



UNIVERSITY OF LEEDS

This is a repository copy of *Mental healthcare staff well-being and burnout: A narrative review of trends, causes, implications, and recommendations for future interventions*.

White Rose Research Online URL for this paper:
<http://eprints.whiterose.ac.uk/125589/>

Version: Accepted Version

Article:

Johnson, J orcid.org/0000-0003-0431-013X, Hall, LH, Berzins, K et al. (3 more authors) (2018) Mental healthcare staff well-being and burnout: A narrative review of trends, causes, implications, and recommendations for future interventions. *International Journal of Mental Health Nursing*, 27 (1). pp. 20-32. ISSN 1445-8330

<https://doi.org/10.1111/inm.12416>

© 2017 Australian College of Mental Health Nurses Inc. This is the peer reviewed version of the following article: Johnson, J., Hall, L. H., Berzins, K., Baker, J., Melling, K. and Thompson, C. (2017), Mental healthcare staff well-being and burnout: A narrative review of trends, causes, implications, and recommendations for future interventions. *Int J Mental Health Nurs.*, which has been published in final form at <https://doi.org/10.1111/inm.12416>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Accepted for publication in *INTERNATIONAL JOURNAL OF MENTAL HEALTH NURSING*

**Mental healthcare staff wellbeing and burnout: A narrative review of trends, causes,
implications and recommendations for future interventions**

Judith Johnson^{1,2*}, Louise Hall^{1,2}, Kathryn Berzins¹, John Baker¹, Kathryn Melling³, Carl
Thompson¹

¹ University of Leeds, Leeds, UK

² Bradford Institute for Health Research, Bradford Royal Infirmary, Bradford, UK

³ University of Liverpool, Liverpool, UK

* Corresponding author: School of Psychology, University of Leeds, Leeds, LS29JZ, UK;

j.johnson@leeds.ac.uk; Tel: +44 (0) 113 343 5724; Fax: +44 (0)113 343 5749

Acknowledgement: This article presents independent research supported by the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care Yorkshire and Humber (NIHR CLAHRC YH). www.clahrc-yh.nir.ac.uk. The views and opinions expressed are those of the authors, and not necessarily those of the NHS, the NIHR or the Department of Health.

Mental healthcare staff wellbeing and burnout: A critical review of trends, causes, implications and recommendations for future interventions

Abstract

Background: Rising levels of burnout and poor wellbeing in healthcare staff are an international concern for health systems. The need to improve wellbeing and reduce burnout has long been acknowledged, but few interventions target mental healthcare staff, and minimal improvements have been seen in services.

Aims: To examine the problem of burnout and wellbeing in mental healthcare staff and present recommendations for future research and interventions.

Methods: A discursive review examining trends, causes, implications and interventions in burnout and wellbeing in healthcare staff working in mental health services. Data were drawn from national surveys, reports and peer-reviewed journal articles.

Results: Staff in mental healthcare report poorer wellbeing than staff in other healthcare sectors. Poorer wellbeing and higher burnout is associated with poorer quality and safety of patient care, higher absenteeism and higher turnover rates. Interventions are effective but effect sizes are small.

Conclusions: Grounding interventions in the research literature, emphasising the positive aspects of interventions to staff, building stronger links between healthcare organisations and universities and designing interventions targeting burnout and improved patient care together may improve the effectiveness and uptake of interventions by staff.

Word count: 4993

Keywords: burnout; health services; mental health; patient safety; workforce

Mental healthcare staff wellbeing and burnout: A critical review of trends, causes, implications and recommendations for future interventions

Background

Burnout and poor wellbeing in healthcare staff are a growing problem (RCP, 2015). Burnout describes negative work-related attitudes made up of three facets: emotional exhaustion with work, depersonalisation or disengagement from patients and low personal accomplishment (Maslach & Jackson, 1981). Wellbeing is a more holistic concept that encompasses facets of mental health, physical health and stress. Higher levels of burnout are closely associated with lower levels of wellbeing in healthcare staff, and both states have a negative impact on patient care (Hall et al., 2016; Johnson et al., 2017a). In this review we consider both concepts together.

The need to develop interventions to improve staff wellbeing and reduce burnout and to test their effectiveness has long been acknowledged (Gilbody et al., 2006). However, few interventions target mental healthcare staff, which is one factor contributing to the minimal improvements which have been seen in these staff.

Aims and overview

In this article, we critically examine the problems of burnout and poor wellbeing in mental healthcare staff in order to present recommendations for future research and interventions. We first review current rates and patterns of burnout and wellbeing in healthcare staff. We then make the case for the importance of addressing this area by outlining evidence that healthcare staff wellbeing is linked with quality and safety outcomes and that elevated service costs result from increased sickness absence rates and staff turnover. We review evidence of the effectiveness of interventions aimed at improving wellbeing and reducing burnout in healthcare professionals. Finally, we consider the limitations of current

research evidence and propose recommendations for future work in this area. Whilst the focus of the article is on mental healthcare staff, the wider literature on healthcare staff in other settings will be drawn on to provide context and additional evidence where this is lacking in mental health settings.

Design

A critical review of the literature was conducted.

Methods

In order to identify relevant peer-reviewed journal articles, literature database searches were undertaken (PsycInfo, Ovid Medline) and reference lists of relevant original articles and reviews were scanned. In order to identify relevant data not reported in journal articles, electronic data sources were accessed (Bureau of Labour Statistics, USA; Statistics Canada; Office of National Statistics, UK; NHS Digital). Specific requests for data were submitted to NHS Digital for relevant data not routinely available online.

Discussion

Current Rates of Stress and Burnout in Healthcare Staff

Concerns about high levels of burnout and poor wellbeing in healthcare staff are an international phenomenon. A study of 61,168 nurses across 12 countries found that in nine countries a quarter or more of the nursing workforce was burnt-out, with rates as high as 78% in Greek nurses (Aiken et al., 2012). These rates may be rising; in a survey of 6880 USA physicians, burnout prevalence increased from 46% in 2011 to 54% in 2014 (Shanafelt et al., 2015). In the UK, the proportion of staff feeling unwell due to work-related stress has risen from 28% in 2008 to 37% in 2016 (Figure 1A), and double the number of NHS staff left due to poor work-life balance in 2015 compared with 2011 (Figure 1B).

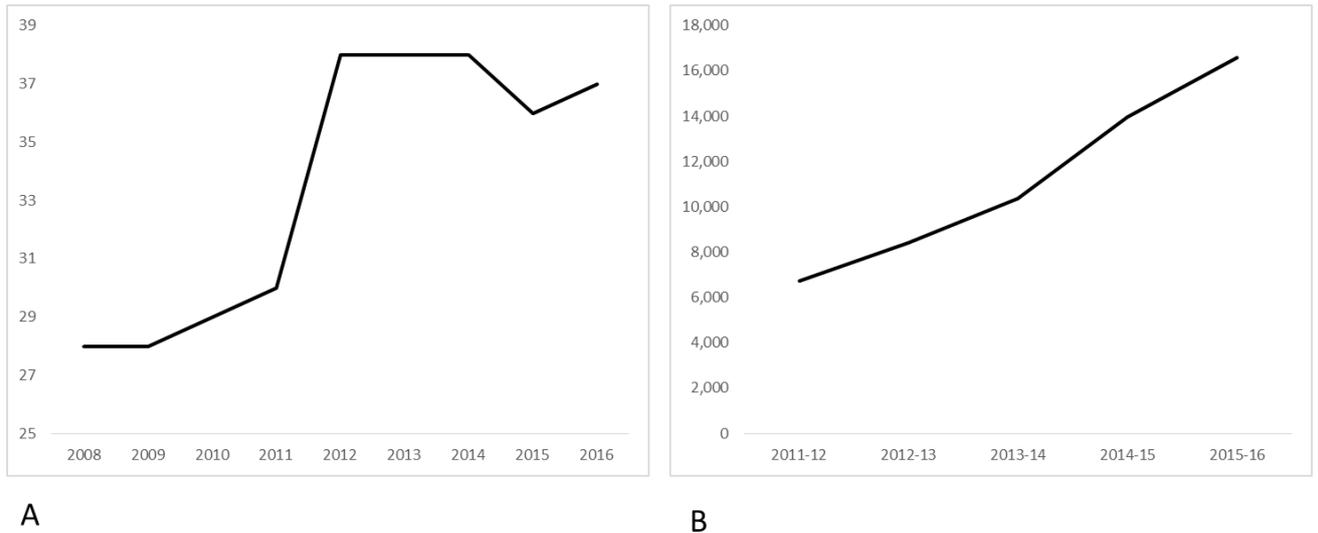


Figure 1. Percentage of staff reporting having felt unwell due to work-related stress on the NHS staff survey. (Source: NHS staff survey data; www.nhsstaffsurveys.com) (A) and number of staff citing poor work-life balance as their reason for leaving their NHS post. (Source: NHS digital; <https://data.gov.uk/dataset/nhs-workforce-reasons-for-leaving>) (B).

Stress and burnout in mental healthcare staff. Research into burnout and wellbeing in mental healthcare staff has lagged behind other areas of healthcare, but the research which has been conducted suggests burnout may be a particular problem in this group, with prevalence rates ranging from 21 to 67% (Morse et al., 2012). Amongst Iranian nurses, those working on psychiatric wards reported higher emotional exhaustion and depersonalisation than their surgical, internal medicine or burns ward-based colleagues (Sahraian et al., 2008). Concomitantly, in one study of Italian psychiatrists almost half (49%) reported high levels of emotional exhaustion (Bressi et al., 2009), and a recent study of UK psychological therapists categorised 69% as suffering from burnout (Westwood et al., 2017). Whilst the use of burnout cut-off scores is contentious, with some researchers arguing that norms for the scale are unreliable, and the use of a cut-off for a non-medical syndrome is flawed (Bianchi et al., 2017b; Bianchi et al., 2017a), these figures do indicate elevated levels of stress and negative work-attitudes in mental healthcare staff. As discussed further below, this stress has a profound impact on productivity; 2016 figures suggest staff take more sick days than those in both acute

trusts and primary care (Figure 2). Work-related stress is also higher, with 41% of mental healthcare staff reporting feeling unwell due to stress in the last year compared with 35% in acute trusts (NHS Digital, 2016).

Causes of Stress and Burnout in Mental Healthcare Staff

The causes of burnout and stress in mental health care staff overlap with those of healthcare staff in other areas. These include inadequate staffing, excessive workload, poor leadership, lack of support and lack of opportunity for skills development (Graber et al., 2008; Willard-Grace et al., 2014; Pinikahana & Happell, 2004; Bressi et al., 2009). However, there are a number of differences between mental health services and other healthcare services which may account for the differences seen in this group. These include the 'emotional labour' of caring for mentally unwell patients, high levels of violence, detaining and treating patients against their will, caring for patients who may harm themselves (Seago et al., 2001; Knickman & Snell, 2002; Letvak & Buck, 2008), and the underfunding of mental health services.

Emotional labour. All healthcare work includes emotional labour but mental healthcare requires intense emotional involvement with patients over a prolonged period (Mann & Cowburn, 2005; Edwards & Burnard, 2003). These emotional demands induce moderate to high stress in mental healthcare staff (McGrath et al., 1989), as well as high rates of depression; the British Psychological Society reported that nearly half of its NHS-employed members had recently experienced depression (BPS, 2017).

Violence. Violence against staff is higher in mental healthcare services than other sectors. In the UK, there were 46,107 reported assaults on mental health staff in 2015-16 and overall, assaults in the mental healthcare sector account for nearly 70% of all NHS reports of assaults on staff (NHS, 2010; Renwick et al., 2016). In a Taiwanese study, 19.3% of psychiatric nurses experienced physical violence annually, compared with 5.9% of general nurses (Shiao et

al., 2010). The impact of these assaults is costly both in terms of sickness and litigation, as well as the physical and psychological impact on staff victims (van Leeuwen & Harte, 2015).

Involuntary detentions. Involuntary detentions mean staff will be caring for patients who do not choose to receive treatment, and in the UK there has been a year-on-year increase in the use of the Mental Health Act to detain patients. Coercive measures such as seclusion, restraint and forced medication are high risk, stressful activities for both patients and staff (Bonner et al., 2002). Although this trend is not uniform internationally, with some nations such as Sweden having seen reductions in involuntary detentions (Salize et al., 2002), it contributes to higher staff stress levels when it occurs.

Risk of suicide. Completed patient suicides are comparatively rare, with less than 100 occurring in mental healthcare in the UK annually (NCISH, 2016). However, they are more common in mental health services than other healthcare services. When they happen the impact is strong and sustained, linked with loss of self-esteem, disturbed relationships with colleagues, friends and family, and feelings of guilt and anger (Kinney & Torigoe, 1988). Although completed suicide is rare, suicide attempts, suicidal ideation and self-harm are more common, and caring for such patients is emotionally taxing, requiring constant monitoring and management of the potential risk of suicide (Hagen et al., 2017). Risk management can be particularly challenging in community mental health services where staff do not have daily contact with patients and may be carrying large case loads.

Underfunding of mental health services. Mental health services receive less funding relative to demand compared with physical health services. In the USA, growth in mental healthcare funding has been slower than growth in physical healthcare spending (Garfield, 2011), and between 2009 and 2011 states cut in excess of \$1.8 billion dollars from their mental healthcare budgets (Honberg et al., 2011). Similar underfunding for mental health services has also been widely reported in the UK (Gilbert, 2015). The result is services which are stretched

beyond their resources, placing greater demands on staff, creating a stressful and pressurised environment.

Underlying mental health difficulties. Whilst uncomfortable, we must consider the possibility that rates of mental health difficulties in staff who are initially attracted to work in mental health services may be higher than elsewhere in the health system. Research in this area has been limited and results inconclusive (Mata et al., 2015). A study comparing types of nursing students found no evidence to suggest that mental healthcare nursing students reported significantly different levels of mental wellbeing to other types of nursing students, although they did report better use of coping strategies than nurses training in general adult or children's nursing (Pryjmachuk & Richards, 2007). However, there are numerous anecdotal reports of staff inspired to enter the profession by virtue of their own previous mental health difficulties (Jamison, 1996; Gask, 2015), and increasingly these staff are exhorted to use their lived experience as a 'tool' to understand and relate to patients which may strength therapeutic interactions (Oates et al., 2017; Perkins et al., 2010). Despite this, staff continue to describe concerns around disclosing their mental health problems (Vaughn et al., 2017; Hassan, 2015; Hassan et al., 2016; White et al., 2006). Whilst there is currently no clear evidence regarding underlying mental health problems as a cause of the poorer wellbeing in this mental healthcare staff, this possibility raises the question of how the wellbeing of staff in mental healthcare trusts is promoted.

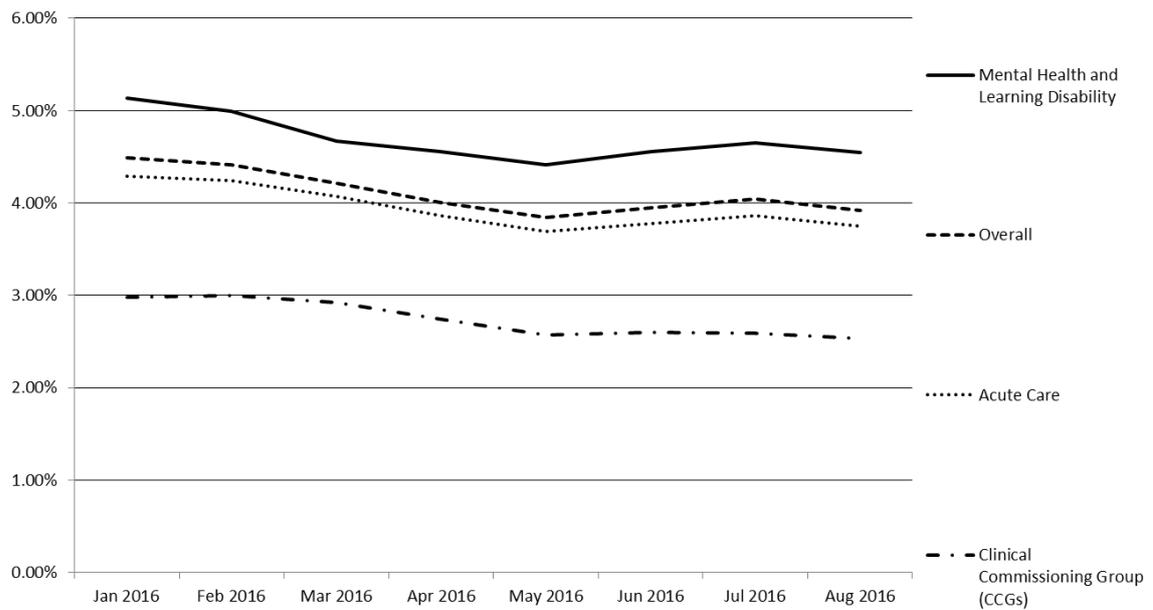


Figure 2. Sickness absence rate by trust type. (Source: NHS digital: <http://www.content.digital.nhs.uk/catalogue/PUB22562>).

Mental Health Staff Wellbeing and Quality and Safety of Patient Care

Healthcare staff wellbeing/burnout and quality and safety. Staff wellbeing and burnout is associated with both patient safety and care quality. A recent review found that 22 out of 27 studies reported a significant association between poor wellbeing and poorer patient safety outcomes, and 25 of 30 studies found a significant link between higher levels of burnout and increased adverse events (Hall et al., 2016). Further evidence for the link was offered by Welp and Manser (2016) who found that 66% of studied associations linked poor wellbeing and negative patient safety indicators. This pattern is replicated when patient satisfaction rather than patient safety is examined, and a recent meta-analysis of 63 studies reported that higher burnout was significantly associated with poorer patient satisfaction (Salyers et al., 2016).

Healthcare staff wellbeing and quality/safety in mental healthcare. Research into links between staff wellbeing and patient safety/quality of care is still limited in mental health

settings. However, two studies provide preliminary evidence for similar patterns to general healthcare. In the USA, a mindfulness-based-stress-reduction intervention in acute psychiatric staff improved patient satisfaction scores and decreased patient safety events in the three months post-intervention (Brady et al., 2012). A subsequent USA study tested cross-sectional associations between burnout and quality and safety outcomes. It found that the burnout subscales of high personal accomplishment and low depersonalisation were associated with overall quality of care scores, and emotional exhaustion and depersonalisation were associated with general work conscientiousness, although links were not found with perceived errors (Salyers et al., 2015). Given the strength of this finding in general healthcare, further research into these associations in mental healthcare is warranted. Supporting healthcare staff wellbeing may be an underexploited route to improving patient care.

Mechanisms. Understanding why and how burnout and poor wellbeing impact patient care is key to targeting interventions (Craig et al., 2008). Conservation of Resources Theory (Hobfoll, 2002) suggests burnout occurs because of resource over-investment from the individual, combined with too few gains (e.g., lack of necessary tools for work meaning that work cannot be carried out as intended). This lack of return on investment results in individuals being cautious with future resource investment in the same situation. This may manifest as subsequent pulling away from patients or developing negative attitudes towards patients (Halbesleben et al., 2008).

An alternate explanation is found in biological processes. Stress, depression, and burnout can cause physical and emotional fatigue, reducing cognitive functioning skills, including decision-making, memory, and attention (Linden et al., 2005; Hammar & Årdal, 2009; Burt et al., 1995). Therefore, stressed workers are more likely to make poorer decisions and judgements (Hall et al., 2017), and to rely on heuristics and cognitive biases. These informalise decision-making processes and may make errors more likely (Burt et al., 1995).

Staff Wellbeing, Burnout and Sickness Absence and Turnover Rates

Sickness absence. Numerous studies indicate that sickness absence from work is higher in the public sector than in the private sector, internationally (Uppal & LaRoche-Cote, 2013; ONS, 2017; BLS, 2017). This difference is further pronounced when healthcare employees are considered apart from other public sector employees. In the UK, staff in the healthcare sector take twice the number of sick days as those in the private sector, and around 25% more than staff in other public sector organisations (ONS, 2017). In the USA, workers in healthcare support occupations take the most sickness absence of all employees, with rates 50% higher than private sector employees (BLS, 2017). Furthermore, as discussed above, the absence rate of mental health care staff outstrips other healthcare sectors (Figure 2). Notably, a higher proportion of these sick days are attributed to anxiety, stress, depression or other psychiatric illness. From December 2014-November 2015, 26% of all absence days in UK mental health doctors were in this category, compared to 17% in doctors in acute trusts (NHSDigital, 2017). In mental health nurses, 25% of absences were also stress or anxiety related, compared with 18% in acute trust nurses (NHSDigital, 2017).

These unplanned absences are costly; where workers are not replaced they result in lost productivity and where workers are replaced, the effective hourly cost is usually higher than that of the absent worker. In front-line acute healthcare, required staffing levels usually mean the latter option is applied. This has been a particular problem in the UK, where concerns about the inflated rates charged by staffing agencies have resulted in the introduction of locum staff expenditure caps in the NHS. Despite this cap, many doctors in the UK are continuing to choose locum work over substantive positions as it provides more control and is less stressful (Cheshire et al., 2017). This further adds to the shortage of healthcare staff

and exacerbates current staffing level issues. However, research is yet to explore these factors within mental healthcare locums.

Burnout is a risk factor for higher absence rates. A study of 3368 Finnish employees found that physical illness was more common in burnt-out employees than others, and the prevalence of diseases increased with increasing severity of burnout (Honkonen et al., 2006). Strong evidence suggests that this translates into greater sickness rates, with numerous studies identifying a prospective link between higher burnout and subsequently greater rates of sickness absence (Borritz et al., 2006; Schaufeli et al., 2009; Firth & Britton, 1989). In 3151 Finnish employees, the risk of taking a sickness absence longer than 9 days was 6.9-fold higher in participants with severe burnout, even when mental and physical health problems were adjusted for (Ahola et al., 2008).

A large proportion of research in this area has focused on general healthcare staff (Peterson et al., 2011; Firth & Britton, 1989; Anagnostopoulos & Niakas, 2010). A smaller number of studies have been conducted in mental healthcare staff, with results reflecting those in other occupational groups. For example, one study comparing three groups of ward-based mental health nurses found that the group reporting the highest levels of emotional exhaustion and depersonalisation also reported the highest sickness absence rates (Fagin et al., 1996). More recently, a study of 475 UK mental health nurses found a significant association between increases in emotional exhaustion and number of sickness absence days taken (Sherring & Knight, 2009).

Turnover. Staff turnover and absenteeism are directly linked. In the USA, a report found that workplaces with higher absenteeism also had higher turnover (Aguirre & Kerin, 2004). In a meta-analysis assessing the strength of the absenteeism-turnover association, Berry et al. (2012) found evidence of a significant correlation between the two variables. Annual turnover in general nurses ranges from 15-44%, (Duffield et al., 2014), similar to other

industries (Bingley & Westergaard-Nielsen, 2004; Siebert & Zubanov, 2009), but turnover in mental healthcare is higher, ranging from 28-52% (Glisson et al., 2006; Glisson & James, 2002; Aarons & Sawitzky, 2006; Prosser et al., 1999). One study of 42 mental healthcare teams over 24 months reported a mean turnover rate of 81% (Woltmann et al., 2008).

Turnover is costly, necessitating temporary replacement cover, recruitment and training of new staff. Estimates of costs for nurses lost and replaced are (per nurse) \$20,561 in the USA, \$26,652 in Canada, \$23,711 in New Zealand and \$48,790 in Australia (Duffield et al., 2014). High turnover also has a negative impact on service delivery, with mental healthcare studies linking it with poorer implementation of evidence-based practices (Woltmann et al., 2008) and more patient suicides (Kapur et al., 2016).

Similar to absenteeism, burnout is a consistent risk factor for higher turnover. Numerous studies report cross-sectional associations between burnout and turnover intentions in nurses (Spence Laschinger et al., 2009; Van Bogaert et al., 2014), doctors (Zhang & Feng, 2011), clinical managers (Wong & Laschinger, 2015) and ambulance personnel (Bria et al., 2013). Mental healthcare staff are no exception. In one study with 10,997 mental healthcare nurses, social workers, psychologists and psychiatrists, higher levels of emotional exhaustion were associated with higher turnover intention (Yanchus et al., 2016). These turnover intentions may translate into actual turnover. In nurses (Firth & Britton, 1989) and social welfare workers (1998) higher burnout predicted likelihood of subsequent contract terminations. These findings are contentious, though. In a study of mental healthcare staff, Prosser et al. (1999) found that overall wellbeing (measuring using the General Health Questionnaire; Goldberg, 1978) predicted turnover for 12 months but burnout did not, and neither wellbeing nor burnout predicted turnover three years later. However, the absence of statistical significance in this study may stem from a lack of power and a high attrition rate; just 25 staff remained at the end.

Together, these studies suggest that reducing burnout and improving wellbeing in mental healthcare may improve patient care quality, reduce safety incidents and reduce costs incurred through staff sickness absence and high turnover rates. We will now review recent evidence regarding the effectiveness of burnout reduction interventions.

Interventions for Preventing or Reducing Burnout

Interventions targeting burnout can be categorised into those directed at individuals (person-directed) and those which take a wider, organisational approach (organisation-directed). Person-directed interventions include psychological interventions such as cognitive-behaviour therapy (CBT), mindfulness groups or counselling. Organisation-directed interventions include educational interventions, work scheduling changes and teamwork training. Interventions can be further divided into those which are preventative and those which are reactive (ameliorating existing burnout) (Firth-Cozens, 2001). This preventative/reactive division is rarely operationalised in practice; possibly due to lack of clarity regarding the difference. However, widespread high burnout levels may mean that all studies are defacto reactive. Interest in reducing burnout is growing; 2016 saw the publication of three separate meta-analyses of burnout reduction interventions in different groups of healthcare staff (Panagioti et al., 2016; West et al., 2016; Dreison et al., 2016).

One of these meta-analyses focused on mental healthcare staff and identified 27 relevant studies, of which around half were uncontrolled studies (n=14) and half were randomised controlled trials (n=13) (Dreison et al., 2016). Interventions included stress management workshops, psychological therapy, clinical supervision and team communication training. The majority of interventions were organisation directed (e.g., co-worker support groups; 70%), and the largest subtype of organisational interventions were job training/education interventions (44%). Their overall effect was small, with standardised mean differences ranging from .13 to .22, depending on time of measurement and study design.

Effects were greater when a second post-test measurement was used, and when studies used controlled designs. These findings are promising, suggesting that the impact of interventions is likely to be sustainable and robust in the face of higher quality evaluations.

Interestingly, the meta-analysis found that person-directed interventions were more effective than organisational interventions for burnout reduction, and when they were considered in isolation, organisation directed interventions were not effective for reducing overall composite burnout scores. This finding contrasts with two recent meta-analyses of burnout interventions in doctors working in a range of settings, which found either no difference between these types of interventions (West et al., 2016) or that organisational interventions were more effective (Panagioti et al., 2016). Reasons for this divergence are unclear. One possibility is that compared with studies of organisational interventions, the person-directed interventions selected for, or attracted participants high in burnout, and their results were boosted due to regression-to-the-mean. This is supported by evidence that greater burnout reductions were observed in studies where participants reported higher baseline burnout (Dreison et al., 2016). However, explanation is hampered by poor reporting of recruitment and selection strategies. An alternative explanation lies with the type and components of organisational intervention, and grouping all organisational interventions together may obscure the true picture. Certainly when job training/education interventions were analysed separately from other organisational interventions, they had a significant impact on each type of burnout. Indeed, effect sizes were larger for job training/education interventions than person directed interventions for the outcomes of composite burnout (.21 v .17) and personal accomplishment/efficacy (.24 v -.09) (Dreison et al., 2016). Conversely, other forms of organisational interventions had no significant impact on any burnout outcome. Taken together, these findings suggest that job training interventions could be a promising avenue for reducing overall burnout and enhancing personal accomplishment, whilst person-

directed interventions may be most effective for reducing emotional exhaustion, and other forms of organisational interventions such as support groups may be irrelevant for all burnout outcomes.

Relevance for Clinical Practice

Given reports of increasing burnout and stress in healthcare staff, staff leaving due to stress, and an amplification of these problems in mental healthcare providers, implementing burnout interventions in mental healthcare settings is imperative. However, when tested the impact of interventions has been minimal (Dreison et al., 2016). In an increasingly resource-limited healthcare context, there is an urgent need to identify *how* interventions can be made more effective and therefore more cost-efficient. We outline four recommendations below which could advance burnout research and increase adoption by mental health services.

1. Ground interventions in the research literature

Burnout interventions are too often ad-hoc and based on anecdotal understandings of the causes of burnout and poor wellbeing in staff. Growing evidence reveals the underlying causes of burnout and should be used in the development of burnout interventions. For mental healthcare staff causes include poor staffing ratios, inadequate leadership support, the emotional demands of caring for suicidal or complex patients and lack of training (Graber et al., 2008; Willard-Grace et al., 2014; Pinikahana & Happell, 2004; Bressi et al., 2009; Hagen et al., 2017). These factors may explain the meta-analytic finding that organisational interventions focused on job training are more effective for reducing burnout in mental health care staff than other types of organisational interventions such as co-worker support groups (Dreison et al., 2016). Whilst job training addresses one known cause of burnout: lack of training, co-

worker support groups fail to target any known causes of mental healthcare staff burnout. Interventions which may prove effective for known burnout causes include i) increasing staffing levels, which would both improve staff-patient ratios, facilitate time for clinical supervision and training and give staff time to monitor patients at risk of self harm or suicide, ii) training in known areas of need, such as de-escalation of violence, reducing coercive practices, the management of self harm and suicide risk, iii) training managers in leadership skills, iv) effective supervision (White & Winstanley, 2010), and v) improving support for staff after incidents have occurred (Goulet & Larue, 2016). Despite requiring initial investment from services, cost-savings from reduced rates of sickness absence due to stress and staff turnover are feasible; an argument that requires further research.

2. Increase the value of interventions.

Healthcare staff wellbeing and burnout is consistently associated with the quality and safety of care (Johnson et al., 2017a; Hall et al., 2016). However, the direction of this relationship is unclear and the two factors may operate as a feedback loop: higher staff wellbeing may lead to better quality and safety of care, but an inability to provide high quality, safe care may lead to disillusionment, stress and burnout (West et al., 2009). As such, developing interventions which simultaneously reduce burnout and enhance quality could increase the value of interventions, meeting two objectives at once. Furthermore, the impact of these interventions may be longer-lasting, with enhanced staff wellbeing and the ability to provide higher-quality care acting in a mutually reinforcing, maintaining way.

3. Build bridges between universities and healthcare organisations

Too often, University researchers work in isolation from mental health services. This may be pragmatic and practical: healthcare organisations operate in a faster-paced context driven by urgent need to improve patient care, meet targets and work within stringent financial constraints, whereas universities work to different demands. Their time-frames for work are longer, in order to abide by lengthy research approval processes. They are expected to be scientifically rigorous and focus on research impact as well as (and not always) service-level improvements. Co-working offers advantages to both healthcare and academics. For healthcare practitioners, university researchers can review existing knowledge, identify novel solutions and develop rigorous plans for testing intervention effectiveness. They also have access to research journals, databases and specialist data analysis software that can support evidence gathering and intervention evaluation. For university researchers, partnering with healthcare organisations can offer opportunities to evaluate interventions already happening. Partnerships can help identify new and important avenues for research, ensuring that studies meet current service and patient needs and enhance the societal impact of results. In the UK, the exercise that assesses the quality of academic research (the Research Excellence Framework) now emphasises the importance of impact, and potential for impact is increasingly prominent in research funding calls. Furthermore, partnering with healthcare organisations can support access to research populations and increase credibility of bids in which clinical and service partnerships are positively encouraged (for example, the UK's NIHR Health Services and Delivery Research funding programme) (NIHR, 2017). In addition to this, we recommend the documenting of these partnerships on research outputs, to allow for the evaluation of their effectiveness and impact.

4. Engage healthcare staff by emphasising the positives

Given that wellbeing exists on a spectrum from low to high wellbeing (Johnson & Wood, 2017), it could be expected that interventions which reduce burnout will also offer positive benefits. This is supported by studies suggesting lower burnout is associated with variables such as higher job satisfaction (Baruch-Feldman et al., 2002; Weng et al., 2011; Griffin et al., 2010), life satisfaction (Hakanen & Schaufeli, 2012) and broader physical health outcomes, including risk of subsequent musculo-skeletal pain (Armon et al., 2010; Kim et al., 2011). Mackenzie and colleagues (2006) found a burnout intervention also improved other outcome variables. In a controlled test of a mindfulness intervention in nursing staff, reductions in burnout occurred alongside improvements in relaxation and life satisfaction (Mackenzie et al., 2006). Similarly, in a more recent study of participants from a range of occupations, Hulsheger and colleagues (2013) reported that a mindfulness intervention resulted in concurrent reductions in emotional exhaustion alongside increases in job satisfaction in the intervention group. However, it should be noted that the outcome variables affected may vary according to the specific type of intervention delivered, and in a controlled test of an intervention involving a small-group curriculum covering topics such as “patient,” “self” and “balance” in doctors, it was found that whilst depersonalisation was reduced, no significant differences in quality of life, job satisfaction or stress were found (West et al., 2014).

There is a perceived stigma associated with admitting poor mental health in healthcare staff. Fears that disclosure may cause career damage or put oneself on the radar of licensing or registering bodies exist and need acknowledging (Wallace et al., 2009). This may be more pronounced in mental healthcare staff who fear being referred for treatment in a service which employs them and by staff who are also

colleagues. Burnout is a factor which is well known to co-occur with depression (Hakanen et al., 2008) and interventions which only emphasise the potential for burnout reduction may deter staff who are concerned about admitting to poor mental health. Instead, emphasising the potential additional benefits of these interventions in terms of increased job satisfaction, life satisfaction, relaxation and physical health may overcome this stigma and increase uptake of interventions by professionals. Framing interventions in terms of their potential to build 'resilience' can also be helpful, given increasing awareness of the need to cope with a challenging and changing healthcare context (Johnson et al., 2017b). The literature on mindfulness interventions has often emphasised the potential positive gains of participation, which may partly explain its widespread appeal. We suggest that for burnout interventions to receive comparable interest and uptake in healthcare professionals, an increased emphasis upon and measurement of positive outcome variables may be necessary.

Conclusion

A growing body of research suggests poor wellbeing and burnout are increasing in healthcare staff. Staff in mental healthcare settings report higher rates than those in other healthcare sectors. This harms the quality and safety of patient care delivered and increases service costs because stress and burnout means higher rates of sickness absence and turnover. Recent syntheses suggest interventions can be effective for reducing burnout, but effect sizes in mental healthcare staff are small. Grounding interventions in the research literature, emphasising the positives of interventions to staff, building links between healthcare organisations and universities and designing interventions which target burnout and improve patient care together may serve to improve the effectiveness and uptake of interventions.

References

- Aarons, G. A. & Sawitzky, A. C. (2006). Organizational climate partially mediates the effect of culture on work attitudes and staff turnover in mental health services. *Administration and Policy in Mental Health and Mental Health Services Research*, 33, 289.
- Aguirre, A. & Kerin, A. (2004). Shiftwork Practices 2005.
- Ahola, K., Kivimäki, M., Honkonen, T., et al. (2008). Occupational burnout and medically certified sickness absence: a population-based study of Finnish employees. *Journal of psychosomatic research*, 64, 185-193.
- Aiken, L. H., Sermeus, W., Van den Heede, K., et al. (2012). Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *Bmj*, 344, e1717.
- Anagnostopoulos, F. & Niakas, D. (2010). Job burnout, health-related quality of life, and sickness absence in Greek health professionals. *European Psychologist*.
- Armon, G., Melamed, S., Shirom, A. & Shapira, I. (2010). Elevated burnout predicts the onset of musculoskeletal pain among apparently healthy employees. *Journal of occupational health psychology*, 15, 399.
- Baruch-Feldman, C., Brondolo, E., Ben-Dayana, D. & Schwartz, J. (2002). Sources of social support and burnout, job satisfaction, and productivity. *Journal of occupational health psychology*, 7, 84-93.
- Berry, C. M., Lelchook, A. M. & Clark, M. A. (2012). A meta-analysis of the interrelationships between employee lateness, absenteeism, and turnover: Implications for models of withdrawal behavior. *Journal of Organizational behavior*, 33, 678-699.
- Bianchi, R., Schonfeld, I. & Laurent, E. (2017a). Can we trust burnout research? *Annals of oncology*, 28, 2320-2321.
- Bianchi, R., Schonfeld, I. S. & Laurent, E. (2017b). Physician burnout is better conceptualised as depression. *The Lancet*, 389, 1397-1398.
- Bingley, P. & Westergaard-Nielsen, N. (2004). Personnel policy and profit. *Journal of Business Research*, 57, 557-563.
- BLS (2017). Absences from work of employed full-time wage and salary workers by occupation and industry. US Department of Labour.
- Bonner, G., Lowe, T., Rawcliffe, D. & Wellman, N. (2002). Trauma for all: a pilot study of the subjective experience of physical restraint for mental health inpatients and staff in the UK. *Journal of Psychiatric and Mental Health Nursing*, 9, 465-473.
- Borritz, M., Rugulies, R., Christensen, K., Villadsen, E. & Kristensen, T. (2006). Burnout as a predictor of self-reported sickness absence among human service workers: prospective findings from three year follow up of the PUMA study. *Occupational and environmental medicine*, 63, 98-106.
- BPS (2017). New Savoy survey shows increasing mental health problems in NHS psychotherapists.
- Brady, S., O'connor, N., Burgermeister, D. & Hanson, P. (2012). The impact of mindfulness meditation in promoting a culture of safety on an acute psychiatric unit. *Perspectives in psychiatric care*, 48, 129-137.
- Bressi, C., Porcellana, M., Gambini, O., et al. (2009). Burnout among psychiatrists in Milan: a multicenter survey. *Psychiatric Services*, 60, 985-988.
- Bria, M., Băban, A., Andreica, S. & Dumitrașcu, D. L. (2013). Burnout and turnover intentions among Romanian ambulance personnel. *Procedia-Social and Behavioral Sciences*, 84, 801-805.

- Burt, D. B., Zembar, M. J. & Niederehe, G. (1995). Depression and memory impairment: a meta-analysis of the association, its pattern, and specificity. *Psychological Bulletin*, 117, 285.
- Cheshire, A., Ridge, D., Hughes, J., et al. (2017). Influences on GP coping and resilience: a qualitative study in primary care. *Br J Gen Pract*, bjpg17X690893.
- Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I. & Petticrew, M. (2008). Developing and evaluating complex interventions: new guidance. London: Medical Research Council.
- Dreison, K. C., Luther, L., Bonfils, K. A., Sliter, M. T., McGrew, J. H. & Salyers, M. P. (2016). Job Burnout in Mental Health Providers: A Meta-Analysis of 35 Years of Intervention Research.
- Duffield, C. M., Roche, M. A., Homer, C., Buchan, J. & Dimitrelis, S. (2014). A comparative review of nurse turnover rates and costs across countries. *Journal of Advanced Nursing*, 70, 2703-2712.
- Edwards, D. & Burnard, P. (2003). A systematic review of stress and stress management interventions for mental health nurses. *Journal of Advanced Nursing*, 42, 169-200.
- Fagin, L., Carson, J., Leary, J., et al. (1996). Stress, coping and burnout in mental health nurses: findings from three research studies. *International journal of social psychiatry*, 42, 102-111.
- Firth-Cozens, J. (2001). Interventions to improve physicians' well-being and patient care. *Social Science & Medicine*, 52, 215-222.
- Firth, H. & Britton, P. (1989). 'Burnout', absence and turnover amongst British nursing staff. *Journal of Occupational Psychology*, 62, 55-59.
- Garfield, R. L. (2011). Mental health financing in the United States: a primer. Menlo Park, CA: Kaiser Family Foundation.
- Gask, L. (2015). *The other side of silence: A psychiatrist's memoir of depression*: Summersdale Publishers LTD-ROW.
- Gilbody, S., Cahill, J., Barkham, M., Richards, D., Bee, P. & Glanville, J. (2006). Can we improve the morale of staff working in psychiatric units? A systematic review. *Journal of Mental Health*, 15, 7-17.
- Gilbert, H. (2015). Mental health under pressure. London, UK: The King's Fund.
- Glisson, C., Dukes, D. & Green, P. (2006). The effects of the ARC organizational intervention on caseworker turnover, climate, and culture in children's service systems. *Child abuse & neglect*, 30, 855-880.
- Glisson, C. & James, L. R. (2002). The cross-level effects of culture and climate in human service teams. *Journal of Organizational behavior*, 23, 767-794.
- Goldberg, D. (1978). *Manual of the General Health Questionnaire*, NFER, UK: Windsor, Birks.
- Goulet, M.-H. & Larue, C. (2016). Post-Seclusion and/or Restraint Review in Psychiatry: A Scoping Review. *Archives of psychiatric nursing*, 30, 120-128.
- Graber, J. E., Huang, E. S., Drum, M. L., et al. (2008). Predicting changes in staff morale and burnout at community health centers participating in the health disparities collaboratives. *Health services research*, 43, 1403-1423.
- Griffin, M. L., Hogan, N. L., Lambert, E. G., Tucker-Gail, K. A. & Baker, D. N. (2010). Job involvement, job stress, job satisfaction, and organizational commitment and the burnout of correctional staff. *Criminal Justice and Behavior*, 37, 239-255.
- Hagen, J., Knizek, B. L. & Hjelmeland, H. (2017). Mental health nurses' experiences of caring for suicidal patients in psychiatric wards: an emotional endeavor. *Archives of psychiatric nursing*, 31, 31-37.

- Hakanen, J. J. & Schaufeli, W. B. (2012). Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *Journal of Affective Disorders*, 141, 415-424.
- Hakanen, J. J., Schaufeli, W. B. & Ahola, K. (2008). The Job Demands-Resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work & Stress*, 22, 224-241.
- Halbesleben, J. R., Wakefield, B. J., Wakefield, D. S. & Cooper, L. B. (2008). Nurse burnout and patient safety outcomes: nurse safety perception versus reporting behavior. *Western Journal of Nursing Research*, 30, 560-577.
- Hall, L. H., Johnson, J., Heyhoe, J., Watt, I., Anderson, K. & O'Connor, D. B. (2017). Exploring the impact of primary care physician burnout and wellbeing on patient care: A focus group study. *Journal of patient safety*.
- Hall, L. H., Johnson, J., Watt, I., Tsipa, A. & O'Connor, D. B. (2016). Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. *PloS one*, 11, e0159015.
- Hammar, Å. & Årdal, G. (2009). Cognitive functioning in major depression—a summary. *Frontiers in human neuroscience*, 3, 26.
- Hassan, T., Tran, T., Doan, N., et al. (2016). Attitudes of Canadian psychiatry residents if mentally ill: awareness, barriers to disclosure, and help-seeking preferences. *Canadian Medical Education Journal*, 7, e14-e24.
- Hassan, T. M. (2015). Canadian psychiatrists' attitude to becoming mentally ill. *APA 2015*. Toronto, Canada.
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of general psychology*, 6, 307.
- Honberg, R., Diehl, S., Kimball, A., Gruttadaro, D. & Fitzpatrick, M. (2011). State mental health cuts: A national crisis. Arlington, VA: National Alliance on Mental Illness.
- Honkonen, T., Ahola, K., Pertovaara, M., et al. (2006). The association between burnout and physical illness in the general population—results from the Finnish Health 2000 Study. *Journal of psychosomatic research*, 61, 59-66.
- Hülshager, U. R., Alberts, H. J., Feinholdt, A. & Lang, J. W. (2013). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *Journal of Applied psychology*, 98, 310.
- Jamison, K. R. (1996). *Touched with fire*: Simon and Schuster.
- Johnson, J., Louch, G., Dunning, A., et al. (2017a). Burnout mediates the association between symptoms of depression and patient safety perceptions: A cross-sectional study in hospital nurses *Journal of Advanced Nursing*, In press.
- Johnson, J., Panagioti, M., Ramsey, L., Bass, J. & Harrison, R. (2017b). Resilience to emotional distress in response to failure, error or mistakes: A systematic review. *Clinical psychology review*, 52, 19–42.
- Johnson, J. & Wood, A. M. (2017). Integrating Positive and Clinical Psychology: Viewing Human Functioning as Continua from Positive to Negative Can Benefit Clinical Assessment, Interventions and Understandings of Resilience. *Cognitive Therapy and Research*, 41, 335-349.
- Kapur, N., Ibrahim, S., While, D., et al. (2016). Mental health service changes, organisational factors, and patient suicide in England in 1997–2012: a before-and-after study. *The Lancet Psychiatry*, 3, 526-534.
- Kim, H., Ji, J. & Kao, D. (2011). Burnout and physical health among social workers: A three-year longitudinal study. *Social work*, 56, 258-268.
- Kinney, B. & Torigoe, R. Y. (1988). Patients' suicides: frequency and impact on psychiatrists. *Am J Psychiatry*, 1, 45.

- Knickman, J. R. & Snell, E. K. (2002). The 2030 problem: caring for aging baby boomers. *Health services research*, 37, 849-884.
- Letvak, S. & Buck, R. (2008). Factors influencing work productivity and intent to stay in nursing. *Nursing Economics*, 26, 159.
- Linden, D. V. D., Keijsers, G. P., Eling, P. & Schaijk, R. V. (2005). Work stress and attentional difficulties: An initial study on burnout and cognitive failures. *Work & Stress*, 19, 23-36.
- Mackenzie, C. S., Poulin, P. A. & Seidman-Carlson, R. (2006). A brief mindfulness-based stress reduction intervention for nurses and nurse aides. *Applied Nursing Research*, 19, 105-109.
- Mann, S. & Cowburn, J. (2005). Emotional labour and stress within mental health nursing. *Journal of Psychiatric and Mental Health Nursing*, 12, 154-162.
- Maslach, C. & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of occupational behavior*, 2, 99-113.
- Mata, D. A., Ramos, M. A., Bansal, N., et al. (2015). Prevalence of depression and depressive symptoms among resident physicians: a systematic review and meta-analysis. *Jama*, 314, 2373-2383.
- McGrath, A., Reid, N. & Boore, J. (1989). Occupational stress in nursing. *International journal of nursing studies*, 26, 343-358.
- Morse, G., Salyers, M. P., Rollins, A. L., Monroe-DeVita, M. & Pfahler, C. (2012). Burnout in mental health services: A review of the problem and its remediation. *Administration and Policy in Mental Health and Mental Health Services Research*, 39, 341-352.
- NCISH (2016). The National Confidential Inquiry into Suicide and Homicide by People with Mental Illness. Making Mental Health Care Safer: Annual Report and 20-year Review. University of Manchester.
- NHS (2010). Cost of violence against NHS staff: A report summarising the economic cost to the NHS of violence against staff 2007/8. London, UK.
- NHSDigital (2017). Sickness absence full time equivalent days lost by staff group, organisational type and reason for absence. Dataset provided by the Health and Social Care Information Centre on request on 24th April 2017.
- NIHR (2017).
- Oates, J., Drey, N. & Jones, J. (2017). 'Your experiences were your tools'. How personal experience of mental health problems informs mental health nursing practice. *Journal of Psychiatric and Mental Health Nursing*.
- ONS (2017). Sickness absence in the labour market. Office of National Statistics.
- Panagioti, M., Panagopoulou, E., Bower, P., et al. (2016). Controlled Interventions to Reduce Burnout in Physicians: A Systematic Review and Meta-analysis. *JAMA Internal Medicine*.
- Perkins, R., Rinaldi, M. & Hardisty, J. (2010). Harnessing the expertise of experience: increasing access to employment within mental health services for people who have themselves experienced mental health problems. *Diversity in Health & Care*, 7.
- Peterson, U., Bergström, G., Demerouti, E., Gustavsson, P., Åsberg, M. & Nygren, Å. (2011). Burnout levels and self-rated health prospectively predict future long-term sickness absence: a study among female health professionals. *Journal of Occupational and Environmental Medicine*, 53, 788-793.
- Pinikahana, J. & Happell, B. (2004). Stress, burnout and job satisfaction in rural psychiatric nurses: a Victorian study. *Australian Journal of Rural Health*, 12, 120-125.
- Prosser, D., Johnson, S., Kuipers, E., et al. (1999). Mental health, "burnout" and job satisfaction in a longitudinal study of mental health staff. *Social Psychiatry and Psychiatric Epidemiology*, 34, 295-300.

- Prymachuk, S. & Richards, D. A. (2007). Mental health nursing students differ from other nursing students: Some observations from a study on stress and coping. *International journal of mental health nursing*, 16, 390-402.
- RCP (2015). Work and wellbeing in the NHS: why staff health matters to patient care. London, UK.
- Renwick, L., Lavelle, M., Brennan, G., et al. (2016). Physical injury and workplace assault in UK mental health trusts: An analysis of formal reports. *International journal of mental health nursing*, 25, 355-366.
- Sahraian, A., Fazelzadeh, A., Mehdizadeh, A. & Toobaee, S. (2008). Burnout in hospital nurses: a comparison of internal, surgery, psychiatry and burns wards. *International nursing review*, 55, 62-67.
- Salize, H. J., Dreßing, H. & Peitz, M. (2002). Compulsory admission and involuntary treatment of mentally ill patients-legislation and practice in EU-member states. Mannheim, Germany: Central Institute of Mental Health
- Salyers, M. P., Bonfils, K. A., Luther, L., et al. (2016). The Relationship Between Professional Burnout and Quality and Safety in Healthcare: A Meta-Analysis. *Journal of general internal medicine*, 1-8.
- Salyers, M. P., Fukui, S., Rollins, A. L., et al. (2015). Burnout and self-reported quality of care in community mental health. *Administration and Policy in Mental Health and Mental Health Services Research*, 42, 61-69.
- Schaufeli, W. B., Bakker, A. B. & Van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organizational behavior*, 30, 893-917.
- Seago, J. A., Ash, M., Spetz, J., Coffman, J. & Grumbach, K. (2001). Hospital registered nurse shortages: environmental, patient, and institutional predictors. *Health services research*, 36, 831.
- Shanafelt, T. D., Hasan, O., Dyrbye, L. N., et al. (2015). Changes in burnout and satisfaction with work-life balance in physicians and the general US working population between 2011 and 2014. *Mayo Clinic Proceedings*. pp. 1600-1613). Elsevier.
- Sherring, S. & Knight, D. (2009). An exploration of burnout among city mental health nurses. *British Journal of Nursing*, 18.
- Shiao, J. S.-C., Tseng, Y., Hsieh, Y.-T., Hou, J.-Y., Cheng, Y. & Guo, Y. L. (2010). Assaults against nurses of general and psychiatric hospitals in Taiwan. *International Archives of Occupational and Environmental Health*, 83, 823-832.
- Siebert, W. S. & Zubanov, N. (2009). Searching for the optimal level of employee turnover: A study of a large UK retail organization. *Academy of Management Journal*, 52, 294-313.
- Spence Laschinger, H. K., Leiter, M., Day, A. & Gilin, D. (2009). Workplace empowerment, incivility, and burnout: Impact on staff nurse recruitment and retention outcomes. *Journal of nursing management*, 17, 302-311.
- Uppal, S. & LaRochelle-Cote, S. (2013). Understanding public-private sector difference in work absences.
- Van Bogaert, P., Timmermans, O., Weeks, S. M., van Heusden, D., Wouters, K. & Franck, E. (2014). Nursing unit teams matter: Impact of unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported job outcomes, and quality of care, and patient adverse events—A cross-sectional survey. *International journal of nursing studies*, 51, 1123-1134.
- van Leeuwen, M. E. & Harte, J. M. (2015). Violence against mental health care professionals: prevalence, nature and consequences. *The Journal of Forensic Psychiatry & Psychology*, 1-18.

- Wallace, J. E., Lemaire, J. B. & Ghali, W. A. (2009). Physician wellness: a missing quality indicator. *The Lancet*, 374, 1714-1721.
- Waugh, W., Lethem, C., Sherring, S. & Henderson, C. (2017). Exploring experiences of and attitudes towards mental illness and disclosure amongst health care professionals: a qualitative study. *Journal of Mental Health*, 1-7.
- Welp, A. & Manser, T. (2016). Integrating teamwork, clinician occupational well-being and patient safety—development of a conceptual framework based on a systematic review. *BMC Health Services Research*, 16, 281.
- Weng, H. C., Hung, C. M., Liu, Y. T., et al. (2011). Associations between emotional intelligence and doctor burnout, job satisfaction and patient satisfaction. *Medical education*, 45, 835-842.
- West, C. P., Dyrbye, L. N., Erwin, P. J. & Shanafelt, T. D. (2016). Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. *The Lancet*, 388, 2272-2281.
- West, C. P., Dyrbye, L. N., Rabatin, J. T., et al. (2014). Intervention to promote physician well-being, job satisfaction, and professionalism: a randomized clinical trial. *JAMA Internal Medicine*, 174, 527-533.
- West, C. P., Tan, A. D., Habermann, T. M., Sloan, J. A. & Shanafelt, T. D. (2009). Association of resident fatigue and distress with perceived medical errors. *Jama*, 302, 1294-1300.
- Westwood, S., Morison, L., Allt, J. & Holmes, N. (2017). Predictors of emotional exhaustion, disengagement and burnout among improving access to psychological therapies (IAPT) practitioners. *Journal of Mental Health*, 1-8.
- White, A., Shiralkar, P., Hassan, T., Galbraith, N. & Callaghan, R. (2006). Barriers to mental healthcare for psychiatrists. *The Psychiatrist*, 30, 382-384.
- White, E. & Winstanley, J. (2010). A randomised controlled trial of clinical supervision: selected findings from a novel Australian attempt to establish the evidence base for causal relationships with quality of care and patient outcomes, as an informed contribution to mental health nursing practice development. *Journal of Research in Nursing*, 15, 151-167.
- Willard-Grace, R., Hessler, D., Rogers, E., Dubé, K., Bodenheimer, T. & Grumbach, K. (2014). Team structure and culture are associated with lower burnout in primary care. *The Journal of the American Board of Family Medicine*, 27, 229-238.
- Woltmann, E. M., Whitley, R., McHugo, G. J., et al. (2008). The role of staff turnover in the implementation of evidence-based practices in mental health care. *Psychiatric Services*, 59, 732-737.
- Wong, C. A. & Laschinger, H. K. S. (2015). The influence of frontline manager job strain on burnout, commitment and turnover intention: A cross-sectional study. *International journal of nursing studies*, 52, 1824-1833.
- Wright, T. A. & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied psychology*, 83, 486-493.
- Yanchus, N., Periard, D. & Osatuke, K. (2016). Further examination of predictors of turnover intention among mental health professionals. *Journal of Psychiatric and Mental Health Nursing*.
- Zhang, Y. & Feng, X. (2011). The relationship between job satisfaction, burnout, and turnover intention among physicians from urban state-owned medical institutions in Hubei, China: a cross-sectional study. *BMC Health Services Research*, 11, 235.