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STAFF EXPERIENCE AND PATIENT OUTCOMES: WHAT DO WE KNOW?

**A report commissioned by NHS Employers
on behalf of NHS England
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Following a request from NHS England, NHS Employers commissioned a report from Dr Jeremy Dawson of Sheffield University to look at the international research evidence on the links between staff and patient experience. This builds on his previous work as part of the team, led by Professor Mike West, that analysed results of the NHS staff survey. It demonstrates the evidence base across a range of studies from the UK and elsewhere, to find that there are clear links between improved staff experience and better care for patients. Good HR practice and, in particular staff engagement, should therefore be seen as integral to overall objectives for the NHS, not a separate HR initiative.

NHS Employers hopes this paper is useful to build the case for good employment practice and as a summary of evidence base.

If you have any queries on the issues raised in this paper, please contact steven.weeks@nhsemployers.org

Most of the research studies referred to can be found on the NHS Employers website or on request.

INTRODUCTION

For many years researchers have sought to derive links between the experience of employees within organisations, and the performance of those organisations. Within the healthcare sector, organisational performance usually refers to – or at least includes an element of – the care of patients. The way in which this is evaluated varies considerably, however, and thus there is little consistency between studies. The competing priorities of healthcare organisations (for example, health outcomes, patient satisfaction, financial performance) can sometimes prevent clear conclusions from research, and may leave healthcare managers and professionals in the dark about what studies have really shown. In this paper we aim to summarise some of the recent evidence about how the experience of staff is associated with the quality of care and patient satisfaction.

“This model was derived from a large amount of research.”

By ‘staff experience’ we refer mainly to factors such as staff engagement, motivation, satisfaction, morale, work pressure, stress and intention to leave – attitudinal or psychological factors that determine how an individual employee feels about their job, their colleagues and their organisation. However, we also include experience of behaviours and management practices at work that would relate closely to this – for example, on the negative side this would include experiences of bullying or violence, errors, or discrimination; on the more positive side, however, this can include communication, support from colleagues, job design factors, team working, or experience of particular human resource management (HRM) practices such as staff appraisal or training. We only include specific interventions if they are directly aimed at improving the experience of staff, and therefore exclude others that focus on a more systemic or clinical change (for example, the redesign of a particular service or the impact of a specific form of clinical training). Neither do we include leadership within our definition of staff experience. We note, however, that there is a strong literature on the benefits of good leadership, both within healthcare and elsewhere, and, for example, two reviews of leadership in the nursing context (Cummings *et al.*, 2010; Wong & Cummings, 2007) have demonstrated links between leadership styles and outcomes, such that more transformational and relational leadership styles are often associated with better outcomes, and that positive leadership is associated with increased patient satisfaction and fewer adverse events.

Michie and West (2004) proposed a model explaining how people management practices have psychological consequences for employees (including attitudes such as satisfaction and engagement, and health-related experiences such as burnout and stress), in turn affecting their behaviour (for example, individual job performance, avoidance of errors, relationships at work, absenteeism and turnover), which then lead to patient outcomes, including improved patient satisfaction and better health outcomes. This model was derived from a large amount of research reviewed by the authors, both within and outside healthcare settings. Although a simplified model in the sense that it doesn’t take into account contextual factors that may change these relationships, it provides a useful framework through which subsequent research can be viewed.

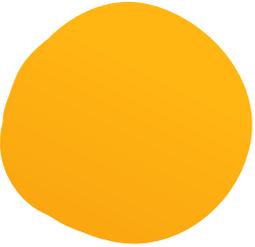
“This analysis made use of the NHS staff survey, which has been run annually in NHS trusts in England since 2003.”

Within the NHS in particular, it can help to explain links between HRM practices and health outcomes (particularly patient mortality) found by West and colleagues (West *et al.*, 2002; West *et al.*, 2006). The importance of staff health and wellbeing within the NHS was further revealed by the Boorman Review (Boorman, 2009), which gave further evidence for the links between management practices and employee health; moreover, it demonstrated clear (and often substantial) links between staff health and wellbeing and a range of objectively measured outcomes, including absenteeism, turnover, patient satisfaction, patient mortality, and infection rates. This analysis made use of the NHS staff survey, which has been run annually in NHS trusts in England since 2003.

Making further use of this data was a more in-depth report by West and colleagues in 2011 (<https://www.gov.uk/government/news/nhs-staff-management-and-health-service-quality>). This took a more systematic approach to examining the links between experiences of HRM practices (as reported by the NHS staff survey), attitudes and behaviours of staff, and patient outcomes. It demonstrated that there were significant associations between a number of staff experience variables and organisational outcomes; in particular, staff engagement (measured in three ways: motivation, involvement and advocacy) was linked to patient satisfaction, patient mortality, and overall performance indicators (from the CQC’s Annual Health Check), as well as being very strongly linked with staff absenteeism. Overall, they found that patient outcomes were best when there was a climate of respect and dignity, where staff were clear about their goals and objectives, and where there were effective people management practices such as appraisals, training and personal development plans. Cultures of engagement, positivity, caring, compassion and respect for all, were important factors associated with good quality of care.

The rest of this current document seeks to examine new evidence to have been published since the West *et al.* (2011) report. We surveyed the literature for studies published in the English language since 2011, which linked employee experience (as defined earlier) with outcomes: this included patient-rated outcomes, as well as objective measures of health outcomes and organisational performance. We included studies that looked at ratings of quality of care provided as the outcome, including those where the ratings were made by the employees themselves. We also included studies that looked at other objective outcomes that were not directly linked with patient care but that have been shown by earlier studies to be linked to patient outcomes (for example, staff absenteeism and turnover). We excluded studies where such outcomes were rated by the employees themselves, however (except for when the rating was of the quality of care provided).

In the following four sections we summarise the 17 relevant studies that we found. We begin by looking at links between staff experience and patient satisfaction, then go on to look at links with objective health data, quality of care, and other objective outcomes.



STAFF EXPERIENCE AND PATIENT SATISFACTION

Relatively few recent studies have examined the direct link between staff experience and patient satisfaction, with only two papers meeting the criteria in our search. Lee *et al.* (2012) looked at the links between 196 patients and 196 paired care-givers in four South Korean hospitals. They examined the care-givers' experience of high performance work systems, in particular training and education, communication, and compensation; these were linked to other care-giver-rated variables, in particular employee reactions (attitudes and the degree of engagement determined by employees' perceived organisational support, politics, compensation systems, structure, work activities, and goal) and service quality, which in turn were related to patient satisfaction (and then to patient loyalty). Although these significant links were found, the article did not explicitly test whether the indirect (mediated) relationships along the proposed sequential paths (from high performance work systems, to employee reactions and service quality, to patient satisfaction) were significant, and admitted possible bias due to the fact that the patients included in the study were selected by the hospitals.

Maben *et al.* (2012) studied a wide range of staff experiences for 66 staff in eight NHS organisations in England (four acute hospitals, four community trusts), linking these with 26 patient evaluations of care from the same organisations. Due to the small number of units (and the impossibility of linking data at an individual level) it was only possible to show trends of associations between staff and patient experience statistically; however, this was triangulated by a substantial body of qualitative work, especially interviews with patients, which concluded that work experiences of staff impacted directly on patient care experience. Poor ward and patient care climates often led staff to seek job satisfaction through caring for particular patients, leaving less favoured (often more complex) patients to receive less personalised care.



STAFF EXPERIENCE AND OBJECTIVE OUTCOME DATA

“The authors’ analysis revealed a weak negative correlation with HSMR.”

A variety of patient health outcomes of staff experience have been studied by researchers. Lee and colleagues (2013) conducted a meta-analysis to determine which individual- and organisation-level factors correlate most strongly with burnout (in the form of emotional exhaustion and depersonalisation) amongst physicians from a variety of countries and health care settings. A wide range of outcomes were identified using data from 65 studies with a combined total of 28,882 participants. Of particular interest was the relationship between burnout and lack of quality and safety, the meta-analysis for which were based upon 15 studies of various types incorporating 5,612 participants. The authors found a highly significant positive meta-correlation of 0.42 between lack of quality and safety and emotional exhaustion, and a highly significant positive meta-correlation of 0.33 between lack of quality and safety and depersonalisation. As such, high levels of burnout as measured by emotional exhaustion and depersonalisation were linked to higher levels of poor quality and safety which had consequences for patient health. As a well-conducted meta-analysis drawing on a large number of studies, this research confirms the relationship between staff well-being and patient outcomes, although the data are correlational and therefore cannot prove causal relationships.

Within the NHS, the annual NHS Staff Survey continues to be a valuable tool in the assessment of staff satisfaction. Pinder *et al.* (2013) utilise several items from the 2009 NHS Staff Survey to assess the relationship between staff satisfaction and Hospital Standardised Mortality Ratios (HSMR) at institution level for acute NHS hospitals in 147 trusts. Answers to three items from the survey were extracted relating to assessments of quality of care and examined in relation to HSMR within each institution. The authors’ analysis revealed a weak negative correlation with HSMR where staff believed that their trust’s top priority was patient care, and where they would be happy with the care for a friend or relative. There was no correlation between satisfaction with the quality of care delivered by oneself and institutional HSMR. This study has the advantage of utilising data from thousands of respondents to the NHS Staff Survey, but can only show that there is a relationship between staff satisfaction and patient outcomes, not the direction of this relationship. As such, it is possible that more satisfied staff produce higher quality care, or perhaps working in a trust with a low HSMR leads to more satisfied staff. The fact that these correlations are weak also suggests that there are other factors contributing to staff satisfaction and patient outcomes.

Two further articles discuss the patient-related outcomes of interventions in healthcare settings. McKenna and colleagues (2011) describe the implementation of an intervention to improve number of productive hours by altering the staffing model of a Magnet-designated hospital in the USA. The research quality is reduced by the lack of a control group, but suggests that the intervention has led to lower nurse-to-patient ratios, and improved labour costs through a reduction of agency workers. In another intervention study, Thompson (2011) describes the process of implementing a new working practice within an English NHS trust. By keeping nurses engaged and informed during the rollout of a new catheter procedure, the crossover to the new technique is reported to be problem-free, and occurrence of catheter-associated urinary tract infections is reduced from 30 per cent to 0 per cent. These pieces of research do not objectively measure the engagement or satisfaction of staff with the intervention and its outcomes, but give some support to the findings of the previous authors regarding beneficial patient outcomes.

STAFF EXPERIENCE AND QUALITY OF CARE

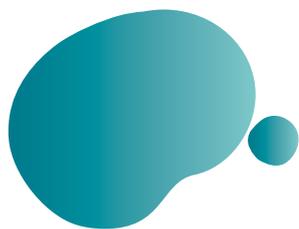
Quality of care can be rated in multiple ways, and by different people. We have already covered patient ratings of care quality, but studies have been published examining quality of care rated by external bodies, by researchers, by the supervisors of healthcare workers, and by the health care workers themselves.

Direct observation of care delivery can be an interesting way to measure patient care quality. Abdelhadi and Drach-Zahavy (2012) made use of this by having a research nurse use structured observation to assess the patient care behaviours of 158 nurses in 40 wards of Israeli retirement homes. Although this method does not completely remove the possibility of bias in results, it minimises the likelihood of this compared with self-report outcomes (which were used in several of the papers we will review in this section). Therefore, their finding that work engagement is a significant predictor of patient care behaviours is important, and they also found that engagement was a mediating variable in the link between service climate and patient care behaviours: that is, an important part of the reason that service climate is associated with patient care is because it instils greater engagement in the staff.

Salanova *et al.* (2011) used supervisor ratings of nurses' extra-role performance – that is, the extent to which they go 'above and beyond' their normal expected duties. 280 nurses were rated by their 17 supervisors in a hospital in Portugal, and it was found that work engagement was a positive (if relatively weak) predictor of extra-role performance, and that work engagement in turn was modestly predicted by the level of transformational leadership displayed by the supervisors, as well as being strongly predicted by the nurses' self-efficacy.

Four studies looked at nurses' own perceptions of the quality of care they delivered. Results from these studies need to be treated with a certain degree of caution, because there may be bias in their ratings that is also present in their ratings of predictors. However, some of the findings are still quite noteworthy. Freaney and Fellenz (2013) conducted a survey of 158 midwives in two Irish hospitals. They found that social support from colleagues, supervisor support, and organisational resources were all significant predictors of care quality, and that these relationships were explained (fully in the case of social support) by the support and resources variables predicting midwives' work engagement, which in turn predicted care quality. The importance of engagement was also demonstrated by Lowe (2012), who examined 10,702 staff in 16 hospitals in Canada; both service quality and patient-centered care were higher when engagement was higher (although the scale of these effects is difficult to determine as the paper did not report standard statistical effects).

Van Bogaert *et al.* (2013a, 2013b) wrote two papers from the same overall study; one examining the individual data from 357 nurses in Belgian psychiatric hospitals, the other looking at the 32 units in which they worked. The individual paper found that nurse management, hospital management and workload all significantly predicted work engagement, which in turn predicted nurses' quality of care ratings (as well as some other nurse outcomes). The unit level paper found similar effects when these ratings were considered in aggregate.



Sometimes care quality is assessed by external bodies in the form of accreditation data. This type of data can be variable by setting (country and healthcare sector), but it is worth noting that Alhassan *et al.* (2013) made use of such ratings, as well as using patient risk assessments, in a survey of 324 health workers in 64 primary health care facilities in Ghana. They found that four employee motivating factors (clinical work environment, availability of resources, financial and extrinsic incentives, and job prospects and career development) were positively associated with risk assessments, so that the greater the level of motivation, the safer the environment. However, for the accreditation scores representing overall quality of care, the job prospects and career development motivating factor was the only one to be linked significantly with this outcome (albeit weakly). Thus there was some relatively weak evidence to suggest that the greater staff motivation in particular areas is associated with better quality and safer care.

Overall, these papers have a clear common thread: the quality of care provided is predicted by the engagement of healthcare workers, as well as by the support they receive from others (colleagues, supervisors and the organisation more widely).

STAFF EXPERIENCE AND OTHER OBJECTIVE OUTCOMES

Although not directly measuring the quality of care provided, some studies have examined outcomes that use objective data of staff outcomes (in particular staff absence and turnover) that have been shown elsewhere to be clearly related to patient outcomes (for example, Boorman, 2009; West *et al.*, 2011).

Rickard and colleagues (2012) conducted an evaluation of an organisational intervention designed to reduce work-related stress and turnover rates among hospital nurses in the Northern Territory of Australia. A total of 484 nurses and midwives in two hospitals returned surveys either before or after the intervention, with only a handful of staff responding at both time points. When comparing pre- and post-intervention survey results, job demands and occupational stress were found to have modestly decreased and job resources, job satisfaction and system capacity were slightly improved, however no significant changes in work engagement were found after the intervention. Turnover data obtained through payroll records indicated that one hospital's turnover rates remained stable before, during and after the intervention, with the other hospital showing a significant reduction in turnover after the intervention. The cause of any improvements is difficult to ascertain as comparison data were not collected from other hospitals which had not received the intervention, and the strength of these improvements fluctuated between the two hospitals using the same intervention, suggesting that external factors may have also contributed to the presence or absence of change. As such, there is some indication that this type of intervention may improve turnover and occupational stress even though work engagement levels remain unchanged, although these improvements cannot be definitively attributed to the intervention.

Following another organisational intervention, Nayback-Beebe and colleagues (2013) discuss the ways in which improvements in areas such as skilled communication, effective decision making and meaningful recognition can lead to improved staff morale and a healthy work environment, which they believe ultimately leads to improved patient safety and care. The intervention in a care unit of a military hospital in the United States of America was linked to a reduction in staff absenteeism of 48.5 per cent in the first three months of implementation and an increase in patient compliments. The strength of these findings is reduced as the intervention is not evaluated on its specific areas of focus, and there is no control group for comparison.

In their country-wide survey of 705 chief nursing officers in Canadian hospitals and long-term care facilities, Rondeau and Wagar (2012) assessed the relationship between high-involvement work practices and voluntary turnover, and to what extent this relationship is explained by an employee empowerment culture and/or the accumulation of human capital. Both an employee empowerment culture and the accumulation of human capital were found to mediate the process by which high-involvement work practices reduce voluntary turnover: that is, high-involvement work practices affect employee empowerment culture and human capital, which in turn affect turnover. These findings indicate that such practices may have a greater impact upon turnover when they are accompanied by an environment which facilitates work engagement and involvement of staff in decision-making processes, and where staff demonstrate high levels of knowledge and skill in their roles. This research is limited by its reliance upon the subjective reports of the

“These findings indicate that such practices may have a greater impact upon turnover.”

“This study is limited by the lack of variance in both the demographics of the respondents.”

chief nursing officers, but has the advantage of controlling for a number of external variables such as establishment type, size and location, which may have otherwise confounded the results.

Collini *et al.* (2013) explored the extent to which employee turnover was predicted by organisational context, and whether this relationship was explained by engagement at ten hospitals within a large healthcare organisation in the USA. Relationships were analysed within 185 individual departments providing direct patient care using survey data from 5,443 staff. Engagement was found to mediate the relationships between interpersonal respect and turnover, and mission fulfilment and turnover: in other words, both interpersonal respect and mission fulfilment lead to higher engagement, which in turn decreases turnover. As such, they conclude that when respect is high, engagement is also high, which is related to reduced turnover. Similarly, when an organisation is perceived to be fulfilling its mission, staff are more engaged, and are less likely to leave the organisation. The authors highlight the advantages of aggregating data within patient-facing departments to reduce the impact of individual differences in survey respondents. This study also used an interdisciplinary cohort of hospital staff which gives a more representative view of the departmental culture which is not easily achieved when only surveying one group of staff, such as nurses. This study is limited by the lack of variance in both the demographics of the respondents (mainly female and Caucasian) and their answers on the subscales, which suggest this population may not be representative of health care organisations in the USA.

DISCUSSION

Between them, these articles provide further evidence that the experience of staff in healthcare organisations is linked to the quality of care provided to patients. This manifests itself in terms of patient ratings of care, other peoples' ratings of care, and some other direct health outcomes for patients; there is also some further evidence that employee experiences at work are directly linked to objectively-measured absenteeism and turnover of those employees.

Amongst the various employee experience domains that were studied, engagement is the one most commonly reported as linked to all of these outcomes. This backs up previous work within healthcare, particularly West *et al.* (2011), which showed the importance of engagement. However, several other areas of experience were also found to be linked to outcomes, particularly including supportive leadership, motivation, support from colleagues, and assorted high performance work practices. Because most of these effects were found in different studies, though, it is difficult to say which area(s) of experience would be the most important in predicting outcomes; however, it appears that engagement has the most direct effect of all those reported, partly because it is often used as a mediating (explanatory) mechanism between other predictors and outcomes.

It is important to acknowledge, however, that there are methodological limitations in all of the studies described. In particular, the vast majority were cross-sectional studies, with the only longitudinal ones being individual case studies without control organisations. Therefore, these studies provide little evidence that the relationships are causal; it is worth noting, however, that some of the previous literature presented in the introduction (for example, West *et al.*, 2011) includes evidence that the direction of relationships is from staff engagement to patient experience, but clearly more research is needed. Some of the studies examined used self-rated assessments of care quality; whilst the results found were backed up by those that used externally-assessed care data, the effects in these latter groups were generally somewhat smaller, but still statistically significant.

It is also noteworthy that the vast majority of effects studied were statistically significant, at least where such tests were applied. The extent to which this is due to publication bias is unclear, but the patterns detected do at least appear to suggest a clear trend for staff and patient experience to be linked in the expected directions.

Of course, this report has only studied some of the potential organisational predictors of patient outcomes; as well as the range of clinical predictors, other organisational factors such as structures, caseload and resources, which were beyond the scope of this review, are likely to be linked with outcomes. Organisational leadership is another area that was not explicitly included (although supervisor support and leadership did come into a few of the studies); we note that there are many studies, however, that demonstrate the positive effects of good leadership in general, and some specific leadership styles in particular.

CONCLUSIONS

Overall, there is a substantial amount of recent evidence that the experiences of staff, particularly in the form of support received from supervisors and others, and staff engagement, are associated with the care provided to patients, in the form of patient satisfaction, health outcomes, and ratings of quality of care, as well as staff absenteeism and turnover.

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