (see Chida & Steptoe, 2008 for a review; Ryff et al., 2006; Ryff, Singer, & Love, 2004). PWB is also related to optimal sleep patterns and lower levels of depressive and anxiety symptoms (Hamilton, Nelson, Stevens, & Kitzman, 2007). Moreover, adults with high levels of PWB and limited psychological distress had fewer chronic conditions (Keyes, 2005), and showed lower health care use and greater workplace productivity (Keyes & Grzywacz, 2005) than people with lower levels of PWB. PWB may therefore buffer (moderate) the development of negative outcomes across diverse contexts, including workplaces.

PWB is anticipated to be an important construct to consider within the JD-R model, which focuses on identifying the determinants of employee wellbeing, and considering the particular ways that these determinants either contribute to or undermine wellbeing. Work on the JD-R model has recently expanded to consider how personal resources might interact with workplace factors to influence employee wellbeing. A number of early studies suggest that in healthcare, a focus on existential personal resources is particularly important. For instance, coherence (a sense of meaning) and a sense of wellbeing despite adversity (e.g., hope, optimism, resilience) are existential themes, and these personal resources seem to buffer the effects of work demands on employee burnout in healthcare settings (Kalimo et al., 2003; Mäkikangas & Kinnunen, 2003; Tremblay & Messervey, 2011; van den Broeck et al., 2011). There is some evidence that such personal resources may also enhance the effects of work resources on employee engagement (Xanthopoulou et al., 2009). Given its origins in existential perspectives, PWB is anticipated to be helpful to extending the JD-R model (including newer considerations

related to personal resources) to healthcare contexts. The primary aim of the study discussed in the following three chapters is to further examine the potential role of PWB in determining nurse and NA wellbeing using the JD-R model.



## **Chapter 8: Methods**

As yet, there has been no research investigating the effect of a global measure of psychological wellbeing (PWB) as a potential personal resource that may influence burnout and work engagement, nor has PWB been examined in the LTC setting. Additionally, few studies have used the JD-R model to examine the effect of the work environment on employee wellbeing in LTC, particularly within the Canadian context. Therefore, the aim of this study is to further examine the role of personal resources, operationalized as PWB, in influencing the relationships between job demands and burnout, and job resources and work engagement, in the context of LTC. Specific research questions are as follows:

- 1) Do job demands predict burnout?
- 2) Do job resources predict work engagement?
- 3) Does PWB moderate the relationship between job demands and burnout?
- 4) Does PWB moderate the relationship between job resources and work engagement?
- 5) Which PWB factors predict burnout and which predict work engagement?

Other research questions can also be asked within the JD-R model, such as whether job resources moderate burnout. However, since the primary purpose of this thesis is to examine the potential moderating role of PWB, the focus is limited to those questions outlined above.

### **Ethics Statement**

Ethics approval was obtained from the University of Saskatchewan Behavioural Research Ethics Board (# 16-313) and operational approval was obtained from the Saskatoon Health Region (SHR).

## Participants

A convenience sample of 327 health-care workers, made up of nurses and Nursing Assistants (NAs) was recruited from 21 long-term care homes within Saskatoon. Inclusion criteria were (1) employment in a long-term care home as a nurse or NA and (2) the ability to complete a questionnaire in English. There were no exclusion criteria. Recruitment took place through personal contact with each care home with assistance from Saskatoon Health Region's Seniors' Health and Continuing Care unit. A presentation about the study was made at one of the monthly meeting of Directors of Care (DOCs), and follow-up emails were successful in recruiting each home represented at the meeting. Introductory emails were sent out to other care home DOCs who did not attend the meeting. When emails were not answered, personal visits were made to introduce the study to LTC homes. Ultimately, 23 homes were contacted; of these, two chose not to participate.

NAs comprised the majority of the sample ( $N = 214$ ), while nurses, comprising those registered nurses who had earned a Bachelor of Science degree in nursing, i.e. BSNs ( $N = 23$ ), other registered nurses who had earned diplomas, i.e. RNs ( $N = 46$ ), and licensed practical nurses, i.e. LPNs ( $N = 41$ ), made up 34% of the sample (three people chose not to disclose their status). Participants were between 21 and 70 years of age ( $M = 42.05$ ,  $SD = 12.61$ ), and had been employed for five months to 45 years ( $M = 11.6$  years,  $SD = 10.62$  years), or, within their current position, one month to 40 years ( $M = 6.5$  years,  $SD = 7.5$ ). Most employees worked on a full-time basis ( $N = 161$ ) on an eight-hour shift ( $N = 292$ ). Participants were almost exclusively female ( $N = 295$ ), and most were married or in a long-term relationship ( $N = 248$ ). Independent samples  $t$ -tests showed no statistically significant differences between nurses and NAs in levels of burnout ( $t[311] = -1.15$ ,  $p = .25$ ), work engagement ( $t[311] = -0.82$ ,  $p = .42$ ), job demands

( $t[311] = -1.51, p = .13$ ), job resources ( $t[311] = 1.81, p = .07$ ), or PWB ( $t[311] = .811, p = .42$ ). Additionally, no differences were seen between rural and urban settings in levels of burnout ( $t[314] = -0.35, p = .73$ ), work engagement ( $t[314] = 0.53, p = .60$ ), job demands ( $t[314] = 1.10, p = .27$ ), job resources ( $t[314] = -0.84, p = .40$ ), or PWB ( $t[314] = 0.17, p = .87$ ). Finally, no differences were observed between those employees who were either married or in long-term partnerships and those who were not, in levels of burnout ( $t[308] = -0.49, p = .62$ ), work engagement ( $t[308] = -0.71, p = .48$ ), job demands ( $t[308] = -0.98, p = .33$ ), job resources ( $t[308] = 0.46, p = .64$ ), or PWB ( $t[308] = 0.32, p = .75$ ).

## **Procedures**

Paper questionnaires were delivered to individual homes, together with a sealed drop box in which participants placed their completed questionnaire. A consent form that outlined the purpose, the potential benefits and risks of the study, identification of the researchers, contact information, and an explanation of anonymity and voluntary participation was attached to the questionnaire. In the first nine homes, the study was explained to the DOC, who then passed the information on to nurses and NAs. As this resulted in a very low return rate (per home  $N = 3-15$ , representing 3-4% of nurse and NA staff), permission was requested from the DOCs in other homes to address staff members directly in order to explain the study and request participation. The response rate from these homes was higher (per home  $N = 17-78$ , or approximately 30%). The questionnaires and drop boxes were left in each home for approximately three weeks. Data collection began in October 2016 and ended in April 2017.

## **Measures**

**Oldenburg Burnout Inventory.** The Oldenburg Burnout Inventory (OLBI; Demerouti et al., 2001; Demerouti & Bakker, 2008; see Appendix B for the questionnaire) consists of 16 items

that assess burnout, distributed across two subscales. The exhaustion subscale refers to physical, cognitive, and emotional exhaustion, such as a general feeling of emptiness and a strong need for rest. Examples of questions include, “After my work, I usually feel worn out and weary” and “During my work, I often feel emotionally drained.” The disengagement subscale refers to distancing from work in general, work content, and the work object, as well as the level of identification with work and willingness to continue with the work. Examples include “It happens more and more that I talk about my work in a negative way” and “Lately, I tend to think less at work and do my job almost mechanically.” Each subscale contains four negatively worded items and four positively worded items that are reverse-scored. Each item is rated using a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Items on each subscale were summed separately, with higher scores reflecting higher levels of each dimension.

The OLBI shows acceptable internal consistency, with Cronbach’s alpha scores ranging between .74 - .87 in different samples (Halbesleben & Demerouti, 2005). In a test-retest reliability study over a period of four months, the OLBI scores on corresponding subscales (e.g., time 1 exhaustion and time 2 exhaustion) were moderately correlated (exhaustion:  $r = .51$ , disengagement:  $r = .34$ ) and the correlations between non-corresponding subscales (e.g., time 1 disengagement with time 2 exhaustion) were not significant (Halbesleben & Demerouti, 2005). These test-retest reliability scores are similar to those found for the MBI (Taris, Le Blanc, Schaufeli, & Schreurs, 2005).

Halbesleben and Demerouti (2005) compared three models to test the factorial validity of the scale: a two-factor model of exhaustion and disengagement, factors specified by the wording (positive and negative) of the items, and a unidimensional model in which all items loaded onto one factor. Not only was the two-factor model the best fit to the data, it was the only one of

statistical significance and thus supports the measurement factors of exhaustion and disengagement. This confirmed the original factor analysis showing a two-factor model of the burnout construct (Demerouti et al., 2000).

Convergent and discriminant validity of the subscales was assessed through comparison with the subscales of the Belastung, Monotonie, Sattigung (BMS), a valid and reliable German measure assessing short-term work stress-reactions (i.e., load, monotony, and saturation; the latter referring to a state of high irritability and reluctance to continue work tasks) (Demerouti et al., 2000). Further evidence was found through comparisons between the OLBI and the MBI-General Survey, showing they are related but independent measures of burnout (Halbesleben & Demerouti, 2005).

**Utrecht Work Engagement Scale.** The Utrecht Work Engagement Scale (UWES; Schaufeli & Bakker, 2004b; Schaufeli, Salanova, González-Romá & Bakker, 2002) consists of 17 items measuring the work engagement subscales of vigor (e.g., At my work, I feel bursting with energy), dedication (e.g., I am enthusiastic about my job), and absorption (e.g., I get carried away when I'm working). Each item is rated using a 7-point scale ranging from 0 (never) to 6 (always). Items on each subscale were summed separately, with higher scores reflecting higher levels of each dimension.

The UWES showed acceptable internal consistency estimates, with initial Cronbach's alpha scores for vigour,  $\alpha = .78$ , dedication,  $\alpha = .89$ , and absorption,  $\alpha = .72$  (Schaufeli, Salanova, González-Romá & Bakker, 2002). Confirmatory factor analysis in several studies showed that the three-factor structure was a superior fit to the data than a one-factor model; however, the dimensions were closely related with correlations usually exceeding .65 (Schaufeli & Bakker, 2004b). Divergent validity was assessed through comparison with the MBI (Schaufeli

& Bakker, 2004b). The three dimensions of engagement were negatively related to the three dimensions of burnout on the MBI; however lack of professional efficacy, rather than exhaustion and depersonalisation, was the most strongly related to engagement. The authors suggest this could be due to the possibility that being engaged at work can lead to feeling of efficacy.

A shortened version of nine items, created to reduce respondent burden, was selected for use in this study (Schaufeli, Bakker, & Salanova, 2006; see Appendix C for the questionnaire). Internal consistency estimates for the subscales were: vigour,  $\alpha = .77$ , dedication,  $\alpha = .85$ , and absorption,  $\alpha = .78$ . Correlations between the original scale and the shortened scale were high for each dimension: vigour,  $r = .91$ , dedication,  $r = .96$ , and absorption,  $r = .92$ . In comparisons with the MBI, vigour was negatively related to exhaustion,  $r = -.40$  and dedication was negatively related to depersonalisation,  $r = -.50$ .

**Questionnaire on the Experience and Evaluation of Work 2.0.** The Questionnaire on the Experience and Evaluation of Work 2.0 (QEEW; van Veldhoven, Prins, van der Laken, & Dijkstra, 2015; see Appendix D for the questionnaire) is a set of brief survey scales that cover human functioning in organizations. The QEEW was created in 1994 in the Netherlands from a facet analysis of existing instruments on job stress and psychosocial workload to aid in research on health and well-being in the workplace. The QEEW 2.0 is an updated version of the QEEW, created in 2005, that combined health and safety surveys with the original surveys of the evaluation of job demands and resources, psychological workload and job stress. Five subscales of the QEEW 2.0 were used to assess four job demands, i.e., emotional load, role conflict, role ambiguity, and workload (the two subscales “pace and amount of work” and “mental demands” were combined to form one “workload” subscale). Four additional subscales of the QEEW 2.0

were used to assess four job resources, i.e., autonomy, participation, relationship with one’s supervisor, and relationship with one’s colleagues (see Table 1).

Mokken analysis was used to construct and test the scales of the QEEW 2.0. Internal consistency was reported in terms of Rho. A reliable scale should have Rho values above .80 and values above .60 are seen as low but acceptable. Unidimensionality, being the extent to which the items in a scale measure only one construct, is indicated by the H(t) value. H(t) values should be at least .40 for a reliable scale. Each item is rated using a 4-point scale ranging from 1 (never) to 4 (always). Items on each subscale were summed separately, with higher scores reflecting higher levels of each dimension.

Table 1  
*Subscales of Job Demands and Job Resources*

Construct	QEEW subscale	Rho	H(t)	Sample Question
Workload	Pace & Amount of Work	.86	.59	Do you find that you are behind in your work activities?
	Mental Workload	.81	.55	Do you have to give continuous attention to your work?
Emotion load	Emotional Workload	.80	.50	Does your work put you in emotionally upsetting situations?
Role conflict	Role Conflict	.72	.45	Do you receive contradictory instructions?
Role ambiguity	Role Clarity	.83	.61	Do you know exactly what other people expect of you in your work?
Autonomy	Job Autonomy	.86	.65	Do you have freedom in carrying out your work activities?
Participation	Participation	.81	.55	Can you participate in decisions affecting issues related to your work?
Relationship with Supervisor	Relationship with Supervisor	.87	.60	If necessary, can you ask your supervisor for help?
Relationship with colleagues	Relationship with colleagues	.81	.46	If necessary, can you ask your colleagues for help?

**Ryff Scales of Psychological Well-Being.** The Ryff Scales of Psychological Well-Being (SPWB; Ryff, 1989; see Appendix E for the questionnaire) contains 20 items for each subscale of self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, and autonomy. With respect to convergent and divergent validity, the measure is significantly and positively correlated with other measures of positive function, including affect balance, life satisfaction, self-esteem, morale, and internal control, with coefficients ranging between .25 (personal growth and affect balance) to .73 (self-acceptance and life satisfaction) (Ryff, 1989). The scale bears negative correlations to measures of negative function, including perceived vulnerability to chance control, perceived vulnerability to powerful others, and depression ( $r = -.30$  to  $-.60$ ; Ryff, 1989). Intercorrelations between subscales are positive, with coefficients ranging between .32 to .76, supporting the construct validity of the scale as a unified measure of the construct PWB (Ryff, 1989). Subscales with higher intercorrelations (e.g., purpose in life and self-acceptance;  $r = .72$ ) have been assessed by the authors to ensure the scales are not measuring the same underlying construct (Ryff, 1989). In these tests, scale items bore higher correlations to other items within the same scale than to items within scales with high intercorrelations, justifying their differentiation. Moreover, each scale showed a distinct pattern of relationships to other measures; for example, purpose in life showed lower correlations with affect balance, life satisfaction, and self-esteem than did self-acceptance. Additionally, factor analyses showed that each dimension loaded on different factors of well-being. Ryff therefore concluded that although the subscales are related, there is evidence that they measure different dimensions of PWB.

A shortened version of 7 items per subscale was created to reduce respondent burden in completing a lengthy measure (Morozink, Friedman, Coe, & Ryff, 2010) and was selected for



use in this study. Internal consistency for these subscales ranged from .69 to .85 (Morozink et al., 2010). Examples of questions include: “My decisions are not usually influenced by what everyone else is doing” (Autonomy), “I often feel overwhelmed by my responsibilities” (Environmental Mastery), “For me, life has been a continuous process of learning, changing, and growth” (Personal Growth), “Maintaining close relationships has been difficult and frustrating for me” (Positive Relations with Others), “I don’t have a good sense of what it is I’m trying to accomplish in life” (Purpose in Life), and “In general, I feel confident and positive about myself” (Self-Acceptance). Each item is rated using a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Subscale scores represent the sum of item ratings within each subscale, with higher scores reflecting higher levels of each well-being dimension.

**Demographic Questionnaire.** A demographic questionnaire (see Appendix F) was designed for this study to gather information relating to gender, age, marital status, job title<sup>2</sup>, level of education, employment status, length of time in present position, and length of time working in long-term care. Age is the demographic variable most consistently related to burnout, with the level of burnout generally higher in younger employees (Duffy et al., 2009; Maslach et al., 2001; Rupert & Morgan, 2005). This may point to a survival bias, where those who burn out early are more likely to leave their careers and those who survive will consequently display lower levels of burnout (Maslach et al., 2001). Experience (i.e., years of work) is also negatively related to emotional exhaustion and depersonalization (Wilkerson & Bellini, 2006). Nevertheless, other studies have found no effect of demographic characteristics (Chamberlain et al., 2016; Kennedy, 2005; Payne, 2001; Squires et al., 2015).

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<sup>2</sup> Although a distinction was made between BSN and RN, a BSN who is licenced to practice is an RN. The difference between the two is the level of education received, with BSNs having completed a Bachelor’s degree from an accredited university as well as undergoing training in management, leadership, and administration.

## **Hypotheses**

The following four hypotheses follow from Research Questions 1 to 4 (presented at the outset of this chapter):

- 1) Job demands (i.e., workload, emotional load, role conflict, and role ambiguity) predict burnout. Rationale: Previous work, mostly outside LTC, suggests that job demands are associated with burnout.
- 2) Job resources (i.e., autonomy, participation, relationship with one's supervisor, and relationship with one's colleagues) predict work engagement. Rationale: Previous work, mostly outside LTC, suggests that job resources are associated with work engagement.
- 3) Psychological well-being moderates the relationship between job demands and burnout; i.e., the relationship between job demands and burnout is weaker when psychological well-being is higher. Rationale: Previous work on PWB suggests a protective effect during adverse situations. As such, PWB may moderate the relationship between job demands and burnout.
- 4) Psychological well-being moderates the relationship between job resources and work engagement; i.e., the relationship between job resources and work engagement is stronger when PWB is higher. Rationale: Personal resources such as proactive coping and self-efficacy are known to moderate the relationship between job resources and work engagement. Due to construct overlap, it is expected that PWB may have a similar moderating role.

## **Analyses**

To prepare the data for analysis, frequency tables were generated to confirm that no data were outside the range of possible responses (i.e., incorrectly entered). Assumptions for

regression (i.e., normality, linearity homoscedasticity, and multicollinearity) were checked prior to analysis. Linearity and homoscedasticity were checked through scatterplots of standardized residuals against the standardized predicted values, and normality was checked by comparing the mean and trimmed mean of each variable. These assumptions were met. No multicollinearity was observed between the variables of burnout, work engagement, job demands, job resources, or PWB. Finally, the data met the assumption of independent errors (Durbin-Watson value = 1.87). Outliers were identified and missing data were tested for missing at randomness. Multiple imputation (MI; Rubin, 1987) was used to replace the missing data where appropriate. Cronbach's alpha scores were calculated for all measures. Data were analyzed using IBM SPSS Statistics for Windows, version 20 (IBM Corp.) statistical software package.

As the job demands subscales of workload, emotion load, role ambiguity, and role conflict, and the job resources subscales of job autonomy, relationship with supervisor, and relationship with colleagues were selected from a larger questionnaire, principal component analyses (PCA) with varimax rotation were conducted to ensure that these subscales could be summed to create two overall scales of job demands and job resources. To check factor loadings, an exploratory factor analysis (EFA) using principal axis factoring and direct oblimin rotation was conducted on all eight subscales. Tucker's Coefficient of Congruence (TCC) was calculated to ensure congruency between the subsamples. These preliminary analyses were necessary to answer the Research Questions and to test the corresponding Hypotheses.

To test Hypothesis 1, that job demands predict burnout, a simultaneous multiple regression of burnout on job demands was conducted. The same approach was used to test Hypothesis 2, that job resources predict work engagement. Simultaneous entry was preferred to hierarchical regression as there was no theory to inform a particular order of entry of predictor

variables in a hierarchical regression. Without such a theoretical/empirical base, there is a danger that hierarchical regression can over- or under-estimate the variance accounted for by each variable (Keith, 2014). In addition, simultaneous entry shows both the overall effect of all predictor variables on the outcome variable as well as the effect of each individual variable (Keith, 2014), whereas with hierarchical techniques, the statistical significance of each variable depends on the order of entry.

Hypothesis 3 was that PWB moderated the relationship between job demands and burnout. A variable,  $M$ , is said to moderate the effect of  $X$  on  $Y$  if it affects the direction and/or the strength of the relationship between the two variables, thereby changing the causal relationship between  $X$  and  $Y$  as a function of  $M$  (Baron & Kenny, 1986). Baron and Kenny explain that in a moderating relationship, there are three causal paths that contribute to an outcome,  $Y$ : the path of the predictor variable,  $X$  (path  $a$ ), the path of the moderator variable,  $M$  (path  $b$ ), and the path representing the interaction between the predictor and moderator variables (path  $c$ ). A variable is deemed to have a moderating effect if the interaction of the predictor and the moderator ( $X$  and  $M$ ), represented by path  $c$ , explains a statistically significant amount of variance in the outcome variable (Preacher, Curran, & Bauer, 2006). An interaction is said to occur when the effect of one predictor variable (i.e., job demands) on an outcome variable (i.e., burnout) varies as a function of a second predictor variable (i.e., PWB). Main effects, represented by paths  $a$  and  $b$ , may also be statistically significant; however, these are not directly relevant to moderation analyses. To test Hypothesis 3, a moderation analysis was conducted using the SPSS add-on program PROCESS (Hayes, 2013), testing the main effects of job demands and PWB, as well as the interaction effect of job demands and PWB on burnout. The

same approach was used to test Hypothesis 4, that PWB moderates the relationship between job resources and work engagement.

Beyond evaluating these four hypotheses, an additional goal of this study, corresponding to Research Question 5 at the outset of this chapter, was to examine which facets of PWB predicted burnout and work engagement. To do this, two simultaneous multiple regression analyses were performed: in the first, burnout was regressed on the subscales of PWB, and in the second, work engagement was regressed on the on the subscales of PWB.

## Chapter 9: Results

### Evaluating the Suitability of the Data for the Planned Analyses

The rate of missing data was calculated and deemed low (1.32%); however, the number of missing cases resulting from occasional missing item responses was relatively high (19.27%). Little's MCAR test was performed to check whether data were missing completely at random (MCAR), as opposed to missing at random (MAR), which means that the probability of missingness depends on other variables within the dataset, and as opposed to missing not at random (MNAR), which means that the values of the missing variables are related to the reasons for the data being missing. The test performed showed that data were MCAR. Such data can be safely left out of the analysis without biasing results; however, multiple imputation is also a suitable alternative. Therefore, multiple imputation with five imputations was used to replace the missing data. Multiple imputation estimates missing values from observed data together with an amount of random noise to preserve variability in the data (Barnard & Rubin, 1999), and is preferred over other data replacement techniques as it provides a less biased result than other methods, accounts for random fluctuations, and provides accurate standard errors, thereby allowing accurate conclusions using inferential methods (Schlomer, Bauman, & Card, 2010).

Outliers were identified using Mahalanobis distance and Cook's D, and removed from the analyses. Means and bivariate correlations were calculated for each scale score (see Table 2). In order to estimate internal consistency, Cronbach's alpha scores were calculated for the OLBI ( $\alpha = .80$ ; CI = .761 - .826), the UWES ( $\alpha = .92$ ; CI = .905 - .932), the job demands scale ( $\alpha = .91$ ; CI = .891 - .920), the job resources scale ( $\alpha = .85$ ; CI = .826 - .873), and the SPWB ( $\alpha = .90$ ; CI = .875 - .910). All scales showed acceptable results.

Table 2  
*Means and Bivariate Correlations of Scale Scores*

Scale	Mean (SD)	Potential Score Range	1	2	3	4	5
OLBI	39.6 (8.3)	16-64	1				
UWES	35.7 (10.2)	0-54	-.63**	1			
Job Demands	39.8 (8.8)	15-60	.61**	-.45**	1		
Job Resources	65.0 (9.9)	24-96	-.40*	.49**	-.33**	1	
SPWB	191.9 (13.8)	42-252	-.34**	.35**	-.08**	.33**	1

*Note.* OLBI = Oldenburg Burnout Inventory; UWES = Utrecht Work Engagement Scale; SPWB = Ryff's Scales of Psychological Well-Being  
 \*\*  $p < .01$ .

### **Factor Analyses: Creating Single Measures of Job Demands and Job Resources**

To reduce the number of variables to model, a single measure of job demands and a single measure of job resources was created. To do this, principal component analyses (PCA) with varimax rotation were conducted. For the job demands scale, two subsamples representing approximately 50% of the entire sample were randomly selected and the PCA run on both subsamples to ensure replicability. To check for the suitability of these data for PCA, diagnostic tests were conducted. For the first subsample (N = 157), Bartlett's test of Sphericity was statistically significant,  $p < .0001$ , the KMO test result was .718, and the determinant was .314. The Bartlett's test indicates that the R matrix is not an identity matrix where an item is related to itself but not others; the KMO test was interpreted as mediocre, showing that partial correlations between items may be slightly too high; and the determinant was higher than the cut-off point of .00001, showing that the data are singular. For the second subsample (N = 170), Bartlett's test of Sphericity was significant,  $p < .0001$ ; KMO = .661; determinant = .527, and the interpretation of

these results is the same as for the first subsample. In order to assess component loadings, Parallel Analysis (PA) and the Minimum Average Partial Procedure (MAP) were conducted. Results suggested a two component loading; thus, PCA using varimax rotation was conducted, and a two-component solution was forced. For the first subsample, workload, emotion load, and role conflict had high, positive loadings on component one, ranging from .834 to .870; however, unexpectedly, role ambiguity had a low loading of .018 but a high loading of .993 on component two (see Table 3). For the second subsample, workload, emotion load, and role conflict had high, positive loadings on component one, ranging from .802 to .851, and role ambiguity showed a low loading of .007 but a high loading of .990 on component two (see Table 4). Component one had an eigenvalue of 2.25 and accounted for 56.2% of the variance. Component two had an eigenvalue of 1.0 and accounted for a further 25.2% of the variance.

Table 3  
*Component Loadings for Principal Component Analysis with Varimax Rotation of Job Demands Subscales: Subsample 1*

Scale	Component 1	Component 2
Workload	.834	.081
Emotion Load	.870	.092
Role conflict	.837	-.135
Role ambiguity	.018	.993



Table 4

*Component Loadings for Principal Component Analysis with Varimax Rotation of Job Demands Subscales: Subsample 2*

Scale	Component 1	Component 2
Workload	.802	.102
Emotion Load	.851	.016
Role conflict	.807	-.125
Role ambiguity	.007	.990

The procedure of creating two subsamples was repeated for the job resources scale. For the first subsample (N = 158), the diagnostic test of Bartlett's test of Sphericity was significant,  $p < .0001$ , KMO = .691, and determinant = .414. The KMO test was again interpreted as mediocre, showing that partial correlations between items may be slightly too high. The PA and MAP tests suggested a one-component loading, thus, PCA was conducted with a forced one-component solution. Job autonomy, relationship with supervisor, relationship with colleagues, and participation had high, positive loadings, ranging from .667 to .800 (see Table 5). For the second subsample (N = 162), Bartlett's test of Sphericity was significant,  $p < .0001$ , KMO = .706, and determinant = .337, showing that the data are singular. The one-component solution PCA showed that job autonomy, relationship with supervisor, relationship with colleagues, and participation had high, positive loadings, ranging from .682 to .836 (see Table 6). This component had an eigenvalue of 2.22 and accounted for 55.4% of the variance.

Table 5

*Component Loadings for Principal Component Analysis with Varimax Rotation of Job Resources Subscales: Subsample 1*

Scale	Component 1
Job Autonomy	.667
Participation	.799
Relationship with supervisor	.800
Relationship with colleagues	.690

Table 6

*Component Loadings for Principal Component Analysis with Varimax Rotation of Job Resources Subscales: Subsample 2*

Scale	Component 1
Job Autonomy	.685
Participation	.817
Relationship with supervisor	.836
Relationship with colleagues	.682

As role ambiguity could not be considered a job demand based on the PCA, an exploratory factor analysis (EFA) using principal axis factoring and direct oblimin rotation was conducted on all eight subscales. EFA is data-driven rather than theory-driven and so was considered the most suitable method of analysis. Principal axis factoring is considered more robust than the alternative method of ML Estimation as it does not require an assumption of normality of data. Again, two subsamples of approximately 50% of the entire sample were randomly selected and the EFA run on both subsamples to ensure replicability. As this created two small samples, a further EFA was conducted on the sample as a whole. For the first subsample, the diagnostic test of Bartlett's test of Sphericity was significant,  $p < .0001$ , KMO

test = .797, and determinant = .087. The KMO test was interpreted as middling, showing that partial correlations between items may be slightly too high. For the second subsample, Bartlett's test of Sphericity was significant,  $p < .0001$ , KMO test = .735, and determinant = .109. For the total sample, Bartlett's test of Sphericity was significant,  $p < .0001$ , KMO = .766, and determinant = .111. The PA test suggested a two-factor solution; thus, a forced two-factor solution EFA was conducted. Results showed that job autonomy, relationship with supervisor, relationship with colleagues, participation, and role ambiguity loaded on factor one, ranging from .419 to .627, whereas workload, emotion load, and role conflict loaded on factor two, ranging from .651 to .919. For the second subsample, job autonomy, relationship with supervisor, relationship with colleagues, participation, and role ambiguity loaded on factor one, ranging from .446 to .657, and workload, emotion load, and role conflict loaded on factor two, ranging from .681 to .869.

Tucker's Coefficient of Congruence (TCC) was calculated to ensure congruency between the subsamples. For factor one (job resources), TCC = .99 and for factor two (job demands), TCC = .96. As both coefficient values are above .95, the factor loadings may be said to be congruent. As a further check on the factor loadings, the total sample was analysed. Job autonomy, relationship with supervisor, relationship with colleagues, participation, and role ambiguity loaded on factor one, ranging from .428 to .657, and workload, emotion load, and role conflict loaded on factor two, ranging from .671 to .829 (see Table 7). Factor one had an eigenvalue of 3.05 and accounted for 38.1% of the variance. Factor two had an eigenvalue of 1.59 and accounted for a further 19.8% of the variance.

Table 7

*Factor Loadings for Exploratory Factor Analysis with Direct Oblimin Rotation of Job Demands and Job Resources Subscales*

Scale	Factor 1	Factor 2
Workload	-.080	.671
Emotion Load	.137	.829
Role conflict	-.177	.701
Role ambiguity	.428	.135
Job Autonomy	.562	-.143
Participation	.657	-.209
Relationship with supervisor	.664	-.127
Relationship with colleagues	.542	-.038

To summarize, results of the EFA showed that role ambiguity did not load onto the job demands factor; therefore, it was reclassified as a job resource (and hereafter is referenced as role clarity). Thus, the final job resources scale comprised job autonomy, relationship with supervisor, relationship with colleagues, participation, and role clarity (38.1% of variance explained) and the final job demands scale comprised workload, emotion load, and role conflict (19.8% of variance explained). As the job demands and job resources scale were made up of subscales with unequal numbers of items (e.g., the *workload* subscale has six questions whereas the *emotion load* subscale has five questions), the subscales were standardized by dividing the total score by the number of items in that subscale. The standardized subscale totals were then added to create a standardized total scale score. All other scales had equal numbers of items in each subscale so did not require standardization.

## Research Question 1: Do Job Demands Predict Burnout?

In order to test whether job demands are associated with burnout (Hypothesis 1), a simultaneous multiple regression was conducted. Simultaneous entry techniques enter all predictor variables into the model simultaneously; thus, the researcher makes no decision about the order of entry, thereby having no effect on the influence of one predictor variable over another.

In the first simultaneous regression, burnout was regressed on the job demands of workload, emotional workload, and role conflict, and in the second, work engagement was regressed on the job resources of autonomy, participation, relationship with supervisor, relationship with colleagues, and role clarity. As the demographic variables of age, marital status, education level, and career stage have previously been shown to correlate to burnout levels, Pearson's product-moment correlations between these variables and burnout and work engagement were also calculated to assess potential relevance for inclusion in the regression model. There were no statistically significant correlations; therefore, these variables were not included in the regression.

Using the original simultaneous regression model, predictor variables of workload, role conflict, and emotional workload explained 38.3% of the total variance ( $F [3, 312] = 64.4, p < .0001, R^2 = .383, R^2_{Adjusted} = .377$ ). Semi-partial correlations were inspected to determine the unique variance in the outcome variable that is accounted for by each predictor (Abdi, 2007). In this regression model, each predictor uniquely explained a statistically significant amount of variance in burnout (see Table 8). Specifically, workload uniquely accounted for 5.7% of the variance in burnout ( $r^2_{y(WL,EL,RC)} = .057, p < .0001$ ), role conflict accounted for 4.0% ( $r^2_{y(RC,WL,EL)} = .040, p < .0001$ ), and emotion load accounted for 1.5% of the variance in burnout ( $r^2_{(EL,WL,RC)}$

= .015,  $p = .006$ ). Inspection of the standardized beta coefficients reveal that workload ( $\beta = .298$ ;  $t = 13.0$ ,  $p < .0001$ ), role conflict ( $\beta = .262$ ;  $t = 11.4$ ,  $p < .0001$ ), and emotion load ( $\beta = .168$ ;  $t = 7.1$ ,  $p < .0001$ ) were positively associated with burnout (i.e., the greater the level of each predictor, the greater the level of burnout).

Table 8  
*Simultaneous Entry Regression of Job Demands on Burnout*

Variable	Zero-order correlation	sr	B (Std. Error)
Workload	.53	.23	3.43 (.7)***
Role Conflict	.52	.20	3.16 (.3)***
Emotion Load	.49	.13	3.13 (.3)***

Note.\*\*\*  $p < .0001$

### Research Question 2: Do Job Resources Predict Work Engagement?

In order to test Hypothesis 2, that job resources are associated with work engagement, the predictor variables of job autonomy, relationship with supervisor, participation, relationship with colleagues, and role clarity were regressed on work engagement using simultaneous regression, after first ruling out the potential utility of adding demographic variables to the model. In this regression model, job resources explained 26.7% of the total variance in work engagement scores ( $F [5, 310] = 22.6$ ,  $p < .0001$ ;  $R^2 = .267$ ,  $R^2_{Adjusted} = .255$ ). Four predictors uniquely explained a statistically significant amount of variance in work engagement (see Table 9). Specifically, job autonomy uniquely accounted for 4.2% of the variance ( $r^2_{y(JA,RC,RS,P)} = .042$ ,  $p < .0001$ ), relationship with colleagues accounted for 2.3% ( $r^2_{y(RC,JA,RS,P)} = .023$ ,  $p = .002$ ), relationship with supervisor accounted for 1% ( $r^2_{y(RS,JA,RC,P)} = .010$ ,  $p = .04$ ), and participation accounted for 0.9% ( $r^2_{y(P,JA,RC,RS)} = .009$ ,  $p = .048$ ). Role clarity did not account for a statistically significant proportion of variance in work engagement. Standardized beta coefficients revealed

that job autonomy ( $\beta = .250$ ;  $t = 11.1$ ,  $p < .0001$ ), relationship with colleagues ( $\beta = .169$ ;  $t = 7.8$ ,  $p < .0001$ ), relationship with supervisor ( $\beta = .135$ ;  $t = 5.3$ ,  $p < .0001$ ), participation ( $\beta = .125$ ;  $t = 4.8$ ,  $p < .0001$ ), and role clarity ( $\beta = .041$ ;  $t = 2.0$ ,  $p = .046$ ) were positively associated with work engagement. Thus, the greater the level of each predictor, the greater the level of work engagement.

Table 9  
*Simultaneous Entry Regression of Job Resources on Work Engagement*

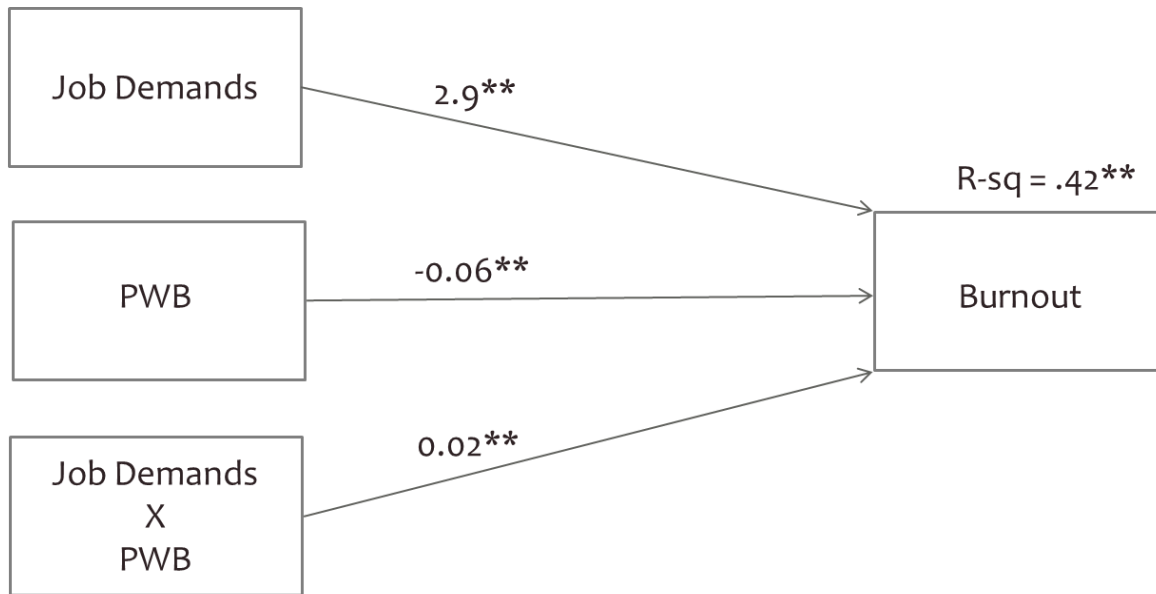
Variable	Zero-order correlation	sr	B (Std. Error)
Job Autonomy	.42	.22	4.0 (.4)***
Participation	.38	.11	1.7 (.4)***
Relationship with supervisor	.37	.10	3.0 (.6)***
Relationship with colleagues	.35	.15	4.5 (.6)***
Role Ambiguity	.21	.04	.75 (.4)*

Note.\*\*\*  $p < .0001$ ; \* $p < .05$

### Research Question 3: PWB as a Moderator of Burnout

To test Hypothesis 3, whether PWB moderates the relationship between job demands (predictor variable) and burnout (outcome variable; see Figure 3), a moderation analysis was conducted using the SPSS add-on program PROCESS (Hayes, 2013). The model explained a statistically significant 42% of variance in burnout scores,  $F(3,312) = 76.4$ ,  $p < .0001$ ,  $R^2 = .419$ . The main effects of job demands ( $b = 2.91$ ,  $t(312) = 13.94$ ,  $p < .0001$ , CI = 2.5 to 3.3) and PWB ( $b = -0.06$ ,  $t(312) = -4.3$ ,  $p < .0001$ , CI = -0.09 to -0.03) on burnout were both statistically significant. The interaction of Job Demands x PWB was also significant ( $b = 0.02$ ,  $t[312] = 2.5$ ,  $p = .012$ , CI = 0.004 to 0.031), indicating that PWB moderates the relationship between job demands and burnout. Specifically, as levels of PWB decrease, the effect of job demands on

level of burnout increases. The variance uniquely attributable to the moderation of job demands by PWB on burnout is 0.9% ( $R^2$  change = .009,  $F [1, 312] = 6.36, p = .01$ ).



Note. \*\*  $p < .0001$

*Figure 3.* Illustration of a regression of job demands, psychological wellbeing, and their interaction on burnout.

Note: Unstandardized beta coefficients are reported above each path. The overall model effect size ( $R^2$ ) is also reported.

Once moderation has been established, it is necessary to probe this relationship to better understand how the relationship between the predictor and outcome variables changes across levels of the moderator variable. There are two main approaches to evaluating the effect of the interaction: the simple slopes technique and the Johnson-Neyman (J-N) technique. Simple slopes analysis (or the “pick-a-point” approach; Bauer & Curran, 2005; Rogosa, 1980) involves testing the conditional effect of the predictor variable at particular levels of the moderator variable, for example, low, medium, and high (see Figure 4). These conditional effect estimates are known as



simple slopes (Bauer & Curran, 2005). This technique requires a small number of moderator variable values to be selected, usually arbitrarily, to evaluate the conditional effect of the predictor variable on the outcome variable. Researchers typically rely on conventional approaches to select moderator values, such as using the mean plus and minus one standard deviation to represent low, medium, and high values of the moderator variable (Hayes, 2013). Use of this technique showed no differences in the conditional effect of job demands on burnout at low ( $b = 2.49, SE = 0.1, p < .0001$ ), moderate ( $b = 2.9, SE = 0.08, p < .0001$ ), and high ( $b = 3.31, SE = 0.1, p < .0001$ ) levels of PWB. The second approach, the J-N technique, eliminates the arbitrariness of value selection by identifying the point at which the relationship between the predictor and outcome variable changes from being non-significant to statistically significant, or vice versa (Hayes, 2013). The J-N test confirmed the simple slopes analysis results, as it showed no statistically significant transition points. Thus, the moderating effect of PWB on the relationship between job demands and burnout is significant at all levels of PWB.

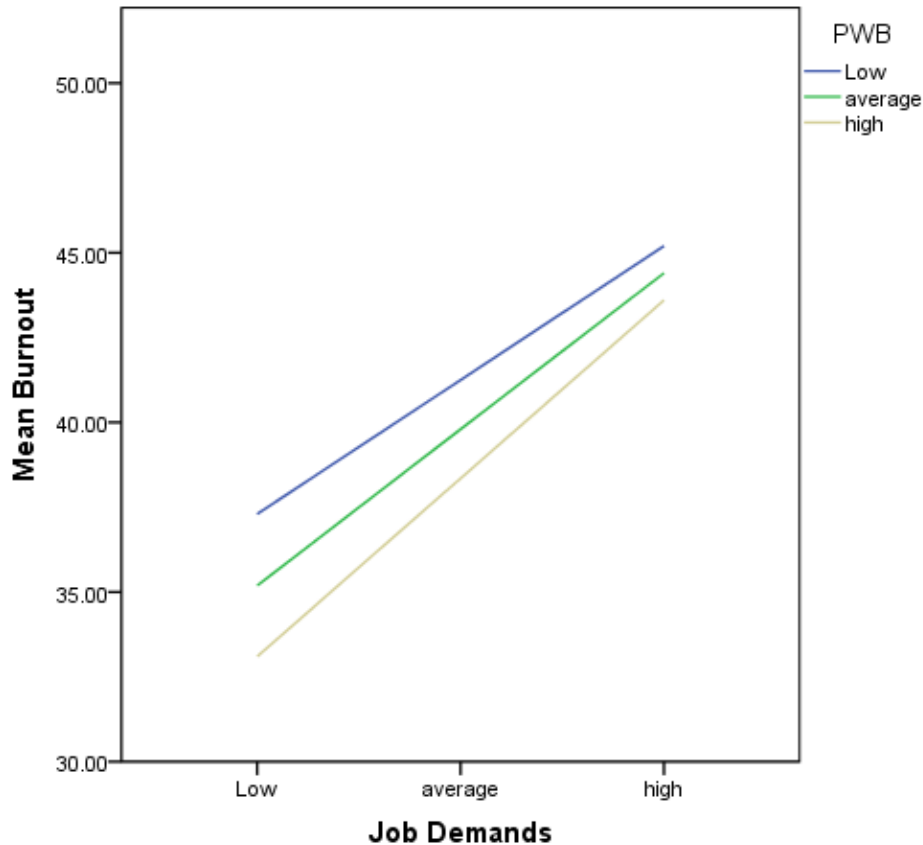


Figure 4. Effect of Low, Average, and High Levels of PWB on the Association between Job Demands and Burnout

#### Research Question 4: PWB as a Moderator of Work engagement

Research Question 4 asks, “Does PWB moderate (i.e., enhance) the relationship between job resources and work engagement?” To test Hypothesis 4, that PWB moderates the relationship between job resources (predictor variable) and work engagement (outcome variable), a further moderation analysis was conducted using PROCESS. The main effects of job resources ( $b = 2.39, t(312) = 8.82, p < .0001$ ) and PWB ( $b = 0.08, t(312) = 3.03, p = .003$ ) were both statistically significant. The interaction term Job Resources x PWB was statistically non-significant ( $t[312] = -0.07, p > .05$ ), indicating that PWB does not moderate the relationship between job resources and work engagement. The full model, including main effects and the

interaction term, accounted for approximately 27% of the variance in burnout ( $F(3,312) = 49.16$ ,  $p < .0001$ ,  $R^2 = .277$ ).

### Research Question 5: Facets of PWB as Predictors of Burnout and Work Engagement

Research Question 5 asks, “Which PWB factors predict burnout and which predict work engagement?” This question is exploratory in nature as there is no previous literature to guide expectations about the results; thus, there are no corresponding hypotheses. In order to test which subscales of PWB (i.e., self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, and autonomy) predict burnout and work engagement, two simultaneous multiple regression analyses were performed. In the first, burnout was regressed on the subscales of PWB, and in the second, work engagement was regressed on the on the subscales of PWB. Correlations among the subscales were all statistically significant and ranged from  $r = .33$  to  $r = .70$ ,  $p < .01$  (see Table 10).

Table 10  
*Cronbach’s Alpha Scores and Bivariate Correlations of Subscales of Psychological Well-Being*

PWB Subscale	Cronbach’s Alpha (CI)	1	2	3	4	5	6
1. Autonomy	.65 (.58-.70)	1					
2. Environmental Mastery	.65 (.58-.70)	.53*	1				
3. Personal Growth	.60 (.53-.67)	.42*	.47*	1			
4. Positive Relations	.71 (.66-.76)	.33*	.59*	.53*	1		
5. Purpose In Life	.58 (.51-.65)	.39*	.58*	.55*	.56*	1	
6. Self-Acceptance	.74 (.70-.78)	.48*	.66*	.67*	.70*	.60*	1

Note. \* $p < .01$

To ensure the suitability of PWB factors for regression analysis, Cronbach's alpha was calculated for each subscale. Alpha values ranged from .58 to .74, and only subscales with alpha values above .70 were retained for analysis. Four subscales, Environmental Mastery, Autonomy, Personal Growth, and Purpose in Life, were discarded because they did not meet the .70 threshold.

With work engagement as the outcome variable, the predictor variables of self-acceptance and positive relations with others explained a statistically significant amount of variance in work engagement ( $F [2,314] = 19.6, p < .0001$ ). The total variance accounted for in this model was 11% ( $R^2 = .11$ ). However, self-acceptance was the only variable to account for a statistically significant proportion of variance in work engagement ( $r^2_{y(SA.PR)} = .032, p = .001$ ; see Table 11); positive relations with others was non-significant. The standardized beta coefficient revealed that self-acceptance ( $\beta = .25; t = 3.4, p = .001$ ) had a positive association with work engagement; that is, the greater the level of self-acceptance, the greater the level of work engagement.

Table 11  
*Simultaneous Entry Regression of Psychological Well-Being on Work Engagement*

Variable	Zero-order correlation	sr	B (Std. Error)
Self-Acceptance	.32	.19	.45 (.13)*
Positive relations	.28	.09	.24 (.15)

*Note.* \* $p < .001$

With burnout as the outcome variable, the predictor variables of self-acceptance and positive relations with others explained a statistically significant amount of variance ( $F [2,314] = 20.68, p < .0001$ ; see Table 12). The total variance accounted for by this model was 9.4% ( $R^2 = .094$ ). However, only self-acceptance accounted for a statistically significant portion of variance

in burnout ( $r^2_{y(SA.PR)} = .007, p < .0001$ ), as positive relations with others was non-significant. The standardized beta coefficient revealed that self-acceptance ( $\beta = -.37; t = -5.02, p < .0001$ ) was inversely associated with burnout. That is, the greater the level of self-acceptance, the lower the level of burnout.

Table 12  
*Simultaneous Entry Regression of Psychological Well-Being on Burnout*

Variable	Zero-order correlation	sr	B (Std. Error)
Self-Acceptance	-.34	-.27	-.53 (.1)*
Positive relations	-.21	.03	.05 (.1)

*Note.* \* $p < .001$

## **Chapter 10: Discussion**

The JD-R model of burnout and work engagement proposes that employee well-being is determined by the effects of job demands and job resources. The aim of this study is to test the JD-R model in the LTC context, and to expand the JD-R model by examining how PWB influences the effect of job demands and job resources on the development of burnout and work engagement respectively, within the Canadian long-term care environment. Overall, the results of the study supported the hypotheses that job demands predicted burnout and that job resources predicted work engagement in LTC care providers. Results further showed that PWB moderated the relationship between job demands and burnout but did not moderate the relationship between job resources and work engagement. Finally, the PWB subscale of self-acceptance, but not other subscales, predicted burnout and work engagement.

### **General Levels of Burnout and Engagement in LTC**

There seems to be a widely held belief that many LTC employees suffer from burnout. Results from this study seem to contradict this impression. The average level of burnout symptoms as assessed by the OLBI was moderate compared to the scale maximum ( $M = 39.6$ , maximum = 64). In the same way, results appear to reflect a moderate level of engagement with work ( $M = 35.7$ , Max score = 54). Taken together, these results suggest that employee wellbeing is generally good in LTC.

If this finding is replicable with other measures and in other LTC contexts, and LTC employees are not suffering from poor wellbeing (and particularly burnout) to the extent previously believed, this would raise questions about why LTC employees are believed to have poor wellbeing. One possibility is that the phenomenon has been exaggerated because of social stigma about long-term care (Canadian Nurse, 2011). Another is that burnout is not the correct

construct to identify the phenomenon. For example, perhaps employees do not suffer from burnout, yet still feel anxious or guilty about the inability to achieve meaningful levels of personal contact with LTC residents due to a lack of time, in line with emerging theory of moral distress as an important phenomenon in LTC (Pijl-Zieber et al., 2008; Spenceley, Witcher, Hagen, Hall, & Kardolus-Wilson, 2015). Another possibility is that a perceived lack of support from leaders results in feelings of dissatisfaction with work, in the absence of burnout (Chu, Wodchis, & McGilton, 2014; McGilton et al., 2007; Wagner & Gregory, 2015). These issues warrant further attention in both qualitative and quantitative research.

Whilst it is encouraging that burnout is not very high nor work engagement low in LTC, these results also illustrate the potential to improve both burnout and engagement. Moreover, LTC is widely acknowledged, in both qualitative and quantitative research, as a stressful environment. If the experience of stress is not leading to the development of burnout, it is important to ask why, and examine the characteristics of the work, as well as the characteristics of those who continue to experience wellbeing in a stressful work environment. The remaining results of this study further illuminate some of these issues.

### **Job Demands and Burnout**

It was anticipated that there would be a positive relationship between burnout and job demands, including workload, role conflict, and emotional workload among Canadian LTC nurses and NAs (Hypothesis 1). This prediction was supported. Specifically, workload was identified as the strongest predictor of burnout in this group, and emotional workload was the weakest predictor.

With respect to workload, previous research suggests that when employees feel they have too much work relative to time available to complete it, they become more exhausted and

detached from their work. The observation that workload was a strong predictor of burnout in this study of LTC nurses and NAs is consistent with previous findings in other settings (Demerouti et al., 2000; Bakker, Demerouti, & Euwena, 2005; Rai, 2010), and adds further support to the relevance of workload as a predictor of nurse and NA wellbeing in LTC. A number of studies suggest that workload is high in LTC. For example, staff shortages (Kash et al., 2006) resulting from absenteeism and high turnover (Tummers, Groeneveld, & Lankhaar, 2013) contribute to a higher workload for those who do attend work. Assisting residents with cognitive impairment is often very demanding (Morgan et al., 2013; Seitz, Purandare, & Conn, 2010). Further, LTC residents are very frail, and require extensive assistance with physical care, which also contributes to workload, particularly for NAs (Morgan et al., 2013). Thus, that workload was the strongest predictor of burnout in this context seems consistent with the known demands of work in this context.

Role conflict also surfaced as a significant predictor of burnout in this study. Role conflict occurs when there is a divergence between the perceived role expectations and what the individual actually accomplishes within the role, i.e., when expectations incompatible with the reality of the role are placed on employees (Acker, 2003). Thus, in this study, LTC nurses and NAs who experienced conflicting expectations about their roles also experienced higher levels of burnout. This observation is consistent with previous findings from other contexts (Acker, 2003; Garossa et al., 2010). An important consideration related to role conflict in LTC is raised by the advent of the person-centred care movement, which advocates a humanistic approach to care, and prioritizes quality relationships between staff and residents (Hunter et al., 2013, Hunter, Hadjistavropoulos, & Kaasalainen, 2016a; Hunter et al., 2016b). Many LTC nurses and NAs feel that their role is to engage meaningfully with residents (Dodson & Zincavage, 2007; Lopez,



2006a; Rodriquez, 2011), and the movement to humanize dementia care has increased the pressure to take up this role. Yet, LTC nurses and NAs are expected to care for residents' physical needs, and a number of studies suggest that the workload involved in this is often perceived as competing with meaningful engagement with residents (e.g., Lopez, 2006a). This sense of inability to do both aspects of the work well is likely to contribute to role conflict in LTC, and will be important to explore in future studies of the relationship between role conflict and burnout in LTC.

Finally, emotional workload also predicted burnout among LTC nurses and NAs. Coping with the emotional demands of work puts a strain on employees that can lead to exhaustion and detachment from work. The finding in this study of Canadian LTC employees parallels previous findings in other contexts (Bartram et al., 2012). Nevertheless, emotional workload accounted for a relatively small amount of variance compared to other variables. This is somewhat surprising, given that LTC work is known to be emotionally engaging work (McGilton et al., 2014; Moyle et al., 2003; Prentice & Black, 2007). It may be the case that emotional labour is accepted as a requirement of working in healthcare contexts (Gray, 2009), or that the rewards associated with emotional labour generally help to balance the demands of this labour. Nevertheless, given the significance of emotional labour in LTC, and the observation that this emotional labour helped to explain variability in burnout, this variable deserves continued attention in applications of the JD-R model to LTC.

### **Job Resources and Engagement**

It was anticipated that job resources would be positively related to work engagement among Canadian LTC nurses and NAs (Hypothesis 2). Indeed, the job resources of autonomy, supervisory support, relationships with coworkers, and participation were found to predict work

engagement in this group, confirming Hypothesis 2. Job autonomy was the strongest predictor of work engagement and participation the weakest.

The strong association between autonomy and work engagement seen in this study suggests that a sufficient level of freedom to make decisions about how one works is requisite for work engagement. This association has also been documented in previous studies in other contexts (Mauno et al., 2007; Schaufeli & Bakker, 2004a). This may be of some concern in LTC contexts, since regulatory requirements have resulted in a relatively inflexible work environment, in which job autonomy is difficult to achieve (McGilton et al., 2014). Canadian LTC homes are known to be particularly hierarchical and mechanistic compared to LTC homes in other countries (Cott, 1997). This especially affects NAs (Cott, 1997; Hunter et al., 2017), who are less likely to be able to have freedom to make independent decisions, to be creative in their work, or to think that their job offers variety (Morgan et al., 2013). Many decisions that affect provision of care are made by people not directly involved in care, such as policymakers, administrators, and supervisors, which can cause resentment among direct care providers (Secrest, Iorio, & Martz, 2005). However, a sense of autonomy over one's work contributes to employee motivation and well-being (Secrest et al., 2005; Squires et al., 2015).

With respect to participation, the ability to participate in or assist in informing managerial decisions is known to increase the perception of control over one's job and can create a sense of feeling valued and respected (Kahn, 1990). Conversely, participation without influence, as might occur when employees perceive that management does not take their contribution into consideration, can be experienced as frustrating (Baker, Israel, & Schurman, 1996). In this study, participation had a weaker effect on work engagement, relative to other variables, perhaps showing that the participants placed a lower value on the ability to participate in work-related

management decisions than on the ability to make decisions about how to satisfactorily complete one's own work (the latter reflecting the resource of autonomy). Still, since both autonomy and participation surfaced as predictors of engagement, it is worth further examining how LTC workplaces might foster nurse and NA involvement in decision-making related to their work.

Supervisory support also surfaced as a predictor of work engagement in the Canadian LTC context, consistent with prior research in other contexts (e.g., Xu & Cooper-Thomas, 2011). Supportive leaders provide encouragement, recognize good performance, and remain aware of the demands on caregivers (McGilton et al., 2014). In LTC, effective leadership has been recognized as essential to workplace health; however, leadership roles have become increasingly complex due to staffing shortages and residents who require higher levels of care than in previous years (McGillis-Hall et al., 2005). In this study, the variance accounted for by supervisor support was low. This was unexpected, as social support has previously been shown to be a predictor of work engagement (Sarti, 2014; Schaufeli & Bakker, 2004a). One explanation for this may be the relative importance of supervisor support in LTC. There is often a strict hierarchical structure within LTC, with relatively rigid role divisions between NAs, nurses, and managers (Cott, 1997; Lapane & Hughes, 2007; Lopez, 2006a), and with little interaction with one's supervisor apart from receiving instruction and rule enforcement, leading to a feeling of being unappreciated (Anderson et al., 2005). In short, LTC is a highly relational environment in which supervisory roles are very constrained when compared to the possible breadth of these roles (Shirey, 2004). As a result, this form of support may not have as significant a bearing on work engagement as other relationships. There is some evidence for this in studies that emphasize the importance of resident relationships and feedback to care providers (Ball et al.,

2009; McGilton et al., 2014; Moyle et al., 2003; Prentice & Black, 2007; Tyler et al., 2006).

Thus, it may be important to further identify and study context-unique job resources in LTC.

Finally, this study confirmed that co-worker support predicts work engagement in LTC, extending previous research findings from other settings (e.g., Brunetto et al., 2013). Co-worker support can help care providers to cope with their work and overcome job difficulties, and can create a friendly environment in which people feel good about their work (Freeney & Tiernan, 2009). Relationships with peers are also associated with quality of working life, which in turn may lead to higher levels of work engagement (Jenaro et al., 2011). Care providers who invest themselves in caring for LTC residents may also benefit from the emotional support of peers who understand the particular stressors associated with this environment. Seeking social support helps employees to effectively manage high demands and work complexities in healthcare environments (Udod, Cummings, Care, & Jenkins, 2017).

Once again, though, in this study, co-worker support explained a relatively small proportion of variance in engagement. One explanation is that the effect of co-worker support may be offset by high levels of absenteeism and turnover rates in LTC. Supportive relationships can take time and effort to form (Halbesleben & Wheeler, 2015) and it may be that LTC nurses and NAs have learned not to invest in or rely on others who may not be there in the future. A further explanation is that the pace and demands of work may not allow for spontaneous expressions of co-worker support as recognition is given for completing individual assignments and not for demonstration of teamwork (Anderson et al., 2005). Regulated nurses in LTC often work alone, which may negate the potential impact of working with supportive colleagues (McGilton, Tourangeau, Kavcic, & Wodchis, 2013). Finally, it must be acknowledged that long-term care staff complements typically include dozens, if not hundreds, of staff, and that some

relationships are likely to be more supportive than others. In addition to variability in relationship quality, there can be variability in the quality or helpfulness of expressions of social support. For example, Deelstra et al. (2003) used the threat-to-self-esteem model to examine whether well-meaning support might inadvertently generate feelings of incompetence. In addition, Fenlason and Beehr (1994) found that when support focuses on the negative aspects of work (e.g., the difficulties in coping with certain patients) rather than the positive, it might be more harmful than helpful.

Although role clarity did not have a significant influence on work engagement in this study (paralleling other research; see Barber & Iwai, 1996; Rai, 2010), it bears further mention. Of interest, role ambiguity was initially conceptualized as a job demand reflecting lack of certainty about expectations on the part of employees. This conceptualization was based on previous research (e.g., Acker, 2003; Garrosa et al., 2011; Levert, Lucas, & Ortlepp, 2000). However, during this study, a factor analysis was conducted to confirm that role ambiguity and a series of other variables constituted job demands. Unexpectedly, role ambiguity loaded poorly onto a job demands factor and, on further testing, had a high loading onto a job resources factor. On this basis, it appears likely that role ambiguity reflects the lack of a resource (i.e., role clarity) rather than the presence of a demand. This has not been previously evaluated and thus represents a notable finding that bears further consideration. In particular, it will be important to replicate the finding that role clarity operates as a job resource in other factor analytic studies, and in other work contexts. This construct may require a more precise conceptualization and operationalization.

## **Extending the Job Demands-Resources Model: The Role of Psychological Well-Being**

One of the main aims of this study was to evaluate whether PWB was a useful adjunct to the JD-R model, as applied in LTC. Specifically, PWB was proposed as a potential moderator of the relationship between job demands and burnout (i.e., serving as a buffer) and of the relationship between job resources and engagement (i.e., serving as an activator). These expectations, corresponding to study Hypotheses 3 and 4, were partially supported.

### **PWB as a Moderator of the Relationship between Job Demands and Burnout.**

Overall, regression models showed that job demands were associated with increased burnout and PWB with decreased burnout. In addition, as hypothesized (Hypothesis 3), PWB and job demands interacted, such that higher levels of PWB reduce the effect of job demands on the development of burnout. Thus, PWB moderated the relationship between job demands and burnout.

There is limited prior evidence for a moderating effect of personal resources on the relationship between job demands and burnout (Bakker & Demerouti, 2014). For example, Garrosa et al. (2010) found that hardy personality, optimism, and emotional competence were all statistically significant predictors of burnout; however, only optimism moderated the relationship between role stress and burnout. Xanthopoulou et al. (2007) found that personal resources did not moderate the relationship between job demands and exhaustion (as previously hypothesised), but suggested this might be due to the nature of the specific personal resources in the study. This study therefore adds to a small body of research documenting the effects of personal resources on job demands and burnout. Based on this small volume of research, much remains to be understood about the potential moderating effects of personal resources. Further studies should focus on the personal resources that are most likely to be associated with employee well-being,

and should also examine whether the particular personal resources that moderate burnout vary from one employment context to the next.

Given that some studies, including this one, do show a moderating effect of personal resources on the relationship between job demands and burnout, the reason for this must begin to be more fully articulated. It is possible that higher levels of PWB may change the way in which job demands are perceived. According to Lazarus and Folkman's (1987) Transactional Model of Stress, it is the cognitive appraisal of stress that determines well-being rather than the stressor itself. During a stressful experience, an individual evaluates how the experience may impact his/her well-being, in other words, the potential for benefit or harm, as well as actions that may be taken to enhance benefit or prevent harm to oneself. Options include changing the situation, seeking further information, or constructing a new meaning around the experience. The individual's view of the effectiveness of each approach as well as the availability of resources will influence the way in which the individual copes with the situation. Having an optimistic view or a global sense of well-being could help individuals to appraise events in such a way as to reduce the perception of threat to the self and find ways to increase benefit and reduce harm to oneself.

Adding to this, LePine, Podsakoff, and LePine (2005) suggest that the conceptualization of demands as either hindrances or challenges can affect their impact on well-being. Hindrance demands are seen as having a negative effect on job performance, whereas challenge demands are seen as obstacles that can be overcome and which help one to learn and achieve. Thus, because challenge stressors are appraised as potentially able to promote personal growth, they activate positive emotions and active coping. Conversely, because hindrance stressors are appraised as potentially harming personal growth, they activate negative emotions and passive

coping (LePine, Podsakoff, & LePine, 2005). Bakker and Sanz-Vergel (2013) showed that emotional job demands (i.e., having frequent interactions with patients as well as dealing with emotions of patients and their families) strengthened the effect of personal resources of self-efficacy and optimism on work engagement in nurses, as emotion demands were perceived as a challenge rather than a hindrance to those who enjoy caring for others. However, work pressure was seen as a hindrance demand and so did not enhance the effect of personal resources on work engagement. Thus, differences in perception may have a role in how individuals respond to job demands.

#### **PWB as a Moderator of the Relationship between Job Resources and Work**

**Engagement.** Contrary to expectation, PWB did not moderate the relationship between job resources and work engagement in this study (Hypothesis 4); that is, those with higher levels of PWB did not seem to derive greater engagement in their work by further activating job resources. Main effects of job resources and of PWB on work engagement were each significant; thus, it is possible that the perception of sufficient resources at work may be enough to lead to work engagement without the additional effect of PWB. Perhaps people are more motivated to draw on their personal resources more in times of stress, to prevent burnout, than to draw on these resources when needs at work are being met, to further engage enhancement. A further explanation may be that the moderating effect of PWB is context-dependent, that is, PWB may have a greater impact on the effects of job resources in other work environments. For example, the job resource of autonomy had the greatest impact on work engagement in this study. In an environment where one's work is prescribed and highly regulated, only a certain amount of autonomy can be given to employees; thus, the potential to utilize this resource to achieve higher levels of engagement may be limited.



Previous studies conducted in other settings have found a moderating effect of personal characteristics such as proactive coping (Searle & Lee, 2015), a strong intrinsic work value orientation (van den Broeck et al., 2011), optimism (Mäkikangas & Kinnunen, 2003), self-esteem, and sense of competence (Kalimo et al., 2003) on work engagement. One possibility, therefore, is that PWB is not as relevant as other personal resources in enhancing the effect of job resources on work engagement. Another is that different kinds of personal resources may be needed to enhance the effect of job resources in LTC. Finally, it may also be important to further articulate the job resources that are important in LTC. For instance, if quality relationships with residents are an important job resource, then it would not be surprising if a personal resource such as compassion satisfaction moderated the relationship between this resource and job engagement.

The lack of moderating effect on job resources and engagement could also be due to an imperfect conceptualization of the relationship between these variables. For instance, it is possible that PWB does not moderate the effect of job resources and engagement, but rather acts as a mediator<sup>3</sup>, partly or fully accounting for the relationship between the two constructs. That is, perhaps job resources influence psychological wellbeing, and psychological wellbeing in turn influences work engagement. Indeed, some studies found that personal resources mediated the relationship between job resources and work engagement, suggesting that job resources influence personal resources, and these personal resources accounted for employees' engagement in their work (Llorens, Schaufeli, Bakker, & Salanova, 2007; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008; Xanthopoulou et al., 2007). As yet, few studies have examined the mediation of

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<sup>3</sup> Moderating variables ("moderators") affect the strength and/or direction of the relationship between the predictor variable and the outcome variable. Terms such as "buffer" or "protect" and "activate" describe moderating variables. Mediating variables ("mediators") are additional variables that either partially or fully account for or explain the relationship between a given predictor variable and outcome variable (Baron & Kenny, 1986).

personal resources on work engagement, and this is a topic that deserves attention in future research.

**PWB as a Predictor of Burnout and Work Engagement.** One further way to evaluate potential contributions of PWB to the JD-R model was to assess which aspects of PWB best predicted burnout and work engagement. As the study of on the relationship between PWB, burnout, and work engagement is novel, this work (corresponding to Research Question 5) represents a further unique contribution of this study. Among the dimensions of PWB (self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, and autonomy), only self-acceptance predicted both burnout (negatively; i.e., as self-acceptance increased, burnout decreased) and work engagement (positively; i.e., as self-acceptance increased, work engagement also increased).

To accept oneself means to acknowledge that the self contains both positive and negative aspects and to acknowledge one's potentialities as well as one's limitations (Ryff, 1989). People who are self-accepting allow that everyone is fallible; thus, their tolerance of themselves does not depend on whether they were correct or incorrect, or whether they obtained the approval of others (Ellis, 1997). To date, there has been very little research on the concept of self-acceptance and employee well-being in the workplace, and particularly within healthcare, as it has more often been studied in areas such as body image (e.g., Carr & Friedman, 2005), sexual identity (e.g., Darby-Mullins & Murdock, 2007), and mental health (e.g., Scott, 2007). It is surprising that among the range of PWB constructs, only self-acceptance proved to be associated with burnout and work engagement in LTC. While the reasons for this remain unclear, a small body of related research offers some possibilities.

The finding that self-acceptance negatively predicted burnout has some tangential support in the work of Chamberlin and Zhang (2009), who found that workaholics reported lower levels of self-acceptance, which could lead to an individual demanding more of oneself as well as those around them. Workaholism is associated with burnout and occurs when an individual tends to work harder than is required, is obsessed by work, and is unwilling or unable to disengage from work when appropriate (Innanen, Tolvanen, & Salmela-Aro, 2014; Schaufeli, Bakker, Van der Heijden, & Prins, 2009). When self-accepting people experience failure or rejection, they tend to feel adaptive and healthy emotions of regret and frustration, rather than incapacitating and dysfunctional feelings of incompetence or failure (Ellis, 2003). Self-acceptance is associated with beliefs that are flexible, logical, and consistent with reality; in other words, not irrational or out of proportion (Davies, 2008). Self-acceptance, therefore, may help nurses and NAs to cope with negative situations at work, thus guarding against burnout. This, indeed, is what Chamberlain and Haaga (2001a; 2001b) found in two studies of self-acceptance in the workplace. People higher in self-acceptance were less prone to depression, had lower anxiety, less prone to denigrate those who give negative feedback, had greater general well-being, and were more objective in their self-evaluations of performance. Overall, it seems that self-acceptance may help to protect against burnout through healthy reactions to negative work events.

The finding that self-acceptance is associated with work engagement has some parallels in research on core self-evaluations (CSE), which refers to one's fundamental appraisal of self-worth, capabilities, and competence (Judge Locke, Durham, & Kluger, 1998). CSE is thought to influence both cognitive appraisals and behavioural reactions to events, such as persisting with tasks. It is positively correlated to job satisfaction, work commitment, motivation, and task

performance (see Chang et al., 2012 for a review). CSE is further related to positive perceptions of job characteristics, whereby those high in CSE perceive their jobs and workplace as more attractive, suggesting that these individuals pay more attention to the positive aspects of the workplace (Chang et al., 2012). It is also a predictor of work engagement, suggesting that employees high in CSE set high work goals and find the accomplishment of these goals to add meaning to their work, and are less likely to see their jobs as demanding but rather as challenging and enjoyable (Lee & Ok, 2015). Self-acceptance may contribute to these effects of positive CSEs, or it may represent another form of self-evaluation that contributes to work engagement.

While the finding that self-acceptance is important to nurse and NA wellbeing deserves further theoretical exploration, there has already been work towards a practical application. Acceptance-based therapies are increasingly used to promote coping and mental health, and these approaches often draw from ancient spiritual traditions, emphasizing appreciation of the present moment, a gracious attitude toward discomfort, and self-discipline through practices such as meditation. Perhaps these lifestyle-oriented approaches will prove useful in cultivating adjustment to work, as suggested by some recent work to introduce these approaches to trainees and employees in healthcare (Chakravarti, Raazi, O'Brien, & Balaton, 2017; Irving, Dobkin, & Park, 2009).

### **Implications of this Research**

This study did not examine additional outcomes associated with employee burnout, work engagement, or PWB, such as workplace health and safety, or patient care outcomes.

Nevertheless, it is worth emphasizing that workplace wellbeing and personal well-being each have implications that extend beyond the employee to the workplace (in this case a healthcare

setting) and to those influenced by the work (in this case, residents), and therefore merit sustained attention.

**Engagement and the Workplace.** Work engagement is related to positive organizational and workforce outcomes, such as higher job satisfaction, increased organizational commitment, lower levels of absenteeism, and decreased turnover intention (Demerouti et al., 2001; see Keyko, Cummings, Yonge, & Wong, 2016 for a review; Shuck et al., 2011). Engagement is further related to job performance (Salanova, Agut, & Peiro, 2005), motivation, and initiative (Sonnentag, 2003). Being engaged with one's work impacts nursing performance, including willingness to accept additional work (Salanova, Lorente, Chambel, & Martínez, 2011), and work efficacy (Laschinger, Wilk, Cho, & Greco, 2009). Given the importance of engagement to commitment to work and quality work, it will be important to further consider ways to engage Canadian LTC employees, who exhibit high rates of absenteeism and turnover. This might especially be important for NAs, who have expressed concerns about feeling disempowered in their work (Chamberlain et al., 2016; Parsons et al., 2003).

**Engagement and Patient Care.** Patient care is ultimately the greatest concern of health care organizations, and represents an important rationale to further consider the work-related well-being of the employees who provide the care. Work engagement has been linked to patient-centred care in hospitals (Abdelhadi & Drach-Zahavy, 2012). A Gallup study found that work engagement of RNs was the primary predictor of patient complication rates and mortality variance in a study of over 200 hospitals in the US (Blizzard, 2005, as cited in Bargagliotti, 2012). Of particular significance is the fact that engagement appears to mediate the relationship between the quality of the nursing work environment and patient safety outcomes (Laschinger & Leiter, 2006). In other words, if the work environment is perceived to support professional

practice (in this case, effective leadership, staff participation, adequate staffing, support for a nursing model of patient care, and effective nurse/physician relationships), nurses are more likely to become engaged in their work, thus increasing patient safety and beneficial outcomes. Despite these important findings, surprisingly little research has investigated work engagement and patient outcomes (Keyko et al., 2016).

**Burnout and the Workplace.** Researchers have found that burnout is significantly related to absenteeism and turnover (Aiken et al., 2002; Leiter & Maslach, 2009). Burnout is also associated with decreased commitment to work and job dissatisfaction (Aiken et al., 2001; Maslach & Goldberg, 1999). LTC homes in particular have high levels of nurse and NA absenteeism (Castle & Ferguson-Rome, 2015) and turnover (Cohen-Mansfield, 1997; Castle & Engberg, 2006) and are often understaffed (Kayser-Jones, 2003), thus increasing work levels for other employees. According to the effort-recovery theory (Meijman & Mulder, 1998), the ability to recover from effort can affect health and job performance. Expenditure of effort at work has a short-term cost, for example, fatigue or stress, which disappears after a complete recovery. In this case, the employee will begin the next day fully recuperated from the previous day's effort. However, when there is insufficient recovery, the employee starts the day in a suboptimal condition requiring expenditure of additional effort to achieve work goals, and thus placing a higher demand on the recovery process. These higher demands can result in a cycle of load accumulation from which it becomes more difficult to recover. Reducing burnout may therefore contribute to the resolution of absenteeism and turnover in LTC and help to prevent the cycle of load accumulation and suboptimal recovery.

**Burnout and Patient Care.** LTC residents are among the most vulnerable members of society, and most LTC residents depend extensively on others for their physical and psychosocial

needs (Knopp-Sihota et al., 2015). Inadequate care provider staffing levels has often been linked not only to burnout (Leiter & Maslach, 2009) but also to negative patient outcomes as well as patient mortality (e.g., Aiken et al., 2002; Kane et al., 2007; Tourangeau, Giovannetti, Tu, & Wood, 2002; Whitman, Kim, Davidson, Wolf, & Wang, 2002). Staff shortages can have adverse consequences to patient care, for example, lower levels of nurse staffing have been linked to medication errors and increased number of falls (Duffield et al., 2011). Conversely, higher staffing levels have been linked to an improvement in patient outcomes and hospital related mortality (see Kane et al., 2007 for a meta-analysis; Rantz et al., 2004; Schnelle et al., 2004).

In addition to the effect of burnout on staff levels, some characteristics of healthcare environments have been linked to adverse patient outcomes through the mediating role of burnout (Laschinger and Leiter, 2006). In other words, burnout acts as the mechanism through which the work environment affects patient outcomes. The experience of burnout may diminish patient satisfaction with care (Leiter, Harvie, & Frizzell, 1998), the quality of care given to patients (Poghosyan et al., 2010), and lead to an increase in adverse patient events including older adult maltreatment in LTC homes (Ben Natan, Lowenstein, & Eisikovits, 2010 ). As such, the question of how to avoid burnout in the LTC workplace is very important to both staff and residents.

**Implications for LTC Practice.** In considering the practical implications of these results for LTC, the concept of empowerment, which has a long history of use in nursing theory, might be important. Kanter's (1979) theory of structural empowerment suggests that access to specific means, or resources (i.e., formal and informal power, support, resources, information, and opportunity), is required to achieve organizational goals. Udod and Racine (2014) further suggest that empowerment refers to sharing power with others in order to enable action and achieve

common goals, as well as enabling others to become aware of organizational constraints and to gain control over their work. In the current study, resources such as job autonomy, relationship with colleagues, relationship with supervisor, and participation accounted for over 25% of the variance in work engagement. At face value, empowerment (as defined by Kanter and extended by Udod and Racine) seems to have some construct overlap with these resources, and cultivating a philosophy of staff empowerment increase availability of the kinds of resources that promote work engagement. Moreover, the benefits of empowering employees in the healthcare sector extend beyond work engagement. It can increase organizational commitment, reduce turnover, and increase quality of care (Laschinger, 2008; Laschinger, Finegan, Shamian, & Wilk, 2001a; Laschinger, Finegan, & Shamian, 2001b).

One question that arises is, ‘How are employees best empowered?’ Effective leadership is known to be important here. In Canada, the daily activities of NAs are overseen by regulated nurses, and all care staff are directly supervised by a director/manager of resident care. Supervisors can have a significant influence on the experience of other employees and on general organizational health. Effective nurse supervision of NAs is associated with increased job satisfaction, work effectiveness, and reduced job stress and turnover (McGilton et al., 2016). Nurses are empowered when supervisors foster perceptions of autonomy, meaningfulness, and confidence in their work, which can lead to work satisfaction and reduced job strain (Laschinger, Finegan, Shamian, & Wilk, 2001a). Conversely, poor information flow, poor staff connections, reliance on rules and regulations, and lack of interaction between different staff members can lead to low quality employee relationships and negative resident outcomes (Anderson et al., 2005).



Effective leadership practices such as modelling and encouraging, enabling others to act, inspiring a shared vision, and open communication, and accurate provision of information are associated with reduced rates of turnover among nurses in LTC (Chu, Wodchis, & McGilton, 2014). This, in turn, is likely to reduce workload and associated burnout, and improve quality of resident care. However, the workload of regulated nurses can be a barrier to frequent interaction with their supervisor (McGilton et al., 2013). Additionally, apart from shift change reports about residents, communication between nurses and NAs is often opportunistic and constrained by lack of time (Madden et al., 2017). Since both nurses and NAs emphasize the importance of effective communication in order to enhance cooperation between co-workers and provide optimal resident care (Madden et al., 2017), leaders will need to find ways to circumvent the barriers induced by time constraints to promote communication and its associated benefits.

The traditional hierarchical approach to LTC work means that the employees who are least often in direct contact with residents are the most influential in determining care provision. For instance, NAs, who provide the majority of day-to-day care, are less consistently involved in making decisions about care than are professional staff, who are directly engaged with residents less frequently (Kontos, Miller, & Mitchell 2009). As such, NAs have a sizeable level of responsibility but have less decision-making authority and autonomy. Inclusion in decision-making appears to empower NAs in particular, helping them to provide higher levels of individualized care to residents, and fostering improved cooperation between NAs and nurses (Caspar et al., 2009; Yeatts & Cready, 2007). Given that NAs are the group of care providers who interact most frequently with LTC residents and thus might be in the best position to contribute to resident quality of life, efforts to empower this group by enhancing levels of autonomy and authority to a degree appropriate for unregulated care providers might be an

important way to improve employee wellbeing within LTC homes, and research on employee wellbeing suggests probable downstream benefits for LTC organizations and the residents they serve.

**Summary.** Developing a thorough understanding of how different work-related and personal variables affect nurse and NA well-being has practical implications, not just for individual LTC nurses and NAs, but also for the well-being of the LTC workplace and the well-being of older adults residing in long-term care. To date, these work-related and personal variables have not received a great deal of study in LTC contexts. This study offers evidence that certain job demands and resources, and PWB (a personal resource) are related to nurse and NA well-being in the LTC workforce.

### **Future Directions**

Although no differences between nurses (licensed care providers) and NAs (unlicensed care providers) arose with respect to the variables measured in this study, justifying a combined analysis, the experiences of nurses and NAs are not homogeneous, and should continue to be studied in their own right. For instance, it is likely that specific job demands and job resources may be more or less relevant to each group. Identifying and examining variables of particular relevance to nurses and NAs, respectively, will provide more in-depth knowledge about the effect of the work environment on the development of burnout and work engagement for these two employee groups within LTC.

It will also be useful, in future, to further examine psychological wellbeing specifically in relation to work. For instance, it is possible that meaning and purpose at work, a sense of connection to work, and the extent to which a person feels that work is worthy of one's energy and time (Simmons & Nelson, 2001) will prove to be of greater interest to extensions of the JD-

R model than the current PWB construct, which represents a more global sense of meaning or purpose in life. The Abstract-Specific hypothesis asserts that the information people use as a basis for their answers depends on how abstract or specific the measure is (Schwarz and Strack 1999). When asked about the subjective quality of life, people generally utilize a wide variety of information to decide upon their answer. In answering abstract or global questions, people seldom thoroughly evaluate and integrate all aspects of their lives into a representation of a whole, but instead use decision-making heuristics (Tversky & Kahneman, 1974). When they feel they have enough information at hand to form a judgement, they use this to answer the question. As the level of specificity increases, people rely less on heuristics, examine the domain in question more carefully, and respond more specifically to the question at hand (Schwarz and Strack 1999). For example, in this case, it is interesting that the subscale of “positive relations with others” did not explain a significant amount of variance in work engagement even though social support, measured as a job resource, was significantly associated with engagement.

As well as being a global construct, PWB is context-free. Future research could focus on more context-specific personal resources that have been identified as important in providing care to older adults, such as patience, altruism, friendliness, compassion, the desire to take care of others, and viewing older adults as valuable (Ball et al., 2009), and which have not been studied as moderating factors. The personal resources of methods of appraisal and coping as well as resilience might also be relevant to nurse and NA well-being in LTC. Future research could also focus on job demands and resources more specific to the LTC context, such as assisting residents experiencing pain, depression, or cognitive impairment, level of training in how to care for residents with dementia, resident case mix, time available to support residents in caring for themselves, engaging meaningfully with residents, and positive resident feedback. The

complexity of social support in LTC is also an issue that would benefit from further in-depth study.

Finally, the scope of this study was limited, as the study emphasized the potential moderating role of PWB. For instance, there is evidence that job resources moderate burnout, but this was not examined in the current study. It is also possible that personal problems might have a bearing on burnout and work engagement, but these were not measured in this study. Further, a number of studies have explored partial mediation effects among these variables (Llorens et al., 2007; Van den Broeck et al., 2008; Xanthopoulou et al., 2007), which were not evaluated here. Each of these omitted questions about the nature of interrelationships of variables in the JD-R model warrants further study in the Canadian long-term care context. Furthermore, very few studies have examined how the variables in the JD-R model relate to each other over time. Since cross-sectional studies do not have the explanatory power to enable full understanding of the nature of these relationships, longitudinal studies of nurse and NA wellbeing in long-term care and other contexts would be extremely valuable.

### **Limitations**

The results of this study should be understood in light of its limitations. As with all research, the nature of the choices governing aspects of the study such as sampling, choice of variables, research design, and methods ultimately influenced the results.

**Design.** This is a cross-sectional study, so there can be no conclusions about causality between the variables. For instance, although it seems likely that job demands influence the development of burnout, it may also be that someone who is burned out will perceive the environment as more demanding than someone who is not experiencing burnout. A cross-sectional study represents a moment in time; therefore, there is no way of knowing whether

external factors influenced responses at that particular time which would not operate at another point in time. One such external factor might have been news of a looming amalgamation of regional health authorities in the province in which this study was situated. This news was released near the time that the study took place, although the study predated the amalgamation. There is no way to know whether or how this might have influenced levels of burnout, engagement, or PWB.

**Sampling.** As a convenience sample was used, there is no way to ensure that findings are representative of the care provider population. In particular, there is no information about the non-respondents; for example, it is not known whether they were too overworked or too tired to respond, whether they lacked the engagement with the organisation to care about contributing towards this study, or whether they felt the study was not relevant to them. Engaging busy LTC workers can be a challenge as it is difficult for them to create a space between various demanding tasks in order to fill out a questionnaire (Mitchell et al., 2006). Generalizations to the total population of Canadian LTC nurses and NAs should be made with caution. In addition, this study was conducted within the Canadian healthcare context, which has different characteristics than healthcare in other countries. Thus, caution must be used in generalizing these results beyond Canada.

**Choice of Variables.** This study examined a certain set of job demands and resources; as a result, generalizability to other work characteristics is limited. This study did not assess different work factors that can also affect employee well-being, such as whether employees were happy with the level of pay and benefits or with the work-life balance offered by the organization. As job demands and resources accounted for a relatively small percentage of variance, it is likely that not all relevant variables were identified.

**Bias.** It is possible that common method variance bias may have increased or decreased the strength of correlations. Chang, Van Witteloostuijn, and Eden (2010) explain that common method variance may occur when one instrument is used to collect information at the same time from respondents, and may be stronger when both dependent and independent variables are collected simultaneously, as occurred in this study since one questionnaire was used to gather the data. This may inflate or understate relationships between variables. However, single data collection events are more feasible in LTC environments, and allow for anonymous data collection, which can maximize response rates. The potential effects of common variance bias may have been offset by the fact that each measure included in the questionnaire was formulated in different terms and used different scale anchors and ranges (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

The length of the total questionnaire may also be a limitation. Some participant fatigue and carelessness towards the end seems evidenced by a greater number of missing items on the final measure in the survey. It is possible that having the responses of these participants in hand would have led to somewhat different results. This also represents a compromise, since the variables included in the study encompassed each of those considered in the JD-R model and allowed for statistical modeling using this model.

Social desirability bias is an additional limitation faced by many studies, whereby participants feel the need to present themselves in a favourable manner rather than expressing their true feelings about a topic (Crowne & Marlow, 1964). This tendency may bias responses to questions and mask the true relationships between variables. For example, employees might feel that they should be able to cope better than they actually do, influencing responses to job demands and burnout questionnaires to reflect what people consider socially appropriate answers

to the questions, rather than fully truthful answers. Since a social desirability response measure would have added to the length of the questionnaire, this was managed by mentioning in the verbal explanation and the consent form that only the researcher would see the raw data, that data would be aggregated, and that responses could not be traced back to the individual. Still, some employees might have worried that the questionnaires would be seen by the managers of the homes in which they worked. Indeed, in some situations, it might be possible to identify individual employees from their answers to the demographic questions and any perceived vulnerability associated with this might have influenced responses. Related to this, one employee told the researcher that she did not fill out the questionnaire since she feared repercussions for negative answers from the management of the home.

Based on some comments on the questionnaires, social desirability may have been a particular issue in the SPWB measure. One of the items says, “When I compare myself to friends and acquaintances, it makes me feel good about who I am.” Two people wrote that they do not compare themselves to others and did not answer this question. Social comparison theory (Festinger, 1954; Suls, Martin, & Wheeler, 2002) postulates that people evaluate themselves against an objective reality where possible or against comparisons with others when there is no objective reality. Comparisons against those perceived as less desirable tend to increase self-esteem, while comparisons against those perceived as more desirable decreases self-esteem (Morse & Gergen, 1970). Social comparison is acknowledged to be a central feature of social life, but is often viewed as socially undesirable (Buunk & Gibbons, 2007). Thus, although these two comments within a sample of 327 respondents might simply represent human diversity, it seems unlikely that they never compare themselves to any others in any aspect of life, and interesting that they felt strongly enough about it to point it out.

## **Conclusions**

The purpose of this study was to extend the JD-R model by examining the potential of psychological well-being (PWB) to inform the model. This work was done within the Canadian LTC context, where the JD-R model has not yet been applied. This study provides new information about the moderating effect of PWB on the relationship between job demands and burnout, and more specifically, shows that care providers with greater levels of self-acceptance have lower levels of burnout and higher levels of work engagement. The JD-R model, with the inclusion of personal resources, is therefore relevant to the LTC setting, and self-acceptance is a variable that should continue to be explored in this context. This study confirms and extends the literature on burnout and helps to remediate the paucity of literature on work engagement in LTC workers. These results have practical implications for the LTC workforce as understanding the personal and work-related variables that affect nurse and NA well-being can assist organizations in taking steps to provide an environment that reduces burnout and increases work engagement in long-term care.



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## Appendix A: Consent Form



### Employee Well-Being in Long-Term Care Workers

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You are invited to participate in a research study of employee well-being in long-term care workers. Please read this form carefully, and feel free to ask any questions you might have about the study.

**Student-Researcher:** Fiona Fick, Department of Psychology, [fiona.fick@usask.ca](mailto:fiona.fick@usask.ca).

**Supervisor:** Paulette Hunter, Department of Psychology, 306-966-2175.

**Purpose and Objectives:** The study is being done to better understand what contributes to burnout and, conversely, engagement with work among nurses and continuing care assistants who work in long-term care.

**Procedures:** If you decide to participate, you will be asked to complete a paper survey that includes a series of questions asking you about your work environment and personal well-being, including burnout. The estimated time of completion for this study is 20 minutes.

**Risks and Benefits:** There are no known risks associated with participation in this study. Although this study is expected to contribute to a growing understanding of long-term care employees' work experiences, participation in the study will not provide any direct benefit to you.

**Confidentiality:** We are not asking you to identify yourself on the survey form. Your responses will be entered as part of a larger dataset and research communications will focus on this larger dataset (e.g., a focus on the average responses of participants). Research results will be communicated in a Master's thesis and may also be printed in an academic journal and/or presented at a professional conference. In line with best practices for management of research data, all forms and datasets will be securely stored using locks or passcodes accessible only to the supervisor and a small group of employees and students who have signed a confidentiality agreement. The storage period will last until research communications have been finalized, and for at least five years. Once forms and data are no longer needed, they will be securely destroyed (i.e., shredded and deleted).

**Right to withdraw:** You may withdraw from the study or choose not to respond to any given item on the questionnaire for any reason, at any time prior to submitting the data. However, due to the anonymous nature of the study, you will not be able to withdraw after you have submitted your data because of the inability to identify the data of any specific individual. There are no negative consequences to withdrawal from the study.

**Questions:** If you have any questions before you participate, please feel free to ask the researcher. The proposed research has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office [ethics.office@usask.ca](mailto:ethics.office@usask.ca) (306)

966-2975. Out of town participants may call toll free (888) 966-2975. You may ask further questions or obtain a copy of the results of the study by contacting the student-researcher or the supervisor using the information at the top of the page.

**Consent to Participate:** By completing and submitting the questionnaire, **YOUR FREE AND INFORMED CONSENT IS IMPLIED** and indicates that you understand the above conditions of participation in this study.

PLEASE KEEP THIS FORM FOR YOUR RECORDS.



## Appendix B: Oldenburg Burnout Inventory

Instructions: The following statements refer to your feelings and attitudes during work. Please indicate to what extent you agree with each of the following statements by selecting the number that corresponds with the statement. All questions are rated on a 1 to 4 scale, where 1 = Strongly Disagree, 2 = Moderately Disagree, 3 = Moderately Agree, and 4 = Strongly Agree

		Strongly Disagree		Strongly Agree
1. I always find new and interesting aspects in my work.	1		2	3
4				
2. There are days when I feel tired before I arrive at work.				
3. It happens more and more often that I talk about my work in a negative way.				
4. After work, I tend to need more time than in the past in order to relax and feel better.				
5. I can tolerate the pressure of my work very well.				
6. Lately, I tend to think less at work and do my job almost mechanically.				
7. I find my work to be a positive challenge.				
8. During my work, I often feel emotionally drained.				
9. Over time, one can become disconnected from this type of work.				
10. After working, I have enough energy for my leisure activities.				
11. Sometimes I feel sickened by my work tasks.				
12. After my work, I usually feel worn out and weary.				
13. This is the only type of work that I can imagine myself doing.				
14. Usually, I can manage the amount of my work well.				
15. I feel more and more engaged in my work.				
16. When I work, I usually feel energized.				

Statements number 2, 4, **5**, 8, **10**, 12, **14**, and **16** measure exhaustion  
 Statements number **1**, 3, 6, **7**, 9, 11, **13**, and **15** measure disengagement  
 Items number 1, 5, 7, 10, 13, 14, 15, and 16 must be reverse scored

Permission has been given by the authors to use this questionnaire

### Appendix C: Utrecht Work Engagement Scale

Please read each statement carefully and decide if you ever feel this way about your job. Please select the number (from 0 to 6) that best describes how frequently you feel that way.

Never	Almost Never (A few times a year or less)	Rarely (Once a month or less)	Sometimes (A few times a month)	Often (Once a week)	Very Often (A few times a week)	Always (Every day)	
0	1	2	3	4	5	6	
1. At work, I feel bursting with energy	0	1	2	3	4	5	6
2. At my job, I feel strong and vigorous	0	1	2	3	4	5	6
3. I am enthusiastic about my job	0	1	2	3	4	5	6
4. My job inspires me	0	1	2	3	4	5	6
5. When I get up in the morning, I feel like going to work	0	1	2	3	4	5	6
6. I feel happy when I am working intensely	0	1	2	3	4	5	6
7. I am proud of the work I do	0	1	2	3	4	5	6
8. I am immersed in my work	0	1	2	3	4	5	6
9. I get carried away when I'm working	0	1	2	3	4	5	6

## Appendix D: The Questionnaire on the Experience and Evaluation of Work 2.0

Always	Never	Sometimes	Often
<hr/>			
1. Do you have too much work to do?			
2. Do you have to work extra hard in order to complete something?			
3. Do you have to hurry?			
4. Do you find that you are behind in your work activities?			
5. Do you have problems with the work pace?			
6. Do you have problems with the work pressure?			
7. Does your work demand a lot from you emotionally?			
8. Are you confronted with things that affect you personally in your work?			
9. Do you have contact with difficult patients in your work?			
10. In your work, do you have to be able to convince or persuade people?			
11. Does your work put you in emotionally upsetting situations?			
12. Do you know exactly what other people expect of you in your work?			
13. Do you know exactly for what you are responsible and which areas are not your responsibility?			
14. Is it clear to you exactly what your tasks are?			
15. Do you know exactly what you can expect of other people in your department?			
16. Do you have to do things in your work that you dislike?			
17. Do you receive contradictory instructions?			
18. Do you have to do your work in a way which differs from the method of your choice?			
19. Do you have to do work which you would rather not do?			
20. Do you have conflicts with your superior about the content of your tasks?			
21. Do you have freedom in carrying out your work activities?			
22. Can you decide how your work is executed on your own?			
23. Can you personally decide how much time you need for a specific activity?			
24. Can you organise your work yourself?			
25. Can you count on your supervisor when you come across difficulties in your work?			
26. If necessary, can you ask your supervisor for help?			

27. Do you get on well with your supervisor?
28. Do you have conflicts with your supervisor?
29. Is there a good atmosphere between you and your supervisor?
30. Have there been any unpleasant occurrences between you and your supervisor?
31. Can you count on your colleagues when you encounter difficulties in your work?
32. If necessary, can you ask your colleagues for help?
33. Do you get on well with your colleagues?
34. Do you have conflicts with your colleagues?
35. Is there a good atmosphere between you and your colleagues?
36. Have there been any unpleasant occurrences between you and your colleagues?
37. Can you discuss work problems with your superior?
38. Can you participate in decisions affecting issues related to your work?
39. Can you satisfactorily consult with your superior about your work?
40. Do you have a direct influence on your department /organization?

Job Demands:

- Workload: items 1-6
- Emotion load: items 7-11
- Role ambiguity: items 12-15
- Role conflict: items 16-20

Job Resources:

- Autonomy: items 21-24
- Relationship with supervisor: items 25-30
- Relationship with colleagues: items 31-36
- Participation: items 37-40

Permission has been given by the authors to use this questionnaire

## Appendix E: Ryff's Scales of Psychological Well-Being, 42 item version

Please indicate your degree of agreement to the following sentences. All questions are rated on a 1 to 6 scale, where 1 = Strongly Disagree, 2 = Moderately Disagree, 3 = Mildly Disagree, 4 = Mildly Agree, 5 = Moderately Agree, and 6 = Strongly Agree

		Strongly Disagree					Strongly Agree				
1. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people	1		2		3		4		5		6
2. In general, I feel I am in charge of the situation in which I live.											
3. I am not interested in activities that will expand my horizons.											
4. Most people see me as loving and affectionate.											
5. I live life one day at a time and don't really think about the future.											
6. When I look at the story of my life, I am pleased with how things have turned out.											
7. My decisions are not usually influenced by what everyone else is doing.											
8. The demands of everyday life often get me down.											
9. I think it is important to have new experiences that challenge how you think about yourself and the world.											
10. Maintaining close relationships has been difficult and frustrating for me.											
11. I have a sense of direction and purpose in life.											
12. In general, I feel confident and positive about myself.											
13. I tend to worry about what other people think of me.											
14. I do not fit very well with the people and the community around me.											
15. When I think about it, I haven't really improved much as a person over the years.											
16. I often feel lonely because I have few close friends with whom to share my concerns.											
17. My daily activities often seem trivial and unimportant to me.											
18. I feel like many of the people I know have gotten more out of life than I have.											
19. I tend to be influenced by people with strong opinions.											

20. I am quite good at managing the many responsibilities of my daily life.
21. I have the sense that I have developed a lot as a person over time.
22. I enjoy personal and mutual conversations with family members or friends.
23. I don't have a good sense of what it is I'm trying to accomplish in life.
24. I like most aspects of my personality.
25. I have confidence in my opinions, even if they are contrary to the general consensus.
26. I often feel overwhelmed by my responsibilities.
27. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.
28. People would describe me as a giving person, willing to share my time with others.
29. I enjoy making plans for the future and working to make them a reality.
30. In many ways, I feel disappointed about my achievements in life.
31. It's difficult for me to voice my own opinions on controversial matters.
32. I have difficulty arranging my life in a way that is satisfying to me.
33. For me, life has been a continuous process of learning, changing, and growth.
34. I have not experienced many warm and trusting relationships with others.
35. Some people wander aimlessly through life, but I am not one of them.
36. My attitude about myself is probably not as positive as most people feel about themselves.
37. I judge myself by what I think is important, not by the values of what others think is important.
38. I have been able to build a home and a lifestyle for myself that is much to my liking.
39. I gave up trying to make big improvements or changes in my life a long time ago.
40. I know that I can trust my friends, and they know they can trust me.
41. I sometimes feel as if I've done all there is to do in life.
42. When I compare myself to friends and acquaintances, it makes me feel good about who I am.

**Scoring Instruction:**

1) Recode negative phrased items: # **3, 5, 10, 13, 14, 15, 16, 17, 18, 19, 23, 26, 27, 30, 31, 32, 34, 36, 39,** and **41.** (i.e., if they scored is 6 in one of these items, the adjusted score is 1; if 5, the adjusted score is 2 and so on...)

2) Add together the final degree of agreement in the 6 dimensions:

- a) Autonomy: items 1, 7, **13, 19,** 25, **31,** 37 (rev: 13, 19, 31)
- b) Environmental mastery: items 2, 8, **14, 20, 26, 32,** 38 (rev: 14, 26, 32)
- c) Personal Growth: items **3,** 9, **15,** 21, **27,** 33, **39** (rev: 3, 15, 27, 39)
- d) Positive Relations: items: 4, **10, 16,** 22, 28, **34,** 40 (rev: 10, 16, 34)
- e) Purpose in life: items: **5,** 11, **17, 23,** 29, 35, **41** (rev: 5, 17, 23, 41)
- f) Self-acceptance: items 6, 12, **18, 24, 30, 36,** 42 (rev: 18, 30, 36)

Permission has been given by the author to use this questionnaire

## Appendix F: Demographic Questionnaire

Please tell me about yourself:

**1. What is your qualification?**

- BSN
- RN
- LPN
- Continuing Care Aide

**2. Approximately how long have you worked as a nurse or continuing care aide?**

\_\_\_\_ years \_\_\_\_ months

**3. What is your current employment status?**

- Full time
- Permanent part time
- Casual
- Other \_\_\_\_\_

**4. In what year were you born? \_\_\_\_\_**

**5. What is your gender? \_\_\_\_\_**

**6. What is your marital status?**

- Married
- In a long-term relationship
- Single
- Divorced
- Widow/widower