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## DOCTOR OF PHILOSOPHY

### Understanding burnout and mental well-being in healthcare staff

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Understanding burnout and mental well-being in  
healthcare staff

by

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Submitted in partial fulfilment of the requirements for the degree of  
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## Section 1

### **Determinants of burnout among health professionals working in a palliative care setting: A systematic Review**

#### **Abstract**

*Background:* It has been reported that almost a quarter of palliative care staff are considering leaving palliative care, in the next five years, due to burnout. This is particularly concerning as there is an overall increased need for health services to provide palliative care for those at the end of life. It is therefore crucial that palliative care staff are supported in their work.

*Aim:* To explore the determinants (risk and protective factors) of burnout among health and social care professionals working in a palliative care setting.

*Design:* A systematic review was carried out following the PRISMA guidelines. The review was prospectively registered on PROSPERO (registration number CRD42018111359).

*Data sources:* A search strategy was developed and applied to search databases in October 2018. The databases searched included: Scopus, PsychINFO, MEDLINE, Embase, Web of Science, and CINAHL. Only studies published in English, identified determinants of burnout, and included staff working within palliative care were eligible to be included. Eligible studies were quality checked using Appraisal tool for Cross-Sectional Studies.

*Results:* A total of 1903 possible studies were identified, with 9 cross-sectional studies included in this review. Occupational risk factors included work environment, working pattern (e.g. working longer than 50 hours per week and working weekends and nights), and team dynamics. Attachment style and attitudes toward death were

possible individual risk determinants whilst sociodemographic factors were inconclusive. Importantly, having variety within one's work and engaging in hobbies served as protective factors against burnout.

*Conclusions:* The determinants of burnout can be categorised into two categories: occupation and individual factors. Due to the low quality of the included studies, as a result of cross-sectional design, the results should be interpreted with caution. There is a need for longitudinal studies to be completed in this area to elucidate causal factors and enhance the quality of burnout research in palliative care.

**Keywords**

Burnout, palliative care, health care staff, risk factors, protective factors

## **Background**

Due to increased chronic conditions, terminal illnesses, and an aging population, the need to provide palliative care within health services is increasing.<sup>1</sup> Health professionals working within this setting are regularly exposed to the suffering of their patients and their families.<sup>2</sup> They are also often faced with the loss of their patients with whom they may have developed a close relationship.<sup>3</sup>

Due to being regularly exposed to such highly emotive situations, research has evidenced that working within palliative care settings, can increase staff vulnerability to experiencing occupational stress, exhaustion, and burnout.<sup>4-7</sup> Burnout was first discussed by Herbert Freudenberger in 1974 and is said to exist when individuals experience chronic work-based stress for which the perceived job demands exceed personal and workplace resources.<sup>8-10</sup> Among the current literature, burnout is more commonly viewed as being made up of three factors as demonstrated in the Maslach Burnout Inventory; emotional exhaustion (feeling overstretched and exhausted by work demands), depersonalisation (extreme detachment from those you work with), and reduced personal accomplishment (feeling a lack of achievement and accomplishment at work).<sup>11,12</sup>

The reported prevalence of burnout among palliative care staff has varied widely from 9 per cent to 62 per cent, which is among the highest rate within health care settings.<sup>13-15</sup> However, this elevated prevalence must be interpreted with caution as some studies only involve one professional group, such as physicians.<sup>14</sup> It is also worth noting that there is a lack of consensus amongst the literature on what constitutes the presence of burnout. Some studies view burnout as existing when individual's experience high emotional exhaustion, high depersonalisation, and low personal accomplishment

while other studies suggest that, only the presence of high emotional exhaustion or depersonalisation is required to indicate the presence of burnout.<sup>13,16,17</sup> In Koh's study, personal accomplishment was not included as it was felt that emotional exhaustion and depersonalisation were the core concepts of burnout.<sup>18</sup> Regardless of this fact, Harrison reported that a quarter of staff were considering leaving the palliative care field, within the next five years, due to experiencing high levels of burnout.<sup>7</sup>

The prevalence of burnout has been steadily increasing within the caring professions.<sup>19</sup> It has been linked to many adverse personal and professional factors including, higher staff turnover, poorer wellbeing, poorer employee physical health and increased staff sickness, decreased patient satisfaction, and increased medical errors.<sup>7,20-24</sup> There has been a current trend, within the literature, to identify adequate interventions to try and decrease burnout for those working in palliative care settings.<sup>25</sup> This has been criticised by some as not fully appreciating the systemic factors which influence burnout and shifts the responsibility for preventing burnout to the individual.<sup>7</sup> However, there is still not enough known about the risks and protective factors of burnout among palliative care staff with much variation across studies.

Pereira, Fonseca, and Carvalho carried out a systematic review examining risk and protective factors of burnout for palliative care staff.<sup>26</sup> This review reported organisational risk factors, such as, time pressures and difficulty delivering bad news. Protective factors related to being able to spend more time with patients and effective communication. However, the review only included studies published before 2009, focused on nurses and physicians, and six of the included studies measured stress as opposed to burnout. Also, over half of the studies included were based in an oncology

setting, which differs from a palliative care setting as not all patients are at end-of-life stage and may be receiving ongoing curative treatment.

One previous review, which looked at the prevalence of burnout in palliative care staff, found that social workers reported the highest levels of burnout within a palliative care setting.<sup>2</sup> This review did not explore determinants of burnout, hence little insight on what these are is available. Therefore, in contrast to Pereria et al review mentioned above, a more in depth understanding of the full range of palliative care staffs experience of burnout appears worthwhile, given the negative impact of working in palliative care for some.<sup>26</sup>

### **Review Question**

What are the determinants (risk and protective factors) of burnout among health and social care professionals working in a palliative care setting?

## **Methods**

A systematic review was carried out following the ‘Preferred Reporting Items for Systematic Reviews and Meta-Analyses’ (PRISMA) guidelines.<sup>27</sup> The criteria for selecting studies for this review was as follows:

### *Types of studies*

Only studies which were published in English were included in the review. The study designs, which were considered, included observational, cohort (prospective and retrospective), and cross-sectional. Only studies which identified determinants of burnout were eligible to be included in the review. The current review is an updated and modified version of Pereira’s et al systematic review.<sup>26</sup> While the two reviews examine risk and protective factors of burnout among palliative care staff, the current review employs different search strategies, with wider and more encompassing search terms and databases searched.

### *Types of participants*

Included studies involved health and social care professionals working with people experiencing a terminal illness within palliative care settings (e.g. hospice, care home, community based).

### *Types of outcome measure*

Only studies specifically measuring burnout using a standardised burnout out scale, for example, Maslach’s Burnout Inventory were eligible for the review.<sup>11</sup>

### *Search methods for identification of studies*

Databases systematically searched included Scopus, PsychINFO, MEDLINE, Embase, Web of Science, and CINAHL. Searches in all the databases were executed

using the appropriate key words. All related MeSH terms, indexed words, or indexed mapped terms were explored in the selected databases. The searches took place in October 2018. The Opendrey database was also searched, however, this did not yield any additional papers. The search strategy, which was used for searching the MEDLINE database, is detailed in Appendix 1.

#### *Study selection and assessment of study quality*

After all databases had been searched and articles identified, duplicate articles were removed. At this stage, the first reviewer assessed each article's title followed by the abstract, and excluded articles based on the identified exclusion criteria. Following this, full-text articles were sourced and assessed by two reviewers independently for eligibility, using the identified inclusion and exclusion criteria. There was a disagreement regarding the possible inclusion of three papers and this was resolved through discussion (Cohen's Kappa= .82).

For all included studies, the Appraisal tool for Cross-Sectional Studies (AXIS) quality assessment tool was used.<sup>28</sup> This is a tool which is specifically designed for use with cross-sectional studies. The tool does not provide a numerical scale for determining quality but rather requires those using it to apply subjective judgements.

#### *Data extraction and synthesis*

The relevant data from each included study was extracted using a data extraction table which was created with the review questions in mind. The data extracted included information on the study design and methodology, sample characteristics, burnout measure used, and the results of the studies which related to addressing the aims of the review. A narrative synthesis of the data was completed and is presented in this

paper. Due to the heterogeneity, regarding determinants and outcomes measured in the included studies, a meta-analysis was not performed.

## **Results**

### *Study characteristics*

A total of 1903 articles were identified after applying the search strategy to six databases (*Figure 1*). After duplicates were removed, 1037 possibly eligible articles were reviewed. A total of 860 articles were excluded after reviewing the title and 118 articles were deemed not eligible for inclusion, based on their abstracts. Of the 59 studies remaining, the full-text versions were read and a total of 9 articles were deemed eligible to be incorporated in the review. *Figure 1* highlights the reasons for exclusion from the review.

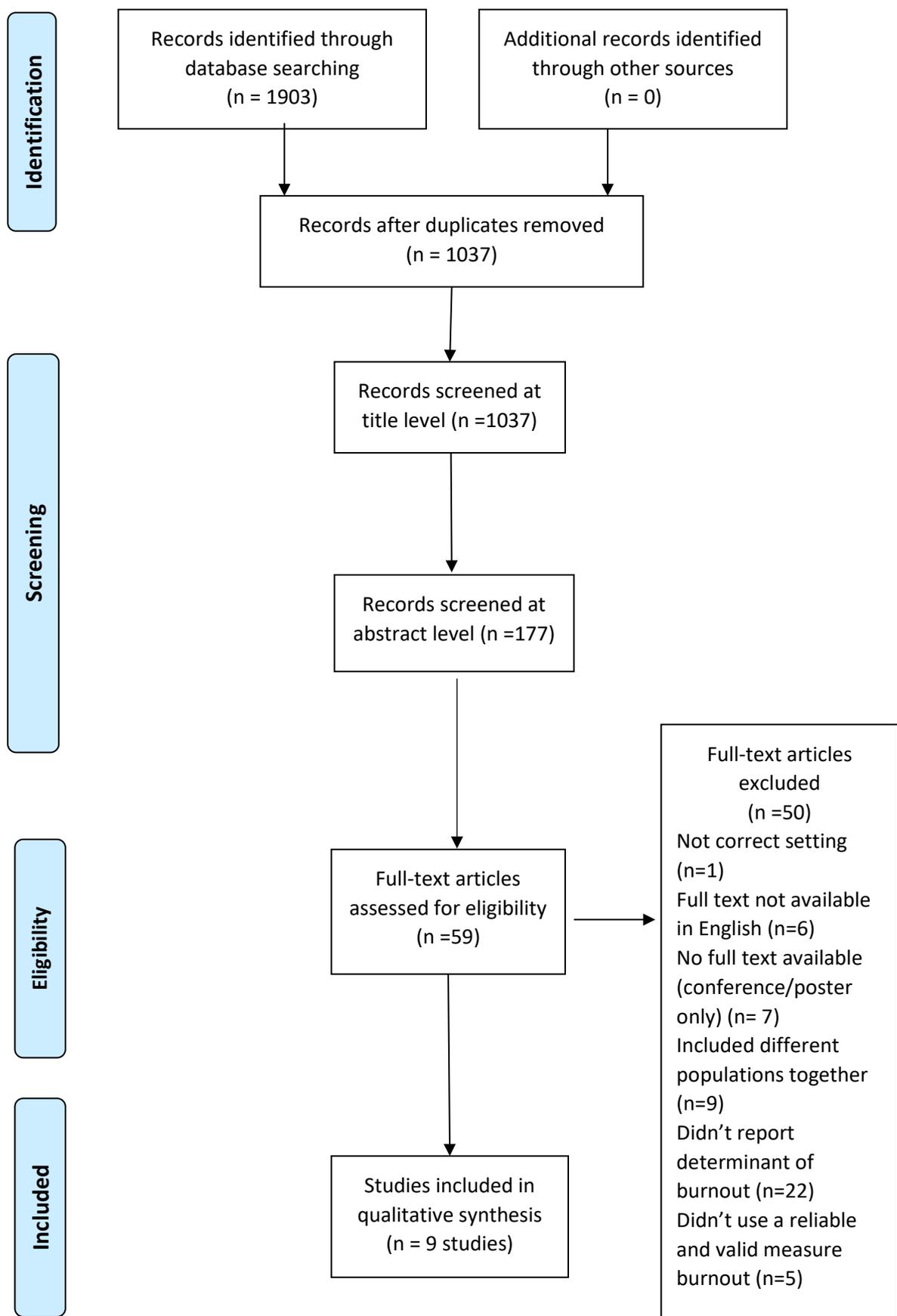


Figure 1. PRISMA diagram of studies included and excluded from systematic review

All the studies included in the review were cross-sectional in design and utilised self-report measures of burnout. As can be seen from *Table 1*, three studies were carried out in Europe<sup>6,30,31</sup>, three in North America<sup>14,32,34</sup>, one in South America<sup>29</sup>, one in Australia<sup>35</sup>, and one in Asia.<sup>6,14,18,29-35</sup> Two studies did not use a version of the Maslach Burnout Inventory to measure burnout but used The Burnout Measure and The Professional Quality of Life Assessment.<sup>11,33</sup> Stensland and Landsman's study used the questions from the MBI-HSS which related to the 'Emotional Exhaustion' subscale to measure burnout.<sup>32</sup>

Regarding the characteristics of the sample, as presented in *Table 1*, a total of 2819 health professionals were included, with a sample size ranging from 33 to 1357. Of the overall sample, 767 were Doctors, 1280 were nurses, 106 were social workers, 148 were attendants/assistants, 34 were chaplains, 133 were classified at 'other', 3 were bereavement professionals, 2 were medical directors, 1 was a volunteer coordinator, 1 was an administrative assistant, and 344 can be classified as missing data.

**Table 1. Study characteristics, context, and burnout measure used**

Reference	Location	Sample Size & job role	Setting	Burnout Measure
<b>Pavelkova, &amp; Buzgova 2015<sup>6</sup></b>	Czech Republic	N= 241 Physician (2); Attendant/ orderly (100); Nurse (139)	Inpatient and mobile hospices	The Burnout Measure
<b>Rizo-Baeza et al., 2017<sup>29</sup></b>	Mexico	N= 185 Nurses (185)	Hospital and health centres	Maslach Burnout Inventory- HSS
<b>Koh et al., 2015<sup>18</sup></b>	Singapore	N= 273 Doctor (74); Nurses (156); Social worker (37); Not reported (6)	Hospital, home hospice, & inpatient hospice	Maslach Burnout Inventory- HSS
<b>Ostacoli et al., 2010<sup>30</sup></b>	Italy	N= 33 Nurse (33)	Hospices	Italian Maslach Burnout Inventory
<b>Gama et al., 2014<sup>31</sup></b>	Portugal	N= 360 Nurse (360)	Internal medicine, oncology, haematology, & palliative care	Maslach Burnout Inventory
<b>Kamal et al., 2016<sup>14</sup></b>	America	N= 1357 Physicians (691); Nurse practitioner/physician assistant (113); Clinical Nurse specialist (66); Registered nurse (36); Social worker (36); Chaplain (21); other (59); Not reported (335)	Hospice and palliative care units	Maslach Burnout Inventory- HSS

**Table 1. Continued**

<b>Reference</b>	<b>Location</b>	<b>Sample Size &amp; job role</b>	<b>Setting</b>	<b>Burnout Measure</b>
<b>Stensland &amp; Landsman, 2017<sup>32</sup></b>	Iowa, America	N= 244  Nurses (86); Social workers (29); Chaplain (11); Certified Nursing Assistant (43); Other (72); Not reported (3)	Hospices	Maslach Burnout Inventory- HSS
<b>Alkema et al., 2008<sup>34</sup></b>	Midwest, America	N= 37  Nurse (17); Home health aide (5); Social worker (4); Volunteer coordinator (1); Bereavement professional (3); Chaplain (2); Administrative assistant (1); Medical director (2); Other (2)	Home hospice	Professional Quality of Life Assessment (ProQOL-RIII)
<b>Payne 2000<sup>35</sup></b>	Western Australia	N= 89  Nurse (89)	Hospice	Maslach Burnout Inventory

### *Quality Assessment*

Two independent assessor quality checked each study and there was a consensus reached which is presented in Table 2 (Cohen's Kappa= .84). It was agreed that all studies were of low to moderate quality.

**Table 2. Results from the AXIS quality check tool for studies included in the review**

	Pavelkova, et al., 2015 <sup>6</sup>	Rizo-Baeza et al., 2017 <sup>29</sup>	Koh et al., 2015 <sup>18</sup>	Ostacoli et al., 2010 <sup>30</sup>	Gama et al., 2014 <sup>31</sup>	Kamal et al., 2016 <sup>14</sup>	Stensland et al., 2017 <sup>32</sup>	Alkema et al., 2008 <sup>34</sup>	Payne 2000 <sup>35</sup>
<b>1. Were the aims/objectives of the study clear?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>2. Was the study design appropriate for the stated aim(s)?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>3. Was the sample size justified?</b>	No	Yes	No	No	No	No	No	No	No
<b>4. Was the target/reference population clearly defined? (Is it clear who the research was about?)</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>5. Was the sample frame taken from an appropriate population base so that it closely represented the target/reference population under investigation?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>6. Was the selection process likely to select subjects/participants that were representative of the target/reference population under investigation?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>7. Were measures undertaken to address and categorise non-responders?</b>	No	No	No	No	No	No	No	No	No
<b>8. Were the risk factor and outcome variables measured appropriate to the aims of the study?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Pavelkova, et al., 2015 <sup>6</sup>	Rizo- Baeza et al., 2017 <sup>29</sup>	Koh et al., 2015 <sup>18</sup>	Ostacoli et al., 2010 <sup>30</sup>	Gama et al., 2014 <sup>31</sup>	Kamal et al., 2016 <sup>14</sup>	Stensland et al., 2017 <sup>32</sup>	Alkema et al., 2008 <sup>34</sup>	Payne 2000 <sup>35</sup>
<b>9. Were the risk factor and outcome variables measured correctly using instruments/measurements that had been trialled, piloted or published previously?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>10. Is it clear what was used to determined statistical significance and/or precision estimates? (e.g. p-values, confidence intervals)</b>	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>11. Were the methods (including statistical methods) sufficiently described to enable them to be repeated?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>12. Were the basic data adequately described?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>13. Does the response rate raise concerns about non-response bias?</b>	No	No	No	No	No	Yes	Yes	Yes	No
<b>14. If appropriate, was information about non-responders described?</b>	Yes	No	Yes	No	No	No	No	No	No
<b>15. Were the results internally consistent?</b>	NR	NR	NR	NR	Yes	NR	Yes	Yes	Yes
<b>16. Were the results presented for all the analyses described in the methods?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
<b>17. Were the authors' discussions and conclusions justified by the results?</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>18. Were the limitations of the study discussed?</b>	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes

	Pavelkova, et al., 2015 <sup>6</sup>	Rizo-Baeza et al., 2017 <sup>29</sup>	Koh et al., 2015 <sup>18</sup>	Ostacoli et al., 2010 <sup>30</sup>	Gama et al., 2014 <sup>31</sup>	Kamal et al., 2016 <sup>14</sup>	Stensland et al., 2017 <sup>32</sup>	Alkema et al., 2008 <sup>34</sup>	Payne 2000 <sup>35</sup>
<b>19. Were there any funding sources or conflicts of interest that may affect the authors' interpretation of the results?</b>	No	No	No	NR	No	No	No	NR	NR
<b>20. Was ethical approval or consent of participants attained?</b>	NR	Yes	Yes	NR	Yes	Yes	Yes	NR	NR

\*NR= not reported

As presented in *Table 3*, five studies collapsed burnout into a single factor, as opposed to identifying the determinants of each factor of burnout.<sup>6,14,18,29,33</sup> Only four studies reported protective factors of burnout, of which two of the studies involved participants identifying factors they felt helped reduce burnout.<sup>6,14,18,33</sup>

#### *Risk Factors for Burnout*

Only three studies reported personal factors to be a risk factor for burnout.<sup>14,29,33</sup> These included living with a partner, being a single parent, being younger than 50 years old, and having a lack of self-care. Work setting was found to play a role in two studies with those working across different settings and with less than three colleagues experiencing higher burnout levels.<sup>14,18</sup> These same studies also found job role to be significant with senior nurses and those in a non-physician role at a greater risk of developing burnout.<sup>14,18</sup> Four studies identified work load and/or work patterns as important factors.<sup>6,14,29,32</sup> These factors included working longer hours, at weekends and nights, having a medium/high workload, increased time pressures, administrative work, and lack of professional quality of life.<sup>6,14,18,29</sup> Having to work with patients who are suffering was found be risk factor in one study.<sup>6</sup>

#### *Protective Factors of Burnout*

Of the studies reporting protective factors, mainly personal/self-care and organisation variables appeared to be relevant. Two studies found having a hobby and engaging in spiritual and transcendental activities as protective.<sup>14,18</sup> One study found taking holidays, talking to family, and to a lesser extent, having time to engage in reading was important.<sup>14</sup> Another study reported maintaining self-care in the areas of physical, psychological, emotional, and spiritual care was associated with lower burnout.<sup>33</sup>

One study found work related protective factors included having a passion for your work and having realistic expectations for patients.<sup>18</sup> In another study, organisational factors which were self-reported included, spending time with colleagues, receiving praise from supervisors, and having more staff to share the workload.<sup>6</sup> Attending organisation activities and clinical variety (combination of clinical work, administration, research and education) were also reported protective against burnout.<sup>18</sup> Alkema et al found engaging in work-place self-care strategies and maintaining a work/life balance were associated with reduced burnout.<sup>33</sup>

#### *No relationship with burnout*

Two studies identified factors which did not have a significant relationship with burnout.<sup>6, 29</sup> These included demographic factors, such as gender, age, marital status, and having children.<sup>6, 29</sup> Both studies also reported that the level of education and years of experience working in palliative care were not significant determinants of burnout.<sup>6, 29</sup>

**Table 3. Determinants of Burnout as a single factor variable**

Reference	Risk factors of Burnout	Protective factors of Burnout	No relationship with Burnout
<b>Pavelková &amp; Bužgová, 2015<sup>6</sup></b>	Self-reported by staff: Administrative work (28.2%) Being confronted with suffering (22.4%) Time pressure for job duties (21.2%)	Self-reported by staff: Meeting with colleagues outside of work (24.9%) Praise from superiors (21.6%) More workers in workplace (14.5%)	No difference between job positions (p=0.997) Type of hospice (p=0.978) Education level (p=0.376) Marital status (p=0.790) Having children (p=0.850) Age (r= 0.01, p=0.831) Experience working in Palliative care (r=0.13, p=0.490)
<b>Rizo-Baeza et al., 2017<sup>29</sup></b>	Living with a partner (p<0.001) Being a single parent (p<0.001) Working >8 hours a day (p<0.001) A medium/high workload (p<0.001) Lack of high professional quality of life (p<0.001) Self-care deficit (p<0.001) Working at night (p=0.003)	Not reported	Gender (p=0.435) Age >50 (p=0.648) Years in palliative care > 20 (p=0.388) Education (p=0.628)
<b>Koh et al., 2015<sup>18</sup></b>	Working >60 hours a week (OR: 8.54; (5% CI: 2.2-32.9), p=0.002) Working in multiple settings in the past month (hospice, home care or hospital) (OR: 3.75, 95% CI: 1.0-13.7, p=0.046) Being a senior nurse (p=0.02)	Having more coping mechanisms (OR: 0.081, 95% CI: 0.02-0.32, p=0.001) Physical wellbeing (p=0.043) Hobbies (p=0.011) Transcendental (meditation and quiet reflection) (p=0.003) Having passion for one's work (p=0.029)	

**Table 3. Continued**

Reference	Risk factors for Burnout	Protective factors for Burnout	No relationship with Burnout
<b>Koh et al., 2015<sup>18</sup></b>		Having realistic expectations (p<0.001) Remembering patients (p<0.001) Organisational activities (p=0.007) Clinical variety (combination of clinical work, administration, research and education) when working (p=0.021)	
<b>Kamal et al., 2016<sup>14</sup></b>	Being a nonphysician vs physician (66% vs 60%, p<0.001) Younger non-physician (<50) (OR: 1.91, 95% CI: 1.45-2.52, p<0.05) Working >50 hours per week (OR:1.67, 95% CI: 1.25-2.25, p<0.05) Working with 3 or less colleagues (OR: 1.66, 95% CI: 1.25-2.19) Working weekends often (OR:1.65, 95% CI: 1.24-2.19, p<0.05)	Self- reported by participants: Talking with family, friends, or significant others for support (>50%) Participating in recreation/hobbies/exercise (>50%) Taking vacations (>50%) Reading (<50%, but highly rated) Nurturing spiritual/religious aspects of myself (<50%, but highly rated)	
<b>Alkema et al., 2008<sup>33</sup></b>	Low Compassion satisfaction (r=-.612, p<0.05) High compassion fatigue (r=0.761, p<0.05) Age (r= 0.306, p<0.05)	Physical Care (r= -0.311, p<0.05) Psychological Care (r=-0.332, p<0.05) Emotional Care (r=-0.497, p<0.05) Spiritual Care (r= -0.496, p<0.05) Workplace Self-Care (r=0.546, p<0.05) Work/life balance (r=-0.496, p<0.05)	

### *Burnout subscales*

Three of the studies included and analysed each of the subscales, emotional exhaustion, depersonalisation, and personal accomplishment, as described and measured by the MBI (*Table 4*).<sup>11,18,30,31</sup> One study only used the ‘emotional exhaustion’ subscale to measure burnout.<sup>32</sup>

### *Individual Risk Factors*

One study reported that those living with depression were at greater risk of high emotional exhaustion and depersonalisation.<sup>30</sup> Another study found that hiding emotions (surface acting) and having high empathy (empathetic concern) were risk factors for high emotional exhaustion (EE) and depersonalisation (DP).<sup>32</sup> In Koh’s et al study not having spiritual beliefs was found to increase the risk of high DP and low personal accomplishment (PA).<sup>18</sup> One study reported that being younger than 27, single or divorced, and practicing within palliative care for less than four years were all risk factors for high DP.<sup>31</sup> The role of gender was disputed with one study finding being male increased the risk of high DP while another study reported that being female increased the risk of low PA.<sup>18,31</sup> Payne reported that having fewer qualifications increased the risk of low PA.<sup>35</sup>

Types of coping styles, including feeling unprepared to deal with the emotional needs of patients and escaping situations, were identified as contributing the risk of high DP and low PA.<sup>35</sup> This same study reported that a lack of planning related problem solving, and not feeling prepared to deal with the emotional needs of patients and escaping were related to increased DP. Only one study reported an individual protective factor, which was having meaning in life, which protected against high EE and DP, and low PA.<sup>31</sup>

Two studies measured attachment style, however, both utilised different instruments.<sup>30,31</sup> One study reported that those with a ‘discomfort with closeness’ (avoidant) attachment style were at increased risk of high EE and those with preoccupied (anxious) attachment styles at risk of high DP.<sup>30</sup> The other study also reported that an anxious attachment style was a risk factor for high EE, DP, and low PA.<sup>31</sup>

Having to deal with death and dying was reported to contribute to high EE levels.<sup>34</sup> Gama et al explored participant’s attitudes toward death and found that having a fear of death put an individual at risk of high EE and DP.<sup>31</sup> Scoring highly on being death avoidant also placed individual at risk of high EE. The study also identified that those who received higher scores on escape acceptance, whereby death is viewed as an escape from pain and suffering, were at risk of high DP and low PA.

#### *Organisational Risk Factors*

Two studies found that setting was a risk factor, with those based in hospitals and those providing terminal care not in palliative care specific settings, at risk of high EE, high DP, and low PA.<sup>30,31</sup> Factors contributing to a risk of elevated EE were ambiguity and conflict around work role, higher staff grade, and increased responsibility.<sup>32, 35</sup> Working full time and in organisations with more than 60 employees were also related to higher EE levels.<sup>32</sup> Experiencing conflict with colleagues was reported to contribute to the risk of high EE and high DP.<sup>35</sup> Gama et al measured professional quality of life and found that those with lower levels were at greater risk of experiencing higher burnout.<sup>31</sup>

### *Protective Factors*

Setting appeared to be important with one study finding working in a hospice, and another study finding working in specific palliative care settings, were protective against high EE and DP, and low PA.<sup>30,31</sup> Stensland and Landsman only reported perceived respect at work as a protective factor.<sup>32</sup> Secure and dependent attachment styles protected against high EE and DP, and low PA.<sup>31</sup> The death attitude of 'neutral acceptance, whereby death is viewed as a part of life, was identified as a protective against high EE and low PA.<sup>34</sup>

**Table 4. Determinants of high emotional exhaustion (EE), high depersonalisation (DP), and low personal accomplishment (PA)**

<b>Reference</b>	<b>Risk factor for high EE</b>	<b>Protective factor for high EE</b>	<b>Risk factor for high DP</b>	<b>Protective factor for high DP</b>	<b>Risk factor for low PA</b>	<b>Protective factor for low PA</b>
<b>Koh et al., 2015<sup>18</sup></b>	Working >60 hours a week (OR: 9.02, 95% CI: 2.3-35.8, p=0.002) Being single (OR:2.02, 95% CI:1.0-4.0, p=0.04) Being a senior nurse (p=0.03)	Not reported	Being less spiritual (OR:2.83: 95% CI:1.2-6.5, p=0.014)	Not reported	Being less spiritual (OR:2.85, 95% CI:1.4-6.0, p=0.005) Being female (OR: 3.65, 95% CI: 1.6-8.6, p=0.003)	Not reported
<b>Ostacoli et al., 2010<sup>30</sup></b>	Working in a hospital setting (p<0.01) Depression (p<0.05) Discomfort with closeness (Attachment style questionnaire) (p<0.05)	Working in a hospice (p<0.01)	Working in a hospital setting (p<0.01) Preoccupation with relationships (Attachment style questionnaire) (p<0.05) Depression (p<0.05)	Working in a hospice (p<0.01)	Working in a hospital setting (p<0.01)	Working in a hospice (p<0.01)

Table 4. Continued

Reference	Risk factor for high EE	Protective factor for high EE	Risk factor for high DP	Protective factor for high DP	Risk factor for low PA	Protective factor for low PA
Gama et al., 2014 <sup>31</sup>	Working in terminal Vs palliative care (t=3.47, p<0.001; t=2.62, p=0.009) Anxious attachment style (r=.33, p<0.001) Fear of death, death attitude (r=.21, p<0.001) Death avoidance, death attitude (r=.11, p =0.025) Escape acceptance, death attitude (r= .23, p<0.001)	Working in palliative care Vs terminal (t=2.71, p<0.008) Secure attachment style (r= -.29, p<0.001) Dependent attachment style (r= -.33, p<0.001) Meaning in life (r= -.46, p<0.001) Neutral acceptance, death attitude (r= -.11, p<0.036)	Nurses aged <27 (t=2.29, p =0.022) Male (t=2.25, p=0.029) Single and divorced (t=4.63, p<0.001) Practicing as a nurse <4 years (t=2.59, p<0.01) Working in terminal care Vs palliative care (t=4.85, p<0.001) Anxious attachment style (r=.32, p<0.001) Fear of death, death attitude (r=.14, p= 0.009) Escape acceptance, death attitude (r= 0.13, p=0.014) Most Significant Purpose in life (t= -4.19, p<0.001)	Working in palliative care Vs oncology (t=3.07, p= 0.003) Secure attachment style (r= -.29, p<0.001) Dependent attachment style (r= -.28, p<0.001) Meaning in life (r= -.30, p<0.001)	Working in terminal care Vs palliative care (t= -2.00, p=0.047) Anxious attachment style (r= -.27, p<0.001) Escape acceptance, death attitude (r= -.13, p< 0.031)	Working in palliative care Vs terminal care (t=-2.24, p=0.27) Secure attachment style (r=.32, p<0.001) Dependent attachment style (r=.10, p =0.047) Meaning in life ( r=.40, p <0.001) Neutral acceptance, death attitude (r=.13, p= 0.011)

Table 4. Continued

Reference	Risk factor for high EE	Protective factor for high EE	Risk factor for high DP	Protective factor for high DP	Risk factor for low PA	Protective factor for low PA
<b>Stensland &amp; Landsman, 2017<sup>32</sup></b>	Role ambiguity (t= 2.04, p=0.043) Role Conflict Surface acting (faking emotions) (t= 2.20, p= 0.029) Working full time (t= 3.82, p<0.001) More than 60 employees (t= 2.09, p=0.037) Empathic Concern (t= -2.46, p=0.015)	Perceived respect (t= 2.04, p=0.043)		Only reported emotional exhaustion		
<b>Payne 2000<sup>35</sup></b>	Death and dying (F=8.65, p<0.001) Conflict with other nurses (F=8.40, p<0.001) Responsibility (F=9.54, P<0.001) Higher grade (F=4.63, P<0.05)		Nurse conflict (F=19.08, P<0.001) Preparation (F=12.16, P<0.001) Escape (F=12.89, P<0.001) Plan-ful problem solving (F=11.63, P<0.001)		Fewer professional qualifications (F=6.15, p<0.05) Preparation (F=5.65, P<0.01) Escape (F=6.12, P<0.001) Positive reappraisal (F=5.83, P<0.001)	

## **Discussion**

The aim of this systematic review was to explore the determinants, in particular risk and protective factors, of burnout among those working within palliative care settings. After systematically searching relevant databases, nine articles were included in this review.<sup>6,14,18,29-32,34-35</sup> Out of the nine studies, seven of these used versions of the Maslach Burnout inventory to measure burnout.<sup>14,18,29-32,35</sup> Due to low quality of the studies included in the review, as they all used a cross-sectional methodology, the determinants identified must be interpreted with caution.

### *Individual risk and protective factors for burnout*

Overall, the risk factors for burnout can be split into two main themes; individual and work-related. Within the general population, being younger is one of the main demographic factors associated with increased burnout.<sup>38</sup> However, the findings in this review were mixed as two studies supported this, whereas two other studies, reported that age was not significantly related to burnout.<sup>6, 14, 29, 33</sup> Also, it should be noted that one of the studies found that it was 'young non-physicians' who reported higher burnout.<sup>14</sup> This may indicate that it is job role, as opposed to age, which was having an impact. Other demographic factors, including gender, marital status and having children were also found to not significantly relate to burnout, which is consistent with much of the published literature.<sup>38</sup>

Interestingly, years of experience in palliative care was not found to be a significant determinant of burnout within this review.<sup>6, 29</sup> Only one study found those working less than four years in palliative care reported higher levels of depersonalisation.<sup>31</sup> This is in comparison to other studies conducted in acute hospital settings, which have

shown reduced burnout in more experienced nurses and increased burnout for nurses working fewer years in the field.<sup>39-41</sup> This finding may suggested that it is the psychological impact on staff providing end-of-life care which impacts on burnout, as opposed to education. However, based on the published literature, it is difficult to determine the validity of this hypothesis.

#### *Attachment and burnout*

Two of the included studies reported that anxious and avoidant attachment styles were associated with higher risk of burnout, whereas, secure attachment style was protective.<sup>30,31</sup> It is important to note that both studies used different attachment questionnaires. This is consistent with what has been found by Hawkins, Howard and Oyebode when exploring this relationship among hospice staff.<sup>42</sup> They reported that those with anxious and avoidant attachments tend to have reduced coping skills. This is supported by Koh's et al study which found that having more coping skills reduced the risk of burnout.<sup>18</sup> Bartholomew also stated that individuals with these attachment styles are less likely to seek social support from others, which again, fits with the findings of Kamal et al, who highlighted that staff reported talking with loved ones as an important protective factor.<sup>14,43</sup>

#### *Death anxiety and burnout*

One study reported on the relationship between burnout and death anxiety finding that fear of death, death avoidance, and escape acceptance (death viewed as an escape from pain and suffering), were significant risk factors for burnout, whereas, neutral acceptance was a protective factor.<sup>31</sup> Peter et al, hypothesised that being surrounded by death and suffering, which is a daily occurrence when working within palliative

care, highlight one's own mortality thus giving rise to anxiety.<sup>44</sup> This appears to be consistent with Pavelková and Bužgová and Payne's reporting that staff felt having to regularly confront suffering was a significant risk factor for developing burnout.<sup>6,35</sup> Contrary to this, a study by Jonasen and O'Beirne found death anxiety lower in hospice nurses compared to other health care settings.<sup>45</sup> However, the participants in this study comprised of staff from only one hospice, which limits the generalisability of the findings.

Death anxiety and interventions to combat it, have been more extensively researched among patients as opposed to staff.<sup>46</sup> One important element in these interventions involves enhancing spiritual wellbeing.<sup>46</sup> This is partly consistent with Koh's et al reporting that being less spiritual increased the risk of high depersonalisation and lower personal accomplishment.<sup>18</sup> Also, engaging in spiritual based self-care was identified as protective against burnout within both Kamal et al and Alkema et al studies.<sup>14, 34</sup>

Self-care appears to play a role in burnout, as those with a deficit in this area were at risk of burnout.<sup>29</sup> Having an opportunity to engage in hobbies and improving physical wellbeing were most consistently reported protective factors.<sup>4,14,18,34</sup> However, it is important to note that one of these studies asked participants to self-rate factors they felt helped protect them from burnout, therefore, this may lack objectivity.

### *Organisational risk and protective factors*

The most consistently reported risk factors related to work environment. Three studies found working long hours significant impacted on burnout.<sup>14,18,29</sup> Having a medium

to high workload and working unsocial hours also appeared to be important factors.<sup>14,29</sup> These findings are consistent with studies in different health care settings.<sup>47,48</sup> It is also consistent with the protective factors of having more workers to assist with workload and maintaining a work/life balance, being identified within this review.<sup>6,34</sup> However, the very nature of working within palliative care and health settings, dictates that there is an element of unsocial working patterns, therefore, there is the potential that it is the amount of time worked that is significant as opposed to when it is worked.<sup>49</sup> The setting in which individuals conduct their work emerged from the review as impacting on risk. This may be due to the lack of ethical decisions and conflict regarding treatment in hospices compared to crisis and terminal care settings.<sup>26</sup>

The main organisational protective factors for burnout included having organisation activities, interacting with colleagues outside of work, and receiving praise from supervisors.<sup>6,18</sup> These factors appear to relate to team work and having positive team-based characteristics. This is consistent with Deneckere et al finding that teams, who engaged in an intervention to improve their team dynamics, had reduced burnout levels.<sup>50</sup>

### **Limitations of this review**

There are a few limitations of this review which are important to highlight. The first relates to the relatively low number of studies. Many studies were excluded from the review as they grouped together participants from different healthcare settings, whereby, it was not possible to differentiate those working within palliative care. This appeared to be most common with staff working in intensive care units. This was

problematic as it has been highlighted that staff working with ICU, are almost twice as likely than those in palliative care settings, to experience high burnout levels.<sup>51</sup>

## **Conclusions**

From this review it is evident that a combination of individual and organisational factors contributes to developing or protecting against burnout. The role of sociodemographic factors is inconsistent across the included studies, which is similar to the other burnout literature available. Attachment styles appear to play role and it may be important for managers to be mindful of this when trying to identify those at risk of developing burnout. It may also be advantageous to provide interventions which address death anxiety with a focus on spiritual wellbeing to combat burnout.

Organisationally, the most significant risk factor related to working times and patterns. Organisations should be mindful of having staff work more than 50 hours per week and provide regular breaks from night and weekend working. It may also be important to provide variety within an individual's work role to assist with preventing burnout. From the review, it seems apparent that encouraging self-care and engagement with hobbies are important to prevent burnout, or at least, cope with it. Finally, there is some evidence to support prioritising improving team interactions and dynamics when trying to protect against burnout. Future research may wish to focus on longitudinal designs to enable a greater understanding of variables contributing to burnout.

## **Declaration of conflicting interests**

The author(s) declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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## Section 2

### *Appendix 1: Example search strategy for Medline database*

1. Nursing staff, hospital/or students,nursing/ or exp nursing
2. Nurse\*. mp
3. Physicians/or doctor.mp
4. Social work\*
5. Health professionals or health personnel
6. Psycholog\*
7. Physiotherapist\*.mp. or physical therapists/
8. Occupational therap\*
9. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8
10. Hospice\*.mp.
11. Hospice care
12. Palliative medicine/ or palliative care or palliative.mp.
13. Terminal care
14. End-of-life or “end of life”. Mp.
15. 10 or 11 or 12 or 13 or 14
16. Burnout or burn-out or burn out.mp
17. Depersonali?ation.mp
18. Emotional exhaustion.mp.
19. Personal accomplishment. Mp.
20. Occupational stress.mp.
21. 16 or 17 or 18 or 19 or 20
22. 9 and 15 and 21

## Section 3

### 'Palliative Medicine' Author Instructions

All papers submitted to Palliative Medicine are scrutinised carefully by a number of members of the editorial team before being sent for external peer review. We strongly suggest therefore that this information on writing and reporting is followed whilst drafting your paper, well before you consider submission to the journal, as there is evidence that this will enhance the clarity of your writing and message to readers.

a) **Reporting guidelines.** All papers must be written following appropriate reporting guidelines, and a reporting guideline checklist indicating where required elements are found in the manuscript must be uploaded at the time of paper submission as a mandatory file (excluding case reports and research letters).

b) The key messages of the paper must be easy to see and interpret for readers. For this reason we ask you to pay close attention to the title, structured abstract and key statements.

c) Full details of ethics/research governance/data protection approvals must be given.

#### **Specific instructions on titles, abstracts, keywords and key statements for all papers**

a) **Titles** You must ensure that the main key phrase for the topic is in the article title. Make sure the title is clear, descriptive, unambiguous, and accurate, and reads well.

b) **Abstract.** All our abstracts are structured, and should follow the formats below:

Systematically constructed review abstract (250 words) *Background:* Identify the issue to be addressed, current knowledge on the topic and some indication of its relevance and importance to clinical practice, theory or research methodology. *Aim:*

A clear statement of the review aim(s). *Design*: A statement about the review strategy/methods adopted (e.g. meta-ethnography, realist synthesis, systematic review, meta-analysis). If prospectively registered (e.g. on PROSPERO), this information should be given here. *Data sources*: State the data sources used (including years searched). Include a statement about eligibility criteria for selecting studies and study quality appraisal. *Results*: Report the main outcomes(s) /findings of the review. *Conclusions*: Identify how the aims have been met, and the relevance of the findings for clinical practice, theory or research methodology.

**Keywords.** Please give at least four key words, and up to eight.

### **Specific guidance on paper types and word limits**

**Review Articles – 5,000 words.** The reviews we publish are usually systematically constructed reviews, clearly following the relevant publication guidelines (such as PRISMA, RAMESES or ENTREQ) for the particular review style chosen. If reviews are registered (e.g. on PROSPERO <https://www.crd.york.ac.uk/PROSPERO/>) this should be stated. Please ensure that you include a PRISMA type flowchart for all reviews to enable readers to understand your search processes. All reviews should include sufficient detail on review question, inclusion and exclusion criteria, search strategies, data extraction and synthesis methods (as appropriate to the review design) for the study to be replicated. Please note our specific requirements on review abstracts above.

## **Journal publishing and formatting requirements**

**Funding.** We require all authors to acknowledge their funding in a consistent fashion under a separate heading.

**Declaration of conflicts of interest.** It is the policy of Palliative Medicine to require a declaration of conflicting interests from all authors, enabling a statement to be carried within the paginated pages of all published articles. Please ensure that a ‘Declaration of Conflicting Interests’ statement is included at the end of your manuscript, after any acknowledgements and prior to the references. If no conflict exists, please state ‘The Author(s) declare(s) that there is no conflict of interest’.

**Journal layout.** Palliative Medicine conforms to the SAGE house style

**Reference style.** Palliative Medicine adheres to the SAGE Vancouver reference style.

## **Section 4**

### **Exploring the relationship between psychological flexibility and burnout, engagement, and mental well-being for mental health workers**

#### ***Abstract***

Within the NHS, there have been concerns that employee mental well-being has been declining, with burnout and engagement identified as contributors. Interventions to address well-being and burnout have focused on Mindfulness and Acceptance and Commitment Therapy (ACT), however, these have yielded mixed results. This research aims to understand the role psychological flexibility, a key construct in ACT, plays in mental well-being and burnout. Building an understanding of these relationships could assist with designing future interventions aimed at improving well-being and burnout. A cross-sectional study was carried out involving 88 mental health employees working directly with service users. Participants were required to complete questionnaires pertaining to mental well-being, burnout, engagement, and psychological flexibility. Hierarchical multiple regressions undertaken. It was found that psychological flexibility accounted for additional variance in well-being and two burnout factors (emotional exhaustion and depersonalisation). Personal accomplishment also made a significant contribution to well-being, over and above psychological flexibility. These findings suggest that psychological flexibility should be considered when designing well-being and burnout interventions. Future studies could explore factors related to personal accomplishment to enhance understanding of this construct.

#### **Keywords**

Well-being, burnout, mental health staff, psychological flexibility

## **Introduction**

For most people, being employed has a positive impact on their life and overall health and well-being (Modini et al., 2016). However, commissioned reports involving National Health Service (NHS) employees, have consistently highlighted concerns relating to a steady decline in the mental well-being of staff (Boorman Review, 2009; Francis Report, 2013; Health Education England, 2019). Poor employee well-being can have a negative effect on individual staff members and the quality of care received by those using NHS services (Francis Report, 2013; Atallah, McCalla, Karakash, & Minkoff, 2016). It also has a significant economic impact. A recent report by Monitor Deloitte (2017) reported that poor mental well-being costs the NHS between £1794 and £2174 per employee every year.

The majority of well-being literature, involving health care staff, has focused on medical professionals (Lizano, 2015; Platis, Reklitis & Zimeras, 2015; Lee, Brown & Cabrera, 2016). This has resulted in a relative underrepresentation of staff from other high-risk groups (Stevenson & Farmer, 2017; Wang et al., 2017). One such group are those working within mental health settings. An NHS staff survey identified that 41 per cent of mental health staff reported feeling unwell due to workplace stress in the previous year (NHS survey, 2017). Also, staff working within this area were mostly likely to report poor mental well-being as a reason for sickness and absence from work (Johnson et al., 2018).

### *Well-being and Burnout*

One of the biggest factors having an adverse influence on employee mental well-being is the result of prolonged or chronic stress, known as burnout (Milfont, Denny, Ameratunga, Robinson & Merry, 2008; Salvagioni et al., 2017; Adil & Baig, 2018).

First discussed by Herbert Freudenberger (1974), burnout is defined as existing when individuals experience chronic work-based stress (Lizano & Barak, 2015), for which perceived job demands exceed personal and workplace resources (Taylor & Millier, 2016). Burnout is widely viewed as comprising of three factors; emotional exhaustion, depersonalisation, and a lack of personal accomplishment (Maslach, Jackson, & Leiter, 1996). A recent systematic review found that mental health staff reported higher levels of burnout compared to the general population, emergency nurses, and palliative care staff (O'Conner, Neff & Pitman, 2018). However, this finding must be interpreted with caution, as the cut-off scores used to determine the prevalence of burnout in the studies included in the review, are now viewed as arbitrary (Jackson, Maslach, & Leiter, 2017).

It has been theorised that burnout decreases an individual's resources which in turn causes a decline in well-being, however, there is a dearth of longitudinal studies to fully explore this relationship (Lizano, 2015). Like well-being, burnout has been shown to have an impact on individual employees and organisations. Longitudinal studies have shown that burnout can negatively impact on employee physical health (Kim, Ji, & Kao, 2011) and the number of medical errors made (O'Connor et al., 2017). Relationships have also been reported between burnout and increased staff sickness (Atallah et al., 2016), greater staff turnover (Laschinger & Fida, 2014), and decreased patient satisfaction (Rosenbluth et al., 2017). However, causality cannot be determined due to the cross-sectional design of these studies.

Those working within mental health settings are faced with unique working environments, which may increase their vulnerability to developing burnout and poor mental well-being (Maslach & Leiter, 2016). These factors include regular exposure to highly emotive issues, which can be emotionally demanding (Veage et al., 2014),

establishing demanding therapeutic relationships (Rössler, 2012), and working with threats or acts of aggression (Edward, Ousey, Warelow, & Lui, 2014). However, again, fewer studies have involved staff working within these settings compared to general medicine (Morse, Salyers, Rollins, Monroe-Devita & Pfahler, 2012). Also, most studies comprise of one or two professional groups and it has been identified that future studies need to include a wider variety of health care professionals (Lizano, 2015; Stevenson & Farmer, 2017).

### *Work Engagement*

Work engagement is a concept which is often included when exploring burnout (Upadyaya & Salmela-Aro, 2016). Engagement is viewed as a positive and fulfilling work state, which is defined as the level of vigour, dedication, and absorption individuals experience in their work (Schaufeli, Salanova González-Romá & Bakker, 2002). It was previously theorised that high burnout and high engagement were each other's opposite (Demerouti, Mostert & Bakker, 2010). However, more recent studies have argued that engagement and burnout are two distinct concepts and should be measured as such (Amofo, Hanbali, Patel, & Singh, 2015).

The negative relationship between engagement and burnout has been well established (Hakanen & Schaufeli, 2012; Upadyaya & Salmela-Aro, 2016) and some have suggested that low engagement is an antecedent to burnout (Schaufeli & Salanova, 2011). This theory has been supported by research with a student population (Van Beek et al., 2015) and a systematic review reported that low engagement predicted levels of emotional exhaustion after 12 months (Mariculioiu, Sulea, & Lancu, 2017). Contrary to burnout, high engagement has been found to be related to good mental well-being (Christian, Garza & Slaughter, 2011; Hakanen & Schaufeli, 2012). For

these reasons, both the Marmot Review (2010) and the National Institute for Clinical Excellence (2006) have recommended targeting staff engagement when designing interventions to improve staff well-being.

### *Psychological Flexibility*

Psychological flexibility has consistently been linked to improved well-being (Marshall & Brockman, 2016) and tentative links have also been established between psychological flexibility and burnout (Bond & Flaxman, 2006; Onwezen, Veldhoven & Biron, 2012; Bond, Lloyd, & Guenole, 2013). Psychological flexibility relates to an individual's ability to stand back from their emotions and behave in a way which is consistent with their value set (Kurz, Bethay, & Ladner-Graham, 2014) and their ability to focus on the current situation even when dealing with difficult experiences (Lloyd, Bond, & Flaxman, 2013).

The majority of studies which have included burnout and psychological flexibility, have involved intervention evaluation as opposed to understanding the relationship between these variables (Rudaz, Twohig, Ong, & Levin, 2017). Without developing this understanding, it is difficult to capitalise on the possible effectiveness of psychological flexibility, as a personal resource, to address burnout and well-being in the workplace (Lloyd, Bond, & Flaxman, 2013).

Interventions to improve well-being and burnout have recently focused on enhancing an individual's personal resources, as opposed to targeting work-place factors, as this has been shown to be more effective (Richardson & Rothstein, 2008). Also, it is possible to increase psychological flexibility, whereas other factors related to burnout are enduring or more difficult to change, for example, sociodemographic factors and organisational resources (Deval, Bernard-Curie, & Monestes, 2017).

Mindfulness and acceptance and commitment therapy (ACT) based interventions, which both incorporate elements of psychological flexibility, have been the most widely researched, however, these have yielded mixed results (Hofer et al, 2017; Suyi, Meredith, & Khan, 2017; Askey-Jones, 2018; Chang, Wu, and Chen, 2018). Reeve, Tickle and Moghaddam (2018) reported in their meta-analysis that there was significant variance in the focus and delivery of these interventions. This variability limits the ability to identify factors influencing successful and unsuccessful interventions.

### **Current study**

In Northern Ireland, supporting staff well-being has been identified as a target within the ten-year strategy to improve the quality of care received by the public (Department of Health, Social Services, and Public Safety, 2011). This target is well placed as it has been shown that organisations which place a focus on staff well-being, have staff who report as being less stressed, have lower levels of burnout, and are more engaged in their work (The Boorman Review, 2009). One of the best ways to improve well-being is through the delivery of tailored in-house interventions (Stevenson & Farmer, 2017). Providing appropriate individual interventions also has a positive financial impact on the NHS, as Monitor Deloitte (2017) found that for every £1 spent on investing in staff well-being yields a return of £4.20.

The main aim of the current study is to enhance understanding of the role of psychological flexibility within mental well-being and burnout. Psychological flexibility was chosen as it is a possible personal resource which can be increased through relevant interventions and it has been linked to improved well-being. If a role for psychological flexibility is established over engagement, this research could be

used in the design and focus of future staff well-being and burnout interventions within the HSCNI (Health and Social Care Services in Northern Ireland).

### **Research Questions**

The first research question will explore the impact of psychological flexibility on employee well-being when controlling for the impact of burnout and engagement:

1. Does psychological flexibility predict mental well-being in mental health staff whilst controlling for the effects of engagement and burnout?

As psychological flexibility is consistently linked to well-being (Hayes, Luoma, Bond, Masuda & Lillis, 2000), it is predicted that it will make the largest contribution to well-being compared to burnout and engagement factors.

The second research question explored:

2. Does psychological flexibility predict emotional exhaustion, depersonalisation, and personal accomplishment in mental health employees?

Based on the previous research carried out among business employees, it is predicted that psychological flexibility will contribute to each of the burnout factors (Ruiz and Ordriozola-Gonzalez, 2017). However, it is unknown whether psychological flexibility will make a significant contribution after the effects of engagement and demographic factors are controlled for.

## **Method**

### *Study population*

This cross-sectional, observational study involved mental health practitioners working in community and in-patient settings. In April 2017, there were 1422 clinical staff employed within the directorate of mental health and learning disability combined. Only those with direct access to service users were eligible to be included in the study.

### *Participants and recruitment*

The Director of Mental Health, Learning Disability, and Community Well-being identified relevant service managers that worked within mental health settings. These service managers were contacted, by a member of the research team (EC and GM) and given information on the study. Relevant staff meetings were attended to raise awareness of the research study. All managers agreed for their staff to be contacted. Following this, an e-mail which served as an information sheet and outlined the purpose of the study and how to participate, was sent to each manager who then disseminated this to relevant staff. Managers were asked to advertise the study during staff meetings and supervision, especially for those without regular computer access. Paper copies of the questionnaire were also made available in staff rooms for those without computer access.

All participants were self-selected and those wishing to take part were asked to follow an anonymous web-link which was embedded into the e-mail. All participants were reassured that the link was anonymous, and they could not be identified as individuals. The link directed participants to the Qualtrics webpage which was used to host the survey. Those completing the paper version of the survey were provided with a

stamped addressed envelope to return their responses. Those completing the survey were informed in the debrief sheet, that the study included burnout.

### *Sample size*

G-power analysis was carried out prior to commencement of the study, with power ( $1 - \beta$ ) set at 0.98,  $\alpha = .05$  two-tailed, and an effect size of .29, as this was reported by a similar paper (Ruiz and Ordriozola-Gonzalez, 2017). A total of five predictor variables (engagement, emotional exhaustion, depersonalisation, personal accomplishment, and psychological flexibility) were also entered along with one outcome variable (mental wellbeing). This analysis indicated that a total of 88 participants were required to answer the research questions. This equated to a response rate of 6.2% of the local mental health workforce.

### *Ethical Considerations*

The proposal for the study was approved by the Queen's University Faculty Ethics committee in December 2017. The Research and Design department, of the involved organisation, authorised the project to be carried out within their services (March 2018).

### *Measures*

#### *Demographic Factors*

Participants were first required to complete demographic questions related to their age, gender, marital status, job role, and years working within mental health services.

#### *Mental Well-being*

Mental well-being was measured using the shortened Warwick-Edinburgh Mental Well-being Scale (SWEMWBS) (Tennant et al., 2007). This is a widely used scale

which has been shown to have good validity and has been used in government frameworks (Stewart-Brown, 2014). The questionnaire consists of seven items, such as “I’ve been feeling optimistic about the future” and “I’ve been feeling relaxed”. Each item is scored from 1 (‘None of the time’) to 5 (‘All of the time’). Items were first summed and then the total score was transformed for each person using a conversion table. Scores ranged from 7 to 35, with higher scores reflecting higher positive mental well-being. This measure showed good internal consistency with a Cronbach alpha coefficient of 0.86 for this study.

### *Burnout*

Burnout was measured through the use of the Maslach Burnout Inventory Human Services Survey (Maslach et al., 1996). This scale is the most widely used scale for measuring burnout (Hall, Johnson, Tsipa, & O’Connor, 2016) and is commonly viewed as the gold standard (McKinley, Boland, K, & Mahan, 2017). The measure has shown good internal consistency across other studies (Olson, Kemper, & Mahan, 2015), and this was replicated within the current study (Cronbach alpha for emotional exhaustion= .90, depersonalisation= .70, and personal accomplishment = .77). As suggested by Maslach et al. (1996), the survey was described to participants as measuring how employees felt about their work to reduce possible response bias.

The scale is made up of 22 items and assesses burnout based on three factors; emotional exhaustion (9 items) (“I feel emotionally drained from my work”), depersonalisation (5 items) (I feel I treat some recipients as if they were impersonal objects”), and personal accomplishment (8 items) (“I have accomplished many worthwhile things in this job”). For each item, participants indicate the frequency of feelings or symptoms ranging from 0 (‘Never’) to 6 (‘Everyday’). Items relating to

each factor were summed and an average score was calculated. Emotional exhaustion and depersonalisation are proposed to have a direct relationship with burnout, whereas personal accomplishment has a negative relationship. Also, as cut-off scores to determine the presence or absence of burnout have not been stipulated by the questionnaire's authors, a total burnout score was not calculated.

### *Work Engagement*

Engagement was measured the short form of the Utrecht Work Engagement Scale (UWES-9) (Schaufeli, Bakker, & Salanova, 2006). The measure comprises of 9 items, for example, "At my work, I feel bursting with energy", "I am enthusiastic about my job", and "I am immersed in my work". The current study had a cronbach alpha coefficient of 0.88, which is consistent with other studies (Upadyaya, Vartiainen, & Salmela-Aro, 2016). Responses were given on a 7-point Likert scale ranging from 0 ('Never') to 6 ('Everyday'). Items were summed to create a single engagement variable.

### *Psychological Flexibility*

This was measured using the Acceptance and Action Questionnaire- II (AAQ-II) (Bond et al., 2011). Participants responded to 7 items, for example "Emotions cause problems in my life" and "Worries get in the way of my success", based on a 7-point Likert scale ranging from 0 ('Never true') to 6 ('Always true'). Internal consistency was very high with Cronbach alpha calculated as 0.91. Higher scores on the AAQ-II indicated greater levels of psychological inflexibility.

### *Data analysis*

Prior to completing any data analysis, the data was checked for missing responses and data errors. Demographic factors where explored initially and relationships between

the variables was established through correlation analysis. To answer the identified research questions and establish the relative contribution of psychological flexibility, hierarchical multiple regressions were carried out. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity.

## Results

### *Demographic overview*

*Table 1* displays the demographic information for participants. The study comprised of 15 males and 73 females, with ages ranging from 25 to 66 (Mean= 41.95, SD=10.33). Over half of the participants indicated that they were married (62.5%). The most commonly reported job role was Psychologist (22.7%) followed by Nurse (19.3%) and Cognitive Behaviour Therapist (13.6%) respectively. The average length of time working within job role was 11.14 years (S.D.=10.39). *Table 2* highlights the mean and standard deviations for each of the variables included in the study.

*Table 1. Demographic information of study participants*

Demographic Information	Number of participants N=88	Percentage
<b>Gender</b>		
<i>Male</i>	15	17%
<i>Female</i>	73	83%
<b>Marital Status</b>		
<i>Single</i>	24	27.3%
<i>Married</i>	55	62.5%
<i>Widowed</i>	2	2.3%
<i>Divorced</i>	7	8%
<b>Job Role</b>		
<i>Social Worker</i>	11	12.5%
<i>Psychiatrist</i>	3	3.4%
<i>Psychologist</i>	20	22.7%
<i>Nurse</i>	17	19.3%
<i>Occupational Therapist</i>	3	3.4%
<i>Support Worker</i>	3	3.4%
<i>Mental Health Practitioner</i>	10	11.4%
<i>Cognitive Behaviour     Therapist</i>	12	13.6%
<i>Psychotherapist</i>	4	4.5%
<i>Other</i>	5	5.7%

*Table 2: Mean, standard deviations, and ranges for age, years working, burnout factors, engagement, psychological flexibility, and mental well-being scores*

Variable	Mean N=88	Standard Deviation	Range		Possible Range	
			Min.	Max	Min.	Max.
Age	41.95	10.34	25	66		
Years working	11.14	10.39	0	40		
Emotional exhaustion	22.49	11.25	2	53	0	54
Depersonalisation	5.47	4.65	0	20	0	30
Personal accomplishment	38.74	5.12	23	48	0	48
Engagement	38.75	9.59	7	53	0	54
Well-being	23.59	3.41	17.43	32.55	7	35
Psychological Flexibility	15.69	7.29	7	44	7	49

Table 3 outlines the correlations between each of the variables. There were significant positive correlations between psychological flexibility and emotional exhaustion (.59) and between psychological flexibility and depersonalisation (.48) (*Table 3*). The relationship between psychological flexibility and engagement was small. (-.24). There was a large negative correlation between psychological flexibility and mental well-being (-.56).

*Table 3: Correlations for burnout factors, engagement, psychological flexibility, and mental well-being*

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>1.Emotional Exhaustion</b>	1					
<b>2.Depersonalisation</b>	.54**	1				
<b>3.Personal Accomplishment</b>	-.18	-.30**	1			
<b>4. Engagement</b>	-.39**	-.32**	.51**	1		
<b>5.Psychological Flexibility</b>	.59**	.47**	-.15	-.24**	1	
<b>6. Mental well-being</b>	-.54**	-.37**	.48**	.39**	-.56**	1

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

#### *Research Question One*

To assess whether psychological flexibility made a unique and significant contribution to well-being, while controlling for the impact of demographic factors, burnout, and engagement, a hierarchical multiple regression was carried out (Table 4). Prior to carrying out this analysis the data was screened for violations of the assumptions of normality, linearity, multicollinearity, and homoscedasticity, with no significant issues detected. Due to the number of regressions carried out, Bonferonni correction was calculated ( $p < .013$ ) and this was used to establish significance.

Demographic factors were entered at step 1 but this model did not reach significance,  $F(2,85) = .57, p = .566$ . Engagement was entered at step two and this model explained 13% of the variance in mental well-being,  $F(3,84) = 5.15, p = .003$ . The three factors of burnout (emotional exhaustion, depersonalisation, and personal accomplishment) were entered in step 3 and this model explained 40% of the total variance in mental well-being.

Adding psychological flexibility at step 4, increased the total variance explained by the model to 49%,  $F(7, 80) = 12.73, p < .001$ . An additional 8% of the variance was explained by psychological flexibility after controlling for demographics, engagement, and burnout,  $R^2 \text{ change} = .08, F \text{ change}(1, 80) = 14.03, p < .001$ . Closer examination of the final model highlighted that only three variables made a significant contribution. The largest contribution was made by personal accomplishment ( $\beta = .40, p < .001$ ) followed by psychological flexibility ( $\beta = -.37, p < .001$ ) and emotional exhaustion ( $\beta = -.29, p = .008$ ).

Table 4: Results from hierarchical multiple regression for mental well-being with demographic factors, burnout factors, engagement, and psychological flexibility as predictors

	Model 1			Model 2			Model 3			Model 4		
	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$
<b>Well-being</b>												
Age	-.05	.05	-.14	-.01	.04	-.04	-.00	.04	-.13	-.02	.03	-.07
Years working	.04	.05	.12	.03	.04	.08	.03	.04	.09	.04	.03	.17
Engagement				.13	.04	.39*	.00	.04	.01	.00	.04	.00
Emotional exhaustion							-.14	.03	-.47*	-.09	.03	-.29*
Depersonalisation							.01	.08	.01	.07	.07	.09
Personal accomplishment							.26	.07	.40**	.27	.06	.40**
Psychological Flexibility										-.17	.05	-.37**
Adjusted R <sup>2</sup>		-.01			.13			.40			.49	
F for change in R <sup>2</sup>		.01			.14			.29			.08	

Note: \* $p < .008$ , \*\* $p < .0001$

### *Research Question Two*

*Table 5* details the results of the hierarchical multiple regressions which were carried out to assess the ability of psychological flexibility to predict levels of emotional exhaustion, depersonalisation, and personal accomplishment, after controlling for demographic factors and work engagement. Due to the number of regressions carried out, a Bonferroni correction was calculated ( $p < .006$ ).

#### *Emotional exhaustion*

Demographic factors were entered at step 1 (*Table 5*), but did not make a significant contribution,  $F(2,85)=1.61$ ,  $p=.206$ . Engagement was entered at step 2, explaining 13% of the total variance in emotional exhaustion ( $F(3,84)=5.49$ ,  $p=.002$ ). After the entry of psychological flexibility at step 3, the total variance explained by the model as a whole was 40%,  $F(4,83)=15.61$ ,  $p < .001$ . Psychological flexibility explained an additional 27% of the variance after controlling for demographic factors and engagement,  $R^2 \text{ change} = .27$ ,  $F \text{ change } (1,83) = 38.58$ ,  $p < .001$ . In the final model, only psychological flexibility made a significant unique contribution after Bonferroni correction ( $\beta = .53$ ,  $p < .001$ ).

#### *Depersonalisation*

Demographic factors were entered in step 1 (*Table 5*) but did not result in a significant model;  $F(2,85) = .89$ ,  $p = .413$ . After entry of engagement in step 2, the total variance explained by the model as a whole was 8%,  $F(3,84) = 3.59$ ,  $p = .017$ . With psychological flexibility entered at step 3, the total variance explained by the model was 25%,  $F(4,83) = 8.06$ ,  $p < .001$ . After controlling for demographic factors and engagement, psychological flexibility explained an additional 17%,  $R^2 \text{ change} = .17$ ,  $F \text{ change } (1,83) = 11.17$ ,  $p < .001$ .

change= .176, F change (1,83)= 19.18. Only psychological flexibility ( $\beta =.42$ ,  $p<.001$ ) made a significant contribution in the final model.

#### *Personal accomplishment*

Entering demographic factors at step 1 (*Table 5*), did not result in a significant model,  $F(2,85)=.13$ ,  $p=.876$ . The total variance explained by the model after including engagement at step 2 was 22%,  $F(3,84)= 10.36$ ,  $p<.001$ ). Entering psychological flexibility at step 3 resulted in a small increase in the total variance explained (24%), however, the model did not reach significance, R squared change=.00 F change (1,83)=.05,  $p>.831$ . Only engagement made a significant contribution to personal accomplishment ( $\beta =.53$ ,  $p<.001$ ).

Table 5: Results from hierarchical multiple regression for emotional exhaustion, depersonalisation, and personal accomplishment with demographic factors, engagement, and psychological flexibility as predictors

	Model 1			Model 2			Model 3		
	B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$
<b>Emotional Exhaustion</b>									
Age	.25	.15	.23	.14	.14	.13	.18	.12	.17
Years working	-.08	.15	-.07	-.04	.14	-.04	-.05	.12	-.05
Engagement				-.43	.12	-.37*	-.27	.10	-.23
Psychological Flexibility							.82	.13	.53*
Adjusted R <sup>2</sup>		.01			.13			.40	
F for change in R <sup>2</sup>		.04			.13			.27	
<b>Depersonalisation</b>									
Age	.07	.06	.16	.03	.06	.07	.05	.06	.10
Years working	-.07	.06	-.18	-.06	.06	-.15	-.07	.05	-.15
Engagement				-.15	.05	-.31*	-.10	.05	-.21
Psychological Flexibility							.27	.06	.42**
Adjusted R <sup>2</sup>		-.01			.08			.25	
F for change in R <sup>2</sup>		.02			.09			.17	
<b>Personal Accomplishment</b>									
Age	-.03	.087	-.06	.04	.06	.09	.04	.06	.08
Years working	.01	.07	.00	-.03	.06	-.05	-.03	.06	-.05
Engagement				.28	.05	.53*	.28	.05	.53**
Psychological Flexibility							-.02	.07	-.02
Adjusted R <sup>2</sup>		-.02			.22			.24	
F for change in R <sup>2</sup>		.00			.27			.00	

Note: \* $p < .006$ , \*\* $p < .001$

## **Discussion**

The aim of the current study was to explore the impact of psychological flexibility on well-being and burnout in mental health practitioners, whilst controlling for other known influential factors. The first research question, which was broken into two parts, assessed whether psychological flexibility contributed to well-being whilst controlling for burnout and engagement, respectively. The second research question explored whether psychological flexibility made a unique contribution to emotional exhaustion, depersonalisation, and personal accomplishment, whilst controlling for work engagement. This research hoped to expand the understanding of the role of psychological flexibility in the hope of developing and delivering future well-being and burnout work place interventions.

The current study found that psychological flexibility made a significant and unique contribution to well-being when controlling for the effects of burnout and engagement. This result was expected as it is consistent with much of the published research in this area (Milfont et al., 2008; Richards, Campenni & Muse-Burke, 2010; Flaxman & Bond, 2010; Hofer et al., 2017). It was unexpected that personal accomplishment, rather than psychological flexibility, made the biggest unique contribution to mental well-being. This may in part be explained by the high levels of personal accomplishment within the current sample, compared to other studies (Maslach et al., 1996; O'Connor et al., 2018). These elevated levels of personal accomplishment show that there are also positive aspects to working within mental health settings (Stamm, 2010). This is also consistent with the findings from O'Connor et al (2018) systematic review which reported that mental health staff had reasonable levels of personal accomplishment.

The analyses identified that psychological flexibility made the biggest contribution to both levels of emotional exhaustion and depersonalisation. This finding is consistent with those reported by Ruiz and Ordriozola-Gonzalez (2017), although, the current study found psychological flexibility made a larger contribution to well-being, than that identified in their research. The same study also found that psychological flexibility accounted for an additional 15 per cent of the variance in personal accomplishment. This is contrary to the current findings as psychological flexibility did not make a significant contribution to personal accomplishment.

This may be explained by the lack of significant correlation between personal accomplishment and emotional exhaustion, and the small correlation between personal accomplishment and depersonalisation, reported in the current study. A number of studies have proposed that emotional exhaustion and depersonalisation are the core factors of burnout (Lee & Ashford, 1996; Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Lloyd et al., 2013). In fact, some studies have excluded personal accomplishment when measuring burnout due to this (Reeve et al., 2018; Robins, Roberts & Sarris, 2019). Therefore, this finding may support the idea that personal accomplishment is an important factor to include in burnout and well-being research.

The results support the idea that psychological flexibility, rather than work engagement, may be an important mechanism to target when working with emotional exhaustion and depersonalisation. It also adds to the findings of Vilardaga et al (2011), who reported that psychological flexibility had a stronger relationship with burnout than work-based factors, such as workload, salary, and support.

Both of these studies support the idea that psychological flexibility may be one personal resource which could be used to protect against job demands and burnout

(Onwezen et al, 2012). Although burnout interventions which target individual factors, as opposed to organisational factors, have been shown to be more effective in reducing burnout in individuals (Richardson & Rothstein, 2008), it has been suggested that caution is taken when acting on these results. Underplaying organisational factors can shift the blame for burnout onto the individual worker as opposed to the system in which they work (Harrison et al., 2017). Also, there is a lack of support for the efficacy of organisational interventions which do not involve elements of training and education (Dreison et al., 2018).

As mentioned previously, there have been mixed findings regarding the efficacy of ACT and mindfulness informed interventions for improving well-being (Clarke, Taylor, Lancaster & Remington, 2015; Pakenham, 2015; Raab, Sogge, Parker, & Flament, 2015) and reducing burnout (Luoma & Vilardaga, 2013; Razzaque & Wood, 2016; Rudaz et al., 2017). Interestingly, interventions which do not result in an increase in psychological flexibility have been shown to be less effective than those that do (Smith & Gore, 2012; Reeves et al., 2017).

Taking this in account, along with the current findings, it may be that psychological flexibility is one of the key mechanisms to include when designing interventions to address burnout and enhance well-being at work (Hayes et al., 2006; Puolakanaho, Tolvanen, Kinninen & Lappalainen, 2018). Although ACT interventions would be a natural choice when aiming to improve psychological flexibility, other interventions which also focus on enhancing psychological flexibility may be appropriate. Dialectical behaviour therapy (Robins et al., 2019) and functional analytic psychotherapy (Moron, Valero-Aguago, Bond & Blanca, 2019) based interventions have recently been shown to successfully enhance psychological flexibility, improve well-being, and decrease burnout levels.

### *Limitations of the Study*

The current study utilised a cross-sectional design which renders the possibility of determining causality impossible (Reichenheim & Coutinho, 2010). There is a lack of longitudinal research within the area of well-being and burnout (Lizano, 2015), therefore, future research should consider adopting this study design. During this study, information was not gathered regarding where staff were based in their job, for example, community or inpatient services. This may have been significant as community staff have been shown to report high levels of burnout (Edwards, Burnard, Coyle, Fothergill & Hannigan, 2000) compared to inpatient and specialist services (Johnson et al., 2012).

With regards to measurement tools, there have been criticisms of the AAQ-II and its ability to discriminate between psychological distress and psychological flexibility (Wolgast, 2014). The CompACT tool has been developed by Francis, Dawson and Golijani-Moghaddam (2016) to address this and researchers may wish to use this in future studies, to measure psychological flexibility. Future studies may also wish to include and control for work-based factors, for example work pattern and job resources, to enhance understanding of the role of psychological flexibility in burnout (Novaes, Ferreira & Valentini, 2018).

### *Conclusions*

Based on the current findings, psychological flexibility is supported as a key construct to consider when designing work place interventions to target mental well-being and burnout, within this population. It is also apparent that personal accomplishment, an often discarded concept, may play a more important role in well-being compared to the key factors in burnout (emotional exhaustion and depersonalisation).

Interestingly, a recent systematic review by Dreison et al (2018), found that current burnout and well-being interventions have not shown significant improvements in personal accomplishment. Therefore, future research may wish to focus on understanding the factors impacting on personal accomplishment, as these could be utilised in the development in future interventions.

#### **Declaration of conflicting interests**

The author(s) declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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## Section 5

### **‘Journal of Occupational Health Psychology’ Author Guidelines**

Manuscripts submitted for publication consideration in the *Journal of Occupational Health Psychology* are evaluated according to the following general criteria:

- Mastery of the relevant literature
- Theoretical/conceptual framework
- Measures of key constructs
- Research design
- Data analysis
- Interpretations and conclusions
- Writing style (clarity)
- Appropriateness of topic for *Journal of Occupational Health Psychology*
- Theoretical contribution to occupational health psychology
- Practical implications for occupational health psychology

#### **Length of Submission**

Standard manuscripts may not exceed 40 double-spaced pages (excluding figures, tables, references, and appendices).

#### **Masked Review Policy**

The journal accepts submissions in masked review format only. Each copy of a manuscript should include a separate title page with author names and affiliations, and these should not appear anywhere else on the manuscript.

#### **Manuscript Preparation**

Prepare manuscripts according to the *Publication Manual of the American Psychological Association (6<sup>th</sup> edition)*. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*.

**Tables**

Use Word's Insert Table function when you create tables. Using spaces or tabs in your table will create problems when the table is typeset and may result in errors.

**Abstract and Keywords**

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.

**References**

List references in alphabetical order using APA Style. Each listed reference should be cited in text, and each text citation should be listed in the References section.

**Other Information**

Visit the [Journals Publishing Resource Center](#) for more resources for writing, reviewing, and editing articles for publishing in APA journals.

## Section 6

### Queens University Belfast Ethical Approval



**Date:** 11 December 2017  
**To:** Dr Pauline Adair / Ms Gemma Thompson  
**Faculty REC Reference Number:** EPS 17\_32  
**Full Title:** Exploring the relationship between psychological flexibility and burnout, engagement, and mental wellbeing for mental health workers  
**Decision:** APPROVED

Thank you for your application which was reviewed at the meeting of the Faculty of Engineering and Physical Sciences Research Ethics Committee (EPS Faculty REC) on 06 December 2017.

Your application was considered and some clarification was requested on 08 December 2017. You submitted the requested information on 08 December 2017 and this was forwarded for review by the Chair of the EPS Faculty REC.

The response has been reviewed and deemed satisfactory. The application has been approved.

#### Conditions of the Approval

The Faculty REC approval is subject to the following conditions:

- (i) The study must be conducted in accordance with all relevant legislation. All relevant management approvals from organisations involved in the research must be obtained.
- (ii) When the research involves human volunteers the study must be entered on the University's Insurance Database.
- (iii) Monitoring and auditing process must be complied with including submission of annual progress reports to the Faculty REC.

It is the Chief Investigator's responsibility to ensure the study is conducted in accordance with the conditions stipulated.

Any future changes to any part of the submitted application, protocol or supporting documentation must be notified to the Committee prior to these changes taking place.

#### Approved Documents

The documents approved by the Faculty REC are listed in the table below.

Documentation Received	Version	Date
Application Form		27 November 2017
Research Protocol	2	20 November 2017
Intranet advertisement, broadcast e-mail, and Information Sheet (Appendix A)	2	20 November 2017
G-power analysis output (Appendix B)	2	20 November 2017
Maslach Burnout Inventory (Appendix C)		
Utrecht Work Engagement Scale (UWES-9) (Appendix D)		
The Shortened Warwick-Edinburgh Mental Well-Being Scale (SWEMWBS) (Appendix E)		

Acceptance and Action Questionnaire-II (AAQ-II) (Appendix F)		
Informed Consent for Online Survey (Appendix G)	2	20 November 2017
Debrief Sheet	3	08 December 2017
Consent Form for Paper Based Survey (Appendix I)	2	20 November 2017
Project Timetable (Appendix J)	2	20 November 2017
Project Costing (Appendix K)	2	20 November 2017
Covering Letter to Committee (received 08 December 2017)		

If you would like to discuss this further please contact the Research Ethics Officer, Miss Kathryn Taylor, at [facultyrecepts@qub.ac.uk](mailto:facultyrecepts@qub.ac.uk) or by telephone on 028 90972529.

Yours sincerely



Kathryn Taylor  
Digitally signed  
 by Kathryn Taylor  
 Date: 2017.12.11  
 11:05:52

pp Dr Brendan Murtagh  
 Chair, EPS Faculty REC

# Northern Health and Social Care Trust

## Research Governance Permission



Governance Department

Final Research Governance Permission

16 March 2018

Dr Pauline Adair  
Queens University Belfast  
David Kerr Building  
18-30 Malone Road  
Belfast  
BT9 5BN

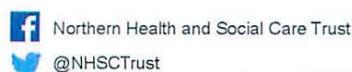
Dear Dr Adair

Study Title:           Exploring the relationship between psychological flexibility  
NHSCT Ref:            NT18-0603-02  
IRAS project ID:      237527

I am pleased to advise that the Northern Health & Social Care Trust has given Final Research Governance Permission for the above project to commence. Permission is granted for the duration of the project to 24 May 2019.

The following documents have been approved for use in the project:

Document	Version	Dated
Protocol	2	20/11/17
Internet advertisement, broadcast e-mail and information sheet	2	20/11/17
Consent form	2	20/11/17
Informed consent	2	20/11/17
QUB Sponsor letter		12/12/17
Insurance cover		15/07/17
QUB Amendment to proposed project		19/07/17
Research Panel Report – Ethics & Scientific Review		19/07/17
QUB Ethical approval		11/12/17
G-power Analysis for sample size	2	20/11/17
Project timetable	2	Not dated
Debrief Sheet	3	08/12/17
Maslach Burnout Inventory – Human Services Survey		08/12/17
Urecht Work Engagement Scale		08/12/17
The Shortened Warwick-Edinburgh Menal Well-being Scale		08/12/17
Acceptance and Action Questionnaire		08/12/17



Document	Version	Dated
Consent form for written responses	2	20/11/17
CV Gemma Thompson		10/11/17
GCP Gemma Thompson		19/10/17
CV Dr Emma Carroll		15/11/17
GCP Dr Emma Carroll		14/07/15
CV Dr Pauline Adair		10/01/18

The following personnel have been approved to work on the study at this Trust:

Name	Indemnity Provided by
Dr Emma Carroll	NHSCT
Gemma Thompson	QUB

Permission is granted subject to the attached conditions and I would ask you to please ensure that all members of the research team are familiar with these. Failure to abide by these conditions will invalidate permission and may result in the cessation of the research.

I wish you every success with your project.  
Yours sincerely,



Dr Desmond Rooney  
Head of NHSCT R&D

CC Dr Emma Carroll, NSHCT  
Gemma Thompson, QUB  
Dr Paula Tighe, QUB

Research & Development Office, Bush Road, Bush Road, Antrim. BT41 2QB  
Telephone Number: 02894 424751

 Northern Health and Social Care Trust  
 @NHSCTrust



## Section 8

### Reflective Appendix

Through the process of creating this research portfolio, I have learned a great deal about the mechanics of completing research along with my own strengths and weaknesses in the area. I have reflected on how this experience has influenced my personal values and what impact it will have on my future practice.

I am aware that I hold a personal value of independence, which means I will often complete work and tasks without seeking assistance. At times in this process, this value has been helpful, as I have taken ownership and responsibility for my research project. However, I have also learned about the importance of appropriately seeking guidance, especially as there is a risk of being too close to your research to identify possible issues. For example, a supervisor suggested checking that the NHS computers would allow staff to access the Qualtrics software, which was required to complete the online survey. This was something which I had not considered and if this had arisen as an issue, I would not have been able to collect my data. I have also appreciated the value of gathering different opinions and views, especially during the process of writing up, as this has helped me to enhance the quality of my research.

I feel that my skills and knowledge in research design and methodology have greatly increased whilst completing this portfolio. By completing a systematic review, I have enhanced my skills and understanding of using databases to search for relevant published literature. This is a skill which I have used when completing other pieces of coursework and within my clinical practice. I have also gained knowledge on how to complete a systematic review, something which I previously did not have experience in. Acquiring this knowledge has also increased my critical thinking skills

when evaluating the methodology and quality of other studies. By completing my large-scale research project, I have improved my skills in statistical analysis, including choosing appropriate tests to answer research questions. Prior to this experience, I would not have felt as confident in this area.

One of the most challenging aspects of completing this portfolio was maintaining momentum and enthusiasm for the projects. Throughout the past three years there were times when I have felt immersed in my project and other times when I felt distant. Reflecting on this, I noticed that as other course pressures became dominant, my availability to attend to my research decreased. However, I found that having a project timetable and setting myself goals assisted me with making room for my research, even when I had other demands to attend to.

I also found writing up my research project and systematic review, to journal standard, quite challenging. At times, I found it difficult to bring the required information together whilst remaining as succinct as possible. I noticed that I would often lapse into an informal prose, which was not appropriate for submission to a scientific publication. To assist with this, I found continuously reading published journal articles and receiving feedback regarding my writing to be the most beneficial. However, I feel that this is an area which still requires further attention.

The final area I would like to reflect on, is the impact this process will have on my future practice. Research is a part of being a Clinical Psychologist, however, it is known that research activity amongst practicing psychologist is low. Having completed this portfolio I feel that the biggest barrier to engaging in research is having the adequate time to dedicate to it. Prior to this experience, I feel that I underestimated the time commitment required to complete good quality research. Therefore, I feel it

may be useful to request that protected research time is considered when creating job-plans. Hopefully, this would assist with overcoming this barrier and foster engagement in research.