

**ies** Paper

Institute for Employment Studies



# Health and Wellbeing Interventions in Healthcare

**A rapid evidence review**

Zofia Bajorek and Jenny Holmes

19 October 2020

**Report 556**

# 1 Executive Summary

---

It is no longer contentious to argue that the health and wellbeing of the workforce is an important issue to consider. The National Health Service (NHS) in the UK undertook a comprehensive study of staff wellbeing in 2009 (the Boorman Review), which reported that staff sickness absence was higher than other government departments and there was a significant level of stress reported with potential implications for patient care. The importance of employee wellbeing was discussed in two recent documents released by the Department of Health (The NHS Long Term Plan and the Interim NHS People Plan) which recognise that the NHS needs to improve the experience of NHS staff at a time where there are increasing workforce pressures and service demands. However, progress still needs to be made in the development of robust business models for measuring, reporting and evaluating the efficacy of common wellbeing interventions that are implemented for both individual and organisational benefits.

The aim of this report was to undertake a rapid review of the evidence base of health and wellbeing interventions used in healthcare and their implications for wellbeing outcomes. The findings would add to current knowledge about wellbeing interventions that are commonly implemented, if there is any evidence of their efficacy, and what future research still needs to be undertaken in this area. The review captures papers written in the English language, published in the last 10 years which focussed specifically on wellbeing interventions (both physical and mental wellbeing) in healthcare settings.

Wellbeing interventions were classified into two main categories: those focussed on treatment (i.e. interventions implemented once a health and wellbeing issue has been identified), or those which are preventative (i.e. those introduced to prevent the likelihood of reduced wellbeing occurring). Within this, distinctions could also be made as to whether interventions were primarily based on improving physical and/or mental health and wellbeing.

Within the treatment interventions there is some evidence to suggest that timely access to face-to-face physiotherapy treatment resulted in a reduction of self-reported pain and increased productivity (measured through reduced levels of sickness absence). Early access to a telephone-based sickness absence management service which provided quick access to interventions also led to reported reduced levels of sickness absence by those who used the service. Interventions that focussed on both the promotion of physical exercise and improved nutrition were reported to result in positive changes in health behaviours.

There was also evidence to suggest that the ways in which interventions were communicated to healthcare staff (including reminders) could have an impact on intervention uptake. Stress management tools delivered via a web-based programme was seen to reduce self-reported nurse stress, with participants who spent more time on

the programme reporting greater improvement. Studies have also suggested that in some cases 'psychological based' interventions could improve mental wellbeing, including more 'person-directed' approaches to reducing burnout, and mindfulness-based stress reduction courses.

The research also provided examples of preventative interventions for reducing the likelihood of negative physical or mental wellbeing occurring. For example, studies suggested that a 'whole-systems' approach (i.e. focussing on a number of different schemes to address different aspects of employee wellbeing) could be beneficial for improving both quality of work and wellbeing outcomes. Developing appropriate 'spaces' in the physical healthcare environment (for example, rest, sleep and eating facilities) helped healthcare staff feel valued and supported by their organisations. A range of 'group-based' mental health interventions were also identified in the literature. These included research on 'Schwartz Center Rounds' developed to provide safe spaces for staff to openly reflect and share the various challenges they experience within their role. Although there was some evidence to suggest that these could have a positive impact on wellbeing, coping mechanisms and teamwork compassion, this may have been dependent on how well they had been implemented and managed locally. Additionally, it was acknowledged that they may not be the 'right' intervention for everyone and should be offered alongside other support mechanisms. Other mental health interventions thought to be helpful include those that focussed on 'wider aspects' of work, including team interactions, flexibility and autonomy, and interventions that healthcare staff actually 'want' and think will be effective.

Although there was evidence of positive wellbeing outcomes, there are questions regarding the quality of the evidence and the methodologies used in the research evidence. For example, a number of studies had short trial periods with no follow-up, which makes it difficult to ascertain whether the intervention led to any sustained behaviour change and wellbeing outcomes. Other research evidence used small samples, or had samples with a large amount of attrition, which leads to questions about the generalisability of the findings to other samples and healthcare settings. There were also research methodologies that lacked a control group which means that it is difficult to ascertain how much any of the reported wellbeing change was as a result of the intervention. Finally, the ways in which outcomes were measured also had an impact on the quality of research. For example, some research studies did not use validated outcome scales, making comparisons between interventions difficult, and some only used 'sickness absence' as a proxy for wellbeing, however a reduction in sickness absence does not always equate to improved wellbeing. It is important to note however, that a limited evidence base for some of the interventions does not mean that they did not have any positive impact on health and wellbeing outcomes, it just means that the evidence base is currently limited, and highlights the difficulties of undertaking research of academic rigour in workplace settings.

The results indicated that there is currently limited evidence of a 'best-practice' intervention, and there may not be a one-size fits all solution to wellbeing interventions. However, the interventions that did have positive uptake and where positive wellbeing outcomes were reported were those that included a 'whole-systems' approach where healthcare staff could engage with the interventions that best suited their needs.

The findings also lead to a number of recommendations for future research. The difficulties of undertaking case-controlled studies should not impede or preclude future research in this area and conducting randomised-control studies or longitudinal studies may enhance the evidence base. However, it may be just as important to undertake 'process evaluations' to understand both the decisions as to what interventions are chosen and how they are implemented, as this could affect overall use, uptake, and what outcomes are measured. Finally, research is now accumulating suggesting that taking a 'good work' approach when discussing the health and wellbeing of the workforce could lead to improved employee outcomes, and thus more research is needed looking at the 'whole-systems' approach to employee wellbeing.

## 2 Wellbeing at work

---

It is now not contentious to argue that improving workplace wellbeing is important for employee health, business outcomes and could also generate cost savings for the government. Over a decade ago Dame Carol Black's (2008) seminal report '*Working for a healthier tomorrow*', reported that ill-health represented a burden for organisations and the wider society due to increased healthcare costs, sickness absence and a loss in productivity. In terms of organisational outcomes, the health of employees can be a major factor in an organisation's performance and competitiveness, with Vaughan-Jones and Barham (2010) suggesting that employees in good health can be up to three times more productive than those in poor health; they experience fewer motivational problems; are more resilient to change and more likely to engage in the business's priorities.

Although workplace wellbeing has been recognised as an important policy issue over the last two decades, it is clear that progress still needs to be made in a number of key areas. Black (2008) argued for a greater need for the development of robust business models for measuring, reporting and evaluating the individual and organisational benefits of any wellbeing intervention, and a strong business case still needs to be made to help develop and successfully implement future wellbeing programmes. The high levels of sickness absence in the UK (related to both physical and mental health) suggests further understanding about what the most effective interventions and how they can be appropriately evaluated is still necessitated. Recent research by Bevan et al (2018), indicated that the most common interventions currently implemented include:

- Healthy eating initiatives.
- Subsidised gym memberships.
- Support for increased physical activity (e.g. pedometer challenges).
- Access to Occupational Health (OH) support.
- Employee Assistance Programmes (EAPs).
- Stress-management programmes.
- Training for line manager in wellbeing symptoms and referral.

When discussing the efficacy of workplace wellbeing interventions, and which would prove the most effective (both in terms of wellbeing outcomes and cost-effectiveness), the research (rather frustratingly for practitioners) is inconclusive – partly as a result of methodological constraints. However, one setting where workforce wellbeing and interventions is becoming of increasing importance is the NHS.

## 2.1 Wellbeing in the NHS

In early 2019 the NHS Long Term Plan (Department of Health, 2019) was published which highlighted the challenge of tackling staff pressures within funding pressures. The plan included a focus on how workforce pressures will be tackled and how staff could be best supported. There was recognition that NHS staff were feeling pressures on their wellbeing in an attempt to keep up with increasing demands, and the way that staff had been supported, *“has not kept up with the changing requirements of patients”* (page 78).

The Interim NHS People Plan (Department of Health, 2019), reported that if the NHS was to achieve its aim of improving the quality of care and health outcomes across all major conditions and take more action to prevent health inequalities, then they need to be aware of workforce issues that can have an impact on the 1.3 million NHS staff. The plan mentioned that, *“to serve our patients and citizens in the best way possible we must improve the experience of our people...it is incumbent on every single NHS organisation to pay much greater attention to improving the experience of working in the NHS”* (page 5).

Although this recognition to focus on employee wellbeing is positive and should be well received, the idea is not new, and movement in this area seems slow. The *NHS Health and Well-Being Review* (Boorman, 2009) was part of the Department of Health’s and NHS response to the Black (2008) review. In the report, Boorman argued that NHS workforce health should not be a secondary consideration but should be at the heart of any operational approach in the NHS. The aim of the review was to evaluate the status of NHS employee health and wellbeing, to identify any improvements and recommendations that could be made, and to assess any implications of workforce wellbeing for key NHS outcomes. A summary of the main findings can be found in the box below.

### Key Findings from the Boorman Review:

The Boorman Review aimed to evaluate the status of employee health and wellbeing across the NHS and identify what key recommendations and improvements could be made that would have an impact on both staff and organisational outcomes. Key findings from the review include:

Although NHS staff reported being quite healthy (drinking in moderation, exercising regularly, enjoyed their work – even if pressured), levels of sickness absence were high (averaging 10.7 days) in comparison to other government departments (9.7 days on average across the public sector).

NHS staff were more likely to incur work-related illnesses or accidents at work than other comparative workers – which could be due to the physical and psychological demanding nature of NHS work and the wider range of skills and activities required in specific roles in comparison to other public sector employers.

Nearly half of all NHS staff absence was accounted for by musculoskeletal disorders, and more than a quarter by stress, depression and anxiety. Those who worked for more than 8 hours a

day for any number of days in a month have much higher absence rates than those who only worked their contracted hours.

Alongside this, staff also reported high levels of presenteeism, often because ‘they felt they should’. Over a four-week period 65 percent of NHS staff reported they has not taken time off work despite feeling ill enough to do so.

NHS staff reported significant levels of stress with over half of the survey respondents being more stressed than usual at the time of completing the survey and thought that their senior managers did not take a positive interest in their health and wellbeing. Importantly, over 80 percent of staff considered that their state of health affected patient care

The perception of current staff wellbeing services included that they were not based on current employee need, they didn’t have the support from Trust Boards or senior management, and there was inconsistent support from line managers for those who wanted to take advantage of health and wellbeing services. Cultural barriers were also present, related to monetary investment in services and delivery of consistent health and wellbeing approaches.

The review concluded that “*all is not completely well with the health and well-being of the NHS workforce*” (page 37), however it did provide a set of recommendations that if implemented could help to improve NHS employee wellbeing. An exemplar vision for providing high quality health and wellbeing support in the NHS included:

- Adopting an approach centred on prevention and health improvements that is proactive and responsive to both staff and managers, fully embedded in NHS Trusts and appropriately resourced.
- Commissioning services on a strategic basis linked to wider organisational goals and values.
- Engaging with staff on the range of services they want to see and how they should be provided and ensuring that services are available to staff when and where required, including those working on night shifts.
- Delivering staff health and wellbeing services to a consistently high standard.
- Ensuring that there are clear and consistent messages on the importance of supporting staff health and wellbeing and that managers recognise their responsibility in supporting staff.
- Measuring the effectiveness of staff health and wellbeing programmes.

The reasons as to why the health and wellbeing of NHS employees is important to focus on is well-rehearsed, but worth briefly recapping:

**Patient outcomes:** There is an array of evidence indicating a link between positive staff wellbeing and improved patient outcomes. The Boorman Review (2009) analysis reported “*a clear relationship between staff health and well-being and patient satisfaction*” (page 47). Examples of this included Trusts with higher staff wellbeing reported lower levels of MRSA, and higher patient satisfaction scores (measured by in-patient surveys). West and Coia (2018) described how low wellbeing and associated strain is linked to increased medical errors amongst healthcare workers and could also impair decision making (having a negative impact on medical errors and patient outcomes). They also

---

provided evidence suggesting that doctors with high levels of burnout had between 45 percent and 63 percent higher odds of making a medical error compared with those who had low levels. West and Dawson (2012), highlighted the importance of wellbeing and employee engagement and implications for patient outcomes finding that Trusts with higher levels of wellbeing and engagement had significantly higher patient satisfaction and service quality ratings, reduced mortality and reduced infection rates.

**Organisational outcomes:** A measure of staff wellbeing that is often used is sickness absence rates. The Boorman Review (2009) suggested that tackling the costs of poor health and wellbeing among NHS staff will help achieve cost saving across Trusts. In the review, it was calculated that the cost of current rate of absence reported was £1.7 billion a year (10.3 million working days lost, the equivalent of 45 whole time equivalents or 45 percent of the current workforce). The report also calculated that if sickness absence was reduced by a third, then the benefits would include a gain of 3.4 million working days and estimated direct cost saving of £555 million annually. There are also indirect costs to sickness absence, for example the use of temporary staff cover (which the review estimated to be £1.45 billion a year) to cover staff gaps.

**Employee outcomes:** The health and wellbeing of NHS staff is also important because of the links to their engagement and role retention (which only adds to further pressure on those remaining in service delivery) (West and Coia, 2018). They also reported in their research that NHS staff discussed unacceptable working and training conditions which had an impact on their wellbeing, as well as experiences of feeling undervalued, unsupported in their roles, overwhelmed by workloads and having little control over their lives. This has an impact on employee turnover as healthier and happier staff are more productive and likely to remain with their employer.

Even with this knowledge, the latest NHS staff survey results<sup>1</sup> have indicated that work still needs to be done to improve health and wellbeing in the NHS. For example, the results indicated that:

- 28 per cent of respondents experienced musculoskeletal problems as a result of work activities in the last 12 months (a score which has increased since 2015).
- 40.3 per cent also reported feeling unwell as a result of work-related stress in the last 12 months (and this has been steadily increasing since 2016).
- 56.6 per cent said that in the last three months they have gone to work despite not feeling well enough to perform their duties (little change in this figure over the last 3 years).
- 29.3 per cent reported that their Trust takes positive action on health and wellbeing (although this was an improvement on the previous year, this was still lower than the proportions reported in 2015-2017).

---

<sup>1</sup> [https://www.nhsstaffsurveys.com/Caches/Files/ST19\\_National%20briefing\\_FINAL%20V2.pdf](https://www.nhsstaffsurveys.com/Caches/Files/ST19_National%20briefing_FINAL%20V2.pdf)



- Although 54 per cent of staff reported that they were satisfied with the opportunities their Trusts provided for flexible working (which has seen a steady improvement since 2015), 55.9 per cent of staff still indicated that they work extra unpaid hours on a weekly basis (although this is declining, it is still a large percentage of the NHS workforce) which could lead to burnout if not managed effectively.
- There had however been small improvements in turnover intentions, with only 28.4 per cent of staff thinking about leaving their organisation, 21 per cent of staff indicating that they will probably look for a job at a new organisation in the next 12 months, and 14.8 per cent of staff reporting that they will leave their organisation as soon as they can find another job.
- With regards to sickness absence, recent findings published by The King's Fund<sup>2</sup> found that sickness absence rates in the NHS are higher than the rest of the economy, and that sickness rates rose from 3.8 per cent in April 2018 to 4.1 per cent in April 2019 (the equivalent of 1.4 million full-time equivalent days lost in a month alone) – the highest level reported at that time of the year in a decade. The most common cause of sickness absence was anxiety, stress, depression and other psychiatric illnesses, which accounted for nearly a quarter of staff absences, followed by other musculoskeletal problems.

## 2.2 Summary

The health and wellbeing of employees has been an important focus of study over the past two decades since evidence has accumulated showing the positive impact that good health and wellbeing can have for both organisational and individual outcomes. The Boorman review (2009) has been the most comprehensive evaluation of the health and wellbeing of the NHS to date, and the report argued that “*the health and wellbeing of NHS staff should no longer be a secondary consideration, but needs to be at the heart of the NHS mission and operational approach*” (page 3). This is especially important because of the relationship between positive health and wellbeing and patient outcomes. The recent NHS long-term plan re-emphasises the importance of staff care but to achieve this effectively, it is important to understand what wellbeing interventions have proven sustainable positive wellbeing outcomes.

---

<sup>2</sup> <https://www.kingsfund.org.uk/blog/2019/10/nhs-sickness-absence>

## 3 Methodology

---

### 3.1 Research aims

NHS Employers commissioned the Institute for Employment Studies to investigate the evidence-base of health and wellbeing interventions used in healthcare and their implications for wellbeing outcomes. As mentioned, improving the health and wellbeing of NHS staff was a priority in the interim people plan, but currently a wide range of health and wellbeing interventions have been implemented in NHS Trusts over recent years. Although there has been some evaluation of the impact of such interventions, this rapid evidence review aimed to review the available research data to answer the following research questions:

- What interventions are currently being used in healthcare to improve staff health and wellbeing?
- What evidence is there of their effectiveness for employee health and wellbeing outcomes?
- What future research still needs to be undertaken to improve the current understanding of health and wellbeing interventions in healthcare?

### 3.2 Research Methodology

The research questions were answered using a rapid evidence review, which included:

- A rapid review of both the academic and grey research literature (relevant NHS bodies, think tanks, healthcare research centres etc.). The rapid evidence review searched for papers in the last 5 years (to search for the most up-to-date evidence in this field), written in English and available on-line. Evidence was included (if applicable) from other countries (e.g. Canada, Australia, Denmark) to see whether the NHS can learn from interventions implemented in other healthcare systems.
- Search terms for the evidence review were agreed with NHS Employers and included terms such as: 'Health and wellbeing in healthcare', 'health and wellbeing and NHS', 'wellbeing interventions in healthcare', 'NHS wellbeing interventions', 'mental health interventions in healthcare', 'MSK interventions in healthcare' etc.
- Online databases were accessed through the University of Brighton library services were used in the search including: Scopus, PsychInfo, Medline, Health Service Journal, BMJ and OneSearch.

- Articles suitable for inclusion were reviewed, with relevant data for the research questions extracted for analysis.

It is important to note that this work was commissioned by NHS Employers before the Covid-19 pandemic, and consequently any wellbeing intervention that has been developed as a result of the pandemic has not been included in this review.

## 4 Results

---

The results of the rapid evidence review have highlighted that there are currently a wide variety of health and wellbeing interventions being implemented in healthcare settings. However, these can be separated into broad categories dependent on whether the interventions are treatment based or more preventative workplace health and wellbeing measures.

### 4.1 Health and wellbeing treatment interventions

The academic and grey literature highlighted a range of interventions that can be classed as 'treatment' based (i.e. interventions that are implemented once a health and wellbeing issue has been identified). These are discussed in more detail below.

#### 4.1.1 Physical health interventions

**Clayton (2017)** reviewed a service in an NHS Trust that was introduced to provide faster access to face-to-face physiotherapy treatment. The rationale behind the intervention was to make the treatment more flexible to staff and to reduce the impact that attending treatment had on both their work and professional lives. To do this, treatments were made more accessible in working hours, were offered on weekdays and across the three hospital locations. Over the course of the research period after referrals to physiotherapy were made, initial assessments took place within an average of just 2.5 working days. At the point of referral 21 per cent of the participants were already absent from work, and 79 per cent were in pain (they reported an average productivity of 64 per cent highlighting the hidden costs of MSK presenteeism). Results from the faster referral proved positive, with 84 per cent of those off sick at time of referral returning to work following treatment, and 97.5 per cent referred whilst at work were safely maintained at work. It was also reported that early referral and quick access to treatment led to a reduction in self-reported pain of 79 per cent and an increase in productivity and function of 33 per cent (an equivalent of 1.65 days per person per week). Based on the 297 employees discharged from the programme over the twelve-month research period, the Trust estimated that it saved 6,762 working days. Other benefits of the intervention included a reduced waiting list for physiotherapy treatment, reduced sickness absence (one measure used to indicate improved staff wellbeing) and saved working days.

**Boniface et al., (2016)** also reported on treatments for MSK wellbeing in a study of district nurses in mental health, learning disability and community health services. The small sample of 7 nurses reported that they often put their patient's needs before their health and wellbeing needs, but when asked about specific wellbeing initiatives they found it difficult to recall specific initiatives. If any equipment was provided to help with

MSK pain to aid with the delivery of patient care (e.g. kneeling equipment), this was usually introduced as a reactionary measure, and was often not fit-for-purpose. Other wellbeing measures (often delivered by e-mail) failed to engage the participants as they were often generic in nature, and due to demands on time, if emails were not pertinent to patient care they were generally ignored. The participants did suggest methods through which physical wellbeing interventions could be improved, including: face-to-face delivery of messaging; yearly wellbeing assessments where staff could then be personally encouraged to take appropriate action and make necessary changes to their lifestyle and a collaborative/partnership approach to designing wellbeing interventions which actually tackle the issues that staff are reporting.

**Brand et al., (2017)** and **Williams et al., (2017)** both undertook systematic reviews of a range of wellbeing interventions introduced in healthcare. Interventions in the Brand et al., (2017) review included: a workplace nutrition and physical activity promotion over 12 weeks which reported improvements in participants' diet and exercise health behaviour choices (and associated improvements in mental wellbeing); a randomised control trial (RCT) focussing on health behaviours, diet and exercise (whilst engaging senior leadership to support implementation) which reported positive changes in physical activity and health behaviours, and finally another RCT researching participation in nutritional activities in health campaigns that reported positive changes in health behaviours in follow ups. However, these studies were reported to be of low research quality as studies had high attrition rates, did not use verified outcome measures and had variability in follow-up lengths so no conclusions regarding sustained behaviour changes could be made. Williams et al., (2017) in their systematic review of 41 papers, included 10 papers focussing on physical health interventions and implications for health outcomes. Positive findings were found in studies that offered progressive exercise programmes and improved nutrition. Two studies reported on combined exercise and nutrition interventions, however there were mixed results (one study reported long-term positive effects, whereas the other had no significant benefits). Once again, the studies were reportedly of low quality because of small sample sizes, and self-selection samples which are subject to a selection bias.

**Blake (2015)** undertook a study to compare the efficacy of how physical health interventions are communicated to healthcare staff, and whether this leads to changes in physical activity behaviours. The study compared SMS and e-mail channels (but the messages were identical in both means of communication), with participants each receiving two messages a week for 12 weeks. The messages were to encourage participants to meet the government recommendations for daily physical activity. The results indicated that using SMS or email resulted in increased moderate work-related physical activity and moderate recreational physical activity and active travel behaviour (e.g. increase in participants walking to work). However, activity levels decreased when the messaging stopped, suggesting that health communication delivered by technology can be a useful mechanism for supporting physical activity promotion, and could be considered as a way through which workplace health programmes are promoted. The research was however based on self-reported data which has known limitations, including measurement errors, and high levels of participation attrition was also reported throughout the 12-week study.

**PHE (2018)**, presented information on the ESCAPE-pain programme which is a 6-week rehabilitation scheme for individuals with arthritic chronic hip and knee joint pain. It includes two hour-long classes a week including discussion and physiotherapy exercise. The programme is said to have been implemented by between 50 and 99 organisations reaching 500 – 999 individuals and claims to make a £5 healthcare saving for each pound spent but there is insufficient information on the PHE site to evaluate how this saving has been calculated. The ESCAPE-pain website does provide further evaluation although not about this saving.

## 4.1.2 Mental health interventions

### Technology based interventions

**Brown et al., (2015)** and **Hersch et al., (2016)** both focussed on technology-based wellbeing interventions in healthcare. **Hersch et al., (2016)** conducted an RCT evaluating a web-based intervention for nurses, with the aim to manage work-related stress. The BREATHE: Stress Management for Nurses programme was designed to provide nurses with the relevant information and tools that they need at work and allowed for nurses to access the interventions at the place and time they were required. The information included topics such as: identifying stressors, how stress has an impact on the body; practical stress management tools etc. The results indicated that those who used the BREATHE programme showed significantly greater improvement than the control group on the nurses' stress scale. Significant differences were found on the full scale, and in the scale sub-groups related to conflict with physicians; inadequate preparation; conflict with other nurses; workload and uncertainty regarding treatment. Participants who spent more time on the programme appeared to benefit more from the programme (although this was not a significant difference on the nurse related stress scale). The tool was thought to be useful in identifying areas of nursing roles which could require more focus when wanting to improve nurse wellbeing, and also what other cultural factors also need to be addressed (e.g. open communication and co-worker support). However, it was acknowledged that the results were based on a small sample and so it may be difficult to generalise the findings. Some of the sample did not engage with the intervention at all – so the reasons for non-engagement requires further consideration. Additionally, the programme was also assessed for a short period of time using self-reported measures, and thus a longer period of data collection would be needed.

**Brown et al., (2015)** looked at the East Access to Support For You (EASY) service – a telephone-based sickness absence management service providing early interventions based on a biopsychosocial approaches. The results found that early access to interventions through the service reduced sickness absence by approximately 21 per cent. The database highlighted that the main causes of sickness absence included mental health problems, gastrointestinal problems, cough/colds/flu and MSKs. Staff with mental health related sickness absence took longer to return to work. The likelihood of

healthcare staff returning to work were increased if they were contacted by the service on the first day of sickness absence highlighting the importance of early interventions. However, in this study there was no control group included for comparison.

**RAND, 2018**, presented a review of the evidence in relation to a number of interventions. One of these was “Be Mindful”, a 4-week online course introducing users to mindfulness-based cognitive therapy and stress reduction with the aim to reduce stress, depression and anxiety. The resources include 10 online sessions, meditation audios as well as information sheets. Be Mindful had been run in 17 organisations including three where randomised controlled trials took place to evaluate results. These showed that participants had lower levels of work-related fatigue and improved sleep quality, as well as lower perceived stress, anxiety and depression at 3 and 6-month follow-ups.

### **Psychological-based interventions**

**Johnson et al., (2018)** and **Williams et al., (2017)** all reported on psychological-based interventions to improve wellbeing in healthcare. Johnson et al., (2018) undertook a discursive review of trends, narrative and recommendations for the mental health of staff in healthcare. The review found that interventions could be categorised in many ways, including more person-directed interventions, such as the use of CBT, mindfulness or counselling, or more organisational approaches including those based on more educational or work-scheduling approaches. A meta-analysis found that person-directed interventions were more effective than organisational interventions for burnout reduction.

Williams et al., (2017) reported studies in their systematic review focussing on ‘Mindfulness Based Stress Reduction’ interventions. A number of papers reported on the use of the tools, including the delivery of an 8-week course that was found to lead to positive improvements in an array of health and wellbeing measures, with significant improvements also seen in longer-term outcome data. Four-week courses were also reported to lead to positive wellbeing outcomes, but no longer-term data was reported. However, other tools did not report such positive outcomes, suggesting some degree of robustness around the specific interventions or the circumstances in which they are implemented. There were other examples of stress management interventions also reported, including a 5 week course of CBT found to result in significant health and wellbeing improvements, and an on-line CBT programme also had significant positive outcomes but the study was limited by a small sample and limited uptake of the intervention. More generic stress management and training workshops yielded mixed results. However, many of the studies included in the review were of low quality, often having a lack of a control group which can obscure the actual effectiveness of an intervention, were based on small samples or had high levels of attrition.

**Van Agteran et al., (2018)** studied the implementation of group-based resilience training to provide staff with basic psychological skills to improve mental health outcomes. The training consisted of 10 skills originating from best-practice positive psychology approaches and evidence-based methods for improving wellbeing and resilience. Each participant in the training was given a positive mental health assessment prior to, and one month after the training. Results indicated that there were significant improvements in wellbeing and resilience, and those with low median baseline wellbeing and resilience

scores demonstrated the most improvement and higher effect sizes. However, no significant improvements were recorded for improvements in mental distress, anxiety and stress. The authors concluded that such interventions are particularly effective with lower levels of wellbeing. The study however is of low quality, as only a minority of the healthcare staff included in the research demonstrated baseline distress values that would enable any change to be detected, there was small sample size and lack of a control group. Additionally, only short-term effects were studied (1-month post training), and a longer-follow up to show sustained change is needed.

### 4.1.3 Summary

The evidence review identified a number of treatment interventions relating to physical and mental health. The physical health treatment interventions included provision of physiotherapy, condition-specific health advice as well as combined exercise and nutrition programmes while the mental health treatment interventions principally focussed on stress reduction. Two of them (Clayton (2017) and Brown et al., (2015)) highlighted the need for early responses to health conditions with the MSK intervention underlining the importance of faster referral and the EASY programme finding better outcomes for those contacted on the first day of absence. There was also discussion of how health messages are shared with one small study suggesting that emails were not the best mechanism (Boniface et al., (2016)) although another study suggested that there were benefits while regular SMS and email messages were being sent but that health improvements dropped off once these had stopped (Blake (2015)). This may relate to the work environment of the staff being communicated with, for instance community-based nurses may find emails harder to access. The interventions used a number of measures of effectiveness including working days saved, productivity, financial saving in relation to health-related expenditure, reductions in sickness absence as well as a number of self-report health criteria however many of the studies were of low-quality with small numbers of participants, a lack of control group or high levels of participant attrition.

## 4.2 Preventative wellbeing interventions

The results of the rapid evidence review also provided a number of papers that focussed on 'preventative interventions' (those introduced to prevent the likelihood of negative physical or mental health and wellbeing occurring). These are discussed in more detail below.

### 4.2.1 System-based approaches

**Brand et al., (2017)** in their systematic review of healthcare wellbeing interventions reported evidence from a number of studies suggesting that adopting a whole-systems approach to wellbeing could be beneficial. For example, one study focussed on an NHS wellness intervention which included a range of different schemes (e.g. a dedicated wellbeing website, physical health schemes encouraging healthy eating and exercise, and mental health interventions including introducing mental health champions and focussing on the promotion of mental health and wellbeing services). The results indicated that



such an approach led to positive changes in physical health, mental health and health behaviours. However, the study was of low quality as a result of methodological design and the outcome measures used. A separate study focussed on a staff-led intervention process where staff in certain departments were able to choose what wellbeing interventions they would like to implement (including issues such as communication, staff relationships etc) and found that work quality and mental health measures improved in a before and after study. A further study looking at team building, and group wellbeing consultations reported no differences in wellbeing. Finally, two further studies looked at developing psychosocial work environments including interventions such as introducing workplace champions, wellbeing awareness programmes and a range of activities to aid both individual wellbeing and the work environment found positive effects on participant mental health and wellbeing. However, the studies were of low quality, and it was noted that it is very difficult to make any conclusions about implementing more vs. less whole system-based approaches.

**Mind (2018), “Taking care of you”.** Mind produced a two-part programme for people working in hospital emergency departments. It included a toolkit of self-management techniques and a network of wellbeing champions to raise awareness and signpost support. The toolkit included posters, coasters, booklets and stickers and was designed with ED staff across the country. These elements were intended to be easy and quick to use to help staff to form positive habits as part of their existing routines. Five emergency departments took part in the pilot but effectiveness evidence is not yet available.

#### 4.2.2 Physical space

**GMC (2019) in Caring for doctors Caring for patients** discussed how the physical environment – in particular provision of rest, sleeping and eating facilities – contribute to both physical health and a sense of being valued and supported by their organisations. There was a discussion in this paper about how these spaces need to be separate from facilities provided for patients and should be available to all staff to support multidisciplinary working. The decision by the Department of Health in England to provide rest rooms was welcomed but there was a question about whether this commitment had been met. The document does not include references to evidence of the effectiveness of good physical space in promoting physical health.

#### 4.2.3 Mental health interventions

##### Group based interventions

**Hall et al., (2018)** discussed strategies that could improve GP wellbeing and prevent GP burnout, based on GP perceptions of what workplace factors could have the most impact on their levels of wellbeing and burnout. Five GP focus groups were conducted discussing the strategies that practices (and individuals) could use to improve staff wellbeing. The research reported a range of factors that could have an impact on

wellbeing, including the level of team support within a practice, the variety of work within their roles, the variety of patients they see, the level of control and autonomy over their work environment and their work schedules and the intensity of their workload. Working in a supportive and interactive team was proposed as a good way to improve wellbeing, and strategies discussed that could be implemented to try and prevent reduced GP wellbeing included: scheduling breaks and having the opportunity to leave isolated treatment rooms to interact with practice colleagues; providing means through which social (peer-to-peer) support could be provided (such as a buddy or wellbeing mentor schemes); being able to have regular wellbeing 'check-ins'; having the time for exercise and support for physical wellbeing if required; more control over their workload; and an increase in resources to reduce internal pressures. The authors concluded that introducing interventions for wellbeing can have some worth, however what would be most beneficial were changes at higher systems levels including increasing resources, capacity and funding in GP services.

**Beresford et al., (2016)**, researched the availability of staff support interventions which seek to prevent work-related stress among multi-disciplinary patient teams. The research was based on a survey looking at the availability of access to a range of interventions including: training on stress management, supervision, clinical reflection, flexible work time/shift patterns, promotion of support from Occupational Health (OH), etc. It was found that each staff group was reported to have access to at least one form of support. Debriefs following the death of a patient was the most frequently reported practice. Across PCTs doctors were less likely than nurses to have access to all the different types of support. Support could also be categorised into one-off or on-going support, with nurses and non-clinical staff emerging as more likely to have access to both one-off and ongoing modes compared to doctors and other healthcare professionals. Other support practices available included: rotation of staff and roles in settings as a strategy to reduce burnout; with a range of flexible work patterns also reported. Work-related stress was also addressed using personal development and appraisals covering work-related demands and stressors, following sickness absence and referral to OH. Some PCTs had developed specific interventions – including having members of management teams that staff members could confidentially refer issues to or the implementation of reflective practice sessions. Some participants did report that initiatives that had been set up had petered out, suggesting issues with sustainable practices. The authors recognised the need for more research of support practices, especially related to detailed data on what aspects of the workplace culture also have an impact on workplace wellbeing. However, the research was of low quality, as there was also no unified way discussed relating to how the different PCTs implemented wellbeing services, and there was little evidence as to how the support interventions improved or sustained healthcare employee wellbeing.

**Maben et al., (2018)** and **Taylor et al., (2018)** reported on research regarding the implementation and the use of 'Schwartz Center Rounds', an intervention that has been developed to support healthcare staff to deliver compassionate care by providing a 'safe space' for staff to openly reflect and share the social, ethical and emotional challenges that they face in their daily work roles. The premise behind the intervention is that caregivers will be able to make improved and better personal connections with both patients and other staff caregivers to also gain insight into their own responses and

feelings in certain situations. Taylor et al., (2018) undertook a systematic review of the Schwartz Center Rounds literature, with the results indicating that attending 'Rounds' were highly valued by attendees, and that most studies reported that attendance could have a positive impact on 'the self' (e.g. improved wellbeing and coping mechanisms), and an impact on patient outcomes (increased compassion and empathy) and positive implications for colleagues (improved teamwork, compassion and empathy). There was also evidence that 'Rounds' have been adapted for more educational purposes in some settings for people to learn about the emotional and compassionate side of patient care. In comparison with other interventions 'Rounds' were viewed as an 'all-staff forum' to share stories about wellbeing and patient care. However, quality of evidence used in the review is described as low to moderate quality. The Maben et al., (2018) review utilised a mixed-method approach to evaluate the effectiveness and implementation of 'Rounds'. When mapping the use of 'Rounds' the main explanations for implementing them referred to the need to focus on staff wellbeing, but there was a lot of variability in how healthcare organisations implemented them, their sustainability and attendance. The findings indicated that attending 'Rounds' could lead to a significant reduction in poor psychological wellbeing, and that wellbeing improved for those who attended 'Rounds' regularly. In the case study evidence 'Rounds' were described as interesting and engaging and that they could be a good source of support, providing the time to reflect on work processes and learn from others also attending. However, some negative comments regarding 'Rounds' were also gathered, including questioning the purpose of unearthing feelings of sadness, anger and frustration which could result in reduced wellbeing. The study concluded that Schwartz Center Rounds can support staff and improve wellbeing, but they might not be accessible for everyone and should be offered alongside other psychological support and not instead of it. There are also considerations to be made with regards to the extra resources and support that 'Rounds' need and ensure that there is relevant senior management support for the intervention. However, once again there were concerns about the quality of the research evidence used in the study.

**RAND (2018).** RAND's review analyses the evidence around Mental Health First Aid England training which aims to provide training to attendees so that they can support a person experiencing mental ill-health by signposting the right support. This programme had trained over 245,000 people. The RAND article presents two evaluation studies of MHFA England which showed participants' views of the programme as well as, in the case of a subgroup of 41 managers, whether their attitudes and confidence towards mental health had improved. These evaluations do not provide evidence as to whether this subsequently translates into better outcomes for the people they support.

**Mind (2019), Blue Light Support for Team 999.** Mind also produced a programme to reduce stigma, promote wellbeing and improve mental health support for people working in the blue light services: ambulance, fire, police and search and rescue. The programme was made up of three phases and included development of Blue Light Mental Health Networks and groups of staff to lead the project locally. The project was evaluated through a survey of 5000 staff in 2019 which showed more positive perceptions of organisational attitudes to mental health and greater awareness of the support available. The programme outline gives clear information about the evidence for the elements of the

programme and the pre and post survey methodology supports the claims for the effectiveness for the programme although it is not possible to state which aspects were the most successful.

**West and Coia (2019)** discussed **teamworking** as an intervention in Caring for doctors Caring for patients, stating that team structure is important for staff mental health as doctors who work across multiple wards experience feelings of isolation, alienation and vulnerability. The report makes a distinction between real teams (teams with clear objectives that meet regularly to review performance) and pseudoteams who do not. According to the 2018 NHS Staff Survey in England for secondary care, 40% of staff work in 'real teams' and had higher levels of work engagement, and more satisfaction with their organisation and work environment as well as lower likelihood to be unwell from stress. It is not possible to know whether these benefits are causally related to the teamworking and the piece does not provide any information on solutions to the challenge of multiple team-working nor strong evidence of effectiveness of resolving this.

#### 4.2.4 Summary

The preventative measures identified in the review focused on systems-based approaches which include a wide range of interventions to improve health and wellbeing generally as well as on interventions aimed at supporting good mental health or addressing stigma in relation to mental health. A number of the pieces of evidence reviewed (Hall et al., (2018), Taylor et al., (2018), GMC, (2019)) referred to the role of team building, team support and good team working including Schwartz Center Rounds. One study in relation to hospitals and another in GP practices referred to the importance of appropriate physical space for recuperation or reducing isolation. Several also looked at creating dedicated mental health champions or developing managers to ensure better signposting to support if it became necessary (RAND, 2018, Mind, 2019). A couple touched upon the importance of autonomy, flexible work patterns or changes to intensity of work (Hall et al., (2018), Beresford et al., (2016)). One study stated that changes at a higher level in relation to resourcing and funding were likely to be more beneficial. Many of these interventions were a bundle of different approaches and, as stated previously, it was not possible to identify which element was most effective in preventing poor health.

## 5 Discussion

---

Over the last decade, there has been a proliferation of interest and research conducted in the area of organisational health and wellbeing and the implications that this can have on individual and organisational outcomes. However, more focus is now increasingly being placed upon developing an understanding of the effectiveness of workplace wellbeing interventions, so that HR and wellbeing leads in organisations know where to place their focus. As the NHS has renewed its commitment to employee wellbeing in both the Long-Term Plan and the Interim People Plan, it has become clear that an improved evidence base for what ‘good’ interventions in healthcare settings are still required. The purpose of this research was to understand what interventions are currently being adopted in healthcare settings, to evaluate their effectiveness, and to see where gaps in current research lie and where future research into healthcare interventions is still needed.

This report based on a rapid evidence review of wellbeing interventions in healthcare in both the academic and grey literature has highlighted a number of key findings:

- There are a wide range of interventions that have been implemented to improve both physical and mental wellbeing in healthcare settings. One way in which these interventions may be classified are those which are implemented to treat those with reduced wellbeing, and preventative interventions implemented to try to reduce the deterioration of employee wellbeing.
- In terms of treatment interventions, interventions to help physical health and musculoskeletal wellbeing included nutrition and physical activity programmes and organisational campaigns and early referral to physiotherapy treatment on-site. There was also evidence to suggest that access to treatment interventions could be improved if messaging about the services occurred, as well as the provision of yearly assessments that would encourage healthcare staff to take action. Mental health and wellbeing treatment interventions were predominantly focussed on stress-based reduction interventions, either delivered through web-based courses or group training focussed on a number of modules aiming to identify and manage stress and adapt behaviours to improve individual outcomes. The other form of intervention was a telephone service that provided quicker access to health services when sickness absence was reported.
- With regards to preventative interventions, one way this has been implemented is using a ‘systems-based’ approach focussing on a range of interventions that an organisation can implement, including ‘wellbeing champions’ and dedicated ‘wellbeing services’, but also focussing on factors such as organisational and social support; line management; rota flexibility and job design. Other preventative measures included training members of healthcare staff in understanding and recognising symptoms of reduced wellbeing so they can signpost quickly to further wellbeing help and support. Finally, Schwartz

Center Rounds were discussed as a group-based initiative to provide space for reflection and discussion regarding their professional care roles.

- Although a wide range of practices were identified, the research was predominantly of low quality, which leads to questions regarding their effectiveness. There are a number of reasons as to why studies were described as low quality. For example, a large number of studies had no control groups which meant that it was difficult to determine how much any change in wellbeing was as a result of the intervention. A number of studies were based on small sample sizes or subject to sample attrition, leading to questions about the generalisability of findings to different healthcare settings or staff populations. Several studies also did not include verified outcome measures which makes replication of findings more difficult. Some solely used changes in sickness absence as a proxy for wellbeing (which is understandable as this is a measure that is already collected by healthcare organisations). However, reductions in sickness absence do not always equate to improved wellbeing and may be an indication of presenteeism. In some of the research included in the review more than one intervention was implemented simultaneously, and through the evaluations it was difficult to ascertain which intervention any change in wellbeing was associated to. Finally, there was very little evidence of any long-term or longitudinal studies, consequently it is unknown whether the interventions led to sustained improved wellbeing outcomes.
- There was limited evidence of a 'best-practice' intervention. What became evident in the research was that for healthcare there may not be a 'one-size fits all' solution to wellbeing interventions. Some of the research where interventions had good take-up and led to positive wellbeing outcomes were those where healthcare staff had options as to which interventions they could engage with and suited their wellbeing needs.

## 6 Recommendations

---

A number of recommendations for future research have been made on the basis of these findings:

- There is clearly still a need to improve the quality of evidence and overcome the methodological challenges when evaluating healthcare wellbeing interventions. Ways in which this can be done include using RCTs and developing longitudinal studies to determine any long-term effects and sustained changes. There is also the need to review the outcome measures that studies use to measure wellbeing, perhaps including validated measures of wellbeing alongside other variables such as sickness absence. Improving research methodologies may provide further value and credence to the evidence base. Ways in which evaluations of wellbeing interventions in healthcare have previously been discussed (NHS Employers, 2014), and key considerations when undertaking evaluations should include:
  - Establishing the aims of the evaluation.
  - Gathering information about the intervention.
  - Formulating key evaluation questions.
  - Developing the evaluation design.
  - Identifying project resources.
  - Reviewing the organisational context.
  - Communicating about the evaluation.
  - Reflecting on practice.
- The current evidence base regarding wellbeing interventions is very much outcomes focussed. It may be useful to undertake more process evaluations, to understand if how the intervention was implemented could have an impact on its uptake and effectiveness. For example, were staff consulted as to what intervention they needed or would use, did the intervention have appropriate senior management support, was it resourced sufficiently and promoted across organisations. All these factors could have implications for the effectiveness of wellbeing interventions, but there is little acknowledgement of these in current research.
- Undertaking a 'process evaluation' may provide a greater understanding as to why some wellbeing interventions may be more effective than others in terms of staff uptake. It is important to gain a greater understanding as to what any barriers are to participating in current wellbeing interventions, so new interventions can learn as to what employees will use, and where spend in interventions will be more worthwhile.
- Organisations usually introduce a suite of wellbeing measures (this was particularly seen in the grey literature). This does provide a research challenge with regards to

measuring the effectiveness of one particular intervention above the others that employees have access to. It may be worthwhile undertaking research comparing respective interventions in an attempt to determine relative effectiveness to both organisational and individual outcomes.

- There is some evidence of research into whole-system approaches to wellbeing, and it is important that this is further developed. Further evidence is now accumulating suggesting that 'good work' should be considered when discussing employee wellbeing, and any intervention will be no more than a 'plaster' unless the underlying systems of work scheduling, autonomy, employee voice, management etc., are also taken into consideration<sup>3</sup>.
- In addition to the above this research was particularly focussed on mental health and physical health interventions. Therefore, not included were any interventions in relation to factors such line management support, performance management and bullying and harassment, which are known to have implications for employee wellbeing.

---

<sup>3</sup> <https://www.hrmagazine.co.uk/article-details/why-good-work-trumps-fruit-and-pilates-evangelism-every-time>



## 7 References

---

- Beresford B, Gibson F, Bayliss J, Mukherjee S (2016), Preventing work-related stress among staff working in children's cancer Principal Treatment Centres in the UK: a brief survey of staff support systems and practices, *European Journal of Cancer Care*, 27, 1-7
- Bevan S, Bajorek Z (2018), *Why 'good work' trumps fruit and pilates evangelism every time*, Available at: <https://www.hrmagazine.co.uk/article-details/why-good-work-trumps-fruit-and-pilates-evangelism-every-time> [accessed August 2020]
- Black C (2008), *Working for a healthier tomorrow. Review of the health of Britain's working age population*, Department for Work and Pensions, London
- Blake H, Suggs L, Aguirre L, Batt M (2015), Active8! Technology-based intervention to promote physical activity in hospital employees, *American Journal of Health Promotion*, 31, 109-118
- Boniface G, Ghosh S, Robinson L (2016), District nurses' experiences of musculoskeletal wellbeing: a qualitative study, *British Journal of Community Nursing*, 21, 350-355
- Boorman S (2009), *NHS Health and Well-being Review: Interim Report*: Available at: [https://webarchive.nationalarchives.gov.uk/20130103004910/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_108799](https://webarchive.nationalarchives.gov.uk/20130103004910/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_108799) [accessed August 2020]
- Brand S, Thompson Coon J, Fleming L, Carroll L, Bethel A, Wyatt K (2017), Whole-system approach to improving the health and wellbeing of healthcare workers: A systematic review, *PLoS ONE*, 12, 1-26
- Brown J, Mackay D, Demou E, Craig J, Frank J, MacDonald E (2015), The EASY (Early Access to Support for You) sickness absence service: a four-year evaluation of the impact of absenteeism, *Scandinavian Journal of Work Environment and Health*, 41, 204-215
- Clayton P (2017), Occupational physiotherapy offering helps NHS Trust increase employee productivity, *Strategic HR Review*, 16, 49-51
- Department of Health (2019), *The NHS Long Term Plan*, Available at: <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf> [accessed August 2020]
- Department of Health (2019), *Interim NHS People Plan*, Available at: [https://www.longtermplan.nhs.uk/wp-content/uploads/2019/05/Interim-NHS-People-Plan\\_June2019.pdf](https://www.longtermplan.nhs.uk/wp-content/uploads/2019/05/Interim-NHS-People-Plan_June2019.pdf) [accessed August 2020]

- Hall J, Johnson J, Heyhoe J, Watt I, Anderson K, O'Connor D (2018), Strategies to improve general practitioner well-being: findings from a focus group study, *Family Practice*, 25, 511-516
- Hersch R, Cook R, Deitz D, Kaplan S, Hughes D, Friesen M, Vezina M (2016), Reducing Nurses' Stress: A randomized controlled trial of a web-based stress management program for nurses, *Applied Nursing Research*, 32, 18-25
- Johnson J, Hall L, Berzins K et al (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, 20-32
- Mayben J et al (2018), A realist informed mixed-methods evaluation of Schwartz Center Rounds in England, *Health Services and Delivery Research*
- Mind (2018), 'Sink or swim?' *Improving the mental health of staff in hospital emergency departments*, Available at: [https://www.mind.org.uk/media-a/4579/mind\\_rr\\_mentalhealthinterventions-final.pdf](https://www.mind.org.uk/media-a/4579/mind_rr_mentalhealthinterventions-final.pdf) [accessed August 2020]
- Mind (2019), *Wellbeing and mental health in the emergency services: Our learning and key recommendations for the sector*, Available at: [https://www.mind.org.uk/media-a/4525/blue-light-programme-legacy-report\\_english-summary.pdf](https://www.mind.org.uk/media-a/4525/blue-light-programme-legacy-report_english-summary.pdf) [accesses August 2020]
- Public Health England (PHE) (2018), *Making it easier to get employee wellbeing right*, Available at: <https://publichealthmatters.blog.gov.uk/2018/08/01/making-it-easier-to-get-employee-wellbeing-right/> [accessed August 2020]
- RAND (2018), *Making it easier to get employee wellbeing right*, RAND, Cambridge
- Taylor C, Xyrichis A, Leamy C, Reynolds E, Maben J (2018), Can Schwartz Center Rounds support healthcare staff with emotional challenges at work, and how do they compare with other interventions aimed at providing similar support? A systematic review and scoping reviews. *BMJOpen*, 1-16
- Van Agteran J, Iasiello M, Lo L (2018), Improving the wellbeing and resilience of health services staff via psychological skills training, *BMC Research Notes*, 1-5.
- Vaughan-Jones H, Barham L (2009), *Healthy work challenges and opportunities to 2030*. The Work Foundation, London
- West M, Coia D (2018), *Caring for Doctors, Caring for Patients: How to transform UK healthcare environments to support doctors and medical students to care for patients*, Available at: [https://www.gmc-uk.org/-/media/documents/caring-for-doctors-caring-for-patients\\_pdf-80706341.pdf](https://www.gmc-uk.org/-/media/documents/caring-for-doctors-caring-for-patients_pdf-80706341.pdf) [accessed August 2020]
- West M, Dawson J (2012), *Employee engagement and NHS performance*, Available at: <https://www.kingsfund.org.uk/sites/default/files/employee-engagement-nhs-performance-west-dawson-leadership-review2012-paper.pdf> [accessed August 2020]

Williams S, Malik H, Nicolay C, Chatuverdi A, Darzi A, Purkayastha A (2017), Interventions to improve employee health and well-being within health care organizations: A systematic review, *American society for healthcare risk management*, 37, 25-51