"The relationship between healthcare staff wellbeing and patient care: It's not that simple"

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Against a backdrop of having to provide better and safer care while facing reduced financial and staff resourcing, the European healthcare sector's ability to recruit and retain workers that are motivated, effective, and efficient is paramount (European Commission, 2015). This is congruent with the *Healthy Healthcare* concept which emphasises the need for a systems-based understanding that links organisational structure, staff health, quality of care and patient safety (Chapter 1). In order to further our understanding of the healthcare system and of *Healthy Healthcare,* it is important to start exploring the relationships between these pillars. In this chapter, we focus on staff wellbeing and quality of care - two of the three core pillars of *Healthy Healthcare*. Chapters 2 and 3 discuss the definition and theories behind these constructs, and we go on to examine the relationship between staff wellbeing and quality of care from an occupational health psychology perspective.

Expecting happier and healthier staff to provide better care may make intuitive sense, but this is not always the case. This chapter aims to highlight the complexity of the relationship between the wellbeing of healthcare staff and patient care. We begin by defining wellbeing and quality of care. Next, we introduce the "happy-productive worker" hypothesis which postulates that happy and healthy workers are more productive. Here, we review the evidence for this relationship among workers in various sectors and consider some of the limitations of our understanding of this association. We then examine the research looking at the links between healthcare staff wellbeing and the quality of patient care at both the individual and organisational level. This is followed by a reflection of the inconsistency of this relationship, and how measurement, moderators, and context influence the presence and strengths of this association. Finally, we consider the implications for research, practice, and policy – including the *Healthy Healthcare* concept.

1. Revisiting staff wellbeing and quality of care

Both staff wellbeing (Chapter 2) and quality of care (Chapter 3) are explored in depth elsewhere in this book. We do not repeat this but provide a brief overview to define our understanding of these constructs and how they are used within this chapter.

For the purpose of this chapter, staff wellbeing is seen as a multidimensional concept that includes affect, motivation, behaviour, cognition, and psychosomaticism (van Horn, Taris, Schaufeli, & Schreurs, 2004; Warr, 1994). Wellbeing, therefore, offers a much broader perspective than physical or mental health. It does not merely represent the absence of illness or infirmity but exists on a continuum encompassing both negative and positive constructs (Bakker & Schaufeli, 2008). This includes depression, anxiety, and ill-health on one end, and happiness, flourishing and thriving on the other (Hall, Johnson, Watt, Tsipa, & O'Connor, 2016; Wallace, Lemaire, & Ghali, 2009). Within an occupational context, examples of the negative end of the continuum include work-related stress and burnout, with work engagement and job satisfaction representing positive manifestations of wellbeing.

The complexity around defining and assessing quality within the healthcare sector is reviewed extensively in Chapter 3. Building on that, we use the definition provided by the United Kingdom's Department of Health (2008) which sees quality as comprising clinical excellence, patient safety, and patient experience. *Clinical excellence* (i.e., preventing premature deaths, enhancing quality of life, and assisting recovery) is arguably the core performance outcome. *Patient safety* refers to a safe care environment without avoidable harm. Finally, *patient experience* encompasses the patient's experience of their personal care and treatment. These three aspects are respectively congruent with the performance dimensions of in-role performance, safety performance, and customer satisfaction. They also operate across different levels, such as a patient's satisfaction with a particular healthcare worker or the number of errors made by a healthcare professional. These could be aggregated to a group level (e.g., ward, hospital) alongside other indicators routinely collected, including hospital mortality rates, infection rates, and admission duration (Powell, Dawson, Topakas, Durose, & Fewtrell, 2014). However, while quality of care functions as a key performance indicator within the healthcare sector, there are distinct differences between quality of care and job performance. These include that: (i) positive patient outcomes are not always possible in the healthcare sector; (ii) that quality of care is a complex construct and the product of numerous factors beyond healthcare workers' control; and (iii) that the provision of care is interlinked with human suffering and emotions (Donabedian, 1988; Teoh, Hassard, & Cox, 2019). This means that quality of care is an emotive experience that can be both distressing

and fulfilling for healthcare workers. As such, quality of care and its predictors need to be measured specifically, as measures of performance used in other sectors are likely to be less relevant to the healthcare context.

2. The wellbeing and performance relationship

Prior to examining the relationship between the wellbeing of healthcare staff and the quality of care, it is useful to first understand this association within the wider context of work. The wellbeing and performance relationship, also known as the "happy-productive worker hypothesis", is one of the most popular postulations investigated in the organisational psychology and management literature (Warr & Nielsen, 2018). It also forms the basis of numerous wellbeing and motivation theories, including the Job Demands-Resources Model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and the Conservation of Resources Theory (Hobfoll, 2002). The basic premise of this relationship is simple - that happier and healthier workers are more productive in their work.

2.1. The rationale for the wellbeing and performance relationship

While the "happy-productive worker hypotheses" makes intuitive sense, it is important to understand the potential mechanisms that underpin this relationship. Broadly, the rationale for this association can be advocated from a cognitive psychological and motivational perspective.

2.1.1. Cognitive perspective

Poor psychological wellbeing, and in particular negative affect, has a wide-ranging impact on an individual's recognition and recall, their episodic, working, and autobiographical memory, their attention and decision making capacities, and their executive functioning. All of these are key cognitive functions required not only for task performance, but for wider contextual performance (Calvo & Eysenck, 1992; Dalgleish et al., 2007; Ford, Cerasoli, Higgins, & Decesare, 2011). For example, anxiety has been shown to detrimentally influence working memory by reducing its capacity for processing and storage, which, in turn, impairs an individual's ability to carry out complex or concurrent tasks (Calvo & Eysenck, 1992). The experience of chronic stress places a cognitive burden on the individual, evidenced by stressed individuals demonstrating deficits in their learning related to episodic

memory and by being unable to encode and retrieve information (Öhman, Nordin, Bergdahl, Birgander, & Neely, 2007). Individuals experiencing depression, a key feature of work-related stress, are less likely to focus on positive or neutral tasks (McCabe & Gotlib, 1995), more likely to make errors (Farrin, Hull, Unwin, Wykes, & David, 2003), and be slower at recalling information (Kizilbash, Vanderploeg, & Curtiss, 2002). Fatigue, which often accompanies stress and ill-health, also increases the cognitive difficulties that individuals face (Ford et al., 2011), making it more effortful for them to meet work goals. Recognising how cognitive functioning is impaired by a poor state of wellbeing, highlights one pathway through which workers' wellbeing influences their performance.

2.1.2. Psychological and motivational perspective

From a psychological perspective, wellbeing can be seen as the accumulation (or loss) of resources, such as those pertaining to energy and coping. For example, burnout is characterised by a depletion of emotional capacity and energy (Maslach, Schaufeli, & Leiter, 2001) while work engagement relates to psychological involvement with work (Bakker, Schaufeli, Leiter, & Taris, 2008). According to the Conservation of Resources Theory (Hobfoll, 2002), the collection of resources begets additional resources that continues in an upward spiral. The converse occurs where the loss of resources facilitates additional resource loss. Similarly, the positive affect an individual might experience (e.g., job satisfaction) is in part due to the provision of working conditions, content, and remuneration from the employer. According to Equity Theory (Adams, 1963), this could lead to a worker feeling obliged to reward their employer for these provisions through increased productivity.

There are at least four reasons why resources are important for job performance. First, is that resources (e.g., material resources, social support, information) are required to complete work tasks (Bakker & Demerouti, 2017). Second, specific resources, such as social support, control, and meaning, are pivotal in meeting basic psychological needs. These include the need to belong, the need for competence, and the need for autonomy (Deci & Ryan, 1985). Meeting these needs facilitates intrinsic motivation and self-efficacy that translates to the individual investing additional effort and interest in the work being done. Third, resources have the potential to act as buffers against the detrimental effects that demands in the workplace can have on an individual (Karasek & Theorell, 1990). This means that difficult and challenging work environments are less taxing on an individual psychologically, physically, cognitively, and emotionally, freeing up additional effort that can

be directed towards goals. Finally, the Conservation of Resources Theory also postulates that where resources are either exhausted or stretched, an individual is likely to become irrational, defensive, or defensive (Hobfoll, Halbesleben, Neveu, & Westman, 2018) – all of which affect their performance. Therefore, summarising the research in this area we are able to understand the wellbeing-performance relationship through a motivational pathway.

2.1.3. Fatigue and exhaustion

Another pathway through which wellbeing can impact on job performance is via physical, emotional, and psychological fatigue. Long working hours and sleep deprivation has strong potential to impair performance directly via negative affect, lack of alertness, and poor judgement (BMA, 2018; Wali et al., 2013). Affective rumination, where people worry about work problems when off duty, will also constrain opportunities to replenish mental and physiological resources (Cropley & Zijlstra, 2011). This is evident in a study of intensive care interns that found that those working extended shifts (at least 24 hours) had approximately 6 hours less sleep per week, made twice the number of attention failures, and made 36% more serious medical errors than those working for shorter periods (Landrigan et al., 2004). A related risk factor is compassion fatigue. This is a salient issue within the healthcare sector as the provision of compassionate care to others is a major source of motivation and reward among helping professionals (Radey & Figley, 2007). However, high demands to provide care and support, particularly where job resources are low, is likely to deplete emotional resources. In turn, this can engender compassion fatigue, characterised by feelings of indifference to the suffering of others (Figley, 1995). Studies have also found strong relationships between compassion fatigue and irritability, low empathy and perceptions of reduced standards of care (Dasan, Gohil, Cornelius, & Taylor, 2015; Drury, Craigie, Francis, Aoun, & Hegney, 2014; Najjar, Davis, Beck-Coon, & Carney Doebbeling, 2009). In contrast, compassion satisfaction can protect against stress and burnout (Cosley, McCoy, Saslow, & Epel, 2010; Kinman & Grant, 2016). This highlights the importance of recovery, which according to the effort-recovery model (Meijman & Mulder, 1998) is vital when exposed to high demand and low control conditions. Therefore, a lack of recovery opportunities will enhance the risk of health complaints and potentially impair job performance.

2.2. The evidence for the wellbeing and performance relationship

The sections above provide a rationale for a relationship between staff wellbeing and performance. In this section we review the corresponding evidence, drawing on a series of reviews and meta-analytical papers that have examined this relationship. These are separated according to how wellbeing has typically been measured in the literature – job satisfaction, work engagement, and burnout. These reviews not only allow a more comprehensive review of the "happy-productive worker hypothesis" but reflect the popularity of exploring aspects of this relationship. However, it is important to recognise that other aspects of wellbeing also exist that warrant examination.

Although job satisfaction is one of the most studied constructs in occupational health psychology there is still considerable discussion around how it is defined and measured (Christensen, 2017). Broadly, it can take two forms. Affective job satisfaction represents the general feelings that employees have about their work overall, while cognitive job satisfaction represents a more logical and objective consideration towards different facets of their work (Spector, 1997). An early meta-analysis of 74 studies found that cognitive job satisfaction had a small effect size (.17) on job performance (Iaffaldano & Muchinsky, 1985) A subsequent meta-analysis of 312 studies, however, found a moderate effect size (.30) (Judge, Thoresen, Bono, & Patton, 2001); moreover, general job satisfaction was also found to be a stronger predictor than cognitive job satisfaction. Stronger effect sizes were also found in jobs that were high in complexity and in cross-sectional studies. Similar findings were observed where time-lagged studies were meta-analysed. Providing support that job satisfaction functions as an antecedent to performance (Harrison, Newman, & Roth, 2006).

Work engagement has more recently emerged as an important facet of positive wellbeing. This generally refers to a psychological investment into work (Christian, Garza, & Slaughter, 2011), or more specifically as a positive work-related state of mind characterised by vigour, dedication, and absorption (Schaufeli & Bakker, 2003). A meta-analytical path model involving 90 studies (Christian et al., 2011) found that work engagement had a medium effect size with both task performance (.36) and contextual performance (.38). Crucially, work engagement had additional predictive value over other job attitudes such as job satisfaction, job involvement, and organisational commitment. However, while it is presumed that certain moderators may explain some of the variations in effect sizes, these were either not supported or untested due to the small number of relevant studies found.

In comparison, fewer studies have examined the relationship between ill-health and performance. Taris (2006) meta-analysed the findings of 16 studies that looked at different burnout dimensions (i.e., emotional exhaustion, depersonalisation, reduced personal accomplishment) and three different performance measures: task performance, organisational citizenship behaviour, and customer satisfaction. All the outcomes were considered "objective" data sources that were either rated by others or obtained from existing performance indicators. As expected, emotional exhaustion had moderate to strong negative correlations with task performance (r=-.22), organisational citizenship behaviour (r=-.19), and customer satisfaction (r=-.55). Fewer studies looked at depersonalisation and reduced personal accomplishment as predictors of performance, however, and the results were generally inconclusive. This review lends weight to the notion that different wellbeing and performance measures differentially influence the hypothesised relationship, and that further work is needed to unpack why this may be the case.

Finally, Ford and colleagues (2011) conducted a meta-analysis of 111 samples to examine the differences between three aspects of health (psychological, physical, behavioural health) on work performance. The relationship between psychological health and performance differed depending on the measure used - overall psychological well-being (.37), depression and anxiety (-.18), symptoms of psychological disorders (-.18), fatigue (-.27), and life satisfaction (.18). These had stronger relationships with performance than physical (.15) and behavioural health (between .01 & -.06). Closer examination of these relationships showed that there was little difference between wellbeing and self-rated and supervisor-rated performance, although both of these were stronger than objective measures of performance.

2.3. **Summary of the wellbeing and performance relationship**

Considering the content presented thus far, it is evident that while the "happy-productive worker hypothesis" makes intuitive sense, the corresponding evidence is less consistent. Although the results outlined above demonstrate weak and moderate effect sizes, a diverse range of effect sizes have been found within the wider literature (Taris & Schreurs, 2009). This suggests that there are likely to be other factors that influence this association, with the reviews above providing some indication as to potential moderators. These include stronger effect sizes being found where measures are self-reported, studies are cross-sectional, and broader measures of wellbeing are used. What is not questioned, however, is

the assumption that wellbeing influences performance (Judge et al., 2001), as it is equally plausible that higher performance leads to better wellbeing, that there is a third factor influencing both wellbeing and performance, or that this association is dynamic and mutually reinforcing. Recognising the complexity and uncertainty of the relationship between wellbeing and performance in different settings, it cannot be certain how it manifests within more specific contexts (e.g., the healthcare sector) or where performance is operationalised differently (e.g., using quality of care). Consequently, a more focussed review on the wellbeing and quality of care relationship is needed.

3. The wellbeing – quality of care relationship in the healthcare sector

It cannot be assumed that the wellbeing – performance relationship found in other working contexts is directly generalisable to the healthcare sector. Crucially, as described earlier, there are differences between the constructs of job performance and quality of care. This is particularly important given that the strength of the association between wellbeing and performance varied depending on the type of performance measured. This section provides an overview of the research on the wellbeing and quality of care relationship, first at the individual level and then at the organisational level.

3.1. Wellbeing and quality of care at the individual level

The vast majority of research that has examined this issue has focused at the individual level, considering how healthcare staff wellbeing relates to the quality of care that they themselves provide. In one of the largest reviews in this area (Salyers et al., 2016), the syntheses of 82 studies involving 210,669 healthcare workers found that higher levels of burnout were associated with lower levels of quality (r=-.26) and safety (r=-.23). These relationships were stronger for nurses (compared to doctors) and for emotional exhaustion (compared to depersonalisation, reduced personal accomplishment).

Similar findings were observed in a meta-analysis of 47 studies involving 42,473 physicians (Panagioti et al., 2018). A high level of burnout was associated with increased odds of patient safety incidents (OR=1.96), low professionalism (OR=2.31), and patient-reported satisfaction (OR=2.28). All three dimensions of burnout increased the odds of poor patient safety. However, unlike other reviews involving burnout, depersonalisation generally had the strongest impact on quality of care. This was attributed to findings showing

depersonalisation to be linked with low professionalism. Where quality of care was self-reported by doctors the odds ratios were stronger than where they were recorded by the system. Stronger effect sizes were also observed among more junior doctors although no potential explanation for this is provided. A separate review of doctor burnout found moderate evidence that it related to patient safety measures, although the evidence for a relationship with other aspects of quality of care (e.g., patient satisfaction, physician attitudes) was weak (Dewa, Loong, Bonato, & Trojanowski, 2017).

Recognising the dominance of burnout, Scheepers and colleagues (2015) focused on links between positive wellbeing and patient care among doctors. In their review of 18 studies, the vast majority examined job satisfaction, but career satisfaction and work engagement were also considered. Consistent with the findings outlined above, evidence for the anticipated positive relationships varied according to the type of quality of care measure. Most relationships involving patient satisfaction and interpersonal aspects of patient care (e.g., frequency and quality of communication) were supported. However, only half the studies looking at technical measures of quality of care (e.g., medical errors and adequacy of treatment procedures) found positive relationships while the only study to look at actual patient health outcomes was not.

Focusing on patient safety as an outcome, a review of 46 studies found that 59% of relationships involving wellbeing as a predictor were supported (Hall et al., 2016). Wellbeing here encompassed a wide spectrum of measures ranging from symptoms of psychiatric morbidity to quality of life. Burnout was examined separately, as a general index rather than a multi-dimensional construct, with 70% of relationships examined predicting patient safety. A key finding here was that studies that did not observe significant findings were less likely to have used self-report outcome measures, indicating that how quality of care is measured matters.

3.2. Wellbeing and quality of care at the group level

Quality of care at the group level ranges from teams to wards, departments, and hospitals. These are indicators of quality that are routinely collected (e.g., patient satisfaction, hospital mortality, infection rates) but can also be obtained from the aggregated perception of care provided by groups of individuals. Where studies have looked at both the individual and group level of this relationship, associations at the individual level are not only more likely to be significant but to have stronger effect sizes (Salyers et al., 2016; Teoh, 2018). However,

few studies have examined the wellbeing and quality of care relationship at the group level, and, to our knowledge, no reviews or meta-analyses exist. As such, we instead consider individual studies examining this relationship.

A key indicator of quality in the healthcare sector is hospital mortality rates. In England, analysis of the National Health Service's Staff Survey has consistently found that staff wellbeing does not predict hospital mortality rates (Teoh, 2018; Topakas, Admasachew, & Dawson, 2010a, 2010b). Moreover, when this relationship was examined longitudinally, none of the staff wellbeing measures predicted patient mortality rates two years later (Powell et al., 2014). Hospital mortality was predicted in a Swiss study involving 54 intensive care units, but the emotional exhaustion of doctors and nurses was the only burnout component to account for standardised mortality ratios (Welp, Meier, & Manser, 2015). All three burnout components predicted workers' collective self-rated patient safety but did not have an influence on patients' length of stay. This lack of significant findings may be attributable to the measurement of mortality rates. As a complex indicator, it is influenced by multiple factors and is possibly too blunt to measure quality of care effectively (Bottle, Jarman, & Aylin, 2011).

Focusing on infection rates, a study across six Finnish hospitals found that work-related stress (i.e., the imbalance between effort and reward), was associated with a 2.47 increase in infection within bed wards (Virtanen et al., 2009). However, the same study did not find job strain, when measured as high demands and low control, to predict infection rates. The authors attributed this to the effort-reward perspective representing a wider perspective of the work environment and wellbeing than the more restrictive demand-control model. Similarly, English hospitals with better staff wellbeing reported lower rates of MRSA infections than those with lower staff wellbeing (Boorman, 2009). Here, staff wellbeing was a composite measure consisting of work-related stress, job satisfaction, turnover intention, and injury rates. Where individual measures of staff wellbeing were used (e.g., work-related stress, job satisfaction, work engagement or presenteeism), none of them predicted MRSA or *C. difficile* infection rates two years later (Powell et al., 2014). These findings indicate that using multiple measures of different aspects of wellbeing are more likely to capture wellbeing levels within an organisation and to demonstrate an association with organisational-level care outcomes.

Patient experience is typically represented by patient satisfaction scores. The Boorman Review (2009) into healthcare workers' wellbeing in England found that healthcare organisations that had better wellbeing also had higher levels of patient satisfaction. As mentioned above, staff wellbeing consisted of a combination of work-related stress, job satisfaction, turnover intention, and injury rates. In general, stronger effect sizes were observed for nurses, followed by doctors. Looking specifically at poor wellbeing, the emotional exhaustion levels of staff from rehabilitation teams in the United States were associated with patient satisfaction on three out of four measured dimensions (Garman, Corrigan, & Morris, 2002). These were satisfaction with the rehabilitation environment, their treatment, and how patients were being prepared for autonomy. This was not the case for the other components of burnout. Similarly, a large study drawing on nurses from 617 American and 488 European hospitals reported that high levels of burnout were related to lower patient satisfaction (Aiken et al., 2012). This included patients being less likely to rate their hospital experience as good, less likely to recommend the hospital and to report less favourable communication from nurses. Apart from burnout, other studies have found that neither work-related stress, general health nor presenteeism were found to predict patient satisfaction from English hospitals (Powell et al., 2014; Teoh, 2018; Topakas et al., 2010b).

More consistent findings are observed for positive wellbeing. Here, further analysis of the findings of the National Health Service Staff Survey in England report that work engagement of all healthcare staff (Topakas et al., 2010a) and of doctors (Teoh, 2018) predicted patient satisfaction. Similar findings were observed for job satisfaction, where high levels were associated with higher levels of patient satisfaction on eight different aspects of care (Dawson, 2009). These included trust and confidence in their doctors; having sufficient help with meals; getting answers that they understood from nurses; and being ignored by nurses. Unlike any of the other studies at the group level, there is longitudinal evidence showing that work engagement and job satisfaction scores predicted the patient satisfaction scores of 347 healthcare organisations in England two years later (Powell et al., 2014).

3.3. Summary of the wellbeing and quality of care relationship

From the research reviewed above, it is evident that there is support for a relationship between healthcare staff wellbeing and quality of care. However, the presence and strength of this relationship is even more tenuous than the wellbeing – performance relationship in the general occupational literature, suggesting that there are other factors involved. One key

difference is the dominance of measures of ill-health, particularly burnout, within this occupational group. Fewer studies have examined positive wellbeing like work engagement, but the initial evidence suggests that negative aspects of wellbeing might have a stronger impact on patient care. While the reviews above did not examine more severe forms of ill-health, individual studies have found more consistent evidence involving depression and anxiety as predictors. (Shanafelt et al., 2010; Weigl, Schneider, Hoffmann, & Angerer, 2015; C. P. West, Tan, Habermann, Sloan, & Shanafelt, 2010). In contrast, the role of work-related stress, work engagement, and job satisfaction is more inconsistent and may mean that doctors continue to function and perform adequate levels of service when stress is high, and engagement and satisfaction are low. In addition, it is clear that relationships were weaker or less clear where quality of care was rated by patients or observers than when they are self-rated (Scheepers, Boerebach, Arah, Heineman, & Lombarts, 2015), raising questions about their sensitivity and the possible role of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). More importantly, there is a dearth of studies considering quality of care measures that are at the group level and/or that involve actual clinical outcomes (Garman et al., 2002). These are all serious issues that affect the validity of the staff wellbeing - quality of care relationship and are discussed in more detail below.

4. The inconsistency of the staff wellbeing and quality of care relationship within the healthcare sector

Concerns around the validity of the wellbeing and performance relationships are well established (Taris, 2006; Taris & Schreurs, 2009; Warr & Nielsen, 2018); they include concerns about how wellbeing is conceptualised, how studies are designed, and the nature of the relationship between wellbeing and performance. In applying this relationship to the healthcare sector, these concerns are also present when trying to relate wellbeing and performance in the healthcare context. In addition, there are more context-specific issues that are discussed below.

4.1. Measurement of wellbeing and quality of care

Fundamentally, the basis of establishing a relationship between wellbeing and quality of care requires the ability to operationalise and measure these constructs. Nevertheless, both constructs present challenges that are reviewed below.

The increasingly demanding work environment within the healthcare sector means that researchers have typically focused on negative aspects of wellbeing, particularly burnout (Teoh, Hassard, & Cox, 2018). However, while wellbeing exists on a continuum, it is important to recognise that positive (e.g., work engagement) and negative (e.g., burnout) constructs are not directly opposed. As such, research that has been carried out in the wider workforce which has predominately looked at job satisfaction (Judge et al., 2001) should be contrasted with that conducted in the healthcare sector which has mainly focused on burnout (Salyers et al., 2016). This fundamentally undermines the "happy-productive worker" hypothesis, which by its name focuses on positive wellbeing, and its accompanying research.

The measurement of wellbeing in itself is often problematic, but the healthcare sector offers additional challenges that make this particularly salient. Issues of stigma, particularly around mental health, means that healthcare workers are less likely to disclose poor wellbeing even when they are struggling (Cohen, Winstanley, & Greene, 2016). There is a perception that poor wellbeing might be seen as a failure on the part of the individual to cope with their work environment and this discourages them to seek help. A reluctance to disclose poor wellbeing clearly impacts self-reporting on research surveys. It also influences "objective" measures of wellbeing; for example, a tendency for healthcare workers to take annual leave or engage in presenteeism than take sick leave will result in inaccurate levels of sickness absence reporting (Kinman, 2019). This likely underestimates the true rate of poor wellbeing in the healthcare sector and, accordingly, undermines its statistical relationship with quality of care.

Equally, there are concerns around the validity of quality of care measures. For example, questions have been raised about the relevance of measuring patient satisfaction (Teoh et al., 2019) as satisfaction is strongly associated with how well a patient's experience of care met their expectations (Crow et al., 2002). It may be the case that over time poor practice becomes the norm and lowers patient expectations (McKinstry et al., 2007). Similarly, when it comes to safety, incidents are often underreported if workers see the process as irrelevant or where they fear reprisal (Probst & Estrada, 2010). This creates problems as safety incidents are already low-frequency events that skew data and subsequent analysis (Christian, Bradley, Wallace, & Burke, 2009). However, the complexity of measuring safety is compounded by higher rates of reporting in mature safety environments where workers feel psychologically safe to do so (Raleigh, Hussey, Seccombe, & Qi, 2009). In such environments, more safety errors reported were in fact associated with higher levels

of patient satisfaction (Raleigh et al., 2009) and lower infection rates (M. West, Dawson, Admasachew, & Topakas, 2011).

Quality of care outcomes at the individual level typically use self-reported measures that touch upon someone's belief, attitude, or perception (Teoh et al., 2019). While this provides an indication of the level of care, it does not represent actual clinical care outcomes (e.g., treatment effectiveness). This undermines the appropriateness of generalising the wellbeing and quality of care relationship to actual improvement in individual patient care, as intention and awareness do not necessarily lead to relevant behaviour change (Michie, Johnston, Francis, Hardeman, & Eccles, 2008). This is evident in the review studies above where weaker relationships were observed when outcomes were measured by others than where they were self-reported (Dewa et al., 2017; Hall et al., 2016).

As important measures of performance, quality of care indicators are scrutinised by various stakeholders including management, government, the media, and the public. This also, to a degree, extends to the measurement of staff wellbeing. Where this information is then used to evaluate performance and make decisions about resource allocation, it has been argued that this opens up the possibility of manipulation or gaming (Mears, 2014a). Examples of such behaviour include the re-categorisation of patient deaths or the refusal to take on complex surgical cases to present more favourable mortality statistics (Mears, 2014b; Omoigui et al., 1996), or recoding case severity to present more positive wait time statistics (Buchanan & Storey, 2010) or infection rates (Ider, Adams, Morton, Whitby, & Clements, 2011).

4.2. The role of moderators

From the research reviewed in this chapter, it is evident that a number of factors moderate the wellbeing and quality of care relationship. It is beyond the scope here to review all of these in any depth. Consequently, we focus on three factors that are particularly salient–intrinsic motivation, occupational group, and job resources.

For many, the motivation to work in the healthcare sector is intrinsic and lies in a desire to make a difference, help others and/or live by personal values. As a consequence, healthcare workers are more likely to exert additional effort and energy to provide patients with good quality care, although this can come at a cost to their own health (Groß et al., 2014; McGowan, Humphries, Burke, Conry, & Morgan, 2013). This often entails working

longer hours or at a quicker pace, taking on additional workload, or even working when ill (i.e., presenteeism) (Groß et al., 2014; Oxtoby, 2015; Spiers et al., 2017; Tucker et al., 2010). Another mechanism by which the wellbeing of healthcare workers influences the quality of care is through emotional labour (Hochschild, 1983). This refers to the expectation that healthcare workers will regulate their 'true' emotions and present the appropriate emotional response during patient encounters so that they still deliver, or at appear to deliver, good quality care. 'Deep acting' enables workers to become adept at expressing the appropriate emotions, even when they may feel frustrated or angry. Understanding this mechanism is important because it may explain instances where the wellbeing and quality of care relationship are weak or non-existent. In addition, the extra effort required to regulate emotions places a further burden on the individual that over time not only further damages their own wellbeing but also increases the likelihood of them exiting the workforce (Khan, Teoh, Islam, & Hassard, 2018; Mann, 2005).

Continuing the theme of professional identity, the occupational group of healthcare staff is also a potential moderator. Where this has been examined, results indicate a stronger relationship between staff wellbeing and quality of care for nurses, followed by inter-disciplinary samples, and then doctors (Salyers et al., 2016). Such findings have been attributed to nurses being the largest occupational group in healthcare and having a more prominent role in the day-to-day contact and management of patients (Buchan, Seccombe, & Charlesworth, 2016; Kieft, de Brouwer, Francke, & Delnoij, 2014). Therefore, poor behaviours and decisions made by nurses are likely to have a stronger and more cumulative influence on the care and the experience that the patient receives. Revisiting concerns about the objective or subjective measurement of quality of care, nurses are more likely to report errors than doctors and pharmacists (Antonow, Smith, & Silver, 2000), and nurses and pharmacists are more likely to disclose making patient safety incidents than doctors (Sarvadikar, Prescott, & Williams, 2010). This suggests that there are differences in how the various healthcare occupational groups interact with patients as well as their understanding of what good quality care is. However, little is known about these occupational differences.

The importance of resources has been covered in Section 2.1.2 above and there are resources that are particularly salient in the healthcare sector. These are instrumental in helping staff achieve work tasks and can mitigate the impact of the challenging work environments (Bakker & Demerouti, 2017; Karasek & Theorell, 1990). For example, healthcare workers generally report higher levels of social support than those from other

sectors (Van den Broeck et al., 2017). This could be attributed to the interdependence of healthcare staff, where many roles are team-based and require collaboration (Groß et al., 2014). Social support functions as a job resource by providing both information and emotional support that are important for work processes and to meet a need for belonging (Haslam, O'Brien, Jetten, Vormedal, & Penna, 2005).

Additional resources are developed through the extensive training and qualifications required for many healthcare roles. The upside of this is the high level of competence and skills acquired by workers which help them complete work tasks (Cave et al., 2007; Cole & Crichton, 2006). In addition, the practical training, supervision, and continual professional development staff receive ensure that their skills remain relevant and up to date. This also enhances self-efficacy and is likely to contribute to the higher levels of resilience that has been reported in healthcare workers (Howe, Smajdor, & Stöckl, 2012; Murray, Cardwell, & Donnelly, 2017). These additional resources at the psychosocial (e.g., training, supervision) and individual (e.g., resilience, self-efficacy) level function to help healthcare workers better manage their wellbeing, and can mitigate the impact poor wellbeing might have on the quality of care they provide. It is plausible, however, that the high levels of resources reported might be the result of healthcare workers who are unable to cope, who have lower levels of resources, and who struggle with their wellbeing choose to exit the healthcare sector (Kinman & Teoh, 2018)

4.3. Recognising the wider context

This chapter so far has focused primarily on relationships between staff wellbeing and the quality of care provided, although there is some indication that the converse is also plausible (Judge et al., 2001). This neglects the fact that both staff wellbeing and quality of care are situated within a broader context and are influenced by factors from the wider system directly and indirectly. However, few studies reviewed so far have used research designs that account for this multilevel perspective. This is important for two reasons. Firstly, multilevel analyses allow for the examination of relationships across different levels, such as where a measure at the individual level (e.g., staff wellbeing) has an influence on organisational outcome measure (e.g., hospital mortality rates (Teoh, 2018). Second, healthcare staff are structured within teams, wards, hospitals and organisations that are situated within a wider geographical location (Byrne, 2012; Croon & van Veldhoven, 2007). Over time, this clustering results in staff becoming increasingly more like those around them, and less like

those working in other groups (Croon & van Veldhoven, 2007). This violates many statistical tests' assumptions that individual data points (i.e., staff) are independent of each other and undermines the credibility of their findings (Sjetne, Veenstra, & Stavem, 2007).

The importance of recognising the wider system is evident in studies that have shown organisational factors (i.e., bed occupancy factors, staffing, number of patients) and group norms (i.e., culture) to influence staff wellbeing and patient care (Montgomery, Panagopoulou, Kehoe, & Valkanos, 2011; Powell et al., 2014; Teoh, 2018). Beyond the organisational level, austerity measures and lack of effective policies supporting healthcare staff have also been linked to poor staff wellbeing and compromised patient care (Kerasidou & Kingori, 2019; McGowan et al., 2013). Consequently, both staff wellbeing and quality of care are products of the decisions and policies made across multiple levels, including the organisation, the sector, and the national, and even international level. For example, the implementation of the European Working Time Directive at the European level led to substantial changes to the working condition of healthcare staff, although this has had both positive and negative impacts on staff wellbeing and the patient experience (Collum, Harrop, Stokes, & Kendall, 2010; Gnerre et al., 2017). All of these link directly with the concept of *Healthy Healthcare* discussed within this book, which advocates that healthcare systems, that are managed and financed consistently with the available resources have the potential to improve workers' health and patient care.

5. Agenda for the future

Moving forward with the staff wellbeing and quality of care relationship, it is imperative to go beyond assuming that this association is simple. Instead, there must be a recognition that this is a complex relationship that is influenced by numerous factors in the wider system as postulated by the *Healthy Healthcare* concept. Implications for research, practice, and policy are reviewed in the sections below.

5.1. Implications for research

The next step for researchers is to embrace the complexity of the staff wellbeing and quality of care relationship. This means using measures that represent key contextual factors at the team (e.g., leadership) and organisational (e.g., financial resourcing, bed occupancy) levels. There are numerous ways in which these factors might influence staff wellbeing and

quality of care, including: (i) by directly affecting both constructs, (ii) where staff wellbeing mediates the relationship between contextual factors and quality of care, and/or (iii) where contextual factors operate as moderators within the relationship. Further research should, therefore, seek to test these pathways. This would help improve our understanding of the mechanisms by which staff wellbeing and quality of care are related. In addition to wider contextual factors, there is scope to test the moderators introduced earlier in the chapter (e.g., social support, emotional labour, training, self-efficacy, resilience). It is also crucial for future studies to recognise that healthcare workers are a heterogeneous group. The vast majority of research reviewed here has sampled doctors and nurses, neglecting other vital roles that include, but are not limited to – healthcare assistants, paramedics, porters, administrators, and laboratory technicians. The factors that influence quality of care for these different groups might be different and therefore warrant exploration. All of these issues are directly relevant to the *Healthy Healthcare* concept and shed light into the complexity and heterogeneity that exists within the healthcare sector.

From a methods perspective, future research should embrace multilevel analyses that are not only statistically more appropriate (Croon & van Veldhoven, 2007), but allow the modelling of relationships and measures across different levels. Within this, there is the need to consider the concerns and limitations highlighted in this chapter around how staff wellbeing and quality of care are operationalised. One such example is to move away from the popular discourse around ill-health (e.g., burnout) among healthcare workers and include more measures of positive wellbeing (e.g., work engagement). Similarly, researchers should use a broader range of quality of care measures – particularly those that measure clinical outcomes for patients. This will have additional benefit of informing the decisions made by organisations and policymakers.

5.2. Implications for practice and policy

A shift in thinking by policymakers and practitioners is required to recognise the complexity of the relationship between staff wellbeing and quality of care. Both these constructs do not function independently within silos, nor do they operate independently of context. As such, a holistic approach could be considered (Leka, Jain, Zwetsloot, Andreou, & Hollis, 2016). While the *Healthy Healthcare* concept remains new, it has strong parallels to existing models. For example, there is relevance in drawing on existing programmes such as the *Total Worker Health Programme* (NIOSH, 2017) and *WHO Healthy Workplace Model*

(WHO, 2010) that focus on improving the system by integrating health promotion with occupational safety and health protection to enhance staff wellbeing and safety. A multi-level perspective is required; crucially, interventions should focus on changes to the work environment and system, and not solely target change within the individual healthcare worker (C. P. West, Dyrbye, Erwin, & Shanafelt, 2016).

While there have been few attempts to develop such interventions, an evaluation of a patient safety initiative across four UK hospitals found an improvement on some clinical processes, and a reduction in the number of workers experiencing work-related stress (Benning et al., 2011). Therefore, more practical interventions that link improvements in the work-related wellbeing of staff and enhanced patient care are still needed. As described in the "implications for research" section above, there is a need to consider more positive responses (e.g., motivation, work engagement) within the wellbeing space. In addition to the ethical argument, there is evidence that happy and engaged healthcare workers provide better quality of care. Consequently, workplace interventions should not only look at managing and preventing ill-health but consider how work environments that facilitate positive wellbeing can be developed (Knight, Patterson, & Dawson, 2017).

6. Conclusion

It is widely recognised that urgent intervention is required to safeguard the healthcare sector's ability to cope with increasing demands with fewer resources (European Commission, 2015). However, to focus solely on staff wellbeing or quality of care neglects the fact that these are related, but constituent parts within a wider and more complex system. This chapter has demonstrated that while there is a relationship between healthcare staff wellbeing and the quality of patient care, the presence and strength of this relationship is influenced by numerous other factors. Crucially, there are limitations and gaps within the existing research that restrict the conclusions that can be drawn. All this provides a basis and impetus to inform future research and practice, recognising the need to fully embrace the systems perspective advocated by the *Healthy Healthcare* system.

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