

# Occupational health management of work-related stress: guidelines versus practice

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<b>Background</b>	Work-related stress, anxiety and depression (WRSAD) are common, overlapping mental health problems burdened with major medical, occupational, institutional and societal implications. Current occupational health (OH) management of WRSAD is based on clinical and managerial guidelines and individual risk assessment.
<b>Aims</b>	The study sought to identify patterns of OH advice in WRSAD and the relationships between the OH advice, available evidence, experience and expertise of the OH doctors (OHDs).
<b>Methods</b>	A retrospective cross-sectional analysis of 101 first-time OH consultations for WRSAD by nine OHDs.
<b>Results</b>	The three most common OH interventions included follow-up OH consultations, adjusted duties and referrals for counselling. All OHDs preferred a light-touch approach but the less experienced and qualified OHDs were more proactive and prescriptive.
<b>Conclusions</b>	In the absence of a specific occupational medical guideline for the management of WRSAD, the OH interventions may be guided by clinical guidelines, individual risk assessment, the client's circumstances or the experience, expertise and preferences of the OHDs. In the study group, OH interventions were under-utilized and not consistently applied. Our findings support the argument for OH guideline for WRSAD to improve the consistency and effectiveness of OH interventions. This is important given the scale of the problem and the recent increase in WRSAD during the COVID-19 pandemic.
<b>Key words</b>	Mental health problems; occupational health; work-related stress.

## Introduction

In the UK, work-related common mental health problems (CMHPs; work-related stress, anxiety or depression, WRSAD) are estimated to account for 51% of all work-related ill-health, and 55% of work-related sickness absence [1]. The annual incidence and prevalence of WRSAD among the UK workforce, respectively, 1% and 2% in 2018/19, has further increased since the COVID-19 pandemic [1,2]. In 2013/14 the cost of WRSAD was £5.2 billion, amounting to 55% of the total cost of all work-related ill-health except cancer [3]. WRSAD have been postulated to have the most negative impact on the lives of workers in the industrialized countries, ahead of financial and other health problems [3]. The European Agency for Safety and Health at Work in 2009 reported 'Stress (is the) most common reported work-related problem, which affected 22% of employees in the

European Union'; the highest level of stress was reported in Greece (55%), Slovenia, Sweden and Latvia [4].

Current management of WRSAD in the UK is based on evidence-based clinical guidelines for primary and secondary healthcare [5–9] and for the managers (HSE Management Standards, HSEMS) [10,11]. Compared with primary or idiopathic mental ill-health, WRSAD is by definition a reactive condition with a known trigger or co-trigger, and therefore potentially amenable to interventions.

## Methods

The study aimed to assess the patterns and consistency of the occupational health (OH) interventions by the study OH doctors (OHDs) against the available clinical and managerial guidelines, and to seek

## Key learning points

### What is already known about this subject:

- The efficacy of secondary and tertiary prevention of work-related stress, anxiety and depression, including vocational rehabilitation based on Health & Safety Executive Management Standards, psychological self-help, lifestyle adjustments, medical and psychological treatment, is supported by strong evidence and included in the clinical and managerial guidelines [20,24,30].
- In the absence of a specific occupational health guideline, the management of work-related stress, anxiety and depression may be based on the available clinical and managerial guidelines, individual risk assessment, clinical judgement, experience and preferences of the occupational health doctor, and recommendations from mental health specialists or general practitioners.
- We are not aware of similar studies analysing the occupational health advice in the management of work-related stress, anxiety and depression against the current clinical and managerial guidelines.

### What this study adds:

- Our study analysed the patterns and consistency of occupational health interventions in work-related stress, anxiety and depression against the current clinical and managerial guidelines, and the relationships between these interventions, the experience and expertise of the occupational health doctors and employee-related variables.
- We found an inverse statistically significant correlation between the experience and expertise of the occupational health doctors and the use of evidence-based occupational health interventions, including HSEMS and referrals for employee assistance programme/counselling, and relatively low and inconsistent utilization of other evidence-based low-cost and effective occupational health interventions, e.g. advice on psychological self-help.

### What impact this may have on practice or policy:

- Our findings, with the limitations as outlined, may highlight the need for a larger, prospective follow-up analysis to consider our observed variations in the management of work-related stress, anxiety and depression by occupational health doctors.
- Given the low cost, ease of use and well-proven efficacy of self-help, the occupational health doctors may consider including at least some basic, verbal or written, information on self-help, including computerized cognitive behavioural therapy and physical exercise, as part of the occupational health consultations.
- Comprehensive occupational medical guideline is needed to improve the consistency of occupational health advice and maximize the quality and effectiveness of the management of the work-related stress, anxiety and depression, a significant cause of sickness absence from work and a very common diagnosis made in everyday occupational health practice.

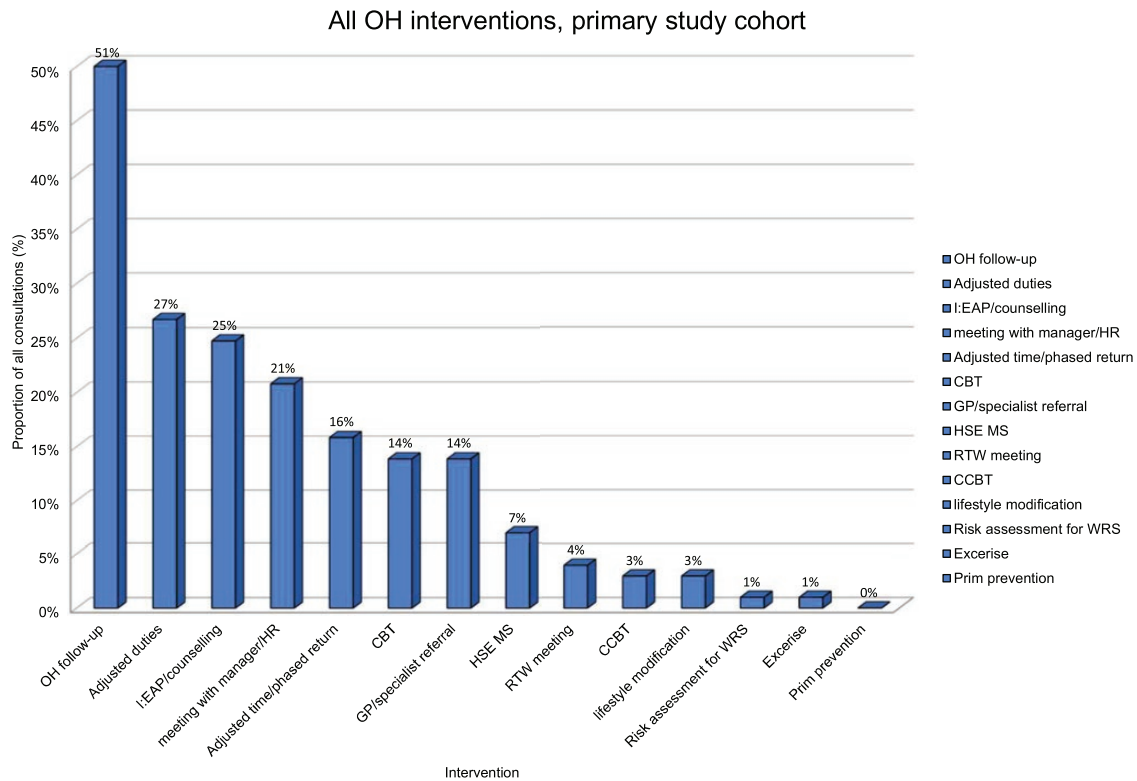
correlations between the management of WRSAD and the expertise and experience of the OHDs. The initial data set included 8673 first-time OH consultations conducted between 1 January 2012 and 30 September 2017 in a medium-sized, private OH practice in the UK. The study inclusion criteria were: first-time referral for stress, anxiety and/or depression; occupational causation; consultation by an OHD, and the exclusion criteria were: follow-up visits; enduring and/or not work-related mental health problems; substance misuse; assessment by OH advisors. The minimum sample size to ensure the commonly used 80% statistical power and statistical significance at  $P < 0.05$  was calculated and rounded up to 101. After applying the study criteria and minimum sample size, the study sample of 101 OH reports conducted by nine study OHDs was randomly selected from the initial data set, automatically anonymized using MS Excel®, and scanned for the study variables (Figure 1). The inter-group comparisons were made using the chi-square test for independence, also with  $P < 0.05$ . Cramer's

$V(\Phi_c)$  was used to determine the strength of the relationships, both above and below the level of statistical significance ( $\Phi_c \leq 0.2$  = weak relationship,  $0.2 < \Phi_c \leq 0.6$  = moderate and  $\Phi_c > 0.6$  = strong relationship). To analyse the 'intensity' of the OH interventions, we introduced a composite discrete Summary Intervention Score (SIS) variable which was defined as the count of individual OH interventions in one consultation.

The study OHD group included three specialist OH physicians (Members or Fellows of the Faculty of Occupational Medicine) and six non-specialists (holders of the Diploma in Occupational Medicine and/or Associate Members of the Faculty of Occupational Medicine). Nine study OHDs were stratified as follows:

### Expertise categories

- Q1 (Diploma in Occupational Medicine [DOccMed] or Associate Member of the Faculty of Occupational Medicine [AFOM]),  $n = 6$ ; 57% of all consultations



**Figure 1.** Frequencies of OH interventions in the study group.

- Q2 (Member or Fellow of the Faculty of Occupational Medicine [MFOM or FFOM]),  $n = 3$ ; 43% of all consultations.

### Experience categories

- E1 (1–10 years of OH practice),  $n = 5$ ; 27% of all consultations
- E2 (>10 years of OH practice),  $n = 4$ ; 73% of all consultations.

Informed consent for anonymous participation was obtained from the participating OHDs. The use of the data was authorized by the Company's data protection officer, and the ethical approval was granted by the University of Manchester.

## Results

The following OH interventions were used in managing WRSAD by the study OHD order of decreasing frequency:

1. Medical advice: OH follow-up (51% of all consultations), employee assistance programme (EAP) or counselling (25%), cognitive behavioural therapy (CBT) (14%) and referrals to own general practitioner (GP) or a psychologist (14%).
2. Vocational advice: Adjusted duties (e.g. reduced or less challenging work; reduced hours and/or scope of duties;

temporary redeployment to adjusted on-site or remote work (27%), meeting with the manager or human resources (HR) (21%), adjusted time or phased return to work (16%), HSEMS (7%) and return-to-work meeting (4%).

3. Lifestyle and self-help interventions included computerized CBT (CCBT), lifestyle modifications and physical exercise (3%, 3% and 1%, respectively) (Figure 1).

The following statistically significant OHD expertise-related correlations were found: (i) the less qualified (Q1) OHDs were four times more likely to advise EAP and counselling (20% versus 5%,  $P = 0.01$ ,  $\Phi_c = 0.3$ ) and (ii) only the Q1 OHDs referenced the HSEMS in their reports (7% versus 0%,  $P = 0.02$ ,  $\Phi_c = 0.2$ ) (Figure 2).

Several non-statistically significant ( $P > 0.05$ ) but moderately strong ( $0.2 < \Phi_c \leq 0.6$ ) expertise-related correlations included higher SIS ( $\Phi_c = 0.26$ ) and more requests for clinical information from the GPs ( $\Phi_c = 0.2$ ) by Q1 OHDs (Figure 3).

In the only statistically significant experience-related correlation, the less experienced E1 OHDs were six times more likely to reference HSEMS in their reports (6 versus 1;  $P < 0.001$ ,  $\Phi_c = 0.36$ ) (Figure 4).

The remaining experience-related correlations were not statistically significant but suggested moderately higher SIS scores (SIS 3–5) and more requests for clinical information from the GPs in the E1 group (Figure 5).

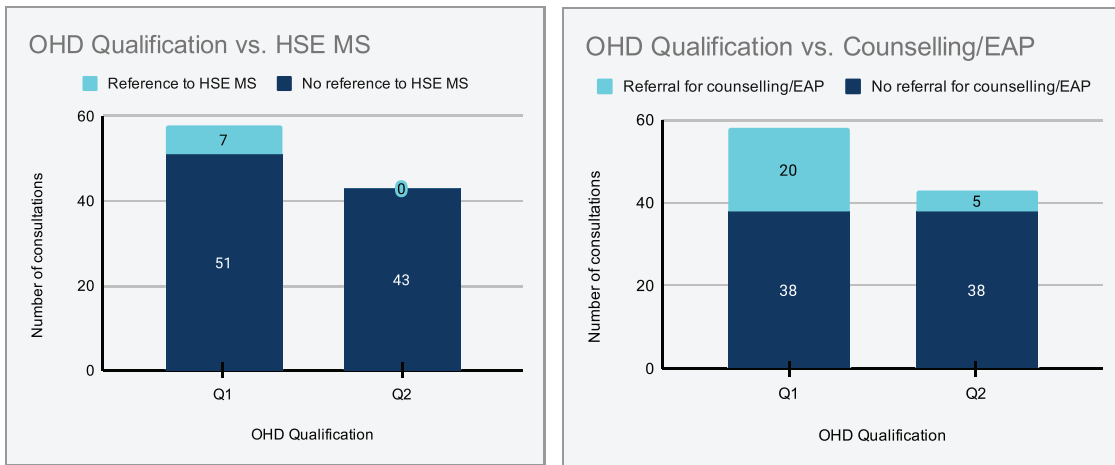


Figure 2. OHD expertise versus HSEMS and referrals for counselling/EAP.

### OHD qualification vs OH interventions

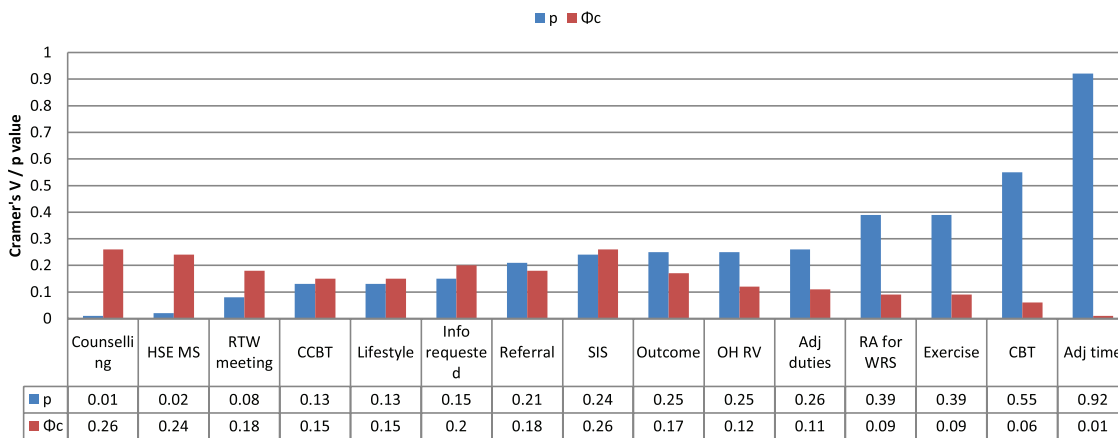


Figure 3. OHD qualification versus OH interventions, statistical significance (P) and strength of correlations (Φc).

The HSEMS were referenced statistically significantly more often by the ‘junior’ (Q1 and E1) OHDs ( $P = 0.001$ ,  $\Phi_c = 0.36$  for E2 versus E1; and  $P = 0.02$ ,  $\Phi_c = 0.24$  for Q2 versus Q1), and also in consultations with higher SIS, in the services, insurance, transport, finance and energy sectors, and in the consultations including referrals to GPs and for CBT, suggesting a more proactive approach in more complex cases.

A cross-tabulation analysis did not reveal any additional clinically and statistically significant correlations between the remaining variables.

## Discussion

Our study revealed two statistically significant correlations:

1. The ‘senior’ (Q2 and E2) OHDs were less likely to directly reference HSEMS than the ‘junior’ colleagues, and

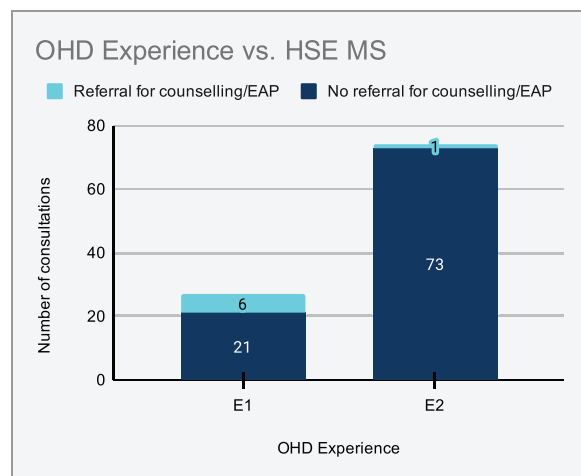
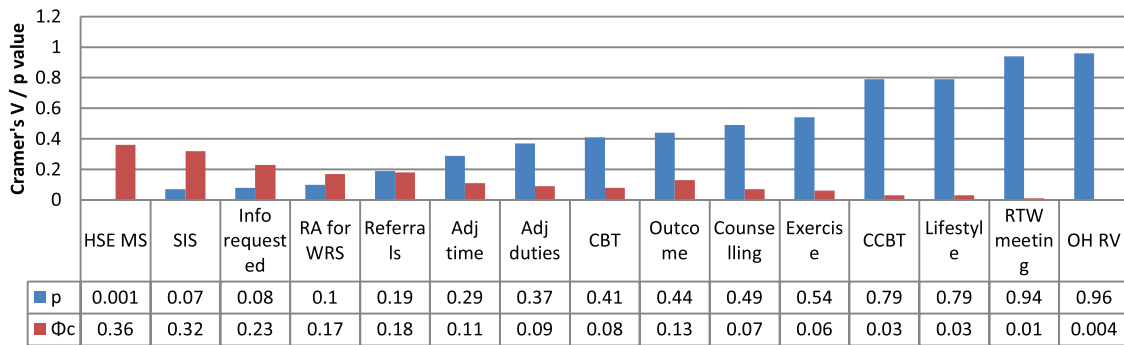


Figure 4. OHD experience versus HSEMS.

2. The more qualified (Q2) OHDs were also significantly less likely to refer employees for counselling or EAP.

## OHD experience vs OH interventions



**Figure 5.** OHD experience versus OH interventions, statistical significance ( $P$ ) and strength of correlations ( $\Phi_c$ ).

Below the level of statistical significance, the ‘junior’ OHDs recommended more proactive management, in line with the guidelines, e.g. HSEMS and recommendations of the National Institute for Health and Care Excellence (NICE) [12]. The ‘senior’ more qualified and experienced colleagues opted for a ‘light-touch’ strategy. Reassuringly, no differences were noted between the OHDs and the remaining employee-related interventions, e.g. return-to-work meetings, advice on reduced working time or duties.

The role of the OHDs in the management of WRSAD as part of the multidisciplinary team has been well documented [13–18] and is advocated by NICE, NHS and the Royal College of Psychiatrists [9,19–21]. Despite the high prevalence and significant clinical, occupational and societal burden, no formal OH guidelines or codes of practice for WRSAD are available for the OHDs in the UK, unlike, for example, in Finland, France or The Netherlands [15,22–24]. Reasons may include complex, overlapping medical and non-medical factors; potentially rapidly changing or self-limiting nature of the problem; difficulties interpreting the results in the OH setting; and relatively limited access to OH in the UK [23]. In the absence of a comprehensive OH guideline for WRSAD, the OHDs may choose to combine the available evidence-based recommendations:

- Clinical guidelines by NICE for CMHPs: psychological self-help including healthy lifestyle (e.g. regular physical activity, restful sleep, eliminating maladaptive behaviours); support groups; counselling; pharmacological treatment; CBT; and CCBT [12,19,24–26].
- Recommendations for the managers, including HSEMS and NICE guidelines [5–7]: addressing workplace stressors, support, relationships, communication problems or change in the organizations, and seeking appropriate OH advice [8,11,18,21].

The most common intervention, OH follow-up (51% of the reports), may suggest a ‘watchful waiting’ approach based on the assumption that WRSAD may be self-limiting and tend to improve with time away from

work and GP support. This strategy may not be helpful, as an active work-related stressor may affect the recovery. Other medical interventions, adjusted scope of duties and reduced hours or phased return to work (27% and 16%, respectively), aimed to tackle the stressor(s) [11]. Referrals for counselling/EAP were advised in a significant proportion of consultations (25%) and 1.8 times more often than referrals for CBT (14%). CBT is considered the first-line and 50–60% effective clinical intervention for CMHPs [12,18,20]; however, the NICE does recommend ‘employment support services’ in mild and moderate anxiety [12]. The common use of counselling/EAP may also be caused by easier access, a perception that it may be a workplace-oriented modality and chronic delays of NHS psychological services.

Vocational recommendations were advised in less than 10% of the OH reports: advising HSEMS in 7%, with mixed consistency and more often by the ‘junior’ OHDs; a return-to-work meeting (4%), stress management at the policy level (1%) and risk assessment for WRSAD (0%) suggests underutilization. The HSEMS are included in the current guidelines on workplace health [5,9,11] as the primary source of information, prevention and management of WRSAD by managers [11]. The efficacy has been confirmed in several studies [7,27], and the relatively low use in our study group was therefore surprising, but possibly explained by indirect references to HSEMS domains in the reports; assumption that the managers should be aware of the HSEMS; or considering the HSEMS as a primary prevention tool only. Given the proven benefits of HSEMS, signposting could improve the outcomes of OH consultations [14,15,23] and help to educate the employers, potentially reducing the current and future burden of WRSAD.

Psychological self-help was advised least commonly (CCBT in 3% and lifestyle interventions in 1%). This may be unexpected and possibly caused by the habits and preferences of the OHDs and non-medical constraints. According to NICE, psychological self-help is a low-cost, safe, effective and accessible intervention

recommended as step 2 of the therapeutic pathway for anxiety and depression [19,25,26,28,29]. The benefits are echoed by the Royal College of Psychiatrists, mental health charities and the NHS MoodZone programme.

Our unique analysis of OH practice in a real-life setting, with no similar study identified as having been undertaken previously, found statistically and clinically significant differences between the study groups and low and inconsistent utilization of clinical and managerial guidelines in one, stable cohort of OHDs working to a set of common organizational policies and procedures.

The study had several limitations, including a cross-sectional design and exclusion of co-morbidities and recurrences of WRSAD which may have affected the interventions (the former caused by limited resources and the latter to simplify the analysis). Methodological limitations also included a relatively small (but statistically reliable) sample size, an over-representation of private and under-representation of public sectors (e.g. social care) which could explain the lower prevalence of WRSAD in our study group compared to the national surveys (24% versus 51%) [1]. Finally, as in many patient-reported outcomes, the confounders may have inherently included under- and over-reporting due to psychosocial yellow, blue and black flags with a potentially significant impact on most of the analysed variables. The bias and confounders may or may not have altered the OHD's behaviours but perhaps may render the results less representative.

In summary, in the absence of OH guideline for WRSAD, the OH advice may be based on the individual risk assessment, preferences, experience and expertise, and individual client-related circumstances and constraints. This may lead to inconsistent and low use of effective OH interventions, e.g. references to HSEMS or psychological self-help.

A national occupational medical guideline on WRSAD would, we believe, help to standardize and maximize the efficacy of the management of this common and burdensome condition in the occupational setting.

## Funding

None declared.

## Competing interests

None declared.

## References

1. HSE. Health and Safety Statistics 2020 [Internet]. Health and Safety Executive, 2020. [www.hse.gov.uk/statistics](http://www.hse.gov.uk/statistics) (20 January 2021, date last accessed).
2. Vizard T, Davis J, White E, Beynon B. Coronavirus and Depression in Adults, Great Britain: June 2020. ONS [Internet]. 2020. <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/coronavirusanddepressioninadultsgreatbritain/june2020> (20 August 2020, date last accessed).
3. CIPD. *Employee Outlook: Employee Views on Working Life. Focus: Mental Health in the Workplace*. Chartered Institute of Personnel and Development, 2016. [https://www.cipd.co.uk/Images/employee-outlook\\_2016-focus-on-mental-health-in-the-workplace\\_tcm18-10549.pdf](https://www.cipd.co.uk/Images/employee-outlook_2016-focus-on-mental-health-in-the-workplace_tcm18-10549.pdf) (20 August 2020, date last accessed).
4. Mielczarek M, Schneider E, González E. *OSH in Figures: Stress at Work—Facts and Figures*. European Risk Observatory, European Agency for Safety and Health at Work, 2009. <https://osha.europa.eu/en/publications/osh-figures-stress-work-facts-and-figures> (20 August 2020, date last accessed).
5. NICE. *Mental Wellbeing at Work. Public Health Guideline [PH22]*. The National Institute for Health and Care Excellence, 2009. <https://www.nice.org.uk/guidance/ph22> (20 August 2020, date last accessed).
6. NICE. *Physical Activity in the Workplace. Public Health Guideline [PH13]*. The National Institute for Health and Care Excellence, 2008. <https://www.nice.org.uk/guidance/ph13> (20 August 2020, date last accessed).
7. NICE. *Workplace Health: Management Practices. NICE Guideline [NG13]*. The National Institute for Health and Care Excellence, 2016. <https://www.nice.org.uk/guidance/ng13> (20 August 2020, date last accessed).
8. NICE. *Workplace Health: Long-Term Sickness Absence and Capability to Work. NICE Guideline [NG146]*. The National Institute for Health and Care Excellence, 2019. <https://www.nice.org.uk/guidance/ng146> (20 August 2020, date last accessed).
9. NICE. *Healthy Workplaces: Improving Employee Mental and Physical Health and Wellbeing. Quality Standard [QS147]*. The National Institute for Health and Care Excellence, 2017. <https://www.nice.org.uk/guidance/qs147> (20 August 2020, date last accessed).
10. HSE. *Work-Related Stress, Anxiety or Depression. HSE Management Standards: Health and Safety Executive*, 2019. <https://www.hse.gov.uk/stress> (20 August 2020, date last accessed).
11. HSE. *Tackling Work-Related Stress Using the Management Standards Approach—A Step-by-Step Workbook*. TSO, 2019. <https://www.hse.gov.uk/pubns/wbk01.pdf> (20 August 2020, date last accessed).
12. NICE. *Common Mental Health Problems: Identification and Pathways to Care. Clinical Guideline [CG123]*. The National Institute for Health and Care Excellence, 2011. <https://www.nice.org.uk/guidance/cg123> (20 August 2020, date last accessed).
13. Seymour L. *Common Mental Health Problems at Work. A Progress Review*. Sainsbury Centre for Mental Health, 2010. [http://www.mas.org.uk/uploads/articles/BOHRF\\_common\\_mental\\_health\\_problems\\_at\\_work.pdf](http://www.mas.org.uk/uploads/articles/BOHRF_common_mental_health_problems_at_work.pdf) (20 August 2020, date last accessed).
14. Rebergen DS, Bruinvels DJ, Bos CM, van der Beek AJ, van Mechelen W. Return to work and occupational physicians' management of common mental health

- problems—process evaluation of a randomized controlled trial. *Scand J Work Environ Health* 2010;**36**:488–498.
15. van der Klink JJ, van Dijk FJ. Dutch practice guidelines for managing adjustment disorders in occupational and primary health care. *Scand J Work Environ Health* 2003;**29**:478–487.
  16. Kendrick T, Pilling S. Common mental health disorders—identification and pathways to care: NICE clinical guideline. *Br J Gen Pract* 2012;**62**:47–49.
  17. Michaelis M, Balint E, Junne F *et al*. Who should play a key role in preventing common mental disorders that affect employees in the workplace? Results of a survey with occupational health physicians, primary care physicians, psychotherapists, and human resource managers. *Int J Environ Res Public Health* 2019;**16**:1383.
  18. Seymour L, Grove B. *Workplace Interventions for People with Common Mental Health Problems: Evidence Review and Recommendations*. London: BOHRF, 2005.
  19. NICE. *Depression in Adults: Recognition and Management; Clinical Guideline [CG90]*. The National Institute for Health and Care Excellence, 2009. <https://www.nice.org.uk/guidance/cg90> (20 August 2020, date last accessed).
  20. Lelliott P, Tylloch S, Boardman J *et al*. *Mental Health and Work*. Royal College of Psychiatrists, 2008. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/212266/hwwb-mental-health-and-work.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/212266/hwwb-mental-health-and-work.pdf) (20 August 2020, date last accessed).
  21. Employers N. *Guidance on Prevention and Management of Stress at Work*. The NHS Staff Council, 2014. <https://www.nhsemployers.org/-/media/Employers/Publications/Guidance-on-prevention-and-management-of-stress-at-work-final-for-website-16-Oct.pdf> (20 August 2020, date last accessed).
  22. Elder S. *Position Statement Provision of Occupational Health Services to Small and Medium Sized Enterprises*. London: Faculty of Occupational Medicine, 2006.
  23. Joosen MC, Brouwers EP, van Beurden KM, *et al*. An international comparison of occupational health guidelines for the management of mental disorders and stress-related psychological symptoms. *Occup Environ Med* 2015;**72**:313–322.
  24. Waddell G, Burton A, Kendall N. *Vocational Rehabilitation—What Works, for Whom, and When?* London: Stationery Office, 2008.
  25. NICE. *Generalised Anxiety Disorder and Panic Disorder in Adults: Management. Clinical Guideline [CG113]*. The National Institute for Health and Care Excellence, 2019. <https://www.nice.org.uk/guidance/cg113> (20 August 2020, date last accessed).
  26. Kvam S, Kleppe CL, Nordhus IH, Hovland A. Exercise as a treatment for depression: a meta-analysis. *J Affect Disord* 2016;**202**:67–86.
  27. Kerr R, McHugh M, McCrory M. HSE Management standards and stress-related work outcomes. *Occup Med (Lond)* 2009;**59**:574–579.
  28. Anderson E, Shivakumar G. Effects of exercise and physical activity on anxiety. *Front Psychiatry* 2013;**4**:27–31.
  29. Schuch FB, Vancampfort D, Richards J, Rosenbaum S, Ward PB, Stubbs B. Exercise as a treatment for depression: a meta-analysis adjusting for publication bias. *J Psychiatr Res* 2016;**77**:42–51.
  30. Joyce S, Modini M, Christensen H, *et al*. Workplace interventions for common mental disorders: a systematic meta-review. *Psychol Med* 2016;**46**:683–697.