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RESEARCH ARTICLE

Contributing to a Healthier World: Exploring the Impact of Wellbeing on Nursing Burnout

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Abstract

Nursing burnout is a challenge for both the nursing profession and healthcare organizations. While research on burnout in healthcare is robust, including its contribution to the absence of wellbeing, e.g., depression and anxiety; little is known about its association with positive dimensions of wellbeing, e.g., engagement and life meaning, which is what the current research aimed to address. A total of 146 practising nurses, mostly female (98%), aged *M*= 45.03, *SD*= 13.31 residing in the United States completed an online survey assessing their burnout on the Copenhagen Burnout Inventory and wellbeing on the Mental Health Continuum and Workplace PERMA Profiler. Hierarchical multiple regression showed that after controlling for physical health, (1) wellbeing constructs explained various types of burnouts differently, (2) wellbeing, as measured by mental health continuum, did not predict work-related and client-related burnout, (3) the presence of positive emotions predicted lower levels of personal and work-related burnout; however, engagement was instrumental in predicting client-related burnout. The results highlight the need to measure positive outcomes using flourishing models of wellbeing. Furthermore, given that not all positive outcomes showed association with burnout, the research identified the need for nuanced approach to addressing burnout in nurses when using flourishing models. These findings can assist researchers and practitioners in further understanding of the impact of burnout on wellbeing and become a springboard for exploring the application of positive psychology interventions for reducing and preventing burnout and enhancing wellbeing.

Keywords: Burnout, flourishing, nursing, positive psychology, wellbeing

Towards the latter part of the 19th Century, Florence Nightingale predicted that it would take 1-1.5 centuries until nurses could transform healthcare and ultimately contribute to a healthier world (Dossey et al., 2015). Even though her prediction has not been realized, the profession is making progress and has the potential to help the United States (US) healthcare system readjust its focus to encompass the holistic value of health while addressing some of the most pertinent challenges of this healthcare system in the 21st century (Pittman, 2019). One area challenging healthcare transformation is chronic nursing burnout, which negatively impacts the profession, patient outcomes, and the associated organizations (Jones & Gates, 2007; Mchugh et al., 2011)

Nursing retention is already a problem within the profession, and the challenges of the COVID-19 pandemic only exacerbate the existing pressures nurses and organizations face (Turale & Nantsupawat, 2021). Coronavirus stress and burnout could be more of a long-term risk factor on mental health (Moroń et al., 2021). Even though coronavirus adds to the stress healthcare professionals experience some evidence shows that resilience-based initiatives (Yildirim et al., 2020; Yildririm & Solmaz, 2020) and supporting initiatives to enhance optimism and social connectedness (Yildririm et al., 2021) could be mediating factors.

In addition, one of the American Nurses Association's (ANA) provisions to the Code of Ethics expresses those nurses owe the same duty to themselves as they do to others (ANA, 2015). However, the research continues to highlight the negative impact of work on nurses; therefore, today more than ever, it is essential to understand the

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relationship between burnout and aspects of wellbeing that promote individual, collective, and systems level approaches towards nursing wellbeing, which is what the current study addressed.

Wellbeing among nurses is often measured as the absence of wellness that results in depression, anxiety, fatigue, stress and other negative outcomes (Hall et al., 2016). Increasingly, more positive outcomes are being measured, such as psychological capital (Dwyer et al., 2019; Laschinger & Fida, 2014), posttraumatic growth (Chen et al., 2021), or empathy (Wilkinson et al., 2017). However, to date little is known about the association between flourishing models, such as PERMA, or Mental Health Continuum (Hone et al., 2014) and burnout among nurses. Given that the positive components of wellbeing are independent from the negative outcomes (Huppert & Whittington, 2003), it is important to measure them in the context of burnout. Furthermore, considering that a range of interventions exist, the objective of which is to enhance the components of positive aspects of wellbeing (Schueller & Parks, 2014), should a link between burnout and wellbeing exist, these interventions can be adapted for the nursing community to not only enhance their wellbeing but also prevent burnout. Therefore, the current research is the first stage of this exploratory process.

Burnout

Burnout refers to a state of exhaustion, feelings of cynicism, and a reduction of professional efficacy (Leiter & Maslach, 2016). While it is present in all professions, it is particularly prevalent in nursing due to the nature of their work (Erickson & Grove, 2007) and results in nurses' loss of energy, motivation, frustration and may lead to reduction in work efficacy (Mudallal et al., 2017). A meta-analysis of 61 studies across 49 countries identified that, on average, 11.23% of nurses report burnout (Woo et al., 2020); however, the incident rate is as high as 35% in the US samples (Dyrbye et al., 2019) and it could be higher or lower than this depending on their work setting or subspecialities (Rehder et al., 2021). In addition, chronic daily stresses and challenging environments leave nurses depleted and vulnerable to exhaustion both of which contribute to burnout (Erickson & Grove, 2007; Lafer, 2005). At the heart of burnout exists physical, mental, emotional exhaustion and fatigue (Kristensen et al., 2005; Maslach et al., 1996; Schaufeli & Greenglass, 2001) and before COVID-19 burnout had already been a salient problem for healthcare professionals (Rehder et al., 2021).

Many factors impact nurses' burnout. They range from work-related stress (Jennings, 2008; Khamisa et al., 2013), to high nurse to patient ratios (Jennings, 2008; Levert et al., 2000; Maslach, 2003), poor job satisfaction (Kalliath & Morris, 2002; Khamisa et al., 2013; Turnbull, 1994), and poor work-place relationships (Dall'Ora et al., 2020). Job demands, including complex patient interactions and time challenges, can forecast exhaustion levels. In contrast, job resources, including a scarcity in achievements and lack of inclusion in decision making, can forecast disengagement, and both job demands and resources can harm the health and well-being of nurses and result in burnout (Demerouti et al., 2000; Khamisa et al., 2013; Lim et al., 2010; Nolan & Smojkis, 2003).

Several approaches to measuring burnout have been used with nurses (Woo et al., 2020), such as the Maslach Burnout Inventory (MBI) (Maslach et al., 1996), Oldenburg Burnout Inventory (Demerouti et al., 2000), and Copenhagen Burnout Inventory (Kristensen et al., 2005). Each one of them conceptualized burnout differently. For the current study, we considered Maslach's model as it was most prevalent in healthcare. It perceives burnout as experiencing (1) emotional fatigue caused by being emotionally exhausted by work, (2) depersonalization, which refers to switching off one's emotions and having an impersonal response to patients, and (3) personal accomplishment, which refers to the depletion of personal competence and a sense of achievement at work (Maslach et al., 1996). However, given that depersonalization may be considered a coping mechanism related to burnout (Kristensen et al., 2005; Lee et al., 2016), rather than a descriptor of it, the current study applied the Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005). CBI measures emotional exhaustion and fatigue from three perspectives, which relate to the degree of individuals' physical and psychological fatigue related to (1) personal, (2) work-related, and (3) client-related contexts (Kristensen et al., 2005; Borritz et al., 2006).

At a personal level, burnout is associated with lower levels of resilience (Yu et al., 2019) and psychological wellbeing, and in the case of trainee nurses, with lower levels of academic achievement (Wei et al., 2021). At an organizational level, it affects patient safety and satisfaction, the quality of care, nurses' organizational commitment, and productivity (Jun et al., 2021). Furthermore, nurses who experience burnout are less likely to express empathy towards their patients, affecting their relationship with patients and quality of care (Wilkinson et al., 2017).). Burnout is also linked to a reduction in job satisfaction (Vargas et al., 2014) and job satisfaction is associated with employment termination (Padykula, 2016); thus, suggesting that burnout contributes indirectly to the nurses'

intention to leave and is linked with employment termination (Ericksson & Grove, 2007; McDermid et al., 2020). This is particularly challenging given that the healthcare environment is perceived as less attractive than other sectors (Lafer, 2005), however, its effect differs across healthcare. For example, job demands, which are the job-related risk factors, such as contracting Covid-19 are associated with emotional exhaustion; however, job resources which relate to a job environment, e.g., safety systems, the effectiveness of communication, or decision-making buffer the correlation between the risk factors and exhaustion (Falco et al., 2021). Therefore, the consequences of burnout among nurses range from personal, through to organizational and systemic. At the same time, environmental measures can be applied to reduce its impact.

Wellbeing

Foundational holistic principles in the nursing profession have been present since the 1700s (Thornton, 2019). Following on from then, in 1948, the World Health Organization (WHO) released a definition of health according to which it is used to date and declares that health is "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity" (WHO, p. 1315). Thus, to address the challenge of reducing burnout (absence of infirmity), we need to consider not only the removal of external factors that contribute to burnout (Copanitsanou et al., 2017) but also help nurses develop protective psychological mechanisms that can protect them against burnout. Positive activities that promote wellbeing (i.e., activities related to gratitude, optimism, kindness, strengths, values, positive feelings towards self and others, and etc.) could serve as protective factors against mental illness (Layous, et al., 2014). The current study aimed to explore the relationship between these protective psychological mechanisms and burnout.

Historically, philosophers have understood wellbeing as hedonic or eudaimonic; psychologists followed suit by creating the subjective wellbeing model (SWB), which is equivalent to the hedonic philosophical stance, and psychological wellbeing (PWB), which depicts a eudaimonic perspective (Arslan, 2021; Boniwell & Tunariu, 2019). SWB consists of three components: satisfaction with their life, positive affect, and negative affect (Andrews & Withey 1976; Diener, 1984; Proctor, 2014); PWB is related to reaching and achieving one's potential measured through positive relationships engagement, meaning, self-esteem, self-acceptance, competence, optimism, and social contribution (Ryff, 1989; Ryff & Keyes, 1995). Since the inception of Positive Psychology in 1998 (Seligman & Csikszentmihalyi, 2001), models of flourishing have begun to emerge, describing a combination of hedonic and eudaimonic dimensions of well-being. Currently, there are four main frameworks for measuring flourishing (Hone et al., 2014). PERMA model (Positive emotions, Engagement, Relationships, Meaning, Accomplishment), otherwise known as The Well-being Model (Seligman, 2011), The Mental Health Continuum (MHC) model (Keyes, 2002), a model-based around the Flourishing Scale (Diener et al., 2010), and the European Social Scale (Huppert and So, 2013). The models applied in the current study are PERMA (Seligman, 2011) and MHC (Keyes, 2002), as they are salient in wellbeing research, thus providing an opportunity for comparison.

Both PERMA and MHC are multidimensional models of wellbeing. MHC is an amalgamation of the SWB, PWB and additional social wellbeing constructs (Keyes, 2002), whereas PERMA represents five diverse components, namely positive emotions, engagement, relationships, meaning, and accomplishments (Seligman, 2011). According to the author, each of the PERMA components is self-motivating; thus, individuals derive intrinsic motivation from engaging with them, enhancing their well-being. According to Hone (et al., 2014) limited empirical evidence of dashboard statics, scale norms, or psychometric properties is known. Additionally, there are critiques on the efficacy of multidimensional models overall, such as the lack of evidence regarding the impact of each one of the domains on each other, or practical implications of the high amalgamated scores (Moneta, 2013), however, from the statistical viewpoint, both PERMA's and MHC' reliability is high (Butler & Kern, 2016; Keyes, 2007).

Nursing and Well-being

Healthcare systems are working in a continuously evolving environment related to newer evidence-based practices, technology, or political climate (Nilsen et al., 2020). For example, in the United States, one of the political reforms to healthcare was with The Patient Protection Affordable Care Act (PPACA, 2010). PPACA aimed to cut costs and improve patient care and healthcare efficiency, complex and multidimensional challenges (Reitz & Malin, 2017). In the midst of it, nurses' burnout poses a significant challenge for healthcare (Khamisa et al., 2013). Additional factors that affect it include working environmen, with as many as 8-38% of healthcare workers being exposed to physical violence (El-Hneiti et al., 2019), and verbal violence from patients, visitors (Shi et al., 2017), and

colleagues (Farrell & Shafiei, 2012). In addition to these factors, there is a variety of other psychological factors that impact burnout.

To address these complexities in healthcare, there needs to be a shift from the medical model (MM) that focuses on symptom management to a holistic model centering on prevention, integrative interventions, health, and wellbeing (Reitz & Malin, 2017). A recent systematic review of wellbeing in nursing showed an apparent scarcity of research in understanding the complex nature of nursing wellbeing (Xiao et al., 2022). Thus, we know more about the negative consequences of burnout than preventative factors that nurses can employ to protect themselves against adverse consequences. The paradigm shift from the MM to a more holistic model is a challenging endeavour (Reitz & Malin, 2017). To make this shift, healthcare organizations, leaders, and administration must expand this paradigm shift to include employee wellbeing and flourishing initiatives.

A systematic review of healthcare staff wellbeing, burnout and patient safety, which included nursing studies, showed a strong connection between burnout and patient safety and advocated for a better definition of wellbeing (Hall et al., 2016). Another study found a positive link between nurses who experienced positive emotions and their work satisfaction (Gurkova et al., 2011). Therefore, for organizations/institutions, interdisciplinary healthcare professions, and individual professionals to function at the highest potential promoting the best outcomes for patients with the best outcomes for patients, they must not ignore their health and wellbeing needs. The goal of providing high-quality care is not lessened by promoting and supporting professional wellbeing but can only be enhanced. Better understanding, promoting, and creating intentional interventions to enhance professional wellbeing is intimately connected to the pursuit of high quality and safe patient care.

Research with medical students showed that experiencing higher levels of wellbeing attenuated the negative consequences of burnout (Dyrbye et al., 2012). However, it is still unclear which aspect of the wellbeing construct protects individuals against burnout most effectively. Al Some evidence suggests that optimism and social support could be protective factors for mental health for healthcare workers (Schug et al., 2021) and resilience serves as a protective factor for nurses (Alameddine et al., 2021); however, very little is known about which aspects of the wellbeing construct protects nurses against burnout most effectively. At the same time, nurse residency programs continue to include the pursuit of wellbeing in their curricula (Hayton et al., 2021) and the "National Academy of Medicine's (NAM) Future of Nursing 2020-2030", the importance of nursing wellbeing and resiliency is highlighted as crucial for the profession (NAM, 2021). Therefore, there is an urgent need for institutions and individuals to understand and create evidence-based solutions that will serve as pathways towards promoting and cultivating a flourishing nursing profession. Past research indicated that burnout predicted negative outcomes such as depression, anxiety (e.g. Hakanen & Schaufeli, 2012). However, in the current research wellbeing was not measured as the presence of pathologies, rather as the presence of symptoms of positive health, some of which were deemed protective factors of nursing burnout, e.g., self-esteem, sense of coherence, or social support (Manomenidis et al., 2017; Navarro-Prados et al., 2022; Velando et al., 2020). Identifying what aspects of wellbeing, as measured by the PERMA and MHC multidimensional models of wellbeing, act as a buffer against burnout in nurses can inform and advance both research and practice of nursing, which the current study aimed to address.

Well-being behaviours (exercise, yoga, meditation, time with a close friend, and vacation) in healthcare workers were all significantly associated with emotional thriving (Rink et al., 2021). One nursing study brings awareness around 3 basic motivational needs of autonomy, competence, and relatedness and suggests that these ingredients could help create nursing environments where nurses want to work and can thrive (Ahlstedt, 2020). In addition, research with medical students showed that experiencing higher levels of wellbeing attenuated the negative consequences of burnout (Dyrbye et al., 2012). There is some evidence that shows all 5 elements of PERMA and especially positive emotions and engagement are associated with resiliency among nursing students (Abiola et al., 2017). PERMA wellbeing has also been utilized in studies with nurse mid-wives and has shown that psychological interventions and education utilizing PERMA model of wellbeing can improve the psychological well-being of nurse midwives (Shaghaghi et al., 2019). Because of the growing interest and need for more research related to nursing wellbeing this study will examine the associations between wellbeing and burnout among nurses. This study adds to the growing research and interest in better understanding nursing wellbeing. The aim is to better understand the associations and components of nursing wellbeing and how they are associated with burnout.

Past research showed a strong link between mental and physical health after controlling for a range of variables, and this effect was ongoing, whereby past physical health affected present mental health and vice versa (Ohrnberger et al., 2017). Furthermore, longitudinal data with over 10 thousand participants showed that these variables impact

each other indirectly (by 10%) and directly (by 8%). When assessing mental health outcomes, physical health must be considered. Therefore, in the current study, the relationship between burnout and mental health was controlled by physical health.

In summation, the aim of the current research was to identify how much how well the MHC and PERMA constructs were able to predict burnout after controlling for physical health and which wellbeing components were the best predictors of burnout after controlling for physical health?

Method

Participants

A total of 146 nurses were recruited for the current study via the snowball sampling method. The majority were females (98%), who have licensed registered nurses currently practicing in the USA, aged M=45.03, SD=13.31. Over 70% of participants (n=104) were employed in a large quaternary US-based health system, and the remainder practiced in other settings. Of the entire sample, 42% were clinical-based nurses, 14% had unit-based leadership positions (manager, charge, team lead or preceptor), the remainder worked in other nursing positions. Half of the participants have practiced nursing for over 15 years, 25% have practiced between 6-15 years, and 25 % for five years or less; thus, the sample represents experienced nurses. Given that there are over 4 million registered nurses in the US, the sample size represents a confidence level of 85% that the real value is within ±6% of the measured value.

Procedure

After obtaining ethical approval and exemption from a large tertiary US-based healthcare system's Institutional Review Board (IRB), participants were recruited via internal recruitment methods (e.g., emails and internal word of mouth). Additional participants were recruited via social media (LinkedIn and Facebook), some were recruited from another nursing speciality related organization, and finally subjects were encouraged to share access to the survey with other nursing colleagues who were interested in participating. Research subjects were provided with information about the nature of the research topic via (e.g., description/purpose of study and a link (Qualtrics) to access the survey). The vast majority of the participants completed their surveys in 2017 and very few if any completed them towards the beginning of 2018.

Measures

Two wellbeing questionnaires and one burnout survey were utilized in the current study: Mental Health Continuum-Short Form (MHC-SF) (Keyes, 2009), Workplace PERMA Profiler (WPERMAP) (Kern, 2014) and the Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005).

Mental Health Continuum-Short Form (MHC-SF: Keyes, 2009). It is a 14-item measure on a 6-point Likert scale ranging from "never" to "every day". It comprises emotional, social and psychological wellbeing. Three questions measure emotional wellbeing (e.g., "During the past month, how often did you feel happy"), five questions measure social wellbeing (e.g., "During the past month, how often did you feel that you had something important to contribute to society"), and six questions measure psychological wellbeing ("During the past month, how often did you feel that you liked most parts of your personality"). The responses are divided into three categories: flourishing mental health, moderate mental health, and languishing mental health. Furthermore, mean scores are provided for each component of wellbeing measured. Past research showed excellent reliability at a= .80 (Keyes, 2009). The reliability of the scale in the current study is α = .92. Factorial analysis of the scale was conducted and showed acceptable fit (Joshanloo & Jovanovic, 2017; Lupano Perugini et al., 2017). The authors (e.g., Keyes, 2009) recommend that the results are presented either using one overall wellbeing score, or factorial scores. However, in the current study, an overall wellbeing score was used as it best reflected the research question.

Workplace PERMA Profiler (WPERMAP: Kern, 2014). The Workplace PERMA Profiler (Kern, 2014) is a 23-item measure on an 11-point Likert scale. There are three questions for each aspect of PERMA (e.g., Positive Emotion: "At work, how often do you feel joyful?"; Engagement: "At work, how often do you become absorbed in what you are doing?"; Relationships: " To what extent do you receive help and support from co-workers when you need it?"; Meaning: "To what extent is your work purposeful and meaningful?"; Accomplishments: "How often do you feel you are making progress towards accomplishing your work-related goals?"), three questions related to

negative emotions (e.g., “At work how often do you feel anxious?”), Three questions related to health (e.g., “In general , how would you say your health is?”), one question related to loneliness (e.g., “How lonely do you feel at work?”), and one question related to happiness (e.g., “Taking all things together, how happy would you say you are with your work?”). The Likert scale responses vary based on the verbiage used for frequency of occurrence (e.g., never to always; not at all to completely; and, terrible to excellent). According to Kern (2014), this measure is skewed towards the positive, and the midpoint is 6.5-7.5 and not 5. Past reliability of the scale is very good and ranges between α =.72-.94 (Butler & Kern, 2016). The current study shows excellent reliability of the overall construct at α =.83 and the physical health component at α =.89. Factorial analysis of the scale was previously conducted and showed marginally acceptable fit (Watanabe et al., 2018). The authors (e.g. Kern, 2014) recommend that the results are presented either using one overall wellbeing score, or factorial scores. However, in the current study, an overall wellbeing score was used as it best reflected the research question.

Copenhagen Burnout Inventory (CBI: Kristensen et al., 2005). This is a 19-item measure on a 5-point Likert response scale. Six questions measure Personal burnout (PB) (e.g., “How often do you feel tired?”) with likert responses ranging from “always, often, sometimes, seldom, and never/almost never”. Surveys with less than 3 responses were considered a non-responder. Seven questions measure Work-related burnout (WRB) (e.g., “Do you feel burnout out because of your work?”). Questions 1-3 with likert responses ranging from “To a very high degree, To a high degree, Somewhat, To a low degree, To a very low degree” and questions 4-7 had likert responses ranging from ”Always, Often, Sometimes, Seldom, Never/almost never” and . reversed score for last question. Surveys with less than 4 responses were considered a non-responder. Finally, six questions measure was used for Client-related burnout (CRB) (e.g., “Do you find it hard to work with clients?”). Questions 1-4 had likert responses ranging from: “To a very high degree, To a high degree, Somewhat, To a low degree, To a very low degree” and questions 5-6 with likert responses ranging from “Always, Often, Sometimes, Seldom, Never/almost never”. Surveys with less than 3 responses were considered a non-responder. The mean of each subscale comprises the componential scores. Past studies indicated very good reliability at α =.90 for personal burnout (PB), α =.83 work-related burnout (WRB) and α =.82 client-related burnout (CRB) (Kristensen et al., 2005; Ruiz et al., 2013). The current study showed excellent reliability at a=.89 for PB, α =.79 WRB, and α =.86 CRB. Confirmatory factor analysis was conducted and identified acceptable fit (Campos et al., 2013). It is recommended that the results are presented as separate dimensions of burnout, which is why in the current study they were reported as three separate scores.

Results

Hierarchical Multiple Regression was used to assess the ability of MHC and PERMA constructs to predict personal, work-related and client-related burnout. Preliminary analyses were conducted to ensure no violation of normality, linearity, multicollinearity, and homoscedasticity assumptions. The dependent variable comprised of the three types of burnouts; the independent variables were physical health (M=3.69, SD=3.05), which was also a control variable, and overall wellbeing scores for MHC and PERMAWP. See Table 1 for demographic detail.

Table 1. Descriptive statistics

Variable	M	SD	Skewness		Kurtosis		Reliability
			Statistic	Std.Error	Statistic	Std.Error	
MHC	3.27	.79	-.57	.20	.08	.40	.92
PERMAWB	7.28	1.50	-.73	.20	.32	.40	.92
H	3.69	3.05	.33	.20	-1.33	.40	.89
PB	45.83	19.88	.07	.20	-.67	.40	.89
WB	49.73	17.62	.36	.20	-.38	.40	.79
CB	31.22	17.78	.50	.20	.01	.40	.86

Notes. MHC=mental health continnum, EWB=emotional wellbeing, SWB=social wellbeing, PWB=psychological wellbeing, PERMAWB= work-place PERMA, H=Physical Health, PB=personal burnout, WB=work-related burnout, CB=client-related burnout.

The relationship between the three burnout dimensions, physical health and two wellbeing scales was investigated using Spearman Correlation, given that data was not normally distributed. There was a small to moderate positive

correlation between the components of burnout and physical health; and moderate to strong correlation between the components of burnout and both wellbeing variables. Table 2 provides further detail.

Table 2. Correlation statistics (2-tailed).

	MHC	PERMAWB	H	PB	WB
PERMAWB	.619**				
H	-.287**	-.365**			
PB	-.535**	-.511**	.270**		
WB	-.396**	-.587**	.333**	.733**	
CB	-.339**	-.421**	.221**	.464**	.638**

Note: *p<.001; MHC=mental health continnum, EWB=emotional wellbeing, SWB=social wellbeing, PWB=psychological wellbeing, PERMAWB= work-place PERMA, H=Physical Health, PB=personal burnout, WB=work-related burnout, CB=client-related burnout.

Regression Results for MHC

Physical health was entered at step 1, explaining 7% of the variance in personal burnout. After entry of the MHC construct at step 2, the total variance explained by the model as a whole was 36%. The three control measures explained an additional 30% of the variance in personal burnout, after controlling for health. In the final model, only two control measures were statistically significant, emotional wellbeing (β=-.31, p<.05) and psychological wellbeing (β-.30, p<.05).

Furthermore, in relation to the work-related burnout, physical health was also entered at step 1, explaining 11% of its variance. After entry of the MHC construct at step 2, the total variance explained by the model as a whole was 22%. The three control measures explained an additional 11% of the variance in work-related burnout, after controlling for health. However, in the final model, none of the control measures were statistically significant.

Table 3. Hierarchical multiple regression statistics for predicting burnout with an MHC construct after controlling for physical health.

Variables		Burnout		
		Personal	Work-related	Client-related
		Model 1		
Health	B	1.74	1.94	1.30
	SE	0.52	0.45	0.47
	ß	0.27	0.34**	0.22**
R^2		.07**	.11**	.05*
F for change		11.12		7.56
		Model 2		
Health	B	0.79	1.40	0.77
	SE	0.46	0.45	0.48
	ß	0.12	0.24**	0.13
EWB	B	-6.84	-3.26	-1.00
	SE	2.47	2.44	2.59
	ß	-0.31*	-0.17	-0.05
SWB	B	0.10	-1.22	-3.56
	SE	1.79	1.76	1.87
	ß	0.01	-0.07	-0.21
PWB	B	-6.32	-2.72	-1.54
	SE	2.59	2.55	2.72
	ß	-0.30*	-0.14	-0.08
R^2		.36**	.22**	.87*
F for change		22.68	6.72	4.71

*Note: *p<.05, **p<.001*

Finally, regarding the client-related burnout, physical health was also entered at step 1, explaining 5% of its variance. After entry of the MHC construct at step 2, the total variance explained by the model as a whole was 14%.

The three control measures explained an additional 9% of the variance in client-related burnout, after controlling for health. However, in the final model, none of the control measures were statistically significant.

Overall, the results indicated that only personal burnout can be explained by the MHC construct, namely emotional and psychological wellbeing predicted lower levels of personal burnout. However, participants' wellbeing as measured by MHC could not predict their work-related or client-related burnout. See Table 3 for further information.

Regression Results for PERMAWP

Physical health was entered at step 1, explaining 7% of the variance in personal burnout. After entry of the PERMAWP construct at step 2, the total variance explained by the model as a whole was 32%,. The five control measures explained an additional 25% of the variance in personal burnout, after controlling for health. In the final model, only one control measure was statistically significant, i.e. positive emotions (β=-.46, p<.001).

In relation to the work-related burnout, physical health was entered at step 1, explaining 11% of the variance in work-related burnout. After entry of the PERMAWP construct at step 2, the total variance explained by the model as a whole was 39%. The five control measures explained an additional 27% of the variance in work-related burnout, after controlling for health. In the final model, only one control measure was statistically significant, i.e. positive emotions (β=-.36, p<.001).

Table 4. Hierarchical multiple regression statistics for predicting burnout with a PERMAWP construct after controlling for physical health.

Variables		Burnout		
		Personal	Work-related	Client-related
		Model 1		
Health	B	1.74	1.94	1.30
	SE	0.52	0.45	0.47
	ß	0.27**	0.34**	0.22*
R^2		.07**	.11**	.05*
F for change		11.12	18.40	7.56
		Model 2		
Health	B	0.41	0.81	0.51
	SE	0.50	0.42	0.46
	ß	0.06	0.14	0.09
Positive emotions	B	-5.15**	-3.57**	-2.10
	SE	1.45	1.22	1.33
	ß	-0.46**	-0.36	-0.21
Engagement	B	0.57	-2.00	-3.88
	SE	1.22	1.02	1.12
	ß	0.05	-0.20	-0.38**
Relationship	B	-0.71	-1.18	-1.11
	SE	1.04	0.87	0.95
	ß	-0.07	-0.13	-0.12
Meaning	B	0.78	0.39	0.78
	SE	1.25	1.05	1.15
	ß	0.08	0.04	0.09
Accomplishment	B	-2.13	0.11	1.01
	SE	1.25	1.05	1.15
	ß	-0.17	0.01	0.09
R^2		.32**	.39**	.28**
F for change		9.96	12.40	8.73

Note. *p<.05, **p<.001

Finally, physical health was entered at step 1, explaining 5% of the variance in client related burnout. After entry of the PERMAWP construct at step 2, the total variance explained by the model as a whole was 28%. The five control measures explained an additional 23% of the variance in client burnout, after controlling for health. In the final model, only one control measure was statistically significant, i.e. engagement (β=-.38, p<.001).

Overall, the results indicated that while lower levels of positive emotions predict personal and work-related burnout, client-related burnout is predicted by lower levels of engagement with work. Table 4 provides further detail.

Discussion

The results of the currents study demonstrated that (1) wellbeing constructs explain various types of burnout differently, (2) personal wellbeing as measured by MHC does not predict work-related and client-related burnout, (3) even though the presence of positive emotions predicted lower levels of personal and work-related burnout, engagement was instrumental in predicting client-related burnout.

Whilst researchers recognize that positive measures of wellbeing, e.g. positive emotions, engagement, relationships are not merely the opposite of the negative measures, e.g. depression, anxiety and as such, they serve a different purpose (Fredrickson, 1998, Huppert & Whittington, 1995; Whittington & Huppert, 1998), little is known about their impact on burnout, especially in the context of nursing. The current study provided unique evidence suggesting that the relationship between two primary wellbeing constructs and burnout is different; thus, approaching nurses' wellbeing in general terms without discussing the details of a wellbeing framework that needs to be applied may prove ineffective. Instead, researchers and practitioners must delve deeper into each wellbeing component deemed to protect nurses against burnout, such as those created by Huppert & So (2013), Ryff (1998), Diener et al. (2010) and others. Learning about their intricate relationship with burnout may bring more focus to the necessary wellbeing measures to protect nurses from the negative consequences of burnout.

Furthermore, the current research provided preliminary evidence of the limiting impact of personal wellbeing, as measured by MHC, on work-related and client-related burnout. This contrasts past research showing that stress management and resiliency training and interventions can improve subjective happiness and burnout scores according in all burnout subcategories (PB, WRB, and CRB) (Magtibay et al., 2017). A recent meta-analysis also provides evidence that resilience interventions for nurses both improved resilience for nurses and interventions were associated with reducing nurses' depression, anxiety and burnout a (Zhai et al., 2021). Additionally, a recent systematic review of randomized controlled trials concluded that healthcare systems should promote evidence-based interventions for nurses and physicians to improve health and quality of the care they provide (MeInyk et al., 2021). Furthermore, given that individuals can have symptoms of both positive and negative well-being simultaneously (Huppert & Whittington, 2003), it is essential to consider them separately in the context of burnout. Whilst negative wellbeing, such as depression and anxiety, may indeed impact nurses' burnout, the current study provided evidence that having high levels of personal wellbeing (EWB, SWB, PWB) does not necessarily impact an individual's experiences of burnout. Other work-related factors may explain burnout at work more effectively. A theoretical study by Dall'Ora et al. (2020) suggests that:

"Research consistently found that adverse job characteristics-high workload, low staffing levels, long shifts, low control, low schedule flexibility, time pressure, high job and psychological demands, low task variety, role conflict, low autonomy, negative nurse-physician relationship, poor supervisor/leader support, poor leadership, negative team relationship, and job insecurity were associated with burnout in nursing. (p. 13)

Another study (Phillips et al., 2022) of over 4,400 nurses (licensed practical nurses) suggests that nurses' health is not purely impacted by personal behavioral choices, but also by the workplace environment. Thus, creating unfocused wellbeing courses for nurses may boost their wellness but may not necessarily reduce burnout at work. Further research is required to confirm this finding in a larger sample and ideally in an experimental setting.

Finally, this is the first study, which identified that whilst lower levels of positive emotions experienced at work predicted personal and work-related burnout, lower levels of engagement at work was the best predictor of client-related burnout. The first part of this finding is in line with past research. The Broaden-and-Build theory of Positive Emotions (Fredrickson, 1998) shows that they act as buffers against adversity, thus protecting nurses from the adverse effects of burnout. Simple interventions that enhance positive emotions, such as increased humour during work or reflecting on the Three Good Things that happened at work, can have a buffering effect against stress and burnout (Fang et al., 2019; Rippstein-Leuenberger et al., 2017).

Even though the CBI burnout scale is not as widely used for nurses as the MBI scale, there is evidence that all subscales of CBI have been shown to have significant correlations with depression, anxiety and stress especially personal burnout and work-related burnout (Creedy et al., 2017). The finding in this study related nurse engagement

and client-related burnout is intriguing. Nurse engagement is not a new area of focus within the literature and some suggest it is influenced by both external and internal factors (Porter & Wang, 2022). There have been both positive and negative correlations related to nurse engagement for example: Nurse engagement is associated with improved teamwork, patient experience, and organizational outcomes (Dempsey & Assi, 2018);however, disengagement is associated with patient harm (Day, 2014; Porter & Wang, 2022). Patient interactions are vital components of front-line nurses' responsibilities. The International Council of Nurses [ICN] suggests that: "Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings." ([ICN], 2022). Additional studies have shown that nurses report higher levels of personal burnout and work-related burnout vs client-related burnout (Montgomery et al., 2022; Creedy et al., 2017). This is promising since front-line nurse have direct patient interactions on a regular basis. The current research suggests a strong correlation with nursing work engagement and client-related burnout which is a good start;however, future research needs to identify the causal effect associated with this correlation, i.e., does lower engagement with work lead to client-related burnout or vice versa?

Additionally understanding nursing well-being through the lens of only one wellbeing construct or one burnout construct may not be efficient. Both PERMA and MHC are validated wellbeing conceptualization; however, they could impact nursing well-being differently. Also, this study highlights the need to continue to understand burnout from multiple angles (e.g., personal, work-related, and client-related). If the current study only chose one wellbeing survey or chose the most frequently used burnout scale (Maslach's Burnout Inventory the nuances highlighted in this study would not have been identified.

Implications for Nurses, Nursing Leaders, and Healthcare Organization

The National Academy of Medicine's [NAM] Future of Nursing [FON] Report 2020-2030 was released in 2021. A major focus area in the report is related to improving the health and professional well-being of nurses (National Academy of Medicine [FON] Report, 2021). Well-being is multidimensional concept (Dodge et al., 2012) and the FON report (2021) takes a broad approach and advocates for nursing wellbeing on physical, mental, social, and moral dimensions. The current study is in line with 2020-2030 FON in so that it examines well-being and burnout from established and multidimensional frameworks. The findings in this study have several implications for future research, nurses, and healthcare organizational leaders.

First, the results of this study are not causal, but correlational in nature. Future research should aim to find the causal relationship between nursing engagement and wellbeing and additional relationships between wellbeing and burnout. Second, this study suggests that a generic approach to supporting nursing well-being will not be efficient. Well-being constructs explain various types of burnouts differently and suggests a more nuanced approach will be needed to better understand and improve the well-being of nurses. Finally, focusing research on purely the relationship between individual well-being and burnout will not be efficient. According to Ken Wilber's (1997) Integral Framework there are four main ontological perspectives to human experience(subjective(personal), objective (behavioral), intersubjective(cultural) and interobjective (systems & structures; Dossey, 2015). Within nursing there are two major theories that have adapted the work of Wilber (1) Theory of Integral Nursing (TIN; Dossey, 2008) and (2) Theory of Integrative Nurse Coaching (TINC; Dossey, 2015) and one applied positive psychological model: Layered Integrated Framework Example model (LIFE; Lomas et al., 2015). The Future research and approaches to support and understand nursing well-being should take an integral approach. According to Dossey (2015b) when coaching clients ignoring any one perspective could jeopardize the coaching process and using the four-quadrant approach could lead to more lasting change (Dossey, 2015a). The current research examined nursing well-being and burnout primarily from the subjective interior point-of-view. This is a great start; however, future research and interventions should aim to include all 4 integral perspectives and approaches when understanding, supporting, and creating interventions to improve nursing well-being.

Limitations

Despite many unique findings, the current research came with several limitations. Firstly, participants were recruited using a snowball sampling strategy, which resulted in a relatively small and homogenous sample. Future research should explore these variables in a larger, international sample of participants. Also, given that it was a cross-sectional sample of nurses, it is not easy to ascertain the causal effect of the findings. Further research should apply a longitudinal, experimental, and integral design to identify the impact of wellbeing on nurses' burnout.

Additionally, surveys were designed as self-report measures which come with limitations (e.g., honesty of respondent, introspective ability, response bias, sampling bias, etc). Finally, the instructions for the CBI encouraged mixing the official survey questions with questions from other topics to avoid stereotyped response patterns. The questions in the current study were not mixed with questions from other topics. Additionally, the Likert-type response choices were the same throughout the current study and CBI suggested different likert responses for questions. Therefore, future research should consider amalgamating the Burnout questionnaire with other measures to identify differences.

Conclusions

Overall, the current research provided preliminary evidence for the importance of measuring a variety of aspects of wellbeing in the context of burnout, as wellbeing scales showed an inconsistent relationship with types of burnout. Also, the study added to the wealth of research by identifying those simple measures for enhancing personal wellbeing might not impact positively on nurses' burnout, as it did not predict their work-related or client-related wellbeing. Therefore, taking an integral and more nuanced approach to teaching and coaching nurses towards greater wellbeing to protect them against burnout is required. Finally, the study contributed by identifying different factors that impact personal and work-related burnout (positive emotions) and client-related wellbeing (engagement). These findings can assist researchers and practitioners in building a profile of the relationship between wellbeing and burnout in nurses.

Compliance with Ethical Standards

Ethical Standards

All study procedures involving human participants followed institutional and/or national research committee ethical standards and the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all participants included in the study. After obtaining ethical approval and exemption from a large tertiary US-based healthcare system's Institutional Review Board (IRB), participants were recruited via internal recruitment methods (e.g., emails and internal word of mouth).

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Data Availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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