Attitudes to and perceptions of workplace health promotion amongst employees from ethnic minorities in the UK: A scoping review.

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Published version

PLATTS, Katharine, SCOTT, Emma, GRIFFITHS, Kerry and CARTER, Anouska (2024). Attitudes to and perceptions of workplace health promotion amongst employees from ethnic minorities in the UK: A scoping review. Work, 1-17.

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Abstract

BACKGROUND

Ethnic minorities make up approximately 14% of the UK workforce. Despite the disproportionate burden of ill-health amongst ethnic minorities, and the increased interest in Diversity, Equity & Inclusion (DE&I) in the workplace, workplace health and wellbeing interventions are still most often designed for the ethnic majority.

OBJECTIVE

The purpose of this scoping review was to explore the depth and breadth of evidence on the attitudes to and perceptions of health and wellbeing interventions in the workplace within ethnic minority groups in the UK, and to identify gaps in evidence that would provide direction for future research needs.

METHODS

A scoping review with quality appraisal was undertaken, supplemented by a review of grey literature and a narrative review exploring related evidence from the knowledge bases related to community and cultural adaptation.

RESULTS

Only three peer-reviewed studies met inclusion criteria. Further database searches yielded a total of 10 papers from the community literature and four papers from the cultural adaptation literature with relevance to the perceptions and attitudes of ethnic minorities to health and wellbeing interventions in the community. Three grey literature sources were also explored.

CONCLUSION

The literature suggests a need for improvements in four key areas: (1) reporting of ethnic minorities in data relating to workplace health and wellbeing research, (2) more thorough review of perceptions and attitudes of ethnic minority workers in the UK, (3) design of culturally appropriate interventions that are tested for impact, and (4) testing of the effectiveness of culturally adapted interventions.

Keywords

Workplace, Health Promotion, Ethnic and Racial Minorities, United Kingdom, Occupational Groups

1. Introduction

Research and services are predominantly designed to support the population majority. Yet ethnic minorities make up 18.3% of the UK population (approximately 10.9 million people), with South Asian and Black populations making up the largest ethnic groups in England and Wales [1].

Ethnic minorities in the UK are reported to have some different health and wellbeing needs, often experiencing a disproportionate burden of health inequalities [2], with increased risk of diabetes [3, 4], cardiovascular disease [5, 6] and mental health issues [7]. Stigma towards mental illness is also reported to be higher among ethnic minority groups [8].

Ethnic minorities make up approximately 14% of the UK workforce (approximately 4 million people [9]). Dame Carol Black's landmark review in 2008 identified the workplace as key setting for health and wellbeing improvement [10]. More recently, the issues of an aging workforce, and increased exit of people over 50 years old with long-term conditions from work, have thrown the need for comprehensive workplace wellbeing support into sharp focus [11]. Although these reports do not focus on ethnic minority groups specifically, the workplace offers a potential environment in which to influence and improve overall health and wellbeing in minority groups across the UK. It is therefore imperative that the provision of health and wellbeing services in the workplace provide equal support to all sections of the workforce, including those from ethnic minorities [12].

There has been an ongoing interest in enhancing wellbeing in the workplace, boosted significantly by the Covid-19 pandemic which has forced employers to consider different working practices and environments for their employees [13]. Despite the disproportionate burden of ill-health amongst ethnic minorities, and the interest in Diversity, Equity & Inclusion (DE&I) in the workplace, workplace health and wellbeing interventions are most often designed for the ethnic majority [12].

The focus on better supporting the health and wellbeing of ethnic minorities in the UK workforce is an emerging field, with limited literature. Exploration of this issue via a scoping review provided a flexible approach that would allow inclusion of grey literature and adaptation of the inclusion and exclusion criteria to ensure that all relevant documents could be included.

The main purpose of this scoping review was to explore the depth and breadth of evidence about attitudes to, and perceptions of, health and wellbeing interventions in the workplace within ethnic minority groups in the UK, and to identify gaps in evidence that would provide direction for future research needs.

2. Methods

This review followed the six-stage framework for scoping reviews (table 1) as described by Arksey and O'Malley [14] and Levac et al. [15], with additional quality appraisal of studies included in the final review using the CASP criteria for qualitative research [16].

A full search of the grey literature was conducted, with an additional narrative search for supplementary data from community health and wellbeing interventions and cultural adaptation literature, to determine if learnings from other settings may be transferable to the workplace environment.

2.1 Scoping Review – Stages

2.1.1 Identifying the Research Question

Scoping reviews enable a much broader view of the evidence base, yet Levac et al. [15] recommended the importance of combining this with a more detailed scope to focus the search strategy. The PICO framework introduced by Richardson et al. [17] supports this process when seeking both qualitative and quantitative literature. The research team determined the scope and formulated the research question based on this framework (table 2).

2.1.2 Identifying Relevant Peer Review Studies and Grey Literature

Criteria for a full systematic search of relevant citations was decided upon by the research team. Anticipating a low number of relevant papers, the research team opted to include studies that either took place in a UK workplace or that had relevance to the UK workplace. Systematic searches were conducted using PubMed, SCOPUS, and The Cochrane Library. The search criteria are outlined in table 2.

In addition, three journals highlighted as specifically relevant by the research team were hand searched via contents, title and abstract for further relevant studies. A further two journals were included in the hand search in response to the frequency with which articles from these journals appeared in the reference lists of other review articles on similar topics.

Furthermore, the research team developed a comprehensive list of websites from predominantly UK-based organisations that warranted an independent search for relevant grey literature (table 3). These websites were searched for literature related to ethnic minorities in the workplace.

2.1.3 Selecting Studies

References were imported into Endnote and duplicates removed. Titles and abstracts were screened in Endnote, with relevant texts obtained for full text screening. The inclusion and exclusion criteria for screening are presented in table 4.

Full-text screening was conducted by two researchers (ES, KP) working independently with any differences of opinion regarding inclusion discussed by a third reviewer (AC). The PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analyses) flow chart was used to report results.

2.1.4 Charting the Data

A data charting form was created by the researchers undertaking full text screening (ES, KP) to enable data extraction, with any differences of opinion related to included content resolved by a third reviewer (AC). Key information extracted during this phase is outlined in table 5. A quality appraisal of the included studies was conducted by a fourth reviewer (KG) using the CASP questions for qualitative literature [16].

2.1.5 Collating, Summarising and Reporting the Results

Following the conventions described by Levac et al. [15], a descriptive summary of the data was prepared, with careful reference to the original research questions and purpose of review, and implications for future research, practice, and policy were considered.

2.1.6 Consulting Knowledge Users

The research team consulted with stakeholders at a UK-based private sector provider of workplace wellness solutions during the review process to ensure that the reported results and method of reporting had commercial relevance and were suitable and appropriate for organisational use.

2.2 Supplementary Narrative Review

Based on initial exploratory work the authors were aware that the scoping review may only yield a small number of papers. Therefore, to support the workplace context-specific data, a supplementary search was conducted (AC) to enable a narrative review of community and cultural adaptation literature related to health and wellbeing interventions in the UK.

It is acknowledged that a narrative review lacks the scientific rigor of a systematic or scoping review and is subject to author bias. However, it was deemed a useful method for obtaining additional information of relevance to the research question and gaining a wider perspective on the research topic.

For the supplementary narrative review the team looked at literature relating to cultural adaptations of health and wellbeing interventions in the community that may have relevance to the workplace. The following databases were searched for literature relevant to answering the research question, PubMed, SCOPUS, and Google Scholar. A combination of the following keywords was selected to be used: 'community', 'ethnic', 'minority', 'wellbeing', and 'health'. The additional terms were added following an initial review of findings: 'lifestyle', 'physical activity', 'nutrition', 'cultural adaptation'. Data was not restricted by publication date but was restricted to papers published in English and readily available to review.

3. Results

3.1 Scoping Review

3.1.1. Identifying and Selecting Articles

Academic Literature

Initial database searches yielded 3,914 results, after duplicates were removed 3,689 were retained for title and abstract screening. Following title and abstract screening, 3,676 articles were deemed not relevant, with 13 retained for full-text screening. A further 21 articles were retained for full text screening from hand searched journals, leaving a total of 34 papers for full-text review. Only three articles met the criteria and were included in the final review. Results are outlined in figure 1 using an adapted PRISMA flow chart.

Grey Literature

A total of 15 websites were searched for grey literature. Following the website searches 71 pieces of grey literature were reviewed to determine if they contained any relevant information. Types of content included reports, bulletins, consensus statements, conference proceedings, articles, toolkits, and blog posts.

Following full screening, only three pieces of grey literature were deemed potentially relevant, none had direct relevance to ethnic minorities in the workplace. Table 3 outlines the data from each web search.

3.1.2 Charting, Collating and Summarising Results

Scoping Review Programme Characteristics

The journal articles were published between 2017 and 2022. Although three articles were included, two were based on the same intervention, looking at different elements of the same study. Only the study by Bertotti et al. [18] was based in the UK and focused on Chinese business in London, whilst the study by Verburgh et al. [19,20] was based in a Dutch Medical Centre in the Netherlands. Both studies employed qualitative methods using both interviews and focus groups to explore barriers and facilitators to workplace wellbeing. A summary of included citations is provided in table 5.

Quality appraisal

A quality appraisal of the academic literature was carried out using the CASP questions for qualitative data (table 6) [16]. All papers were of moderate to high quality, with the paper by Bertotti et al. [18] scoring 14/20 and the two Verburgh et al. papers [19,20] scoring 17 and 18 respectively.

Grey Literature

The grey literature search revealed three reports/articles that contained potentially relevant information. None were directly relevant, and most of the workplace grey literature had no mention of race or ethnicity. The three reports/articles are summarised in table 7 below.

3.1.3 Consulting Knowledge Users

The research team prepared a draft project report for the private sector collaborator, with a meeting arranged to disseminate, discuss, and interpret key findings via a presentation to key stakeholders from the business, prior to finalisation of the results.

3.2 Supplementary Narrative Review

3.2.1 Cultural Adaptation of Health Interventions in the Community

Database searches yielded a total of 10 papers from the community literature and four papers from the cultural adaptation literature with relevance to the perceptions and attitudes of ethnic minorities to health and wellbeing interventions in the community.

4. Discussion

4.1 Main Findings

Despite workplace wellbeing receiving a lot of attention in the UK over the last 15 years, and the more recent highlighted importance of DE&I in the workplace, there has been very little academic or grey literature directly reporting on the attitudes and perceptions to workplace wellbeing of ethnic minority workers in the UK. Only three papers met the scoping review inclusion criteria, only one of which was UK based, targeting Chinese employers in London. Whilst the other was European and included a large number (n= 21) of different ethnic groups.

Data from grey literature was also sparse, with only four reports/articles containing reference to race or ethnic minorities, none of which had information that directly answered the reviews research question. Further supplementary literature from community interventions, highlighted some useful findings, but again there was a lack of robust trials to test the efficacy of interventions adapted for different ethnic minority groups.

4.2 Scoping Review

4.2.1 Peer Reviewed Articles

Findings from the paper by Bertotti et al. [18] suggested that Chinese Employers in London had a reactive approach to health and wellbeing at work and would need a convincing business case to change practices. Views were affected by whether the business owners were first generation Chinese or British born, with the later more willing to take on Western business approaches including workplace wellbeing policies and resources. Employees in this study were all Chinese, and problems highlighted included such as poor mental health and poor working conditions and wages – something the employers seemed unaware of.

This paper identified fundamental issues that needed to be addressed in Chinese-owned businesses that included basic health and safety, as well as a lack of workplace wellness engagement. Participants were from a limited business sector of English-speaking businesses, who volunteered to take part, so these results may not be generalisable to Chinese workers in other non-Chinese owned businesses. Indeed, other Chinese owned businesses who did not volunteer may have business environments that are more or less supportive of worker health.

Only the by Verburgh et al. [19] was based around an intervention ‘the Work-Life Program (WLP)’, which explored the impact of the programme on women's health and work functioning in a Dutch medical centre. The programme demonstrated impact, with menopausal symptoms significantly improving following the intervention despite work-related parameters remaining unchanged. The qualitative findings suggest that female workers in low paid jobs experienced a positive impact from the WLP. The WLP was reported to empower them to make choices that benefit their health and wellbeing both at work and in their private lives, through a process of mental empowerment.

Although there is limited insight regarding reasons for engagement in the trial, participants highlighted that the WLP offered opportunities not usually available to them in their culture, specifically the discussion of menopause, midlife changes, and their own needs. Participants were not recruited based on any specific issues related to the topic of interest and came from diverse ethnic backgrounds preventing results from being representative across a particular population.

The second paper by Verburgh et al. [20] reported results relating to reaching and engaging women from ethnic minorities in workplace health promotion, although the minorities under study were categorised as 'mixed' and were not specified by ethnicity. The study design included many cultural adaptations, which may have aided recruitment and engagement. Recruitment activities, including personalised letters and an additional information meeting with a line manager of similar ethnic background present. This led to a diverse range of women from different ethnic backgrounds participating in the programme.

The key programme facilitators were reported to be: (1) accessibility of offering sessions in the workplace and in work time; (2) programs tailor-made and both individual and group sessions available; (3) practical support for low literacy and language barriers; (4) female facilitators/professionals especially for women from non-western backgrounds.

Barriers to participation were similar to those reported in non-ethnic minority groups and included: (1) creating time in the workday to attend sessions; (2) inconsistent time intervals between sessions; (3) availability/location of rooms for sessions.

Although the overall quality of the literature was reported as moderate to high, the strength of evidence is severely limited by the small number of papers and participants, with the included ethnic minorities of limited relevance to the dominant ethnic groups in the UK workforce (South Asian and Black). Direct evidence relating to perceptions and attitudes of minority groups to wellbeing interventions in American workplaces is similarly lacking. Anecdotal findings in American research suggest that interventions should focus on proactively addressing the issues of discrimination and inclusion to support employee health, as these are the issues that individuals report to have the greatest bearing on sense of wellbeing at work [21].

4.2.2 Grey Literature

Although there was a wealth of grey literature on workplace health and wellbeing, only a small amount of literature referred to race or ethnicity. However, this literature did not go beyond reporting data by ethnicity [22] and providing recommendations for future research based on the lack of evidence on specific needs and intervention effectiveness in different ethnic groups [23,24]. There was no direct information on the attitudes and perceptions of ethnic minorities in relation to workplace health and wellbeing or reports on intervention effectiveness.

4.3 Supplementary Narrative Review

4.3.1 Dimensions of Ethnicity

When looking at designing interventions to better support ethnic minorities it is important to understand that ethnicity has many dimensions. Liu et al. [12] outlined five overlapping components: physical features, ancestry, language, culture, and religion. Furthermore, even in individuals who have the same ethnicity there may be different needs depending on gender, age generation, migration history and socio-economic background [25].

4.3.2. Cultural Adaptations of Health and Wellbeing Interventions

There is a lack of clear evidence in the research literature on how best to adapt health promotion interventions to better support people from ethnic minorities. Yet adaptations have the potential to increase the effectiveness of interventions, by improving uptake and acceptability across the whole population [12].

Cultural Adaptation is “the systematic modification of an evidence-based treatment (or intervention protocol) to consider language, cultural, and context in such a way that it is compatible with the client’s

cultural patterns, meaning, and values." [26]. One of the earliest studies to look at cultural adaptation was based on the development of psychosocial treatments with a Hispanic population [27]. Bernal et al. [27] identified eight dimensions for treatment interventions that could be adapted; language, persons, metaphors, content, concepts, goals, methods, and context. More specifically related to health interventions, Netto et al. [28] outlined five principles for adapting health promotion interventions in the community. These principles have potential use within the workplace, with potential examples for this context outlined in table 8.

Liu et al. [12] used these five principles to set out a programme theory of adapted health promotion interventions (figure 2). These principles and theories were developed for use with community health interventions, yet few research studies have robustly tested the impact of implementing them in the community or workplace [12, 29]. In a recent review by Self et al. [30], 10 studies were identified as using culturally adapted motivational interviewing to promote behaviour change and reported that the culturally adapted intervention produced significantly better results for the primary outcome tested. However, data is still limited and has not been tested on health and wellbeing programmes in the workplace, yet they have the potential to provide a good starting point when designing or adapting health interventions for minority groups in the workplace.

4.3.3. Community Health, Wellbeing and Lifestyle Interventions Targeting UK Ethnic Minorities

Data on wellbeing and lifestyle interventions to improve health for ethnic minorities are scarce. There is slightly more research across the US, but in Europe this is limited. Nearly all studies in Europe are with South Asian groups and are community based [2]. The South Asian population is the fastest growing minority in Europe [31]. Learnings from qualitative literature that has looked at perceptions and attitudes including barriers and facilitators to leading a healthy lifestyle is scarce. A summary of common findings is outlined in table 9.

4.3.4 Useful Research Methods for Programme Design

When designing research with any group of individuals, one of the most crucial things is to talk to those who are going to use the service. This is often classed as 'people-centred' design or co-design and at the very least should include patient or public involvement. Patient and Public Involvement and Engagement (PPIE) entails research being carried out 'with' or 'by' members of the public, rather than 'to', 'about' or 'for' them [32]. Key stages of co-design include exploring the problems, identifying priorities, ideating, and finalising solutions tailored to the local context, implementing these solutions with and for the people for whom it is designed, ensuring the results meet their needs and are usable [33]. Research methods suitable for developing interventions using a co-design approach include, patient/public involvement (PPI), focus/discussion groups, interviews, surveys, questionnaires.

4.4 Strengths/Limitations of Review

To our knowledge this is the first scoping review to report the attitudes to and perceptions of ethnic minorities to workplace health and wellbeing interventions in the UK. The scoping review rigorously followed established review methodology [15], and included a quality appraisal of the included literature, ensuring a high standard. However, the supplementary review conducted to determine if there was relevant UK community-based literature was narrative, which lacks the systematic rigor of a scoping review and may have missed some relevant publications.

Due to the very limited amount of literature in this area a broader research question may have been relevant to capture more learnings from other areas. Furthermore, the scoping review was restricted to content from the last 10 years to keep the data relevant to modern day practices, which may have missed potentially relevant studies conducted prior to 2012.

5. Conclusion

5.1 Key Findings to Inform Future Practice

Health and wellbeing and DE&I are deemed important in the UK workplace and can potentially support some of the key public health agendas in the UK around the health of the nation and health inequalities. Despite this there is very little research reporting the perceptions and attitudes of ethnic minorities, to determine how best to do this.

Current literature from both the workplace and community suggests a need for cultural adaptations to support recruitment, engagement and impact of health and wellbeing interventions. Some key adaptations that have potential to improve interventions for ethnic minorities include providing support with language barriers, availability of female deliverers, champions from similar ethnic backgrounds, a desire to be healthy, fears that weight gain might compromise family care, Type 2 Diabetes diagnosis, exercise classes in safe environment and an increased awareness of links between physical activity and health.

Many perceived barriers to accessing health and wellbeing support for ethnic minorities are similar to those experienced in the general population and include time and financial constraints. However, additional barriers such as, language, cultural and religious norms, lack of culturally suitable environments (to exercise), lack of same sex facilities/opportunities, fear of racial harassment, cultural traditions (food) and a distrust of western ways including health care and health guidelines.

A client-centred approach using methods such as co-design are key to enabling interventions to be designed and adapted in a way that is culturally sensitive and inclusive for the whole population.

5.2 Gaps in Knowledge

The literature suggests a need for improvements in four key areas: (1) reporting of ethnic minorities in data relating to workplace health and wellbeing research, (2) more thorough review of perceptions and attitudes of ethnic minority workers in the UK, (3) design of culturally appropriate interventions that are tested for impact, and (4) testing of the effectiveness of culturally adapted interventions.

5.3 Summary

There is a clear lack of evidence relating to ethnic minorities and wellbeing in the workplace, particularly around perceptions and attitudes, with studies rarely reporting the ethnicity of participants or focusing on minority groups. This review was supplemented from literature (community) outside of the workplace, where there was some limited data. This has provided the researchers with a start point with some potentially useful insights around what might work and how this can be tested and built on in the future. Further research in this area is strongly recommended to build on the foundations of knowledge summarised in this paper.

Acknowledgments

The authors wish to thank colleagues at [*to be added after review to preserve anonymity*] for providing feedback and guidance as knowledge users. The authors with to thank the editors and the reviewers for their helpful suggestions on earlier versions of this manuscript.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Funding

Funding for this review was provided by [*to be added after review to preserve anonymity*], under the auspices of their strategic research partnership with [*to be added after review to preserve anonymity*].

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581 Table 1. Six Stages for conducting a scoping review [15].

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Six Stages for conducting a scoping review
1. Identifying the research question
2. Identifying relevant studies
3. Selecting studies
4. Charting the data
5. Collating, summarizing, and reporting the results
6. Consulting knowledge users

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584 Table 2. PICO framework to determine scope for review and search criteria.

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PICO	**Scope**	**Search Criteria**
Population	UK ethnic minorities in part-time or full-time employment, focusing on larger UK minority groups (using ONS census data)	Multicultural OR Ethnic* OR Minorit* AND
Interest/Intervention	Health promotion or wellbeing interventions	Health Promotion OR Well-being OR Wellbeing OR Wellness AND
Context/Comparator	Studies conducted in UK workplace or relevant to the UK workplace	Employ* OR Workforce OR Workplace OR Corporate AND
Outcome	Studies reporting findings on experiences (attitudes, perceptions, barriers, facilitators) of workplace wellbeing intervention/promotion from the perspectives of ethnic minorities	Attitude OR Perception OR Barrier OR Facilitator OR Experience
Study Design	Longitudinal, experimental, qualitative, pilot/feasibility, mixed methods	

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588 Table 3. Websites searched for relevant grey literature and findings of relevance.

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Organisation/website	**Findings**	**Count and relevance**
Academy of Royal Medical Colleges (AMRC) https://www.aomrc.org.uk/ / Royal College of Nursing (RCN) https://www.rcn.org.uk/ / Allied Health Professional Federation (AHPF) http://ahpf.org.uk/	1 Consensus Statement	1NRI
British Occupational Health Research Foundation https://www.bohrf.org.uk/	8 Articles	8NRI
Chartered Institute of Personnel and Development (CIPD) https://www.cipd.org/uk/	0	
Department of Health, now Department of Health & Social Care (DoH, DoHSC) https://www.gov.uk/government/organisations/department-of-health-and-social-care	1 Report	1NRI
Department of Work & Pensions (DWP) https://www.gov.uk/government/organisations/department-for-work-pensions	1 Report 1 Bulletin	2NRI
Faculty of Occupational Medicine, Business in the Community (BITC) https://www.fom.ac.uk/about-us	2 Toolkits	2NRI
Health & Safety Executive (HSE) https://www.hse.gov.uk/index.htm	5 reports	4NRI 1PRI
Mental Health First Aid.org. https://www.mentalhealthfirstaid.org/	1 Blog	1NRI
National Institute for Health and Care Excellence (NICE) https://www.nice.org.uk/	35 Reports	34NRI 1PRI
Partnership for European Research in Occupational Safety and Health (PEROSH) www.perosh.eu	4 Conference Papers 3 Articles	7NRI
Public Health England (PHE), now Office of Health Improvement & Disparities (OHID, part of DHSC) https://www.gov.uk/government/organisations/office-for-health-improvement-and-disparities	1 Report	1NRI
Wellbeing at Work Conferences – coordinated by PEROSH https://perosh.eu/repository/programme-wellbeing-at-work-2022/	4 Conference Papers 3 Articles	7NRI
Wellcome Trust Home | Wellcome	1 Report	1PRI

Total	**71**	**68NRI** **4PRI**

590 NRI = Not Relevant Information, PRI = Potentially Relevant Information, RI= Relevant Information

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592 Table 4. Inclusion and exclusion criteria for article screening.

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Inclusion	**Exclusion**
Study took place in a UK workplace or has relevance to the UK workplace Study includes at least 1 ethnic minority as outlined by ONS Studies written in English Study taken place in last 10 years (expand to 20 if needed) FREE full text only	Studies that do not report population by ethnic group Studies taking place outside the UK with no application to the UK workplace Studies not written in English Studies older than 10 years from data of search

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595 Table 5. Summary of Scoping Review Citations.

Citation /Country of Origin	Research Question	Design/ Methodology	N=	Age	Gender	Ethnicity	Context	Type of Intervention	Key Findings
Bertotti et al. [18] UK/London	(1) Understand the context and approach to staff well-being within Chinese owned businesses based in London (2) identify any potential levers, barriers, and triggers for engaging Chinese-led businesses with workplace well-being initiatives	Qualitative - Semi-structured interviews and focus groups Cross-sectional Thematic Content Analysis	Interviews - n=11 employees; n=17 employers; focus groups - n=10 employees	Interviews (employees): 25-35 n=7 35-45 n=1 65-75 n=2 Interviews (employers): 25-35 n=1 30-40 n=3 35-45 n=3 40-50 n=4 45-55 n=3 50-60 n=1 55-65 n=2 Focus group: not reported	Interviews (employees) : 7 male; 4 female Interviews (employers) : 12 male; 5 female Focus group: not reported	Chinese living in London	Chinese SMEs in London	No intervention - cross-sectional exploration of attitudes towards workplace wellness and willingness to engage	• Employers' attitudes towards workplace wellbeing were reactive rather than proactive, informal, and characterised by in-house on the job health and safety training. But they would make changes if a convincing business case could be made. • Few employers demonstrated awareness of the impact of issues such as salary levels, working conditions, workers' rights, and relationships between colleagues which, in contrast, were key concerns of the employees. • Generation of owner - first generation Chinese vs British-born Chinese effects willingness to embrace more western approach to business, including workplace wellness.

Verburgh et al. [19] Netherlands/ Amsterdam	What is the impact of the Work-Life Program on women's health and work functioning? aims to support female workers during menopause and midlife in making choices that will enhance their health and wellbeing in both their working and private lives.	Mixed methods - before and after questionnaire; semi-structured in-depth interviews Longitudinal	Quantitative n=56; Qualitative n=12	Only 45-60yrs old eligible; mean age 52.6 +/- 4.5yrs	All Female	Quantitative: Ethnic majority – (Dutch) n=34 Ethnic minority n=36 (21 different backgrounds) Qualitative: Ethnic majority (Dutch) n=5 Ethnic minority n=7	Low paid jobs at Amsterdam University Medical Centre	Integral approach which encompasses an intake session to explore participant needs and general health check, health education on menopause, lifestyle coaching to improve work-life balance, and physical training. 8x 1hr sessions, flexible scheduling over 2-4mths	• Quantitative findings - only menopausal symptoms showed any significant difference between pre- and post-intervention; psychological, somatic, and vasomotor symptoms, depression and overall score all improved. Anxiety and sexual dysfunction did not. No change in work functioning, quality of life or work ability. • Qualitative findings - The WLP initiated a process of mental empowerment (defined as a form of self-efficacy) in most participants; participants said they felt stronger and freer. This has been associated with changes in behaviour, physical health, mental well-being and in the workplace. • Findings suggest that female workers in low paid jobs experience positive impact from the WLP. It empowers them to make choices that benefit their health and

									wellbeing both at work and in their private lives. Additional qualitative methods are indispensable for evaluating the impact of an intervention among a very heterogeneous study population.
Verburgh et al. [20]	How can we reach and engage an ethnically diverse group of midlife women with a low socioeconomic position (SEP) in the implementation of this workplace health promotion (WHP) intervention?	Qualitative evaluation of the implementation of the WLP using the RE-AIM framework (Reach, Effect, Adoption, Implementation, Maintenance). R: Quant plus interviews; E: mixed methods [19]; A: Focus group and interviews; I: interviews; M: focus groups Longitudinal	Interviews - n=12 Intervention participants; n=5 professionals involved in implementing intervention (out of 10 involved); Focus group - n=6 organisation stakeholders	As Above	As Above	Ethnic majority (Dutch) n=34 Ethnic minority n=36 (21 different backgrounds)	As Above	As Above	• Reach - Personal invitation letter most influential to participate; information meetings also perceived to have added value, even if they had already decided to participate, especially for those who could not read or fully understand the letter. The presence of line managers of the same ethnic background at verbal invitation meetings was important to create trust. • Implementation - Facilitators: (1) accessibility of offering sessions in the workplace and in work time; (2) program was tailor-made and both individual and group sessions were an option; (3) practical support for low literacy and

									language barriers; (4) female facilitators/professionals especially for women from non-western backgrounds. • Implementation - Barriers: (1) practicality of creating time in the workday to attend sessions; (2) inconsistent time interval between sessions; (3) availability/location of rooms for sessions.

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598 Table 6. Key quality appraisal results using the CASP questions [16].

Paper / CASP questions	**Bertotti et al. [18]**	**Verburgh et al. [19]**	**Verburgh et al. [20]**
1. Was there a clear statement of the aims of the research?	Yes	Yes	Yes
2. Is a qualitative methodology appropriate?	Yes	Yes	Yes
3. Was the research design appropriate to address the aims of the research?	Yes	Yes	Yes
4. Was the recruitment strategy appropriate to the aims of the research?	Unsure	No	Unsure
5. Was the data collected in a way that addressed the research issue?	Unsure	Yes	Yes
6. Has the relationship between researcher and participants been adequately considered?	No	Yes	Unsure
7. Have ethical issues been taken into consideration?	Yes	Yes	Yes
8. Was the data analysis sufficiently rigorous?	Unsure	Yes	Yes
9. Is there a clear statement of findings?	Yes	Yes	Yes
10. How valuable is the research?	Unsure	Unsure	Yes
TOTAL SCORE/20 (Yes=2, Unsure=1, No=0)	**14**	**17**	**18**

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602 Table 7. Summary of grey literature from scoping review.

	Title	**Possible Transferable Findings**
Health and Safety Executive (HSE) [22]	RR242 – *The evaluation of occupational health advice in Primary Care (2004).*	Focus on ethnic breakdown of access to primary care, such as reasons for consultation, frequency of contact etc. Features data from London and Sheffield sites, London cohort much more ethnically diverse.
National Institute of Clinical Excellence (NICE) [23]	*Mental wellbeing at work (NG212; March 2022)*	Mention of ethnicity in the Recommendations for Research which asks: • What specific needs of employees from different groups (such as income levels, ethnic groups, male or female groups, and age groups) need addressing to facilitate access to individual-level interventions? • How effective are individual-level interventions across different groups (such as income levels, ethnic groups, male or female groups, and age groups)?
Wellcome Trust [24]	*Putting Science to Work – Where next for workplace mental health?* (2022)	Highlights the lack of evidence looking at how workplace wellness interventions may work (or not) for people of different ages, genders, ethnicities, and socio-economic groups. Recommends further work in this area.

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605 Table 8. Five principles for adapting behavioural interventions with examples and potential
606 crossover to the workplace (Adapted from Netto et al. [28]).

Principle	**Examples**
1. Use of community resources to publicise the intervention and increase acceptability.	Use ethnic specific media and networks, community leaders and events to publicise events. Workplace adaptation: Utilise any current networks that are already in place for ethnic minorities in the workplace to publicise events or develop such networks.
2. Identify and address barriers to access and participation.	Tailor timing and location of events to BME women to account for caring responsibilities. Workplace adaptation: Arrange a discussion group to learn what barriers there are and how best they can be overcome.
3. Develop communication strategies that are sensitive to language use and information requirements.	Bilingual facilitators. Use spoken rather than written language to communicate with low literacy groups. Workplace adaptation: Work with people from ethnic minorities to adapt literature, using common and familiar terms. For example, a nutrition leaflet should include examples that use ethnic foods as well as western.
4. Work with cultural or religious values that either promote or hinder behavioural change.	Highlight compatibility of health promotion messages with religious beliefs. Workplace adaptation: As above.
5. Accommodate varying degrees of cultural identification.	Account for generation and migration history difference by more intensively exposing first-generation migrants to the intervention. Workplace adaptation: As above.

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609 Table 9. Common barriers and facilitators to leading a healthy lifestyle among ethnic
610 groups in the UK.

Health Behaviour	**Barriers and Facilitators**
General	Barriers • Financial constraints, childcare, time, accessing venues [34,35,36] • Language [2, 37] • Cultural and religious norms affect service utilisation [38] • Religious fatalistic attitudes [34,35] 'whatever happens is because of God's will' [34] Facilitators • Gender specific facilities [39] • Type 2 Diabetes diagnosis [2] • Information available in mother tongue [39]
Physical Activity (PA)	Barriers • Practical challenges; Childcare, time, motivation [25, 40] • Suitable environment that is culturally appropriate for physical activity [34,36,40] • Lack of same sex venues and acceptability of western exercise clothing [2] • Cultural expectations and social responsibilities [40] • Prioritising work over PA to provide for the family [2] • Fear of racial harassment when exercising [2] • Religion and religious fatalism [40] Facilitators • Exercise class in safe environment i.e., place of worship [2] • Awareness of links between physical activity and health [40] • Previous interaction and engagement with health professionals [40]
Healthy Eating	Barriers

	• Cultural barriers regarding serving and eating traditional foods [2,41] • Acculturation - assimilation to the dominant culture [41] • Interpretation of national guidelines as “foreign and inapplicable” [41] • Taste over healthiness of food [41] • Un-achievability and undesirability of a healthy BMI [41] • Different perceptions over healthy body weight [2] • Distrust of the health-care system [41]

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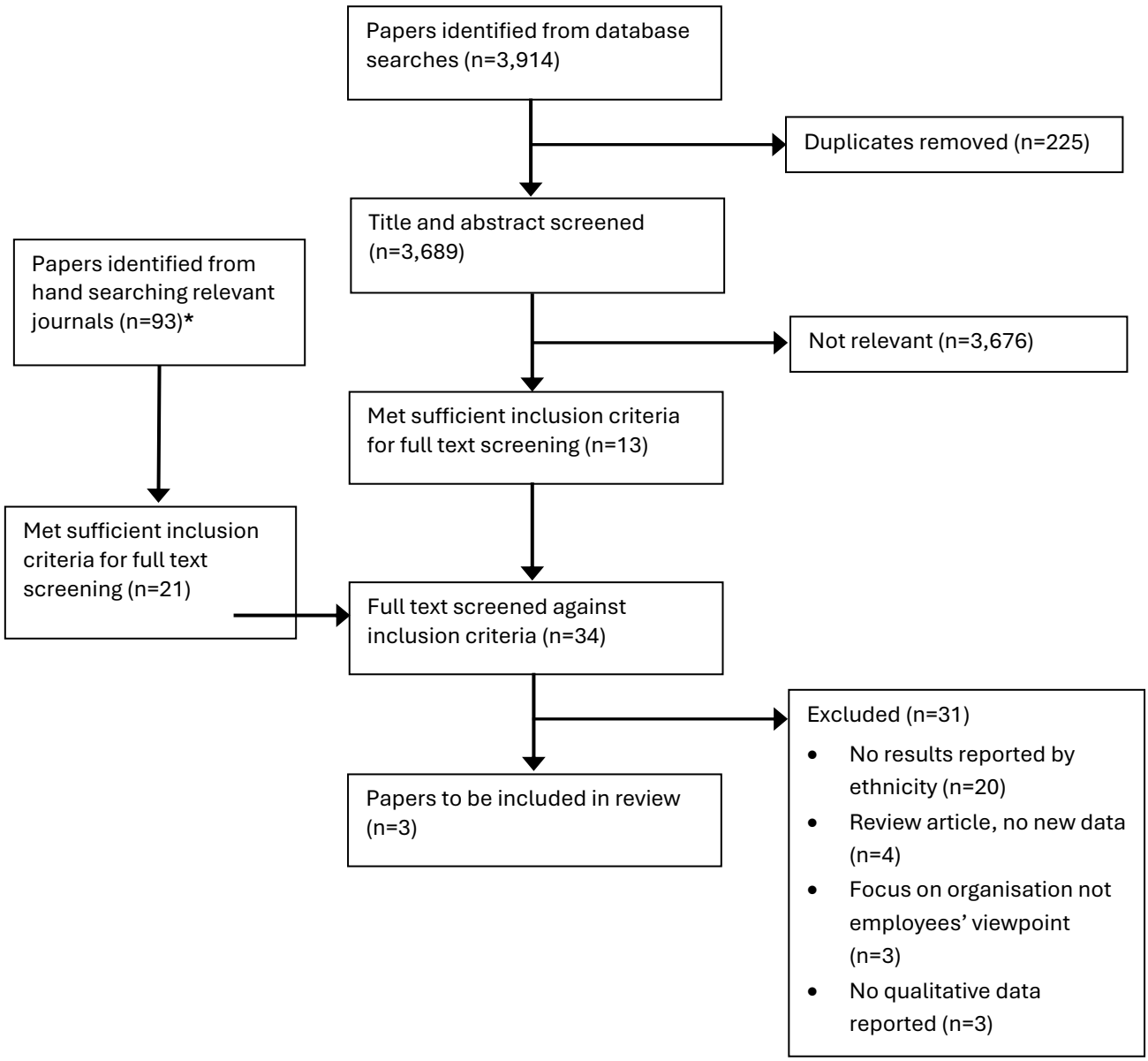
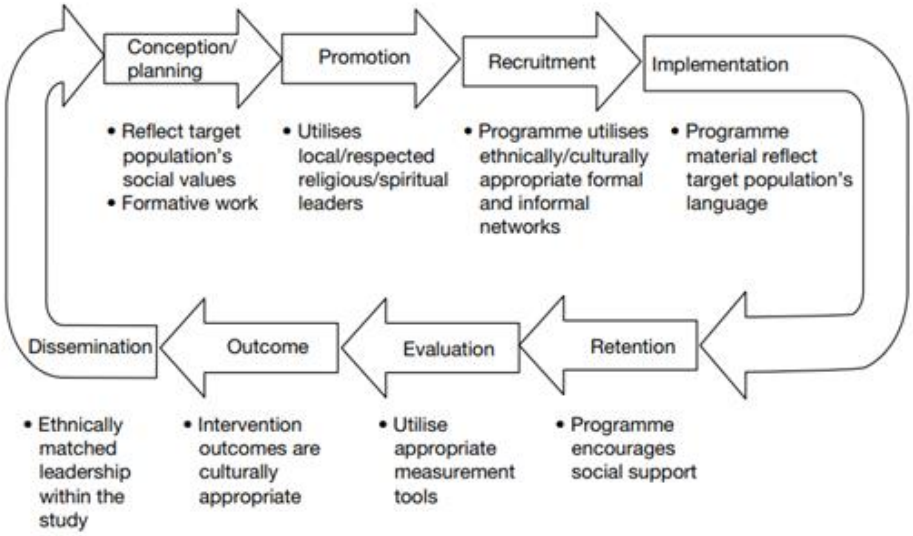


Figure 1. Adapted PRISMA flow chart.

*Journals hand searched: International Journal of Workplace Health Management (9 papers found), Journal of Occupational and Environmental Medicine (5 papers), American Journal of Health Promotion (5 papers), Ethnicity and Health (56 papers), Journal of Racial and Ethnic Health Disparities (18 papers).



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624 Figure 2. Programme theory of adapted health promotion interventions with examples
625 of adaptations at each stage, reproduced from Liu et al. [12].