

**The formative development of an
industry-specific, evidence-informed
toolkit to improve the working
conditions and health of UK contact
centre advisors.**

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A thesis submitted in partial fulfilment of the
requirements of Liverpool John Moores University for
the degree of Doctor of Philosophy

December 2024

Abstract

Contact centre advisors are at risk of ill health due to poor working conditions and low pay. This contributes to excessive sickness absence and attrition in contact centre advisors. Approximately 812,000 advisors work within the UK's 6000 contact centres, totalling 4% of the UK's working population. Contact centres can put health initiatives in place which seek to improve advisor wellbeing. In line with the development phase of the Medical Research Council's (MRC) Framework, the overarching aim of this thesis was to inform the development of an industry-specific, evidence-informed toolkit to improve the working conditions and health of UK contact centre advisors. Three studies were undertaken to achieve this aim.

The study 1 scoping review aimed to investigate the volume, effectiveness, acceptability, and feasibility of health-promoting interventions for contact centre advisors. Searches conducted across four databases (MEDLINE, PsycInfo, CINAHL, Web of Science) and reference checking in February 2023 identified health-promoting interventions for contact centre advisors. Extracted and coded data from eligible interventions were systematically synthesised using the nine intervention functions of the Behaviour Change Wheel and behaviour change technique taxonomy. This scoping review identified a low number of high quality and peer-reviewed health-promoting intervention studies for contact centre advisors (28 studies since 2003). Most interventions were conducted in high-income countries with office-based advisors, predominantly using environmental restructuring and training strategies to improve health. Most interventions reported positive effectiveness results for the primary intended outcomes, which were broadly organised into: i) health behaviours (sedentary behaviour, physical activity, smoking); ii) physical health outcomes (musculoskeletal health, visual health, vocal health, sick building syndrome); iii) mental health outcomes (stress, job control, job satisfaction, wellbeing). Few interventions evaluated acceptability and feasibility.

Study 2 aimed to explore factors affecting the adoption and implementation of contact centre health initiatives and how contact centres evaluate health initiatives. This two-phased mixed methods study explored health and wellbeing decision-makers' perspectives on these processes in UK contact centres. Phase one: semi-structured interviews with 11 contact centre decision-makers explored factors influencing the adoption and implementation of health initiatives and the evaluation methods and outcomes considered important. Interviews were inductively coded using reflexive thematic analysis and mapped to behaviour change theory (COM-B and TDF). Phase two: 38 contact centre decision-makers completed a survey to assess consensus on phase one findings. Factors important to the adoption of health initiatives were leadership buy-in, listening to advisors, the availability of money and resources, and perceiving the need to support employees. Manager/team leader buy-in, time for leaders to prioritise health initiatives, having experienced leaders, and the flexibility to adapt health initiatives to

employee needs, were important for implementation. Centres used a variety of methods for evaluation, considering a range of outcomes. These original findings can inform guidance for contact centres that encourages the adoption, implementation and evaluation of health initiatives to improve advisor health.

Study 3 used a two-phase mixed methods study to explore factors affecting advisors' awareness and engagement with health initiatives, and which health initiatives are perceived to be effective for improving advisor health from decision-makers' and advisors' perspective. Phase one: semi-structured interviews and focus groups with 23 advisors and 11 health and wellbeing decision-makers. Data was coded inductively using reflexive thematic analysis and mapped to behaviour change theory (COM-B, TDF, BCW). Phase two: 116 advisors and 38 decision-makers across UK contact centres completed a survey to assess consensus on phase one findings for engagement and perceived effectiveness. Advisors had limited awareness of health initiatives, highlighting the need for improved communication. Factors important to advisors' engagement with health initiatives included centres offering optional initiatives, with barriers including confidentiality concerns and limited access to health initiatives due to work demands, remote employment, and having a complex sign-up process. Fourteen health initiatives were deemed effective for improving advisor health, for six initiatives only advisors agreed on effectiveness, and five initiatives were not agreed to be effective. These findings underscore the need for tailored health initiatives that align with the unique working environments of contact centres and calls for improved communication strategies to improve awareness of initiatives, as well as fostering greater engagement among advisors.

Overall, this thesis has produced original evidence and associated recommendations to inform the development of a toolkit to improve the health of UK contact centre advisors. Future research will seek to co-develop the toolkit, followed by feasibility and pilot testing in line with the MRC framework. This original research has clear potential for directly benefiting contact centre advisors by addressing their unique health challenges and improving working conditions.

Acknowledgements

Firstly, thank you to my Director of Studies Dr Lee Graves who has gone above and beyond to provide endless advice, expertise, encouragement and support. Your support has been invaluable in helping me develop professionally and personally across the past three years. I would also like to thank my supervisors Dr Lorna Porcellato, Dr Abigail Morris and Dr Paula Holland for all your vital knowledge and support. I am also grateful for having the opportunity to be part of the Physical Activity Exchange team and NIHR ARC NWC for funding my PhD studentship.

Thank you to Jane Thomas and the Northern and Southern Contact Centre Forum for providing industry insights, a platform to reach participants, disseminate findings and host Health and Wellbeing Special Interest Groups (SIG). Thank you to everyone who attended the SIGs. I would also like to take this opportunity to give a special thanks to Paul Moran, who has brought enthusiasm and real-world insights from contact centre industry in his capacity as a public advisor.

Thank you to the decision-makers and advisors who generously gave up their time to participate in this research.

Thank you to my PAEx postgrads and PHI girlies, Chloe, Charlotte, Jessie and Jade, for listening to me at more stressful times of the research. Our catch-up lunches have been a needed part of the PhD experience and are much appreciated! Thank you to my family and Liverpool girlies for always enthusiastically asking how the PhD was going, and sounding interested even if you weren't! A special thanks to Nathan for being my rock across the past few years, supporting every high and low! I love you and can't wait to celebrate with a well-deserved holiday!

This thesis is dedicated in loving memory of my nan and grandad.

Declaration

I declare that no portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

Publications

Bell Z, Porcellato L, Holland P, Morris A, Smith C, Haines C, Graves L. A systematic scoping review of health-promoting interventions for contact centre employees examined through a behaviour change wheel lens. PLoS One. 2024;19(3):e0298150.

<https://doi.org/10.1371/journal.pone.0298150>

Communications

Conference	Presentation title, authors, date, location and award
LJMU Post Graduate Research Festival <i>Poster</i>	Factors affecting the adoption of contact centre health initiatives. Bell, Z., Porcellato, L., Morris, A., Holland, P., Graves, L. May 2023 Liverpool John Moores University First place
LJMU Post Graduate Research Festival <i>Poster</i>	Developing an industry-specific, evidence-informed toolkit to improve the health of contact centre advisors. Bell, Z., Porcellato, L., Morris, A., Holland, P., Graves, L. May 2024 Liverpool John Moores University First place
LJMU Faculty of Science 3-minute thesis competition <i>Oral</i>	Improving the working conditions and health of contact centre advisors. Bell, Z., Porcellato, L., Morris, A., Holland, P., Graves, L. May 2024 Liverpool John Moores University Second place

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Abbreviations

Artificial Intelligence (AI)

Behaviour Change Techniques (BCTs)

Behaviour Change Wheel (BCW)

Display Screen Equipment (DSE)

Employee Assistance Programme (EAP)

Generic Qualitative Research (GQR)

Medical Research Council (MRC)

Theoretical Domains Framework (TDF)

Chapter 1. Introduction

1.1 Background and rationale

Health is defined as “a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity” (1). Social determinants of health are the conditions in which people are born, grow, live, work, and age, which significantly impact their overall health and quality of life (2). Social determinants of health can result in health inequity defined as “the systematic, avoidable and unfair differences in health outcomes that can be observed between populations, between social groups within the same population or as a gradient across a population ranked by social position (p.g.28)” (3). Poor working conditions and low pay are both adverse determinants of health (4, 5), resulting in health inequalities, as those experiencing these conditions are more likely to report poor mental and physical health outcomes (6).

Call centres, traditionally defined as centralised, specialised operations dedicated to handling both inbound and outbound communication through telephone calls, have evolved significantly (7). Today, these have transformed into contact centres, where front-line employees provide customer service through multiple digital channels, including chatbot, email, social media, text, and video support (8). Contact centre advisors, also known as call centre operators or agents, perform a wide range of functions: they answer customer queries, promote services and products, address customer complaints, provide technical support, process orders and payments, and coordinate with other internal departments (9). It is estimated that approximately 812,000 advisors work within the UK’s 6000 contact centres, totalling 4% of the UK’s working population (10). The number of contact centres and advisors globally is difficult to pinpoint, but estimates suggest that the United States alone accounted for nearly 30% of the global market in 2020, employing 2.38 million people (11). As of 2024, the global contact centre industry’s market size is

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projected to reach \$496 billion (~£390 billion) by 2027 compared to \$339 billion (~£266 billion) in 2020, highlighting the sector's growth and importance (12).

Contact centre advisors often face poor working conditions, encountering customer verbal aggression or difficult calls (13), while being continuously monitored against high-performance targets (14). The recent development of Artificial intelligence (AI) has led to advisors taking more complex and demanding calls, as automated responses resolve simpler queries (15). Additionally, advisors are required to complete monotonous tasks (e.g., answering repetitive customer inquiries and following strict scripts), have low autonomy over their work and break times (16, 17), and often work in noisy (18) and highly sedentary environments (19). Alongside these unique working conditions, advisors within the UK typically receive low pay, averaging £11.36 per hour (20), compared to the real living wage of £12.60 (21).

Contact centres' unique working conditions and typical low pay have been linked to health problems within the contact centre advisor population. Specifically, advisors often experience visual, auditory, and vocal fatigue, psychological distress, musculoskeletal discomfort (22), and are at an increased risk of developing non-communicable diseases (cardiovascular disease, diabetes and cancer) and facing premature mortality (23). Low pay further contributes to an increase in unhealthy lifestyle behaviours (e.g., poor diet) (24), making advisors more vulnerable to health problems compared to the broader UK working population (25), and thereby highlighting the health inequality within this occupational group. With the average person spending 90,000 hours of their lifetime in the workplace (26), contact centres are a priority setting for health promotion to reduce health inequalities.

In recent years, the UK's National Health Service (27) and academics (28) have encouraged organisations to invest in employee wellbeing to improve population health, business outcomes and the UK economy. Such investments are particularly relevant for contact centres, as poor health costs the industry over £990 million annually (29). This cost is partly attributed to high employee attrition (30-45% (30) compared to the 15% national average (31)), absenteeism (6% compared to the 2.6% national average (32)), and presenteeism, with 36% of advisors reporting that they work despite being ill (33). Organisational investment in advisor wellbeing can significantly tackle these issues. Improved wellbeing can lead to increased productivity (34), better recruitment and turnover rates (35), and overall cost savings for contact centres. Ultimately, these investments benefit not only the employees but broader society by decreasing the demand for health and social care services, thereby reducing the financial burden on these systems (36).

Contact centres can put health initiatives in place which seek to improve advisor wellbeing. The term "health initiatives" has been used within workplace literature to describe organisational changes to policy, practice and the work environment related to employee health (37, 38). This phrase will be referred to throughout this thesis, encompassing any policies and interventions that improve the health of advisors, including structural changes to pay (e.g. increased pay or sick pay policies). These workplace health initiatives are vital for tackling health inequalities across society (39).

To date, there is very little research evidence worldwide exploring the types and effectiveness of health initiatives that contact centres use to improve the health of their employees. Only one non-peer reviewed review, published in 2011, has examined the effectiveness of interventions to improve the health, wellbeing and/or performance of contact centre employees (40). This review identified sixteen intervention studies

published worldwide, relating to ergonomic conditions, job redesign, air quality, stress reduction and vocal training. However, five of these studies did not assess health or wellbeing outcomes, and searches were only up to July 2010. This highlights the need for an up-to-date review of health-promoting interventions for contact centre employees, particularly advisors, to inform the development of effective health strategy and guidance documents for contact centres.

Strategy and guidance documents produced by trade (labour) unions and private sector organisations (41, 42) recommend health initiatives for contact centres to adopt.

However, some initiatives within these documents are not (or not transparently) evidence-informed, and may be based on expert advice, which can be biased (43). For the documents that are evidence-informed, the initiatives are based on outdated research from 2006 (41, 42, 44, 45). Overall, there is a need for evidence-informed health initiatives for contact centres to facilitate (cost) effective regulation, practice and sustained positive change (46). However, little is known about effective health-promoting initiatives for contact centre advisors.

While it is important to understand the types of evidence-informed health initiatives that exist, it is also necessary to consider the factors influencing the translation of research into practice (47). This is because there is often a failure to adopt and implement evidence-based health initiatives in the workplace (48). In particular, the commitment and attitudes of employers are important in generating sustainable organisational changes in policy, practice and work environments related to employees' health (38). To foster behaviour change within contact centres and maximise the impact of evidence-based health initiatives, it is crucial for research to understand key organisational behaviours across the entire lifecycle of a health initiative – from adoption to implementation and evaluation.

Research indicates that the adoption of a health initiative can be hindered by a lack of management support, organisational knowledge of available health initiatives, and capability to invest in a health initiative (49, 50). The implementation of health initiatives may also be influenced by the level of management support and the prioritisation of health initiatives over work tasks (51, 52). To bridge the gap between evidence and practice, there is a need to explore factors affecting the adoption and implementation of health initiatives (53). Understanding these factors can help facilitate the effective integration of health into the workplace, potentially resulting in improved employee health and organisational outcomes.

Investigating the adoption and implementation of health initiatives within contact centres is particularly crucial because generic office-based health initiatives may not translate well to the unique working environment of contact centres. Despite this, there is a noticeable gap in contact centre-specific research that explores the factors influencing the adoption and implementation of health initiatives. Only two studies (19, 54) have examined factors influencing the adoption of health initiatives, and only four studies have examined factors influencing implementation (19, 55-57), with all conducted within the UK or Canada.

Furthermore, the shift to home and hybrid working - a work arrangement that allows employees to split their time between working in a physical office and working remotely – may have impacted how evidence-based health initiatives are translated into practice within contact centres. This shift has been especially pronounced in this industry, with an increase from 19% of contact centres allowing remote work before COVID-19 (58) to 81.6% post-COVID (59). Understanding factors influencing the adoption and implementation of health initiatives will support the development of guidance for contact centres to promote advisor health and wellbeing in this unique and evolving work environment.

Understanding the methods that centres use to evaluate their own health initiatives can inform whether centres need new guidance on how to evaluate their initiatives.

Understanding the types of outcomes that organisations consider to be important can also inform the adoption of future health initiatives (60). Health initiatives that align with organisational goals and metrics are more likely to be adopted successfully and effectively incorporated into the workplace (61). Therefore, understanding how organisations measure the success of their health initiatives can provide insight into which initiatives they consider to be effective, whilst ensuring that initiatives are aligned with organisational goals and effectively integrated into the workplace.

It is also important for research to consider the behaviours affecting employees' participation in health initiatives, including employee awareness and engagement, which can influence the effectiveness of initiatives (62). Research has demonstrated that awareness is often poor, with employers in the same organisation reporting the existence of health initiatives at almost twice the rate of employees (63). Scheduling conflicts for shift and part-time workers and having health initiatives take place within physical locations that are difficult for some employees to reach (e.g., head office locations) are also common barriers to employee engagement (63). These barriers may be particularly relevant for contact centres, who are experiencing an increase in hybrid working and a growing number of part-time workers (64). Given the lack of contact-centre specific research, there is a need to understand advisors' awareness of and engagement with health initiatives and the factors influencing these to help create effective guidance for contact centres. This guidance may improve the accessibility and effectiveness of initiatives, and ultimately health outcomes.

Finally, it is important to explore which health initiatives used by contact centres are effective. Assessing the effectiveness of initiatives was beyond the scope of this thesis,

though studies have indicated that perceived effectiveness is closely correlated with actual effectiveness (65). Exploring decision-makers' and advisors' perceptions of effectiveness can provide insight into the user experience within a real-world setting and account for a range of diverse opinions, allowing for targeted adjustments. This new evidence can promote sustainable and successful implementation of initiatives across contact centres within the UK. By aligning initiatives with the actual needs and preferences of employees, contact centres can increase the likelihood that health strategies are well-received and impactful.

Overall, there is an increased need for original research in this underserved occupational group to inform the development of an evidence-based and industry-specific toolkit to improve the working conditions and health of contact centre advisors. Toolkits, which often provide a range of resources (e.g., guidelines, training, webinars), are increasingly used as knowledge translation strategies to integrate evidence into practice (66), particularly in the workplace (67). While existing workplace health-promoting toolkits offer valuable resources, they often fail to address the unique challenges faced by contact centre workers, such as the pressures of continuous customer service, limited workspace, and mental health issues arising from high-stress interactions. To effectively support advisors, a tailored toolkit is required, grounded in evidence-based practices and behaviour change theory, to address the specific health needs of this workforce and ensure sustainable, context-appropriate initiatives.

[1.1.1 Statement of the problem](#)

Contact centre advisors are vulnerable to poor health and wellbeing due to their working conditions and low pay. While contact centres can improve employee health by implementing health initiatives, there is a lack of industry-specific and evidence-informed guidance for successfully doing so. To address this gap, more research is needed to

explore organisational and individual behaviours affecting the adoption and implementation of health initiatives, how contact centres evaluate health initiatives, and advisor engagement with health initiatives, as well as to examine evidence and perceptions related to the effectiveness of these initiatives.

The purpose of this programme of research is to understand the existing evidence for health-promoting interventions within UK contact centres and to explore the perceptions of health and wellbeing decision-makers (senior employees involved with higher-level decision-making regarding the health and wellbeing of advisors within their organisation) and advisors regarding the adoption, implementation, evaluation, engagement, and effectiveness of health initiatives. This research will inform the future development of a toolkit, providing evidence-based guidance for health initiatives and tailored to the UK contact centre industry.

1.2 Research approach and research questions

The overarching aim of this programme of research was to inform the development of the first industry-specific, evidence-informed toolkit to support contact centres to adopt, implement and evaluate evidence-informed health initiatives to improve the working conditions and health of contact centre advisors. To address the overarching aim, three studies were conducted:

1.2.1 Study 1

A systematic scoping review aimed to investigate the volume, effectiveness, acceptability, and feasibility of health-promoting interventions for contact centre advisors.

- What is the extent, range, nature, and quality of the evidence on health-promoting interventions in contact centres?
- What is the current evidence regarding intervention effectiveness?
- What is the current evidence regarding intervention acceptability and feasibility?

- What are the evidence gaps requiring further research?

1.2.2 Study 2

An exploratory sequential mixed methods design (phase one: semi-structured interviews with health and wellbeing decision-makers; phase two: an online survey with decision-makers across the UK) aimed to explore factors affecting the adoption and implementation of contact centre health initiatives and how contact centres evaluate health initiatives.

- What factors influence the adoption and implementation of health initiatives?
- Is there consensus for the identified factors affecting the adoption and implementation of health initiatives?
- How do contact centres evaluate health initiatives, and what outcomes do they consider to be important?
- What are the commonly used evaluation methods, and is there consensus for the importance of the outcomes identified?

1.2.3 Study 3

An exploratory sequential mixed methods design (phase one: semi-structured interviews and focus groups with advisors, alongside semi-structured interviews with decision makers; phase two: an online survey with advisors and decision makers across the UK) aimed to explore factors affecting advisors' awareness of and engagement with health initiatives, and which health initiatives are perceived to be effective for improving advisor health.

- What are the factors affecting advisors' awareness of and engagement with health initiatives?
- Is there consensus for the identified factors affecting advisors' engagement with health initiatives?

- What is perceived to be effective for improving the health of advisors in contact centres?
- Is there consensus for the health initiatives perceived to be effective?

1.3 Position of the researcher

At the beginning of the research process, I reflected upon my positionality as a researcher and how this could impact the research. I am a white British female who studied an Undergraduate degree in Psychology with Business and a Master's degree in Public Health. During my undergraduate studies, I focused on organisational psychology and developed a particular interest in behaviour change and implementing change within a business context. I then discovered a passion for health promotion and researching health inequality across the UK. When pursuing a PhD, I found that the current research project aimed at creating health-promoting behaviour change within a population vulnerable to health inequalities seemed to align perfectly with my previous academic experiences.

Alongside my academic background, I have also had practical experience working as a research assistant on several projects. For three of these projects, I conducted focus groups and interviews with diverse groups, including young people (age 7-14), young women (age 20-23) and delivery partners from a violence prevention programme.

Although these experiences developed qualitative research skills, I had not previously conducted research with anyone from the contact centre industry. Despite this, I had completed a work experience placement during my early secondary school years in a UK-based contact centre. Although my memories of listening to calls and participating in team-building exercises are faint, I reflect on this as my first exposure to a contact centre environment. Since that work experience, I have not worked within a contact centre, but I did have friends who worked as contact centre advisors for a short period just before I began my PhD. Their descriptions of a contact centre working environment resonated

with my own experiences and the literature that I was reading, helping me to visualise and interpret the literature and participant experiences. While this was helpful when starting my research, I was also aware that these experiences introduce bias into the research.

To mitigate potential bias, I took several steps to ensure that my knowledge and experiences did not negatively impact the research. To frame my interpretations, I referred to the existing evidence relating to contact centre advisor health research and the working conditions described in Chapter 2. I also collaborated with a public advisor (PM), who works as a change assistance manager within a UK-based contact centre, throughout the research process. PM reviewed the design and interpretation of findings, alongside input from four of my supervisors (refer to section 5.2.2 for more detail). This collaboration offered a variety of alternative perspectives to consider, both academic and experience based. Additionally, I maintained a reflexive diary throughout the research process, documenting my experiences and thoughts to consider their potential impact on the research. These reflections are included throughout the thesis as reflective “stop-offs”.

Reflective stop off

Starting a PhD can be quite overwhelming, but I found that having clearly defined research questions was invaluable in focusing my research. Initially formulating these questions was extremely helpful, as it outlined what I would spend the next three years researching and writing about. This process provided a roadmap for my research journey, giving me a clear focus and direction.

At first glance, the research questions appeared broad, and recognising the breadth and depth of work required to answer them was daunting. Having previously only worked on much smaller projects, the task of creating research questions for multiple studies

with the overall aim of creating recommendations to inform a toolkit was a new and challenging experience. However, I enjoyed this task and found it helpful to clearly develop and reflect on the research questions.

Adopting a structured approach to break down each question into manageable parts provided clarity and acted as a constant reference point, ensuring that I maintained focus throughout this extensive programme of research. This process, despite being my first challenge, ultimately made the journey more manageable and coherent.

1.4 Overview of the thesis

Chapter 2 presents a comprehensive review of the literature related to contact centres and the relevant health initiatives. It begins with an overview of the research exploring the unique working environment of contact centres and the social determinants of health that contribute to advisor health vulnerabilities. The chapter reviews the evidence for health-promoting initiatives and examines studies on the adoption, implementation and evaluation of workplace health initiatives. It also discusses employees' awareness and engagement with workplace health initiatives, followed by an exploration of behaviour change theory and the use of toolkits to guide organisational health promotion. Chapter 3 outlines the methodology for the research. It describes the underpinning pragmatic philosophy and the mixed methods for studies 2 and 3, alongside the data collection tools and analysis approach for study 2 and 3 (phase two). Chapter 4, 5 and 6 present the results from each of the three research studies. Each chapter begins with a short introduction and the aims of the study, followed by an overview of the data collection methods and analysis. These results are then presented and discussed in relation to existing research. Chapter 7 presents an integrated discussion of the three studies, which informs the development of the toolkit. It considers the limitations of the research and

discusses the conclusions drawn from the findings. Recommendations for practice, policy and future research are provided.

Chapter 2. Literature review

2.1 Literature search strategy

The literature was searched using both key words and combinations of key words. The terms 'contact centre' and 'call centre' were used to locate contact centre specific research, and the term 'workplace' was used to identify generic workplace literature. The terms agent, advisor and employee were used to identify relevant populations. To identify health-related literature, key words included: health promotion, health initiatives, health-promoting intervention, health improvement, health policy. Alongside these combinations more specific key words were used when relevant e.g. adoption, implementation, engagement, toolkit.

Literature needed to be in English or presented in the original language but with access to translation. The search placed no limitations on location. Primary literature was searched for using online databases (MEDLINE, PsycInfo, CINAHL, Web of Science and Google Scholar) via institutional access. In addition, citations and references from identified papers were explored. Grey literature was also searched. The literature review was ongoing throughout the three years of study, and alerts were set up with databases and journals.

2.2 Contact centre working conditions

Contact centres emerged in the early 1990's and rapidly grew to become a crucial source of customer support and employment within the UK (68), growing to 6000 centres by 2021 (10). Large contact centres (with over 250 advisor positions) employ more than half of all contact centre staff, with the finance sector holding the most advisor positions (18%), followed by the retail and distribution sector (13%) (69). Richardson and Marshall (70) described that in early contact centres, advisors usually sat at long desks with a

headset, keyboard and computer monitor, divided by low partitions. The work was extremely intensive and stressful, with advisors often facing high performance targets linked to performance-related pay (70). Call listening was used to assess advisors' performance and supervisors could monitor advisors at any point during the working day (70). This managerial power of electronic surveillance led to contact centres being labelled as 'electronic sweatshops' in early research by Fernie and Metcalf (71). However, this research faced critique for making inflated generalisations about employee performance targets and employee autonomy that varied considerably within their case studies (72).

Despite these criticisms, a decade later, research continues to reference the intensive surveillance and performance monitoring within contact centres. One global report claimed that 67% of contact centre workers worldwide occupy low to very low quality jobs characterised by low job discretion and high performance monitoring (73). Another study explored employees' perspectives, with some workers viewing the monitoring as a legitimate management tool, while others saw it as oppressive and intrusive (74).

Since the early 2000's, there has been a surge in research exploring the unique working conditions within this rapidly growing industry. Despite the 'electronic sweatshop' claims being discredited, research highlighted the numerous pressures on contact centre advisors, including imposed full-time schedules, difficulty meeting high performance requirements, tensions with clients, negative comments, lack of recognition from superiors (22), low job control and task complexity when compared to traditional office jobs (75), and a lack of management support, recognition and development opportunities (76).

A significant proportion of contact centre research has focused on the emotional strain placed on advisors during customer interactions. Expressing appropriate emotions during

customer interactions can be demanding and potentially dysfunctional when there is dissonance between felt emotions and displayed emotions (77). This surface acting can lead to increased turnover, absenteeism and emotional exhaustion (77-79). Verbal aggression and impoliteness from customers are also normalised within this working environment (80). One study conducted in Turkey reported that 47.8% of advisors stated their workplace was mostly stressful (18).

Research exploring the contact centre working environment has also documented the physical conditions of this unique office space, where advisors are required to sit at their desks wearing a headset for most of the day. Advisors frequently experience prolonged static sitting and repetitive movements, as well as having an unsupported back and flexed neck, causing musculoskeletal discomforts (81). Compared to other office and customer service environments, contact centre advisors are the most sedentary and least physically active at work (82). Additionally, the office environment has been described as noisy by 95.5% of workers, which negatively impacts health related quality of life (18).

Most research refers to 'call centres', but technological developments have led to evolutionary changes in the industry, altering the working environment and the name. As the modes of communication evolve to provide customers with an omnichannel experience (seamless and integrated environment through various channels like email, chat, social media (83)), 'call centres' have become 'contact centres'. A contact centre is a "coordinated system of people, processes, technologies and strategies that provides access to information, resources, and expertise, through appropriate channels of communication, enabling interactions that create value for the customer and organization" (84). Over the past decade, the evolution from call centres to contact centres has been briefly highlighted in the literature, with the terms used synonymously (85); for example, in a 2022 paper (86). While similarities between the two working

environments exist, important developments have changed the contact centre working environment and the advisor job role (i.e., having to learn and use new communication channels). This thesis therefore uses the term 'contact centre' to reflect the current industry terminology.

Technological advancements and recent events have introduced new challenges within this unique working environment. With AI research still in its infancy, only one study has explored AI's impact on advisor workload (87). This study found that advanced technology (e.g., big data, cloud computing, Internet-of-Things (IoT), and AI) can either enhance the diversity of advisors' tasks, reducing mental demand and frustration, or reduce diversity by increasing the number of complex queries that advisors handle, leading to further stress. Technological advancements, such as remote monitoring, have also enabled a more flexible work approach in contact centres. The COVID-19 pandemic (2020–2023; March 2020–December 2021 lockdown) accelerated the shift to remote working. While the pandemic ended, remote working remains popular; before COVID-19, only 19% of contact centres allowed employees to work from home at least some of the time (58), compared to 81.6% post-COVID (59). Overall, these technological advancements and changes to advisors' working environment may present new risks to advisors' health and may influence whether health initiatives are effectively adopted, implemented, engaged with and evaluated.

The UK's cost-of-living crisis (2021–2024) also influenced the work and lives of advisors. Advisors face increased workload and pressure as customers seek support and reassurance, whilst salary pressure has risen due to inflation (88). This is particularly detrimental to advisors who typically receive low pay (average wage of £11.36 per hour (20), below the real living wage of £12.60 (21)). However, salaries can vary depending on factors such as location and contract type. According to PayScale, the average annual

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salary for a call centre advisor in 2024 is £18,451, with a range of £17,000 to £22,000, plus bonuses of £400 to £1,000 (89). Glassdoor estimates show slightly higher figures, with the average salary for a call centre agent in the UK at £22,176 (between £17k and £22k) (90), and a contact centre agent at £22,493 (between £18k-£23k) (91), and a contact centre advisor at £24,073 (between £18k - £26k) (92). It is important to note that these job titles all refer to similar roles within contact centres, but the different titles are due to a lack of standardisation in job titles across the industry. These statistics display the different levels of pay received by contact centre advisors, which may depend on the complexity of the role and the company. Pay also varies by location. For instance, in London, the contact centre advisor base pay ranges between £20k - £33k (93) compared to £18k - £25k in Liverpool (94) and £16k - £22k in Newcastle (95). Overall, despite these variations, many contact centre advisors are paid relatively low wages in comparison to the average annual wage for full-time employees across the UK (£37,430 in April 2024) (96) and annual real living wage (£24,570; London £27,007) (97). This financial strain can exacerbate health issues, especially given the current UK cost-of-living crisis.

2.3 Health issues among contact centre advisors

2.3.1 Direct health consequences

Research has consistently highlighted numerous risks facing advisors, directly linked to the unique working environment. Studies across the globe have found that advisors often experience poor health-related quality of life, reporting high-levels of job stress, musculoskeletal discomfort, headaches, concentration difficulty, nervousness, and fatigue (18). Specific health issues, such as headaches (98, 99), burnout, psychological distress, and poor mental health, are frequently reported across various studies (22, 25, 100). Notably, one study used the General Health Questionnaire-28 (101), a screening tool for somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression to

identify those likely to have or be at risk of developing psychiatric disorders, and revealed that 45.8% of the call centre employees were mentally at-risk (100).

Advisors' experiencing mistreatment from customers, a common stressor in contact centres, has been associated with poor sleep quality and poor recovery state (a physiological process during which the brain activation level drops, and the body's physical and mental balance is restored) the following morning (102), indicating the broad range of health issues linked to this stressful working environment. Interestingly, research has shown that advisors working within the office full-time reported higher levels of exhaustion and cynicism compared to those working at home full-time (103). This finding underscores the potential impact of the physical work environment on advisors' health and wellbeing.

Research has also shown that contact centre advisors often experience poorer physical health compared to the general UK working population (25). Looking at a computer screen while listening and talking to customers contributes to several health vulnerabilities related to visual, auditory, and vocal health. One survey of 2,000 advisors found that 77.3% experienced visual fatigue, 50% experienced auditory fatigue and 47% reported vocal fatigue (22). The working environment also exposes advisors to musculoskeletal disorders, often due to poor workstation setups and psychological stressors (22, 104) despite Display Screen Equipment (DSE) regulations being in place. Research has indicated that 45% of advisors reported upper extremity symptoms over a one-month period, with the most prevalent symptoms occurring in the neck (39%) and the shoulders (22%) (104). Overall, it is important to explore existing health initiatives designed to address these risks and evaluate their effectiveness in the current working environment.

2.3.2 Unhealthy lifestyle behaviours and health consequences

Contact centre advisors are vulnerable to unhealthy lifestyle behaviours, influenced by factors such as low pay and workplace stress. These factors contribute to increased smoking (105, 106), poor diet (107, 108), high alcohol consumption (109, 110) and low physical activity (111, 112). These unhealthy behaviours are significant contributors to noncommunicable diseases, which cause 41 million deaths globally each year (113).

There are various underlying mechanisms linking low pay to an increase in unhealthy lifestyle behaviours. Low pay can result in physical inactivity due to limited access to physical activity-related facilities and initiatives both within the workplace (114) and in lower-income neighbourhoods (115). This reduced access results in decreased physical activity levels and higher rates of sedentary lifestyles (114). Furthermore, low-income neighbourhoods are often targeted by tobacco companies for outdoor advertising (24), and typically have a higher density of fast food providers contributing to an increase in obesity and social inequalities in health (116, 117).

Being in a lower paid disadvantaged position is also a significant source of stress (114), such as struggling to afford basic living needs, having to work longer hours or multiple jobs and having fewer opportunities or motivation to achieve goals. This stress can lead to individuals using smoking, alcohol, overeating and inactivity as a form of pleasure and relaxation to help regulate their mood and self-medicate (24). Additionally, the affordability of healthy behaviours can increase engagement with unhealthy behaviours; for example, tobacco cessation aids, fitness club memberships, buying fruits, vegetables and lean meats are often unaffordable for those on low incomes (24). Essential living needs take priority, making it difficult for these individuals to adopt healthier lifestyles. A study highlighted that food choices for low-income individuals are often driven by 'value' - what provides the most meals - and 'treat' foods were often prioritised to reduce the

experience of poverty (118). Therefore, those experiencing lower incomes are more likely to experience stress and therefore unhealthy lifestyle behaviours, resulting in health inequality.

Advisors are also vulnerable to low physical activity and high sedentary behaviour during work hours (82), which may contribute to weight gain as suggested by a study that found 68% of advisors gained weight (average of 0.9 kg/month) over 8 months (119). Being overweight or obese can result in a significantly higher risk of hypertension (120).

Moreover, a sedentary lifestyle is linked to higher all-cause mortality, increased risks of cardiovascular disease, cancer, metabolic disorders, musculoskeletal disorders, and depression (121). Sedentary behaviour also incurs costs for the industry, including higher sickness absenteeism and reduced productivity (122).

Most contact centre research exploring the use of tobacco, alcohol and having a poor diet has been conducted in countries such as South Korea, India and Malaysia. These are all popular offshoring locations for contact centres (123) with India holding the second largest offshore market (124), and Malaysia experiencing the most recent growth within the industry (125). Studies indicate that contact centre advisors in India often use tobacco and alcohol and have poor eating habits (126), with the majority of diets being junk food with low vegetable and fruit consumption (127). Night eating syndrome (disordered eating pattern relative to sleep, where food is consumed in the evening and night) is also prevalent among advisors and associated with obesity, substance use and depression (128).

In South Korea, significant research has focused on smoking within contact centres, with the environment being described as a "smoker's paradise" (129). However, this research has mainly focused on women employees, showing a 'strikingly high' prevalence of

smokers compared to the general population. High smoking rates have been associated with negative mood states, the emotional burden of advisor work (130, 131), and low pay (132). Furthermore, the rate of risky drinking among South Korean female contact centre advisors is reported at 45.3% (132). One study explored smoking and e-cigarette use within contact centre advisors from the Philippines (the largest offshore location for contact centres (124)), however, only a conference abstract for this study could be found from 2023, with no full-text publication yet available (133). This suggests that e-cigarette use may be a new area for research to explore in relation to advisor health and smoking cessation. While specific studies on smoking/vaping within UK or Western contact centres are lacking, research from Canadian contact centres suggests a high prevalence of smoking, with managers estimating that 80-90% of employees smoked, preferring smoking over exercise during breaks (54). This research advocated for the co-production of smoking cessation and physical activity health initiatives.

Overall, research to date underscores the vulnerabilities of contact centre advisors to unhealthy lifestyle behaviours and poor health outcomes. There is a pressing need for more research on unhealthy lifestyle behaviours and their health consequences within the contact centre population, as well as the development and implementation of effective health initiatives to address these issues.

[2.3.3 Sickness absence and employee retention in contact centres](#)

The contact centre working environment is a significant cause of occupational ill-health (134). Sickness absence, an integrated measure of physical, mental, and social functioning, reveals the vulnerability of contact centre advisors to poor health (135). Advisors in contact centres exhibit high sickness absence rates (3.7% (136) vs the 1.9% UK average (137)), indicating poorer health outcomes compared to the general working population. In

2022 alone, the UK lost an estimated 185.6 million working days due to sickness or injury, highlighting the broader impact of occupational health on the economy (32).

Poor working conditions in contact centres also lead to high employee attrition and low retention rates (138). Attrition, or turnover, refers to the rate at which employees leave a company, while retention measures the percentage of employees who remain. Contact centres experience higher attrition rates (26% (139) vs 15% (140)) compared to UK industry averages. High employee attrition is a significant concern for employers due to the high costs associated with training and replacing advisors (141).

Improving the working conditions in contact centres can yield substantial benefits beyond the immediate workplace. For the economy, reducing sickness absence by fostering healthier work environments in contact centres can help tackle economic inactivity (142). With more individuals participating in the labour force, government priorities such as reducing inflation and promoting economic growth can be better supported. A healthier workforce means fewer disruptions in productivity, leading to more stable and sustained economic output (143). Moreover, addressing poor working conditions in contact centres can alleviate pressures on health and social care systems (142). Promoting better health among contact centre advisors also aligns with the NHS long-term plan to enhance health outcomes and efficiency in service delivery (144). Improved occupational health in contact centres can lead to fewer hospital admissions and lower demand for medical services, enabling the NHS to allocate resources more effectively and address broader public health challenges. These improvements are particularly pertinent in the context of an ageing workforce as the age of retirement is extended, meaning people will need to work for longer (145). With an increasing number of older workers remaining in employment, it is crucial to support healthy ageing (146). Creating a supportive and healthy work environment in contact centres can help older workers maintain their health and

productivity, reducing the risk of early retirement due to ill-health (147). This not only benefits the individuals, who can enjoy longer, healthier working lives, but supports the economy by retaining experienced workers who contribute valuable skills and knowledge.

In conclusion, improving the working conditions in contact centres is essential not only for the health and wellbeing of the advisors but for broader economic and social benefits, and for the reduction of health inequality. Research has investigated various retention strategies to address high sickness and attrition rates, suggesting that contact centres can reduce turnover by providing good leadership and promoting healthy work environments (148). Other effective strategies include enhancing job satisfaction, providing employee compensation (e.g., healthcare), offering opportunities for career advancement, recognising and rewarding employee achievements, and fostering employee engagement (149). It is also important for centres to address the more structural social determinants of health, offering fair pay (150), increased job control (151) and greater job security (152) to improve advisor health. These measures can lead to reduced turnover, lower sickness absence rates, and a more robust, healthier workforce, ultimately supporting economic growth and the sustainability of health and social care systems.

2.4 Health promoting initiatives

2.4.1 Health promotion in the workplace

The workplace is a key setting for health promotion due to its reach. It offers the opportunity to affect multiple influences on behaviour simultaneously and can help people access resources and opportunities they might not be able to find outside of work. For example, people may find it difficult to attend health-promoting services due to location and timing issues. By promoting health in the workplace, employers can create a supportive environment that fosters overall wellbeing, leading to increased productivity, reduced absenteeism, and a more engaged workforce (153). This holistic approach to

employee health not only fulfils legal obligations but also contributes to a positive organisational culture and long-term business success.

With poor health costing contact centres, there is also a compelling business case for centres to prioritise the health of their employees. Organisations aim to attract and retain top talent to minimise hiring and training costs (154). To do this, benefits packages are evolving traditional offerings like health insurance and retirement plans to include innovative benefits such as employee assistance programmes (EAPs) and workplace wellness programmes (154). Recognising the benefits of a satisfied and healthy workforce, organisations are increasingly linking employee wellbeing to improved business outcomes (e.g., improved productivity) (155). However, while research supports the profitability of investing in wellbeing, demonstrating a clear return on investment for holistic health promotion efforts remains challenging due to the complexity of health outcomes and the long-term benefits that may not become apparent for years (154). Therefore, organisations measure the success of their health initiatives for profit (return-on-investment) and broader value metrics, including employee morale, reduced turnover, productivity, health risk reduction, business profitability and increased quality of life (156).

Contact centres have a duty of care to create a safe working environment and to protectively manage factors that could negatively impact the wellbeing of their employees. This includes addressing ergonomic issues, providing mental health support, and ensuring a healthy work-life balance. For this, there are legal obligations to protect employee health. Guidance documents, such as those from unions, emphasise the requirement for contact centres to safeguard advisors from work-related stress and ill health under the Health and Safety at Work etc. Act 1974 (45). This legislation mandates that employers ensure, as far as reasonably practicable, the health, safety, and welfare of their employees at work (157). Regular risk assessments of potential health hazards (e.g.,

poor workstation set-ups and work-related stress) must also be conducted by employers, in consultation with staff or their representatives, under The Management of Health and Safety at Work Regulations 1999 (158). Evidence shows that for stress, organisations were able to follow risk assessment steps and implement Health and Safety Executive (HSE) assessment tools and guidance effectively under supportive contexts, however, critical barriers included organisation changes, and lack of resources affecting organisational capability (159).

Workers also have the legal right to request flexible working arrangements (which can be refused if customer service would be negatively affected) (160) to help reduce stress and improve job satisfaction by allowing employees to better balance their work and personal responsibilities (161). Additionally, the right to disconnect from work outside of regular hours can help to prevent burnout and help employees have adequate time to rest and recuperate (162). The “right to disconnect” law is in place in several countries in the EU and Australia, giving employees a right to not answer any form of work-related content which falls outside of their working hours (163). This law has been linked to improved health and wellbeing (164), and is anticipated to be in place in the UK in 2025, as promised by the new Labour government (163). Implementing these measures not only ensures legal compliance, but also has the potential to improve advisor health.

[2.4.2 Policy/sector guidance documents for contact centres](#)

Policy and sector guidance has been developed for the contact centre industry, recognising the unique working conditions and the need for industry-specific measures to promote employee health. Unions (Unison (42), the Communications Workers Union (CWU) (45), Unite the Union (44)) and local authorities (HSE/local authority circular (41)) have created documents to help stakeholders to interpret relevant regulations and provide examples of good practice. These documents are titled: ‘*Unison Calling - A guide*

to organising in call centres' (42), *'CWU Advice for Call and Contact Centre Working Practices (Health & Safety)'* (45), *'Health and safety in call centres'* (44) and *'Advice regarding call centre working practices'* (41). Each document focuses on supporting the physical working environment (e.g. DSE regulations to avoid musculoskeletal disorders, air quality and temperature), break and shift regulations to support advisor health, and employee stress management (e.g. recovering after an abusive call). However, these documents are outdated, with the most recent dating back to 2006 (41, 44), 2012 (42) and 2016 (45).

The local authority circular document by the HSE relies on professional recommendations and published literature (41). However, this guidance and literature is dated prior to 2006 and represents research conducted within call centres that may not represent the current contact centre working environment and enhanced stresses. This dated document is referenced by all union documents, indicating that many of their recommendations are based on outdated research for the early call centre environment. Aside from this source, all other methodologies reported lack transparency. For instance:

- The CWU states only that their recommendations for good working practices are based on a large-scale study by the Health and Safety Laboratory/HSE on working practices in UK call centres and work by the CWU (45). This suggests that this document is based on the outdated local authority circular document (41).
- *Unison Calling* is based on survey and site visits (70% energy sector, 17% local government) conducted by two academic researchers exploring the contact centre working environment and health risks (42). Despite being conducted by academic researchers there is no transparency on the credentials of these researchers, whether the research was peer-reviewed and whether the studies met ethical and

methodological standards. This document also references research by the HSE (41) which has been highlighted as dated.

- Unite the Union does not reveal any transparent evidence base (44), however, this document also references the local authority circular document by the HSE (41).

A report titled '*Well-being and call centres*', published by the Institute for Employment Studies (an independent, apolitical, international centre of research and consultancy in human resource issues) (165) suggested ways to enhance employee wellbeing based on existing literature and case studies. This guidance focused on policy level changes, such as increasing family-friendly and emotional labour policies. It also included job redesign recommendations, such as allowing discretion within complex calls, enabling employees to participate in various development opportunities, giving staff time away from the phone, and focusing on social as well as business objectives. While the evidence-base for this report is transparent, it dates to 2006, meaning the recommended health initiatives may not be as effective in the current working environment.

The most recent sector guidance was produced by Calabrio, a customer experience intelligence company, in 2022 (166). Titled the '*Workforce Wellbeing Recovery Toolkit*', it aims to provide insights and resources to help contact centres improve advisor health. This toolkit highlights advisor stress and offers checklists to improve wellbeing within each section, alongside a 'Tech Buyer's Guide' to supporting wellbeing. Given the company's personal interest in promoting solutions linked to the technology that they offer, the recommended health initiatives are likely biased. For example, their first health initiative to reduce advisor stress recommends smart call routing platforms (sold by Calabrio) to help balance the call load and avoid overburdening advisors. They also state that this technology can help balance staffing levels, build in automated breaks, and directly support advisors during calls. Secondly this toolkit suggests that advisors work-life balance

can be improved with self-service scheduling capabilities (another product sold by Calabrio). Whilst this toolkit briefly suggests a simple checklist of ‘non-tech’ driven solutions (e.g. stand up every 20 minutes, put your phone down during breaks, and stay hydrated), most of the guidance is focused on promoting products sold by the organisation. Though these initiatives may be effective for improving contact centre advisor health, this toolkit lacks a clear evidence-base for the suggested strategies in the toolkit or any evidence of their effectiveness. This toolkit may also enhance health inequality, as these initiatives require centres to invest large amounts of money into improving the health of their advisors, with little guidance for centres who are not able to invest. Overall, the contact centre industry arguably lacks evidence-informed and industry-specific guidance that addresses current issues faced by contact centre advisors, with equitable access for all centres.

2.4.3 Workplace health initiatives

To examine the types of health initiatives being implemented within the workplace, Proper and Van Oostrom (2019) conducted a review of reviews spanning from 2009 to 2018 (167). Interventions were included if they studied metabolic risk factors for diabetes and cardiovascular disease, or if they studied mental or musculoskeletal outcomes. From 23 reviews, their findings highlighted strong evidence for interventions targeting physical activity and/or diet, a small positive effect for the prevention of mental health disorders (e.g. anxiety, depression), especially with the use of e-health and cognitive behavioural therapy techniques, and strong evidence for the prevention of musculoskeletal disorders, especially through resistance exercise training. However, Proper and Van Oostrom emphasised the need for further research into factors contributing to the successful implementation of these initiatives within different working environments (167).

For mainly desk-based workers, a large proportion of research focuses on reducing employee sitting time. Two recent reviews have been identified, including a systematic review by Shrestha et al. (168) and its updated search (169), and a systematic review and meta-analysis by Wang et al. (170). Shrestha et al. found that one category of interventions involved making physical changes to the workplace, such as altering desk setups or modifying the overall layout of the work environment. Shrestha et al.'s findings suggest that height-adjustable desks and active workstations (e.g., treadmill desks) effectively reduce sitting time and improve health outcomes. This is supported by Zhou et al.'s meta-analysis which concluded that multi-component interventions, particularly those with sit-stand desks, were effective at reducing workplace sedentary time (171). However, implementing height-adjustable desks or active workstations within contact centres may require specific implementation considerations due to the unique working environment. For example, Morris et al. found that height-adjustable hot-desks were not feasible in the contact centre setting (55). These hot desks were trialled as a cost saving solution compared to rolling out stand-capable desks across the centre. However, these hot desks proved impractical as having ownership of an individual workstation was important to advisors and switching between hot desks may have negatively impacted time and productivity, which is highly pressurised within this working environment (55). Shrestha et al. also identified initiatives that implemented policies to modify how work is organised to reduce sitting time (169). This includes strategies like scheduling walking meetings, encouraging regular breaks, and integrating standing or walking tasks into daily routines. These organisational changes have shown promise in reducing sedentary behaviour, as Shrestha et al. found that interventions such as regular reminders to take breaks and the promotion of walking meetings resulted in increased physical activity and reduced sitting time. Despite this, policies encouraging breaks or walking meetings may

conflict with the demands of continuous customer service within contact centres, where advisors are expected to be readily available (56).

The third category identified by Shrestha et al. involved providing employees with information and counselling, including workplace prompts and e-health interventions designed to raise awareness and encourage behavioural change (168). Studies have demonstrated that these interventions can be effective when combined with other strategies, leading to increased motivation and adherence to new habits. For instance, digital reminders and educational sessions about the risks of prolonged sitting and the benefits of regular movement have been associated with reduced sitting time and improved overall wellbeing (169).

Similarly, two separate reviews by Prince et al. (172) and Pares et al. (173) highlighted how digital-based interventions (such as apps, wearable devices, and online platforms) demonstrated effectiveness for improving office workers' sedentary behaviour. Prince et al. indicated that digital interventions, particularly those providing real-time feedback and goal-setting features, were effective in reducing sedentary behaviour. Employees who used these technologies reported greater engagement in physical activities and a notable decrease in sitting time. While digital interventions could still play a role in improving contact centre advisor health, their effectiveness may be reduced if advisors have limited flexibility and autonomy to act on prompts to move or take breaks during work hours (17).

In addition to reducing sedentary behaviour, numerous health initiatives aim to improve employee physical activity in the workplace. One systematic meta-review by Jirathananuwat and Pongpirul identified nine systematic reviews and/or meta-analyses, encompassing a total of 220 primary studies that investigated 48 interventions related to physical activity in the workplace (174). These interventions aimed to change knowledge,

skills and attitudes towards physical activity, increase availability and accessibility of resources or services to facilitate behaviour change, reinforce behaviour change using social support or incentives, use policy regulation to facilitate strategies (e.g., arrange physical activity breaks), and make changes to the environment. Many of these interventions aimed to change multiple behaviours, incorporating elements such as nutrition programs, stress management, weight control programs, and smoking cessation strategies (174). The meta-review highlighted that multi-faceted interventions tend to be more effective, addressing a broader range of health behaviours and creating a more supportive environment for change. However, it remains unknown whether these strategies, such as providing on-site fitness facilities, would be effective in contact centre environments. With the rise of remote and hybrid working models, many contact centres are cutting overhead costs by reducing or eliminating physical office space (175). Additionally, office spaces are being redesigned for more flexible and collaborative work, which could impact the effectiveness of environmental changes (175). Further research is needed to explore the effectiveness of these interventions within the unique and evolving contact centre environment.

Finally, research also extensively investigates stress management and mental health awareness in the workplace. A review by Richardson and Rothstein identified various health initiatives implemented at both individual and organisational levels (176).

According to this review, organisations typically employ three levels of initiatives to address employee stress and mental health. First, primary interventions aim to prevent stress from occurring, primarily through organisational measures such as job redesign, management training, changes to working schedules or times. These interventions are designed to create a healthier work environment and reduce stressors at the source.

Secondly, secondary interventions focus on equipping employees with stress management

skills and promoting stress-reducing activities like mindfulness training, health promotion initiatives (e.g., exercise programs), and coping skills training. These interventions help employees manage stress more effectively when it arises. Lastly, tertiary interventions target individuals experiencing high levels of stress, offering services such as EAPs, counselling, and disability management. These interventions provide support and resources for employees dealing with significant stress and mental health issues.

There is substantial evidence supporting the effectiveness of primary interventions, which are predominantly organisational, as well as secondary interventions aimed at the individual level (177). There is also support for tertiary interventions such as counselling through EAPs (178), specifically for reducing presenteeism (179). With high levels of stress and poor mental health prevalent in contact centre advisors (22), it is important to consider these initiatives to reduce these negative outcomes. Despite the positive outcomes reported, this review also highlighted the importance of better understanding the contexts and individuals in which these health initiatives are most effective, and how the implementation of initiatives affects outcomes (177).

Research on reducing sitting time, improving physical activity, and managing stress among desk-based workers has highlighted several effective interventions. However, the unique operational constraints of contact centres likely necessitate tailored approaches that address the continuous and customer-focused nature of the work. Research needs to explore tailored solutions that can be seamlessly integrated into contact centre environments, ensuring that efforts to improve health are both practical and effective for these advisors.

[2.4.4 Interventions in contact centres](#)

Whilst there is substantial research exploring the negative health outcomes associated with contact centre work, fewer studies have assessed the effectiveness of health-

promoting interventions. Only one non-peer reviewed systematic literature review, within a 2011 doctoral thesis, assessed the effectiveness of interventions aimed at improving the health, wellbeing and/or performance of contact centre employees (40). This review identified 16 studies, with five assessing productivity outcomes. Most of the interventions focused on ergonomic design, including forearm supports that effectively improved musculoskeletal discomfort (180, 181), computer screen filters that improved visual acuity (182), and arm-boards that reduced the risk of neck/shoulder disorders (183). Two studies examined air quality, finding that changes to the office temperature and outdoor air supply could improve advisor health (184, 185). Two interventions related to job redesign found that increased job control improved mental health and absence rates (186), while high involvement in work processes increased job satisfaction and organisational commitment (187, 188). Additionally, one intervention effectively reduced stress (189) and one improved vocal health with a vocal training course (190). However, this review only searched for literature up to July 2010 (40), highlighting the need for an up-to-date review of health-promoting interventions for contact centre employees, especially advisors. Given the outdated review and recent developments within the contact centre working environment, there is currently a lack of understanding about what initiatives contact centres are implementing to improve advisor health and whether these initiatives are effective. A more in-depth discussion of studies investigating the effectiveness of health-promoting interventions in contact centres is covered in the Chapter 4 scoping review.

2.5 Frameworks and theory

2.5.1 The Medical Research Council framework

Complex intervention research goes beyond asking whether an intervention achieves its intended outcomes. It addresses broader questions about the wide range of impacts, cost

effectiveness, underlying theories, interactions with implementation contexts, and how evidence can support real-world decision-making (191). In 2000, the UK Medical Research Council (MRC) developed a framework for researchers and funders on developing and evaluating complex interventions (192). In light of significant limitations (i.e. following linear steps and a lack of consideration for the context in which initiatives take place (193)) and conceptual, methodological and theoretical developments within the literature, this was updated in 2006 (194). The latest framework, published in 2021 and commissioned by the National Institute of Health and Care Research (NIHR) and the MRC, aims to help researchers collaborate with stakeholders to identify key questions about complex interventions and design research with diverse perspectives and appropriate methods (191). The 2021 framework proposed four iterative and interconnected core phases: development, feasibility, evaluation and implementation.

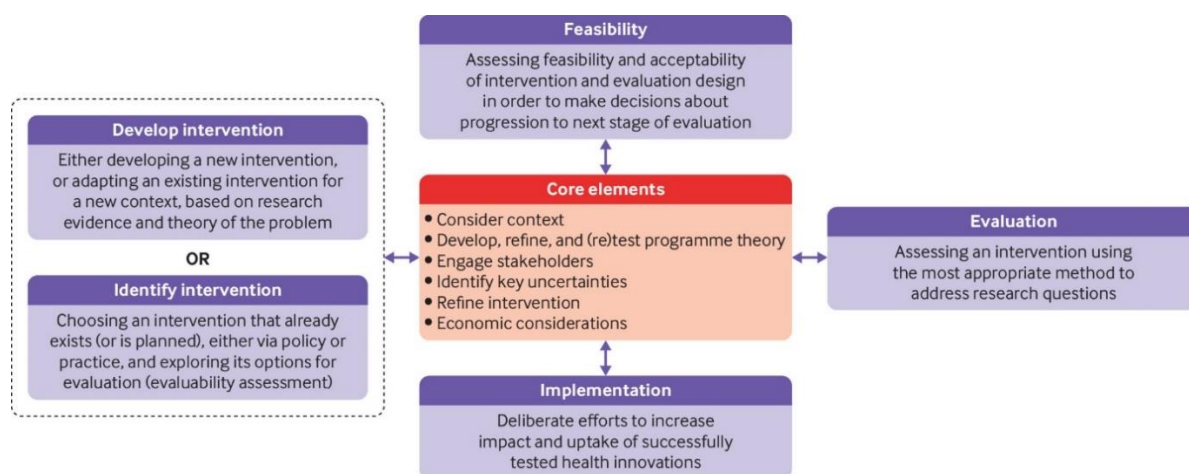


Figure 2.1 Framework for developing and evaluating complex interventions from Skivington et al. in 2021 (191)

This framework provides a structured approach for developing and evaluating complex interventions, ensuring all critical aspects are considered systematically. Dividing this into four distinct phases also emphasises that interventions should be rigorously tested at each stage, reducing the risk of premature implementation. Whilst the updates on this

framework provide up-to-date and relevant evidence, there is no detailed guidance for the use of specific methods and there is only limited evidence and practical examples for some approaches suggested (191). The current programme of research will be guided by this framework, acknowledging these limitations and addressing this by also following established mixed methods research designs.

Importantly, the 2021 extension of this framework emphasises the need to understand how the intervention works within a given context, exploring the resources needed to support its reach and impact in real-world implementation (191). There is now a shift from the binary focuses of effectiveness to understanding how the intervention will be accepted, implementable, cost-effective, scalable and transferable across contexts. Therefore, as part of the theoretical framework for this thesis, a key focus for the studies within this programme of research is to consider the unique context of contact centres across the UK and explore how this affects the adoption, implementation, evaluation, awareness of, and engagement with health initiatives. This programme of research will focus on the formative development phase of the MRC framework to inform an evidence-informed and industry specific toolkit for contact centres to improve the health of their advisors.

The development phase of the MRC framework emphasises that a key source of intervention development may be an existing intervention that can be adapted or tailored to a new context and population. The framework suggests that researchers should first search for existing evidence using a systematic review. The studies in this PhD aim to explore this by performing a systematic scoping review for existing evidence (study 1) and identifying what contact centres are already doing to improve advisor health (study 3). This phase also highlights how a well-developed programme theory can identify features of the intervention that may need adaptation for different populations or settings and

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identify key mechanisms of the intervention that should be retained (191). Therefore, studies 2 and 3 use behaviour change theory to explore how initiatives are implemented differently across settings and population groups, whilst also exploring decision makers' and advisors' perceptions on key components of initiatives that are perceived to be effective.

Overall, the 2021 MRC framework is valuable for its structured, theory-driven, and context-sensitive approach to developing complex interventions. Following the development phase, the MRC framework suggests that researchers conduct feasibility testing using pilot studies, evaluation studies to assess effectiveness and impact, and implementation planning for sustainable scaling, monitoring, evaluation, and adaptation. The feasibility, implementation and evaluation phases are beyond the scope of this PhD; however, post-doctoral research could continue research following the MRC framework.

[2.5.2 The RE-AIM framework to explore contact centre health initiatives](#)

The RE-AIM framework was also used to guide this programme of research. The RE-AIM framework was developed to improve the translation of evidence into practice and policy (195). It is one of the most popular frameworks within public health, behaviour science and implementation science (196). The RE-AIM framework has five main dimensions (reach, effectiveness, adoption, implementation and maintenance) and aims to encourage researchers and practitioners to pay more attention to improving the external validity of a health initiative to improve the sustainable adoption and implementation of effective, evidence-based health initiatives (197). Within the MRC framework, RE-AIM can be integrated across each stage and is often used in the evaluation and implementation phases. Within this PhD, RE-AIM was applied during the development phase of the MRC to inform the formative development of the contact centre toolkit, increasing the translation of evidence-informed health initiatives recommended. For example, this

involved exploring factors influencing reach, rather than reporting reach indicators such as sample size, which are more relevant for evaluation research. Assessing these indicators would be more appropriate for post-doctoral research following the MRC framework. The research questions within this thesis were therefore aligned to dimensions of the RE-AIM framework forming the theoretical framework for this programme of research. One systematic review examining the use of the RE-AIM framework over time states that although RE-AIM was highly reported, there were several inconsistencies in its use, including the confusion of reach and adoption (198). Therefore, it was important to clarify how each component was defined within this programme of research (see Figure 2.2), ensuring that this aligned with the given definitions.

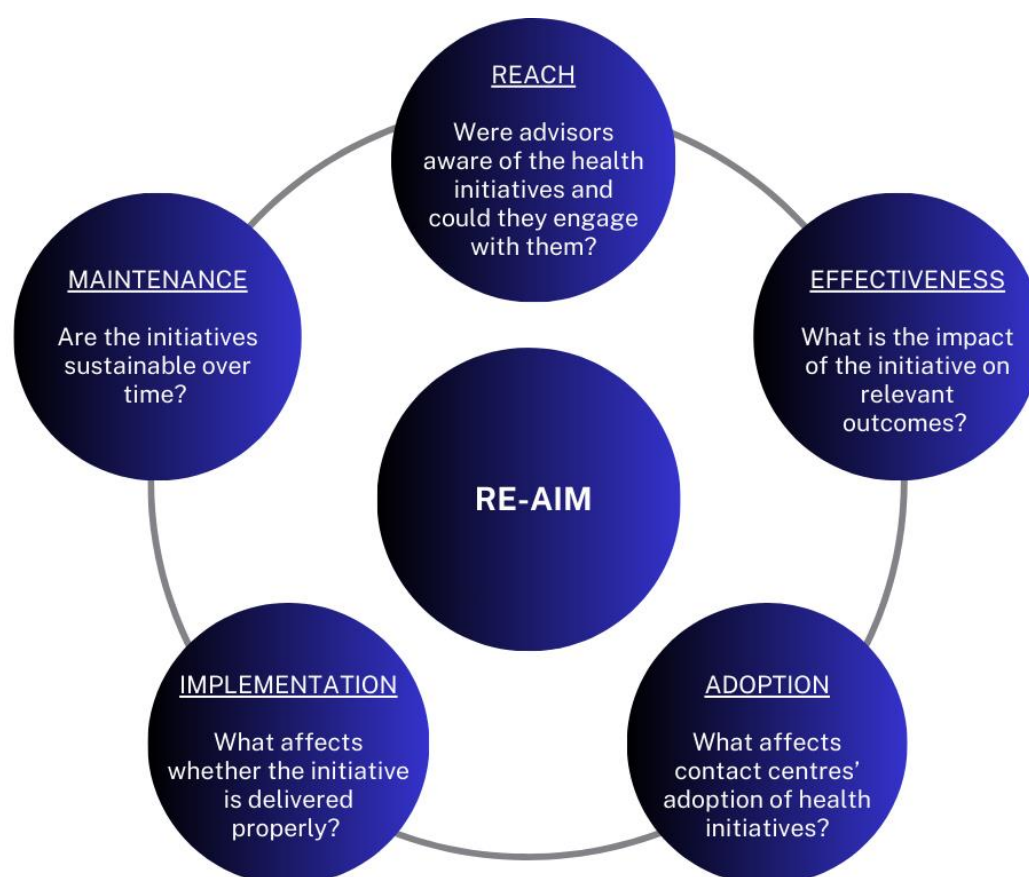


Figure 2.2 The RE-AIM framework aligned to the programme of research

Study 3 explores factors affecting **reach** and perceived **effectiveness**. As with all other elements of the RE-AIM framework, it is important to use qualitative research to understand reach and/or recruitment (199). Therefore, study 3 qualitatively explores advisors' awareness and engagement with health initiatives. To further explore effectiveness within real-world situations, study 3 explores the perspectives of both decision makers and advisors. RE-AIM also states that it is important to explore possible negative or unintended consequences of the initiative (200), therefore this was included as a prompt within the study 3 interview schedule. Study 2 also considers **effectiveness** by considering the evaluation methods used by organisations and what outcomes they consider to be important. This aligns with the RE-AIM framework as part of exploring the effectiveness is understanding what broader outcomes are important to stakeholders (201).

Study 2 explores the **adoption** of health initiatives within contact centres. The RE-AIM framework emphasises the use of qualitative research methods, so emphasis is not only placed on the proportion of organisations who adopt a health initiative, but perspectives on why the initiative was or was not adopted (202). Study 2 also explores the **implementation** of health initiatives within contact centres. For this, the RE-AIM framework suggests that research should consider the multidimensional nature of implementing health initiatives considering how well an initiative has been implemented, any adaptations that have been made, the cost of implementation and the consistency of delivery across sites/time/settings/subgroups (203).

The RE-AIM framework guidance states that **maintenance** may not be assessed in every project or application of the RE-AIM depending on the questions of interest, therefore maintenance was not deemed within the scope of this programme of research. The following sub-sections will consider the literature for the reach, effectiveness, adoption,

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and implementation of workplace health initiatives, focusing on the contact centre environment.

Reach: Employee awareness and engagement with health initiatives

Understanding factors affecting participation in real-world initiatives is essential to reaching the target population / employees (62). It is also important that initiatives are designed to reach a large number of workers (38). One systematic review found that employee engagement in workplace health initiatives were typically below 50% (62). Robroek et al. conducted a systematic review to assess the factors influencing participation in workplace health initiatives, focusing on individual, health, and work-related determinants, as well as programme characteristics that affect initial participation levels. Their review revealed that few studies explored how individual, health, lifestyle and work-related factors impacted participation in workplace health initiatives designed to improve physical activity and/or nutrition (62). However, this study found that female workers had a higher participation rate than men, excluding initiatives involving fitness centres. The review also highlighted that offering incentives or a diverse range of programs - particularly those with multiple components addressing various behaviours - can boost participation rates. Such initiatives are more likely to attract a broader audience compared to single-component programs. This broader appeal is due to the greater likelihood that multi-component programs will align with the diverse interests and needs of potential participants.

Research in non-contact centre settings also highlighted that management support to participate facilitates employee engagement with health initiatives, whilst time constraints, the location of the health initiative, and high workload can be barriers (63, 204). Scheduling conflicts were particularly problematic for shift or part-time workers, as health initiatives were often oriented around fixed-hour workers (63), excluding those

with irregular hours (64). This could be a significant barrier within contact centres, where the number of organisations using part-time shifts has gradually increased, reaching 58.7% in 2023 (64). Participants also emphasised that the physical proximity of the health initiative should be feasible (64), with potential biases favouring head-office and city centric locations (63). This may be relevant in the contact centre population with the recent surge in hybrid working. Given the lack of contact-centre specific research, there is a need to understand advisors' awareness of and engagement with health initiatives.

Effectiveness

A review of the research exploring the effectiveness of contact centre health initiatives can be found in section 2.4.4. This section will therefore discuss centres' evaluation of workplace health initiatives and the outcomes considered to be important, helping to understand if and how health initiatives are considered effective by organisations. This can help researchers when designing initiatives, allowing them to align the initiative with organisational goals. This can enhance the adoption and implementation of these health initiatives within centres and is more likely to be considered as effective by the organisation (205).

Industry guidance recommends that organisations utilise a combination of qualitative methods (e.g., interviews or focus groups) and quantitative methods (e.g., surveys) to assess employee satisfaction and motivation, management satisfaction, peer satisfaction, workplace satisfaction, absenteeism and presenteeism, and performance (206). However, there is a lack of research exploring how organisations, including contact centres, evaluate health initiatives. Broad workplace research suggests that organisations often measure economic outcomes to demonstrate the cost-effectiveness of an intervention, which can inform the adoption of future health initiatives or the continuation of a current one (60).

One contact centre study found that centres emphasised measuring the impact of an

initiative through business outcomes such as productivity, customer service scores, average call handling times, sickness absence, and employee engagement (19). However, despite the importance of absence data, research has described these methods as reductionist, reducing employees to a number for the financial gain of an organisation (207). More research is therefore needed to explore how contact centres evaluate health initiatives compared to industry guidance.

Adoption

One of the top priorities for public health researchers and practitioners is translating evidence-based programmes from research into practice (208). To bridge the gap between evidence and practice, research first needs to explore stakeholder behaviours during the initial decision to adopt a health initiative. Understanding these behaviours helps to identify facilitators and barriers to adoption, which in turn aids in creating practical strategies for integrating evidence-based health initiatives into the contact centre environment.

Studies assessing factors affecting the adoption of workplace health initiatives suggest that smaller organisations are less likely to adopt health initiatives compared to larger organisations (50, 209). This may be due to a lack of awareness of available health initiatives (49) or insufficient resources to adopt them (209). A systematic review on factors influencing the adoption of workplace health initiatives further highlights barriers such as perceived lack of employee interest in health initiatives, insufficient staff resources and funding, and lack of management support (209). While there is some literature exploring factors affecting the adoption of health initiatives within workplaces, there is a lack of evidence specific to the contact centre environment.

Only two studies (19, 54) have examined factors influencing the adoption of health initiatives aimed at reducing sedentary behaviour and/or promoting physical activity within contact centres. Both studies found that direct organisational benefits (such as reduced sickness absence and attrition, and optimised productivity) and concern for employee wellbeing facilitated adoption. Barriers included the unique nature of an advisor's job role (highly sedentary with a physical connection to the workspace via a headset (19, 54)), high workload with continuous performance monitoring against targets (19), perceived lack of interest from employees (54), concerns about discrimination against physically inactive employees (54), workspace (54), and the cost of initiatives like height-adjustable workstations (19). However, these studies were limited to physical activity and sedentary behaviour, with no evidence on barriers and facilitators to the adoption of other health initiatives in contact centres.

Implementation

Once an organisation decides to adopt a health initiative, the next critical step is implementation. Despite solid evidence bases for intervention efficacy, workplace health initiatives often fail in practice due to poor implementation (47). Therefore, implementation research aims to comprehend the mechanisms of what, why and how health initiatives work within “real world” settings (210). This involves exploring barriers and facilitators to implementation from the perspective of key stakeholders.

Research in non-contact centre workplaces has revealed that leadership engagement (commitment, involvement and accountability of employers) was fundamental for successful implementation of health initiatives (51). Other facilitators included managers' high self-efficacy to promote health initiatives, high prioritisation of the health initiative in relation to work, and creating a common understanding of goals and objectives for health initiatives among employees (51). This study also found that the main barrier to successful

implementation was employers' or managers' belief that health management should solely be the responsibility of employees (51). Similarly, studies highlight that support from senior and middle management for health initiatives can significantly influence organisational culture, employees' perception of support and their behaviours (52).

Given the rise in hybrid and remote working models since the COVID-19 pandemic, it is important to explore whether these barriers and facilitators remain as significant.

Leadership support and engagement may play a different role in remote or hybrid environments where face-to-face interaction with management is less frequent. It is worth exploring how the dynamics of leadership and employee engagement have shifted in these modern work settings and whether new approaches are needed to effectively implement health initiatives in such contexts.

To date, there is a lack of implementation research in contact centres. Three UK-based studies found that high workloads among team leaders and middle managers hindered successful implementation of multi-component interventions to reduce sedentary behaviour (19). Additional challenges included inadequate communication of intervention aims due to team leaders not attending the training sessions (55), and conflicts faced by team leaders when trying to balance health initiative promotion with maintaining customer service levels (56). These findings suggest that alongside lack of support from senior and middle management there may be additional barriers related to advisor and team leader workload and targets that need further exploration.

Few studies have investigated the implementation of health initiatives within contact centres. This is important to enabling researchers and practitioners to tailor initiatives to meet the unique needs of contact centre advisors, thereby enhancing effectiveness. Given advisors' limited autonomy over work tasks and break times (211), Allexandre et al.

identified “limited time” as a barrier to implementing a mindfulness programme during advisors’ breaks (57). Morris et al. highlighted challenges in implementing stand-capable desks within a contact centre office environment, including advisors need for ownership over their desks making “hot desk” systems unfeasible, and the variability in shift patterns, break schedules and dispersion across the office meaning movement champions found it challenging to engage advisors (55). Both interventions were designed for contact centre settings, so the barriers identified may not be applicable to remote or hybrid environments. Understanding these dynamics will help promote equitable access to health initiatives for all employees regardless of their work environment.

With minimal research conducted on how health initiatives are implemented within real-world contact centre settings, particularly amidst the rise of home/hybrid working, there is an urgent need to fill this gap. Understanding the multi-faceted aspects of what drives successful implementation in real-world contact centre settings is crucial.

2.5.3 Behaviour change theory

To inform the development of complex interventions, there is a need to understand the mechanisms of behaviour change within the contact centre setting. Improving the implementation of evidence-based practice and public health depends on behaviour change (212). The behaviour change wheel (BCW), developed by Michie et al. (212), outlines a comprehensive framework for designing and evaluating interventions aimed at changing behaviour. This framework integrates nineteen theoretic approaches, covering nine intervention functions (education, enablement, training, coercion, restriction, environmental restructuring, incentivisation, persuasion, modelling) and seven policy categories (guidelines, environmental/social planning, communication/marketing, legislation, service provision, regulation, fiscal measures) that enable interventions to work (212).

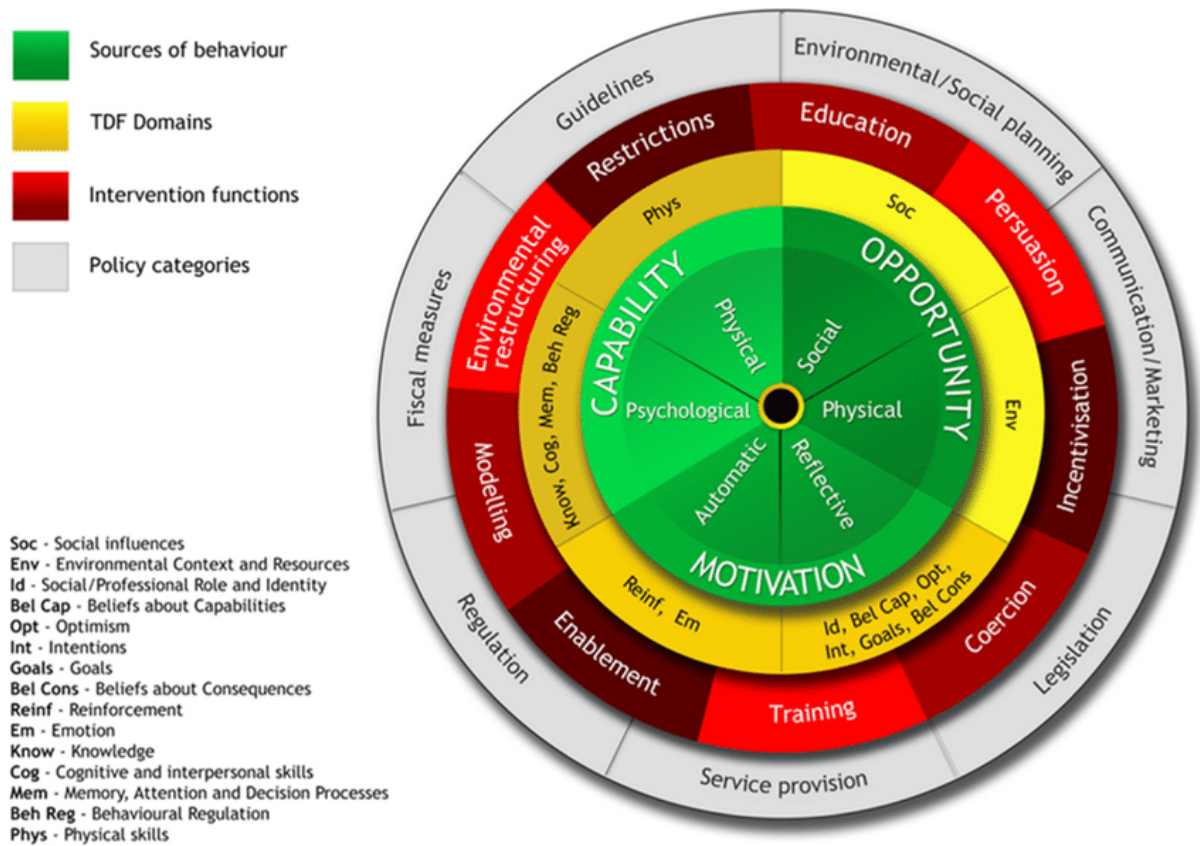


Figure 2.3 The Behaviour Change Wheel and Theoretical Domains Framework (212).

As shown in figure 2.3, the core component of this framework is the Capability, Opportunity, Motivation-Behaviour (COM-B) model; the behaviour change wheel is built around this. The COM-B states that behaviour is influenced by three key factors (212):

1. **Capability:** the individual's psychological and physical capacity to engage in the activity, including having the necessary knowledge and skills.
2. **Opportunity:** all physical and social factors that lie outside the individual that make the behaviour possible or prompt it.
3. **Motivation:** Cognitive processes that energise and direct behaviour, not just goals and conscious decision-making. It includes reflective and automatic processes such as: habitual processes, emotional responding, and analytical decision-making.

Michie et al. (122) states that changing behaviour requires altering one or more of the six underpinning elements.

The Theoretical Domains Framework (TDF) is an integrative framework of 33 organisational and psychological theories and 128 key theoretical constructs related to behaviour change (213). This framework includes 14 domains influencing behaviour (214). The TDF and COM-B have been integrated, with each of the TDF's 14 domains mapped onto the COM-B to provide a detailed understanding of each factor (this integration can be observed within figure 2.3):

1. Capability

- **Knowledge:** Awareness and understanding of information.
- **Skills (psychological and physical):** Abilities or proficiencies acquired through practice.
- **Memory, Attention, and Decision Processes:** Mental processes that influence behaviour.
- **Behavioural Regulation:** Strategies and techniques to manage behaviour.

2. Opportunity

- **Environmental Context and Resources:** Factors in the physical and social environment that influence behaviour.
- **Social Influences:** Interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviours.

3. Motivation

- **Social/Professional Role and Identity (reflective and automatic):** A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting.
- **Beliefs about Capabilities:** Self-confidence and self-efficacy in performing the behaviour.

- **Optimism (reflective and automatic):** Confidence that things will happen for the best or that desired goals will be attained.
- **Beliefs about Consequences:** Acceptance of the truth, reality, or validity about outcomes of a behaviour.
- **Reinforcement:** Incentives and rewards that influence behaviour.
- **Intentions:** Plans and aims to perform the behaviour.
- **Goals:** Endpoints or desired outcomes of a behaviour.
- **Emotion (reflective and automatic):** Affective states and feelings that influence behaviour.

Together, the COM-B and TDF can be used to conduct a comprehensive assessment of factors influencing behaviour, enabling research to systematically identify potential barriers and facilitators to behaviour change. These theories have a strong empirical base and facilitate the theoretical assessment of implementation problems (214). Forming part of this thesis' theoretical framework, this behaviour change lens formed the identification of the problem and analysis of data within each of the three studies.

The COM-B and TDF have been effectively applied to understand drivers of behaviour across a wide variety of settings and populations, using interviews/focus groups and questionnaires (215). For instance, Szinay et al. used these theories to explore reasons for engaging and not engaging with a wide range of health and wellbeing apps (216). Szinay et al. reported that the TDF was particularly useful during analysis, ensuring that factors were identified which may otherwise have been overlooked (216). However, Weatherson et al. noted challenges with the TDF, such as difficulties distinguishing between certain domains (e.g. beliefs about consequences and optimism) and the TDF not being able to provide an explanation for how the domains are connected and influence each other

(217). Despite this, based on the successful application by similar studies, this programme of research used these theories, addressing limitations by using a systematic and transparent approach to reporting the interpretations of TDF domains and offering reflexive insights into how domains may be connected when relevant. Specifically, the COM-B and TDF guided study 2 and 3 to explore the behaviours of multiple stakeholders (advisors and decision-makers) when adopting, implementing, and engaging with a health initiative (adoption, implementation, awareness and engagement).

Figure 2.3 illustrates how the COM-B, TDF and BCW intervention functions and policy categories are linked. Within the BCW, nine intervention functions were identified to address factors identified within the COM-B and TDF behavioural diagnosis (typically conducted prior to designing an intervention to identify factors that need to change, using appropriate intervention functions and policy to do this). These intervention functions are broad intervention components which describe how an intervention aims to change behaviour, supported by policy categories. For example, providing 'education' on how to sit correctly to maintain good posture, if a lack of knowledge (TDF component associated with COM-B's psychological capability) has been identified as a barrier within a behavioural diagnosis. Linked to these intervention functions are 93 Behaviour Change Techniques (BCTs) (218). These BCTs are specific and precise ways of reporting behaviour change interventions (e.g. incentivisation or persuasion). The BCT taxonomy V1 organises the 93 techniques into 16 groups. This linked theoretical approach has been displayed within previous research and is advocated for in the MRC framework (191). For example, Ojo et al. conducted research investigating the perceived barriers and facilitators to breaking up sitting-time among desk-based office workers using the COM-B and TDF (219). Using these results, Ojo et al. then created links between the behaviour identified (e.g. lack of knowledge) and the suggested solutions (health initiatives) using the BCW

(intervention functions and policies e.g. education supported by communication and marketing) and associated BCTs (e.g. information about health consequences) (219).

The BCW interventions functions, policy categories and associated BCT's offer a standardised approach for designing and evaluating health initiatives. Not only can these theories be used to develop effective health initiatives, but to systematically describe the content of existing initiatives. By mapping existing initiatives to behaviour change theory researchers can identify the mechanisms linked to effective outcomes (220). For example, Michie et al. reliably identified specific behaviour change techniques in manuals and guidelines for interventions to reduce excessive alcohol consumption (221). Therefore, this programme of research will apply this theory to examine health initiatives identified within the literature (study 1) and by advisors and decision-makers (study 3). Using this standardised theory throughout these studies can help to identify similarities and differences in approaches to design, delivery, and intervention components, enhancing studies replicability.

To improve practical applicability, the APEASE criteria framework is used within the BCW to systematically evaluate and select appropriate interventions (220). APEASE stands for Affordability, Practicability, Effectiveness and cost-effectiveness, Acceptability, Side-effects/safety, and Equity. This framework can be used following a behavioural diagnosis and identification of intervention functions and policy categories to ensure that the identified health initiatives can be realistically implemented. The APEASE criteria can also be used to retrospectively evaluate existing interventions and their appropriateness for different contexts (222). Informed by the APEASE criteria, the following questions were considered within the study 2 and 3 interview schedules when appropriate:

1. **Affordability:** Can the intervention be adopted within budget constraints?

2. **Practicability:** Can the intervention be implemented in the real-world setting?
3. **Effectiveness and Cost-Effectiveness:** How well does the intervention achieve its objectives, and is it a good value for money?
4. **Acceptability:** Is the intervention accepted by advisors, team-leaders, and managers?
5. **Side-effects/Safety:** Are there any potential negative consequences or risks associated with the intervention?
6. **Equity:** Does the intervention reduce or increase disparities among advisors?

Overall, these systematic frameworks were developed to improve the translation of research into practice (212), although to date, there has been no evaluation of the COM-B and whether it results in increased implementation. Despite this, many studies have reported on the benefits of its exploratory potential to identify barriers and facilitators to behaviour to consider when developing behaviour change initiatives (223, 224). Prior to the development of these theories, the field of behaviour change and implementation lacked explicit theories to understand barriers to implementation and design interventions (225). Most research used implicit commonsense models of behaviour, and the studies who did use theory/models did not cover the full range of possible influences on behaviour (226). This reporting resulted in few interventions being reported with a detailed description of the content, delivery and relationship between the components and outcomes, making it difficult for practitioners to replicate and scale-up (226). Additionally, Michie et al. recognised that earlier frameworks, like MINDSPACE or traditional models such as the Health Belief Model and Theory of Planned behaviour, were either too narrow or failed to address all relevant behaviour change mechanisms (212). Therefore, the BCW, TDF, BCTs, and APEASE criteria were deemed the most appropriate theories to improve research translation into practice.

These theories were chosen to guide this programme of research as they provide a structured and systematic approach that integrates multiple behaviour change theories, can be adapted to various contexts and populations, have been informed by extensive research, and have been applied successfully in numerous studies and practical applications (215). The COM-B and TDF were used to explore the behaviours of multiple stakeholders (advisors and decision-makers) when exploring the adoption and implementation of health initiatives (study 2), as well as advisors' awareness and engagement (study 3). The BCW and BCTs (when appropriate) were used to systematically examine effective health initiatives (study 1) identified within the existing evidence and by employees (study 3). The APEASE criteria was used to inform the study 2 and 3 interview schedules to assess existing health initiatives within contact centres. One limitation of this theory is that it does not provide detailed guidance on the measurement of health initiatives and evaluation methods. This means that this theory cannot be used when considering the evaluation of health initiatives within contact centres and the outcomes that they consider to be important.

2.6 Health-promoting toolkits

Toolkits are a collection of resources used to translate knowledge to key stakeholders (66).

Employers can use toolkits to implement evidence-based strategies to enhance employee wellbeing, increase productivity, and create a healthier work environment (67).

Workplace health-promoting toolkits often provide a range of resources, including guidelines, best practice, assessment tools, programme templates, training and webinars.

The Centre for Disease Control and Prevention (CDC) in the USA created a Workplace Health Promotion Toolkit, in 2019, containing resources for employers to create a healthy work environment (227). Specifically, this toolkit describes a four-step workplace health model to create a comprehensive set of health initiatives that address multiple risk factors

and health conditions (228). These four steps include assessing the risk factors, planning the health initiatives, implementing the initiatives, and evaluating the initiatives. Overall, the CDC toolkit emphasises the need for evidence-based and credible resources for employers to tailor to their own unique workplace needs. These strategies contain a mix of individual and organisational strategies to change behaviour and create a “culture of health” (229). Whilst this toolkit may benefit some contact centres, research indicates that there are unique working conditions within contact centres that may impact the successful adoption and implementation of health initiatives generalised to other office environments. For example, contact centres with hot desks may not be suitable for height-adjustable desks (55), policies encouraging breaks or walking meetings may conflict with the demands of continuous customer service within contact centres (169), and initiatives requiring office space may be challenging as many contact centres are cutting overhead costs by reducing or eliminating physical office space (175). Although the CDC toolkit emphasises adapting to unique environments, more guidance is needed for contact centres on how to do this effectively to facilitate health promotion in workplaces where advisors are particularly vulnerable to specific health risks. This places responsibility on the organisation, increasing the likelihood of some implementing health initiatives poorly, which can be a barrier to future investment.

The National Business Group on Health, based in the USA, also created a wellbeing toolkit in 2020 (230). These resources contain best practice examples of health initiatives, case studies, planning tools and evaluation strategies. However, the resources are non-specific for contact centres, meaning they may not meet the needs of advisors. For example, advisors often face psychological distress following customer interactions (22), are “chained” to their desk via headsets (81), and may need to have their time ‘protected’ to prioritise engagement with health initiatives. Guidance specifically addressing and

providing solutions to these unique barriers to health improvement and behaviour change is needed. For example, harnessing offline time (time when an advisor is not available to take calls) and planning systems for advisors working hours and break times may be particularly useful for contact centres (231). Additionally, these resources are only available to employers with a paid membership. Describing themselves as an “ally for large employers”, this paid membership may result in unequal access to resources, favouring larger organisations with the financial capacity to pay for these services which can lead to inequality within this occupational group.

There are also toolkits focused on specific health outcomes. For example, the Mental Health Foundation (UK) toolkit focuses on improving mental health within the workplace (232). This toolkit provides practical advice, training, and resources for organisations across the UK and worldwide. However, as noted in toolkit development guidance, the success of health initiatives are highly dependent on context and no single strategy has been shown to be universally effective (66). Therefore, while contact centres could utilise resources within this toolkit, more research is needed to determine the perceived effectiveness and practical implementation within this unique environment. Based on this evidence, a contact-centre specific toolkit can be created based on evidence collected within this programme of research and the wider literature.

Overall, no toolkit has been identified that is tailored to the contact centre working environment. With the recent increase in contact centre hybrid/remote working (58, 59), toolkits recommending health initiatives should also consider the impact this has on implementation and the unique health requirements of this population group. While most of these existing toolkits reference initiatives applicable to hybrid working, research suggests that more investigation is warranted to explore the health needs of

remote/hybrid workers alongside the importance of developing tailored health initiatives (233).

Substantial research emphasises the importance of health toolkits being informed by evidence and theory (194, 212). Such an approach ensures that health interventions are effective, sustainable, and tailored to address specific health issues comprehensively. The CDC toolkit appears to be informed by research and behavioural science (234), the National Business Group on Health references no evidence-base or theory (230), and the Mental Health Foundation toolkit references their training as being based on up-to-date research from the fields of mental health psychology, addictions, counselling and social sciences. (235). However, how theory and evidence were integrated into the development of these toolkits is often unclear.

Unlike previous toolkits, the current research will utilise evidence-based practice and widely used behaviour change theory to inform the development of a toolkit grounded in well-established psychological theory. Health toolkits informed by evidence and theory are more adaptable and scalable across different contexts and populations (194, 212). This adaptability is critical for addressing the diverse needs of various groups (e.g., shift workers, night workers, remote and hybrid workers) within contact centres across different industries and sizes.

2.7 Summary

Contact centres have evolved since their development in the early 1990's, presenting a unique working environment compared to typical office jobs. Evidence indicates that these sedentary, monotonous, highly stressful, and typically low-paid environments have created health vulnerabilities within this workforce. Advisors often experience stress, musculoskeletal issues, poor vocal, visual, and auditory health, headaches, and poor

mental health due to their working conditions. Additionally, contact centre working conditions may lead to higher engagement in unhealthy lifestyle behaviours (poor diet, low physical activity, smoking, and high alcohol consumption), increasing the risk of chronic diseases and all-cause mortality.

While there is a business case for contact centres to invest in their employees' wellbeing to reduce high rates of sickness absence and attrition, organisations also have a moral, ethical, and legal responsibility to protect and promote their advisors' health. Despite research on generic workplace health initiatives, there is a gap in understanding recent initiatives implemented within real-world organisations, especially their applicability to contact centres.

To date, there is a lack of recent policy or sector guidance informed by evidence and theory. Additionally, no recent review summarises existing evidence on the effectiveness of health initiatives within contact centres. Given the need for industry-specific guidance, it is essential for research to translate evidence-based findings into practice by exploring organisational (adoption, implementation, evaluation of health initiatives) and individual behaviours (awareness and engagement), alongside the perceived effectiveness of health initiatives.

Research highlights few studies exploring factors affecting the adoption of health initiatives within the workplace, with only two contact centre-specific studies limited to physical activity and sedentary behaviour initiatives. Research also suggests that the unique factors affecting the implementation of health initiatives in contact centres needs further exploration. With limited research on the evaluation methods used by organisations, there is a need to explore how contact centres evaluate health initiatives in practice. Existing research has also identified factors that may serve as barriers to

advisors' awareness and engagement with health initiatives, but further exploration is required.

The current state of the research underscores the need to determine which health initiatives work in practice within contact centres and which are effective to inform industry guidance. Following the theoretical frameworks underpinned by the MRC framework, RE-AIM and behaviour change theory, the current research aims to help close the identified evidence gaps and develop an industry-specific toolkit grounded in evidence and theory.

3. Methodology

This chapter outlines the philosophical foundation of the research, discussing how pragmatism was chosen for its practical and flexible approach. This chapter introduces the mixed methods approach used within study 2 and 3 and endorsed by the MRC framework. The integration of studies and findings are also discussed in relation to Fetter's narrative approach (236), alongside the use of Generic Qualitative Research (GQR). The rationale, data collection tools and analytical process for the study 2 and 3 (phase two) surveys are covered, followed by a discussion of the trustworthiness of the qualitative research and the reliability and validity of the quantitative research.

3.1 Philosophical underpinning

The philosophical framework underpinning this programme of research is pragmatism, a paradigm that emphasises the importance of focusing on the aim of the research and selecting the methodological approach that works best for the research problem (237). Pragmatism is particularly concerned with solving practical problems in the real world, allowing researchers to move beyond the rigid dichotomies which are post-positivism and constructivism (238). This is well aligned with this programme of research which aims to create a real-world and practical toolkit for contact centres to improve the health of their advisors. Pragmatism is characterised by the following key elements, each of which has a direct impact on how research is conducted (238):

Ontology: Pragmatism acknowledges both single and multiple realities, offering flexibility in how reality is perceived and interpreted.

Epistemology: Researchers are encouraged to adopt a “what works” approach, gathering data in ways that are most effective for addressing the research questions.

Axiology: Pragmatism accommodates multiple stances, recognising that research can be both biased and unbiased depending on the context and the researcher's perspective.

Methodology: Pragmatism supports the use of both qualitative and quantitative methods, allowing for a mixed-methods approach that can be tailored to the research problem.

Rhetoric: Pragmatism permits the use of both formal and informal language, depending on what best communicates the findings.

These principles of pragmatism have directly influenced the design and execution of this research project. For instance, the axiology of pragmatism highlights the role of the researcher's personal history, social background and cultural assumptions in shaping the research questions and methods (239). To acknowledge this, I have incorporated reflexive “stop-offs” throughout the research process to critically reflect on how these factors have influenced my decisions. The rhetoric of pragmatism has informed my choice of language throughout the thesis. Specifically, I have employed a more formal tone throughout the thesis to convey objectivity, while a more informal, first-person narrative is used in the reflective stop offs to acknowledge the active role of the researcher and the exploratory nature of mixed methods research. Finally, as pragmatism advocates for methodological pluralism, this research employs a mixed-methods approach, integrating both qualitative and quantitative data to provide a comprehensive understanding of the research problem.

Critics of pragmatism argue that its emphasis on practicality can sometimes lead to a lack of philosophical coherence in research designs, as it may prioritise immediate problem-

solving over theoretical consistency (240). However, it has also been argued that avoiding these ontological and epistemological debates about the nature of truth and reality allows researchers to focus on the practical understandings of real-world issues (241). This has been recognised as particularly useful in organisational research (242). Pragmatism allows researchers to focus on practical understandings of real-world issues, exploring the connections between knowledge and action in specific contexts. This approach aligns well with the MRC framework, which encourages a “pragmatic and pluralist choice of research questions and methods (p.g.32)” to provide evidence that is useful to decision-makers (243).

While pragmatism was ultimately chosen for this research, critical realism was also considered. Both paradigms support mixed methods, but they differ in their philosophical assumptions. Critical realism combines a realist ontology with a relativist epistemology and argues that what we observe through research is caused by underlying, often unobservable mechanisms, which can include people’s reasons, motivations, and intentions (244). Critical realists aim for a rich and detailed exploration of reality by exploring different experiences, contexts and beliefs (245). This approach is often used in evaluation research, as it focuses on explaining what works under specific contexts, and why initiatives cause certain outcomes (246).

Pragmatism was deemed more suitable for this research however due to its practical, flexible, and outcome-oriented nature. Unlike critical realism, which delves into the deeper layers of reality and underlying mechanisms, pragmatism is better aligned with the goal of addressing immediate, practical issues within the contact centre industry and developing actionable guidance in a timely manner. While critical realism offers valuable insights into complex systems, it was felt that this was beyond the scope of this research. Future studies might employ critical realism to evaluate the toolkit that will be developed

based on the evidence gathered from this programme of research and to explore the underlying mechanisms behind successful health initiatives.

Reflective stop off

During my Public Health Master's degree, I was introduced to the concept of research paradigms, though only at a surface level. It wasn't until I embarked on this PhD journey that I deeply explored and truly understood these philosophical frameworks. Upon first reading about post positivism and constructivism I found that neither fully resonated with my research approach which has involved both qualitative and quantitative methods.

Reflecting on my academic journey, I recall the strong emphasis on quantitative research during my undergraduate psychology degree, which influenced the direction of my dissertation. However, as I progressed into my Master's degree and subsequent work as a research assistant, I found myself increasingly engaged with qualitative research. I felt a connection with qualitative methods, especially in exploring and interpreting the nuanced lived experiences and collective perspectives of individuals. As I approached this research program, it became clear that a mixed-methods approach was essential. To understand the complexities of organisational processes related to health initiatives and their effectiveness, I needed the breadth that quantitative research provides and the depth of qualitative insights. This need for a comprehensive approach naturally led me to pragmatism. It resonated with my desire to create recommendations for a practical toolkit for improving the health of contact centre advisors—a tangible outcome that was central to my work. Despite facing challenges, such as recruitment difficulties within the industry, keeping pragmatism in mind

provided clarity and direction in making critical research decisions. This pragmatic approach kept me focused on the overall aim of the research.

3.2 Mixed methods research

Mixed methods research, as defined by Creswell and Plano Clark, integrates research methods, design, and philosophical orientation into a comprehensive approach (238).

They describe mixed methods research as an approach where the researcher collects and analyses both qualitative and quantitative data to answer research questions. This approach involves integrating the two forms of data—mixing or combining them—along with their results, organising these processes into coherent and logical research designs, and situating these procedures within an appropriate theoretical and philosophical framework (238). By doing so, researchers can effectively address complex research questions that may not be fully understood through a single method.

The combination of qualitative and quantitative research methods allows for a more comprehensive understanding of the research problem, providing both in-depth insights and the ability to generalise findings to a broader population (238). In the context of exploring health initiatives within contact centres, this mixed methods approach enables a nuanced understanding of the complexities behind stakeholders' behaviours while also assessing the broader applicability of qualitative findings across a larger UK-based population. Despite the clear advantages of mixed methods research, it can be time-consuming and resource-intensive, requiring the researcher to possess qualitative and quantitative skills (247). However, the time taken to conduct this mixed methods research was taken into consideration for this programme of research, as well as the researchers' skills to conduct and analyse both qualitative and quantitative research.

The use of mixed methods is endorsed by the MRC framework, which recommends that methods are chosen pragmatically to address complex research problems (7). This is because complex interventions often involve multiple interacting components, varying contexts, and outcomes that may not be easily captured through a single method. Therefore, complex interventions often raise multiple research questions that require different types of data to fully answer. For example, study 2 aimed to explore factors affecting the adoption and implementation of health initiatives across UK centres, raising two questions: what factors influence the adoption and implementation, and is there consensus for these factors? The MRC also states that more than two research methods with triangulation techniques increases the validity of research findings (7). Triangulation refers to using multiple, different approaches to generate better understanding of a given theory or phenomenon (248). This approach mitigates the weaknesses inherent in using either qualitative or quantitative methods alone.

Aligned with a pragmatic epistemology and the principles of mixed methods research (249), the overarching aim of the research guided the development of a multi-phase mixed methods design (Figure 3.1). The complexity of organisational processes within contact centres suggested that a combination of qualitative and quantitative approaches would be necessary to achieve a comprehensive understanding that could be translated into guidance for centres across the UK.

First, a literature review (Chapter 2) and the study 1 scoping review (Chapter 4) were conducted, which identified significant gaps in existing studies on the adoption, implementation, evaluation, engagement, and effectiveness of health initiatives within contact centres. Insights from the scoping review directly informed the development of data collection materials, including interview schedules and surveys used in study 3. For detailed information on these processes, please refer to the relevant study chapters.

An exploratory sequential mixed methods approach was employed in studies 2 and 3 (see Figure 3.1). This approach involved two phases: the first phase consisted of qualitative data collection and analysis, which then informed the design and execution of the quantitative phase (250). This approach is useful for exploring topics with limited prior research, as it allows for the development of robust quantitative survey based on initial qualitative findings (250). Each study integrates and discusses the findings from both qualitative and quantitative phases. Detailed information on recruitment, data collection, and analysis is provided in the individual study chapters. The following section will focus exclusively on the integration of the data.

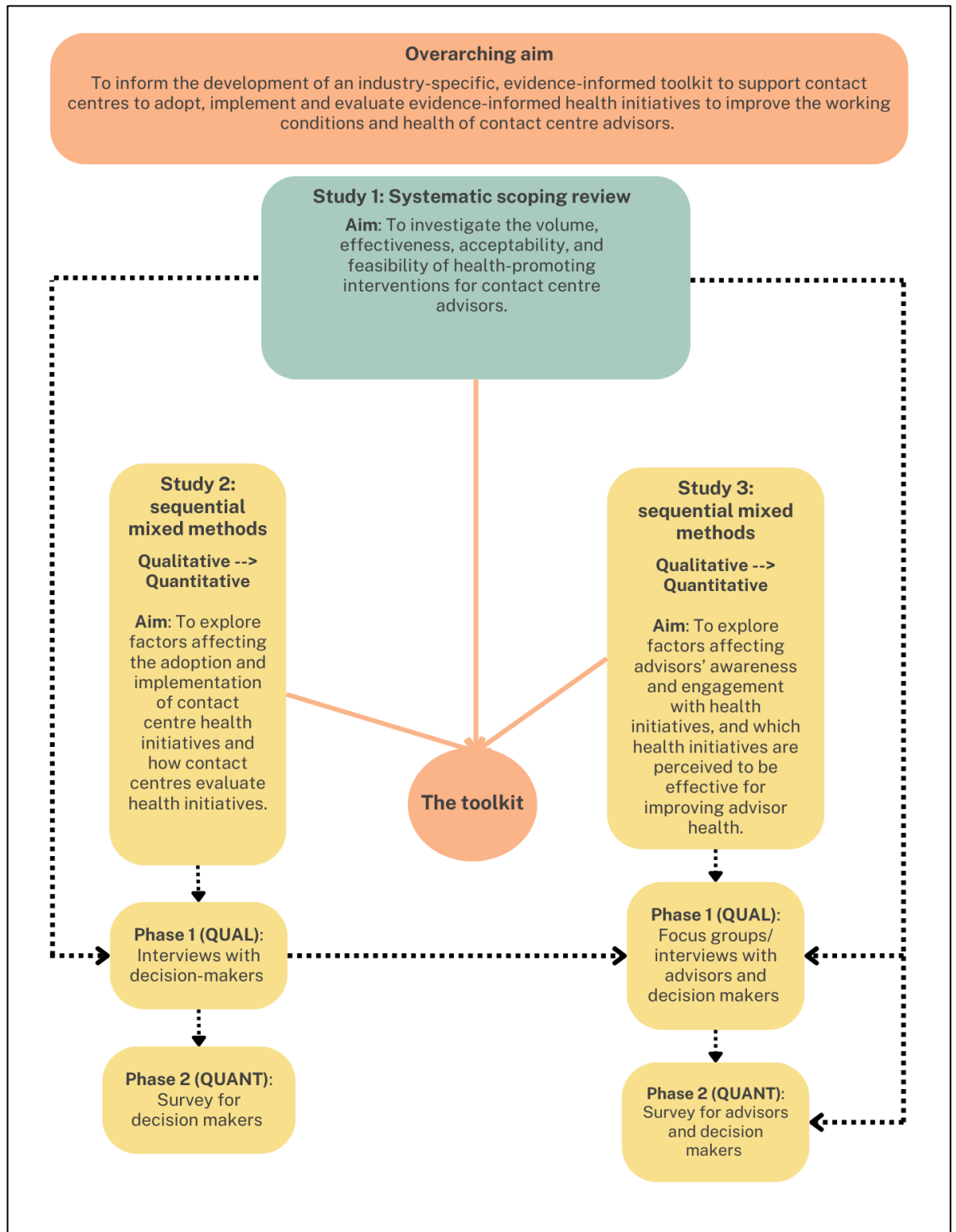


Figure 3.1: Overview of the research design and research aims

3.2.1 Integration

A key challenge for mixed methods research is how the different methods and data sets are integrated and brought together (251). According to Fetters, Curry and Creswell,

integration can occur at design, methods or the interpretation and reporting level (236). In this research, integration is achieved at each of these levels.

Design level: At a design level, both study 2 and 3 employ an exploratory sequential design, where the qualitative phase informs the subsequent quantitative phase. This represents integration at the design level, as the initial qualitative insights directly shape the quantitative approach.

Methods level: For the methods level, Fetters et al. describe integration through “connecting”, which occurs when one type of data links with another through the sampling frame (236). In studies 2 and 3, while participants from the qualitative phase were invited to complete the quantitative survey, the survey was anonymous, and there was no explicit linkage between the two samples. However, there was a connection between the qualitative sample of decision-makers and the qualitative sample of advisors. Specifically, decision-makers who participated in interviews (study 2 and 3) acted as gatekeepers, facilitating the recruitment of advisors for study 3. This connection was necessary, as information about health initiatives implemented in the contact centres was needed from decision-makers before advisors could participate. Detailed information on these connections can be found in the respective study chapters.

Fetters et al. also state that integration can occur through “building” when results from one data collection procedure informs the data collection approach of the other procedure (236). This occurred with the exploratory sequential design as the qualitative results informed the design of the survey.

Integration and reporting level: At the integration and reporting level, this programme of research employed Fetters’ narrative approach, where qualitative and quantitative findings are described within a single report or series of reports (236). More specifically,

the “weaving” approach was used, which integrates qualitative and quantitative findings on a theme-by-theme or concept-by-concept basis (236). In studies 2 and 3, qualitative and quantitative data were analysed separately, and the findings were then synthesised into a coherent discussion exploring their interrelationships. This approach is also used to weave together the results from study 2 and 3 with previous research identified in the literature and scoping reviews. This final integration of all three studies is detailed in Chapter 7.

3.3 Generic Qualitative Research (studies 2 and 3: phase one)

For study 2 and 3 qualitative research, GQR was chosen as a flexible alternative as the research questions did not align neatly within a single established methodology (252).

GQR can be defined as “that which is not guided by an explicit or established set of philosophic assumptions in the form of one of the known qualitative methodologies (p.4)” (253). GQR offers a pragmatic approach that accommodates a broad range of experiences and reflections (254), making it particularly suitable for research focused on understanding external, real-world phenomena rather than internal, psychological processes (255).

While phenomenology was considered due to its emphasis on experiences, it was ultimately not selected because its focus is primarily on understanding the internal, lived experiences of individuals (256). In contrast, the core focus of GQR is on exploring external, real-world events and how they are experienced by individuals (255). This emphasis on the external context aligns more closely with the overarching aims of this research, which seeks to explore and describe the realities of organisational processes within contact centres.

As Neergaard et al. observe, GQR aims to provide "a rich, straight description of an experience or an event (p.2)" (257). They also acknowledge that GQR is particularly useful in mixed methods research and for the development of questionnaires (257). GQR was applied during the qualitative phases of the mixed methods research in studies 2 and 3. Specifically, semi-structured interviews were used, which is a data collection method commonly used in GQR (254). The use of GQR in these phases allowed for an in-depth exploration of the organisational processes within contact centres, providing valuable insights that informed subsequent quantitative data collection and analysis.

3.4 Rationale for the Study 2 and 3 (phase two) online surveys

Studies 2 and 3 (phase two) were designed to assess consensus on the qualitative (phase one) findings, which helped to identify common themes and perceptions across a larger group of decision-makers and advisors. A survey assessing consensus was also useful for highlighting the level of agreement/disagreement between decision-makers and advisors. Another potential study design was explored and involved conducting a Delphi survey instead of the phase two surveys (study 2 and 3) to assess consensus on the phase one findings. However, this was deemed impractical due to several pragmatic decisions made throughout the research. Typically, the more traditional sequential Delphi surveys have high attrition rates and prolonged study durations (258). This was predicted to be particularly challenging within the contact centre environment which is known for its busy working environment and lack of autonomy of advisors. Reaching advisors would require their employers to distribute the survey, and doing a sequential Delphi survey would necessitate their participation at least twice. Feedback from public advisors and the centres who were involved with the piloting of the Delphi survey indicated concerns about the practicality of this approach. A real-time Delphi survey was also considered to overcome these challenges, but this approach presented its own limitations. These

included the need to collect participants' work emails, which posed privacy concerns for centres. Furthermore, the use of specialist software required for a real-time Delphi survey raised concerns about data sensitivity (emails) and the lack of established relationships with the software providers. As a result, organisations involved in the pilot phase were reluctant to distribute the surveys to their employees. Therefore, conducting a real-time Delphi survey on a large-scale to gather opinions from advisors and decision-makers was deemed unfeasible.

Collecting data on a larger scale across the UK was thought an important and practical decision made by the researcher to improve generalisability of the findings to inform recommendations for the toolkit. The decision to conduct a survey that assessed consensus without needing to achieve it directly was made in line with the thesis' and studies' pragmatic philosophy to choose a practical method that would best inform the toolkit recommendations.

Reflective stop off

At this point in my PhD, I encountered some of my most significant challenges. I had invested considerable time and effort in developing a Delphi survey protocol and in navigating the complexities of the real-time Delphi software. A key step was identifying suitable centres to pilot the survey, however, I quickly encountered significant barriers. Centres were hesitant to commit with less attraction to a Delphi survey meaning their employees would need to complete each answer twice, and required the collection of personal data (emails). To address concerns, I communicated with the software provider to secure a confidentiality agreement—an added layer of complexity. As the process unfolded, it became clear that conducting the Delphi survey would be incredibly

difficult if no centres were willing to distribute it to their advisors. I couldn't help but feel like I had wasted so much time on an approach that seemed increasingly unfeasible. However, I addressed this by focusing on my thesis' pragmatic philosophy, focusing on what would be both effective and achievable to guide my decisions moving forward. While a Delphi method might have been ideal, a more straightforward survey, which maintained anonymity and still aligned with the consensus-assessing goal, emerged as a viable alternative.

3.5 Trustworthiness, reliability, validity

Within mixed methods research, it is important to consider the validity and

trustworthiness at each stage of the research, improving overall reliability and credibility of the research findings (259). The steps undertaken to improve the trustworthiness of the qualitative methods (studies 2 and 3: phase one) and the reliability and validity of the quantitative methods (studies 2 and 3: phase two) are described below.

3.5.1 Trustworthiness in qualitative research

The steps followed to improve trustworthiness in the research are based on criteria presented by Bloomberg and Volpe (260). This framework builds upon the criteria originally proposed by Guba (1981) stating that trustworthiness in qualitative research could be evaluated using credibility, dependability, confirmability and transferability (261). The steps taken in studies 2 and 3 (phase one) are detailed in table 3.1. Based on the critiques by Smith and McGannon (262) and Braun and Clarke (263) of a universal, rigid checklist approach to assessing the qualitative research quality, this research was not overly reliant on standardised criterion. Instead, the criteria were applied flexibly and critically, ensuring alignment with the reflexive approach adopted.

Table 3.1 Strategies for improving trustworthiness in qualitative studies

Strategy	Approach undertaken in the research
Credibility	<p><i>Reflexivity</i>: the reflexive process was central to the qualitative research conducted, as the researcher kept a reflective log during the research, considering these during analysis. This is evidenced in section 1.3 which considers any potential biases that the researcher may bring to the research. This is also evidenced within the reflective stop offs provided throughout the thesis.</p> <p><i>Prolonged field engagement</i>: the researcher spent time familiarising themselves with the contact centre industry: during the study 1 scoping review and by engaging with the industry (attending industry webinars and delivering health and wellbeing special interest groups through the contact centre forum). This engagement continued during and after the study 2 and 3 qualitative research data collection. This prolonged engagement facilitated an in-depth understanding of the industry and processes, enhancing the researcher's ability to convey detail about the industry and findings.</p> <p><i>'Thick description'</i>: studies 2 and 3 contain in-depth and necessary descriptions of the research process.</p> <p><i>Peer debriefing</i>: coding and findings were discussed with a public advisor and the supervisory team with specialities in qualitative research. This process helped to examine assumptions and consider alternative ways of looking at the data.</p>
Dependability	<p><i>Audit trail</i>: detailed explanations of how the data were collected and analysed is available in chapters 5 and 6, and the researcher has maintained a clear record of transcripts.</p> <p><i>Peer examination</i>: coding was checked by a member of the supervisory team with qualitative expertise, whilst the first three interviews were independently coded by the researcher and public advisor to discuss alternative perspectives. Mapping to the behaviour change theory was also conducted by the lead researcher and four members of the supervisory team.</p>
Confirmability	<p><i>Audit trail</i>: examples of quotations have been provided within the results to display how the researcher's findings and interpretations are clearly derived from the data. The researcher has maintained all documents displaying all theoretical and analytical choices.</p> <p><i>Reflexivity</i>: constant reflection on the researcher's own beliefs and assumptions can help the reader to assess the trustworthiness of the findings.</p>
Transferability	<p><i>Purposeful sampling and 'thick descriptions'</i>: purposeful sampling and detailed descriptions were utilised within studies 2 and 3. A detailed description of the participants and their organisations (e.g., size and vertical market) enables readers to consider the participants' experiences and the study context, allowing them to form their own</p>

3.5.2 Reliability and validity in quantitative research

Content validity, construct validity and reliability are all key terms in quantitative research (264). This section describes the steps taken to improve this throughout the development and collection of the studies 2 and 3 (phase two) survey. To improve content validity and reliability, the survey was developed by the researcher in consultation with the supervisory research team, who had extensive experience of developing surveys, and a public advisor from the contact centre industry (PM). Additionally, the initially developed Delphi survey was piloted with four health and wellbeing decision-makers. This pilot was valuable and served as an indicator of content validity. Despite the software changing from the original Delphi survey format, the questions remained the same. To improve construct validity and reliability, standardised measures were used for the measurement of demographic variables, guided by research conducted by the National Institute for Health Research. Additionally, the Likert scales and consensus measures were developed based on existing quantitative studies for measuring consensus (265-268).

3.6 Public advisor involvement

3.6.1 Public advisor recruitment

To facilitate meaningful public involvement in this PhD, the researcher developed an advertisement poster for the public advisor role, which was distributed via the National Institute for Health Research (NIHR) Public Advisor Forum. The poster provided an overview of the PhD, details of the public advisor role, and the researcher's contact information for those interested in applying. As a result, Paul Moran (PM) was recruited in June 2022. PM brought valuable expertise from their full-time role as a change acceptance manager in a UK-based contact centre, offering firsthand industry insight. Their involvement was funded by the NIHR.

3.6.2 Public advisor involvement

PM was actively engaged throughout various stages of the PhD, contributing to recruitment materials, data collection instruments, and the interpretation and dissemination of findings. Their involvement helped to align the research with the lived experiences of those working within contact centres, increasing its relevance and potential impact.

Design of Recruitment Materials and Ethical Documents

PM provided formal advisory input on the design of recruitment materials and ethical documentation. This included reviewing the participant information sheets and recruitment posters for Study 2 and Study 3 (phase one and phase two). PM's insights were particularly valuable in improving the clarity and accessibility of these materials for potential participants from both advisor and decision-maker groups. Their contributions helped to refine the language and format, making the recruitment materials more engaging and potentially increasing the likelihood of participation.

Design of data collection materials

PM was also involved in shaping the data collection instruments, including the development of phase one interview schedules for Study 2 and Study 3 and the design of the phase two survey. Their input contributed to tailoring these materials to the contact centre environment, improving their accessibility and feasibility within this setting. For example, recognising the time constraints and high call demands faced by advisors, PM emphasised the importance of keeping the survey as concise and straightforward as possible, with a maximum completion time of 10 minutes. This design consideration aimed to improve response rates while minimising disruption to participants' work responsibilities. Similarly, PM advised that focus groups and interviews should be structured to last no more than one hour to accommodate the scheduling limitations

within contact centres. PM's contributions helped to ensure that data collection methods were pragmatic and considerate of participants' working conditions.

Analysis and write-up

Beyond the design phase, PM contributed to the analytical process and the interpretation of findings. They were actively involved in the initial coding of decision-maker interviews, which provided an additional perspective on the emerging themes (see Section 5.2.2, page 131 for further detail). Additionally, PM was consulted on the study 2 and 3 results, contributing to the interpretation and contextualisation of findings. PM's contributions also extended to the dissemination of research outputs. They reviewed the Study 2 and Study 3 papers and will be a named author on these papers when they are submitted for publication in peer-reviewed journals. Their involvement in the write-up phase highlights the importance of collaborative research approaches that integrate public perspectives, helping to ensure that findings are meaningful and applicable to those working in contact centres.

Reflective stop off

Beyond PM's formal advisory role, we also had informal discussions throughout the research process. These conversations were invaluable in helping me stay connected to industry developments and gain insight into the evolving workplace climate within contact centres. PM shared updates on organisational changes, employee wellbeing initiatives, and emerging challenges in the sector. This informal engagement provided real-time contextual knowledge that complemented the formal aspects of their involvement and helped shape my understanding of the field. In addition to these discussions, I also helped deliver health and wellbeing Special Interest Groups through industry partners (the contact centre forum). These industry-focused sessions allowed

me to present preliminary findings and engage in conversations with professionals working in contact centres. Engaging with industry stakeholders in this way helped bridge the gap between academic research and practical workplace applications, reinforcing the real-world impact of my study.

Chapter 4. A systematic scoping review of health-promoting interventions for contact centre employees examined through a behaviour change wheel lens

Published: Bell Z, Porcellato L, Holland P, Morris A, Smith C, Haines C, Graves L. A systematic scoping review of health-promoting interventions for contact centre employees examined through a behaviour change wheel lens. PLoS One. 2024;19(3):e0298150. <https://doi.org/10.1371/journal.pone.0298150>

4.1 Introduction

It is estimated that over 4% of the UK's working population is employed in a contact centre (10). Contact centre advisors handle customer queries through multiple platforms (phone calls, chat/messaging, email) and help enhance an organisation's image (269). Within this role, advisors typically experience verbal aggression from customers (270), repetitive tasks, fixed breaks, low autonomy (16, 17) and continuous performance monitoring (14) in a noisy (18) and sedentary (19) environment. These working conditions contribute to visual, auditory and vocal fatigue, psychological distress, musculoskeletal discomfort (22), and increased risk of developing non-communicable diseases and premature mortality (23). Advisors typically receive low pay and have low levels of education (56, 271). These social determinants of health are associated with engagement in unhealthy lifestyle behaviours (low physical activity (111), poor diet (107), smoking (105), higher alcohol consumption (109)). These determinants combine with the aforementioned poor working conditions to contribute to higher rates of sickness absence (3.7% (136) vs 1.9% (136)) and attrition, the pace at which people leave the company, (21% (272) vs 15% (140)) in contact centre advisors compared to UK averages across all industries. Accordingly, contact centres are a priority setting for health promotion to reduce health inequalities and the economic burden of absenteeism and attrition.

Trade (labour) unions and private sector organisations have produced strategy and guidance documents (42, 273) to support contact centres to adopt and implement health-promoting regulations and solutions for employees (212). The health and wellbeing solutions within these documents however are not (or not transparently) evidence-informed, and appear based on expert advice, which may be biased (43). The promotion of evidence-informed solutions/interventions to contact centres is important for facilitating (cost) effective regulation, practice and sustained positive change (46),

however little is known regarding health-promoting interventions for contact centre advisors.

Only one non-peer reviewed publication has examined the effectiveness of interventions to improve the health, wellbeing and/or performance of contact centre employees (40). Sixteen intervention studies were identified relating to ergonomic conditions, job redesign, air quality, stress reduction and vocal training, however, four studies did not assess health or wellbeing outcomes, and searches were up to July 2010. This highlights the need for an up-to-date review of health-promoting interventions for contact centre employees (especially advisors) to inform the development of health strategy and guidance documents for contact centres and aid the planning and commissioning of future research.

This scoping review examined the evidence for health-promoting interventions for contact centre employees and addresses four research questions:

1. What is the extent, range, nature, and quality of the intervention evidence?
2. What is the current evidence regarding intervention effectiveness?
3. What is the current evidence regarding intervention acceptability and feasibility?
4. What are the evidence gaps requiring further research?

4.2 Methodology

This scoping review was conducted according to the Joanna Briggs Institute (JBI) methodology for scoping reviews (274-276). The review was preregistered on the *Open Science Framework* on the 12th April 2022 (277) and is reported in accordance with the PRISMA extension for scoping reviews (278).

4.2.1 Search strategy

The search strategy located published studies. One researcher (ZB) searched MEDLINE, PsycInfo, CINAHL, Web of Science (Appendix 4.1: search strategies) and Google Scholar databases on the 21st February 2023. The reference lists of all included sources of evidence were screened for additional studies, alongside relevant citation searches.

4.2.2 Eligibility criteria

The inclusion criteria for eligible intervention studies (based on BCW definitions; see explanation in 'synthesis of results' below (212)) were: (a) directly or indirectly related to improving the health of contact centre employees; (b) published in English; (c) published since 2002. Studies published prior to 2002 were excluded as a previous review (40) identified no relevant research before this.

4.2.3 Evidence selection

Identified citations were collated and uploaded into Endnote (Version X9) with duplicates removed using Endnote's duplicate identification strategy and then manually. References were uploaded to the screening tool Rayyan (279) for independent assessment by two reviewers (ZB, CS) against inclusion criteria. The same two reviewers independently screened all titles and abstracts, followed by full-text assessments for eligible citations. Any disagreements between reviewers were resolved through discussion with an additional author (LG).

4.2.4 Charting the data

Two reviewers (ZB, CS) developed, tested and calibrated a data-charting tool in Excel by extracting data from four randomly selected documents. Discussions of the results informed tool adaptations. For the full data-charting process, each source was charted independently by two reviewers (ZB, CS). Data was collated with any disagreements resolved through discussion.

Data Items:

To address research question one, data were extracted on intervention characteristics (citation details, place published, country of origin), aim, and methodological characteristics (participant and contact centre details, study design, intervention delivery), and underpinning theories. Author conclusions for each intervention were extracted to address research question two (effectiveness) and three (acceptability and feasibility). The acceptability of interventions was explored by the authors of the papers using qualitative methods, with studies reporting perceived experiences of the interventions. The final charting form (Appendix 4.2) presents clear definitions of each data item.

4.2.5 Critical appraisal of individual sources of evidence

The leader researcher critically appraised the quality of included interventions by assessing the risk of bias that each study displays. This appraisal did not impact the inclusion decisions, as guided by a scoping review framework (275). The Cochrane RoB2 tool (280) was used to appraise randomised controlled trials, the ROBINS-I tool (281) to appraise quasi-experimental trials and the NHLBI quality assessment tool for pre-post studies (282). One pre-post study was not appraised, as the main focus of the study was to assess the acceptability and feasibility of the pre-post trial .

4.2.6 Synthesis of results using the Behaviour Change Wheel (BCW)

Sources identified were mapped to the nine intervention functions of the BCW (education, enablement, training, coercion, restriction, environmental restructuring, incentivisation, persuasion, modelling) (212) to systematically describe each intervention, and the BCTs used (218). A detailed account of the BCW is available (220) and discussed in section 2.6.3. This approach will support researchers and stakeholders to interpret the evidence-base, informing future research and practice. To address research question one, extracted characteristics summarise the extent, range and nature of the evidence. Within

this, two reviewers (ZB, CH) systematically coded intervention components within included studies to a) the nine BCW intervention functions, and b) 93 BCTs (218) using detailed intervention descriptions (Appendix 4.3: intervention description table). One reviewer (ZB) had completed BCT taxonomy training. Results were synthesised using relational analysis to present the interventions by their main intended outcomes; this method allows for a rich ‘joined-up description’ within the analysis (283). Accordingly, findings for research question 2 (effectiveness) and three (acceptability and feasibility) are presented interchangeably within the results. Evidence gaps are discussed throughout to address research question four.

Reflective stop off

Synthesising the results for this study presented a significant challenge, especially when writing this study for publication with limited word counts. I initially felt overwhelmed by the extensive information I had extracted from the studies identified within the review. However, mapping the studies to the BCW and BCTs allowed me to focus my discussion to provide a high-level overview of the types of interventions identified to improve advisors’ health. This was my first experience mapping to behaviour change theory, which forms the theoretical framework of the thesis, and it proved invaluable in helping me synthesise and discuss the findings concisely. Overall, this experience improved my writing style and provided an opportunity to reflect on how I would use behaviour change theory throughout the thesis.

4.3 Results

4.3.1 Selection of sources of evidence

A PRISMA study flow diagram (284) (Figure 4.1) details the screening process and reasons for exclusion at full text. Database searches and reference checking returned 328 records.

After removing duplicates, 231 titles and abstracts were screened, and the full text of 40 records were screened. Fourteen records were excluded resulting in 26 eligible records for research question one. Two articles (285, 286) reported two separate and eligible intervention studies. Accordingly, 28 intervention studies from 26 intervention articles were eligible for research question two (intervention effectiveness). Five intervention studies were eligible for research question three (intervention acceptability and feasibility). A detailed description of each intervention is available (Appendix 4.3).

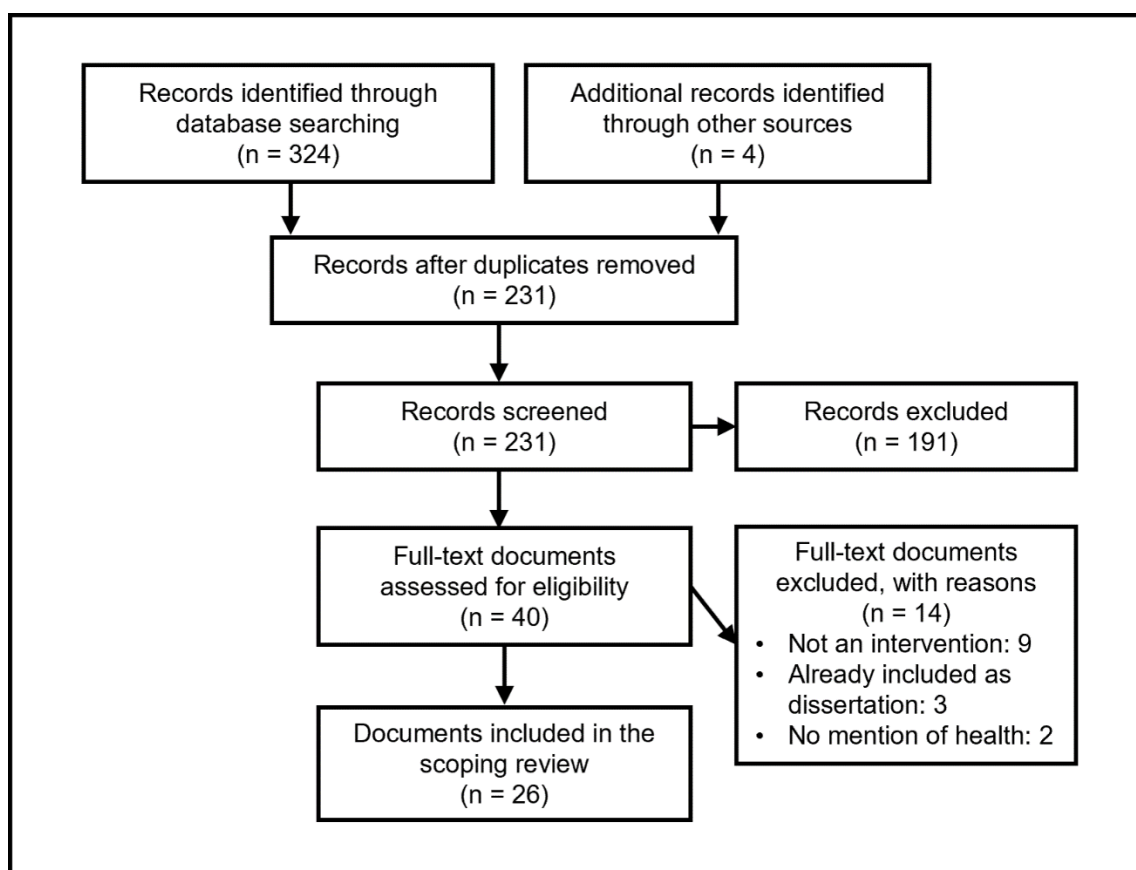


Figure 4.1 PRISMA scoping review flow diagram

4.3.2 Characteristics of sources of evidence

Related to research question one, 14 studies were published between 2003-2011 and 14 between 2012-2022. Most of the 28 intervention studies were conducted in high-income countries (Appendix 4.4: characteristics of included intervention studies): USA (6/28, 21.4%), UK (5/28, 17.9%), Australia (4/28, 14.3%), Germany (2/28, 7.1%) and one each

(3.6%) in Finland, Austria, Denmark, Singapore and Taiwan China. Five interventions were conducted in upper middle-income countries (South Africa, 3/28, 10.7%; Turkey, 1/28, 3.6%, Iran, 1/28, 3.6%) and one intervention in a lower middle-income country (India, 1/28, 3.6%). No studies were conducted in low-income countries. The number of participants totalled 2,774 with samples ranging from 14 (287, 288) to 646 (289). Most studies included contact centre advisors only (23/28, 82.1%). One study each (3.6%) recruited advisors with a disability (182), voice problems (290), employees who smoke (including advisors, managers, admin staff, researchers/analysts) (289), advisors and team leaders (55), and all employees (including advisors, admin staff, support staff) (291). From studies reporting participant age (19/28, 67.9%), the mean was 32.5 years (mean range 23.1 (289) to 40.0 years (57, 183)). From studies reporting participant gender (25/28, 89.3%), the mean proportion of females was 65.7% (range 19.7% (289) to 100% (185, 290)) and males was 34.3% (range 0% (185, 290) to 80.3% (289)). From studies reporting participant ethnicity (6/28, 22.2%), Caucasian was most represented (mean 77.7%, range 47.8% (183) to 100% (288)).

Ten of the 28 studies (35.7%) were randomised controlled trials (RCTs) (including two clustered RCTs), eight (28.6%) were quasi-experimental trials (controlled before and after), and ten (35.7%) were pre-post studies (within-subjects design). Five interventions were single component (5/28, 17.9%) (182, 184, 185, 286); note, (286) reported two separate and eligible intervention studies within one article). The remainder were multicomponent (23/28, 82.1%).

In relation to the BCW, environmental restructuring was used in 24/28 (85.7%) intervention studies, followed by training (19/28, 67.9%), education (12/28, 42.9%), enablement (10/28, 35.7%), persuasion (6/28, 21.4%), incentivisation (2/28, 7.1%), and modelling (1/28, 3.6%). No study used coercion or restrictions. The three most used BCTs

were *instruction on how to perform the behaviour* (training function), *adding objects to the environment* (environmental restructuring function) and *behavioural practice and rehearsal* (training function). See 'Synthesis of evidence by intervention outcome' section for full BCT details.

Twelve of the 28 (42.9%) studies were underpinned by theory, including stress/mindfulness theory (5/28, 17.9%), job redesign theory (5/28, 17.9%) and behaviour change theory/the socioecological model (2/28, 7.1%). Nine interventions lasted <3 months (32.1%), ten lasted 3-6 months (35.7%) and five >6-12 months (17.9%).

Intervention length was unclear for four studies (14.3%). Most interventions occurred in an office setting and one of these interventions included a home-based component (57).

The intervention delivery/implementation location was unclear in two studies (289, 290).

Over half the interventions involved researchers delivering all or part of the intervention (15/28, 53.6%). This was followed by interventions partly delivered by individuals working within the organisations (participatory research participants, team leaders, management; 5/28, 17.9%). One study each (3.6%) had all, or part of the intervention delivered by either group facilitators with previous experience of receiving the intervention, a clinical counselor/social worker, an occupational health and safety officer, a speech teacher/language therapist, an expert tobacco counsellor, or an external consultant in organisational development. It was unclear who delivered the intervention in eight studies (182, 184, 185, 187, 189, 289, 290, 292).

Many outcomes were measured, including health outcomes in 19/28 intervention studies (67.9%; stress-related indicators, visual fatigue, musculoskeletal discomfort, job related wellbeing, vocal health), behavioural outcomes in 6/28 studies (21.4%; sitting time, physical activity, tobacco use), indirect measures of health in 3/28 studies (10.7%; job

control, job satisfaction), and intervention acceptability and/or feasibility in 5/28 studies (17.9%).

4.3.3 Source Quality

For the RCTs, four studies had low bias for all sections, five had some concerns for the measurement of the outcome, and two of these also had high bias for adherence to the intervention (Table 4.1). One study had some concerns for assignment to the intervention and the selection of reported results, and another had some concerns with the randomisation process. Risk of bias was generally higher for the quasi-experimental studies than the RCTs, typically due to confounding in five of the eight studies (Table 4.2). None of these studies received low bias for all categories. Some concerns arose for deviations from the intervention due to poor adherence and for measurement of the outcome due to self-report measurements. One article (285) lacked sufficient information to reliably judge the quality of each section. For pre-post studies, six of the included studies were judged to be 'fair' and three were 'poor' in relation to their risk of bias (Table 4.3). One study (290) did not report receiving ethical approval.

Table 4.1 Risk of bias assessment for interventions with a randomised or cluster-randomised-controlled design						
Study	Randomisation process	Deviation from intended interventions (assignment)	Deviation from intended interventions (adherence)	Missing outcome data	Measurement of the outcome	Selection of the reported results
Allexandre et al (2016) (57)	Low	Low	High	Low	Some concerns	Low
Cook et al (2004) (180)	Low	Low	Low	Low	Some concerns	Low
Krajewski, Wieland & Sauerland (2010) (288)	Low	Low	High	Low	Some concerns	Low
Krajewski, Sauerland & Rainer (2011) (287)	Low	Low	Low	Low	Low	Low
Morris et al (2021) (56)	Low	Low	Low	Low	Low	Low
Rempel et al (2006) (183)	Low	Low	Low	Low	Some concerns	Low
Workman & Bommer (2004) (188)	Low	Low	Low	Low	Low	Low
Mishra et al (2010) (289)	Low	Some concerns	Low	Low	Low	Some concerns
Bond et al (2008) (186)	Low	Low	Low	Low	Low	Low
Workman (2003) (187)	Some concerns	Low	Low	Low	Some concerns	Low

Table 4.2 Risk of bias assessment for interventions with a quasi-experimental design							
Study	Confounding	Selection of participants	Classification of interventions	Deviations from intended interventions	Missing outcome data	Measurement of the outcome	Selection of the reported results
Chau et al (2016) (293)	Low	Low	Low	Some concerns	Low	Low	Low
Garrett (2016) (292)	High	Low	Low	Low	Low	Low	Low
Holman et al (2010) (294)	High	Low	Low	Low	Low	Some concerns	Low
Holman & Axtell (2016) (291)	Low	Low	Low	Some concerns	Low	Low	Low
Kirk et al (2013) – Study 1 (285)	High	Low	High	No information	No information	Some concerns	Low
Kirk et al (2013) – Study 2 (285)	High	Low	High	No information	No information	Some concerns	Low
Pickens et al (2016) (295)	Low	Low	Low	Some concerns	Low	Some concerns	Low
Schneider et al (2012) (296)	High	Low	Low	Low	Low	Low	Low

Table 4.3 Risk of bias assessment for interventions with a pre-post study design

Study	Study question	Eligibility criteria and study population	Study participants representative of clinical populations of interest	All eligible participants enrolled	Sample size	Intervention clearly described	Outcome measures clearly described, valid, and reliable	Blinding of outcome assessors	Follow-up rate	Statistical analysis	Multiple outcome measures	Group-level interventions and individual-level outcome efforts	Overall
Chi & Lin (2009) (182)	Yes	Yes	No	Not reported	Not reported	Yes	Yes	Not applicable	Yes	Yes	Yes	Not applicable	Fair
Kennedy & Pretorius (2008) (189)	Yes	Yes	Yes	Not reported	Not reported	Yes	No	Not applicable	Yes	Yes	Yes	Not applicable	Fair
Lehto et al (2003) (190)	Yes	Yes	Yes	Not reported	Not reported	Yes	No	Not applicable	Yes	Yes	No	Not applicable	Fair
Sharifi, Denesh and Gholamnia (2022) (297)	Yes	Yes	No	Yes	Not reported	Yes	Yes	Not applicable	Yes	Yes	No	Not applicable	Fair
Tham (2004) (185)	Yes	No	No	Not reported	Not reported	Yes	No	Not applicable	Not reported	Yes	Yes	Yes	Poor
Thatcher at al (2020) study 1 (286)	Yes	Yes	No	Yes	Yes	Yes	Yes	Not applicable	No	Yes	No	Yes	Fair
Thatcher at al (2020) study 2 (286)	Yes	Yes	No	Yes	Yes	Yes	No	Not applicable	No	Yes	No	Yes	Poor
Wargocki, Wyon and	Yes	No	Not reported	Not reported	Not reported	Yes	No	Not applicable	Cannot determine	Yes	Yes	Yes	Poor

Fanger (2004) (184)													
Yesilyurt & Yelken (2020) (290)	Yes	Yes	No	Yes	Not reported	Yes	Yes	Not applicable	Yes	Yes	No	Not applicable	Fair

4.3.4 Synthesis of evidence by intervention outcome

The intervention studies were mapped to the BCW intervention categories and BCTs, and synthesised to display the total number of functions used across all interventions (Table 4.4). The interventions were then categorised into the following sections based on the reported primary outcome or intended primary aim: i) health behaviours (sedentary behaviour, physical activity, smoking); ii) physical health outcomes (musculoskeletal health, vocal health, visual health, sick building syndrome); iii) mental health outcomes (stress, job control, job satisfaction, wellbeing). While it is acknowledged that most studies measured multiple outcomes (see Appendix 4.4 for all the study outcomes i.e., Morris et al.'s (56) primary outcome related to sitting time [health behaviour] but they also measured musculoskeletal outcomes [physical health]), this categorisation approach brings order to the synthesis and allows discussion of research question two and three within the following sections.

Table 4.4 Summary of studies mapped to the behaviour change wheel (BCW) intervention functions and behaviour change techniques (BCTs)			
BCW intervention function	BCT* and intervention studies**	Number of studies using the BCTs	Number of studies using the intervention function
Environmental restructuring (change the physical or social context)	12.5 Adding objects to the environment: Sit-stand desk (293); Screen filter (182); Ergonomic checklist (285); A silent room (287, 288); Height-adjustable workstations (55, 56); Stand-capable desks (292, 295); Armband and trackball (183); New filter and outdoor air supply (184); Voice biofeedback (296); Heart rate variability biofeedback (189); Office plants ((286) [study 1 and 2]); Adjustable chairs with arm rests, footrests and screen stands (297)	16	24
	12.1 Restructuring the physical environment: Forearm support (180); Filter and outdoor air supply (184); Temperature and outdoor air supply (185); Modifications made to the physical workstation (297)	4	
	12.2 Reconstructing the social environment: Job redesign changes (186); Job redesign changes (291, 294); Alignment job design, high-involvement work processes and autonomous work teams (187, 188); Given an additional 10-minute rest break to perform exercise program (297)	6	
	2.6 Biofeedback: Heart rate variability biofeedback (S4:9); Voice biofeedback (296)	2	
Training (imparting skills)	4.1 Instruction on how to perform the behaviour: Guided meditation (57); Sit-stand desk use (293)[58]; Forearm positioning (180); Skill training to increase job control (291, 294); Ergonomic checklist and skill-based training programme for MSD ((285) [study 1 and 2]); Progressive muscle relaxation instructions (287, 288); Vocal training (190); Training session on posture changes, active breaks and standing work (55, 56); Stand-capable desk use (292, 295); Ergonomics training (183); 1-week training seminar in high-involvement work processes and autonomous work teams (187, 188); Diaphragm breathing training (290); ergonomic skills training and regular stretching exercises (297)	19	19
	8.1 Behavioural practice/rehearsal: Guided meditation practice (57); Skill training to increase job control (291, 294); Skill-based training programme for MSD ((285) [study2]); Progressive	10	

	muscle relaxation practice (287, 288); Vocal training (190); Training seminar to encourage a participative environment (187, 188); Diaphragm breathing training (290)		
	6.1 Demonstration of the behaviour: Skill training to increase job control (291, 294); Skill-based training programme for MSD ((285) [study2]); Vocal training (190); Diaphragm breathing training (S4:26); Visual pamphlet on ergonomic skills training (297)	6	
Education (increase knowledge or understanding)	5.1 Information about health consequences: Educational stress management articles (57); Educated on the benefits of MSD prevention training ((285) [study2]); Health hazards of tobacco (289); Vocal hygiene (190); Education sessions on posture changes, active breaks and standing work (55, 56); Voice hygiene (290); Ergonomic training on the etiology of MSD (297)	8	12
	2.2 Feedback on behaviour: Heart rate variability biofeedback (189); Voice biofeedback (296)	2	
	2.7 Feedback on outcomes of behaviour: Feedback on anthropometric, cardiometabolic and behavioural outcomes (56)	1	
	5.3 Information about the social and environmental consequences: Lunch and learn sessions in high-involvement work processes (187, 188)	2	
Enablement [increase means or reduce barriers to increase capability (beyond education or training) or opportunity (beyond environmental restructuring)]	1.2 Problem Solving: Steering group to identify problematic aspects of work organisation to recommend job redesign action (186); Assessment to identify problematic aspects of work organisation to recommend job redesign action (291, 294); Advisors worked collectively to identify practical strategies for moving more (55, 56); Identifying and adjusting measurement and reward systems in alignment job redesign, team problem solving for job redesign needs in high-involvement work processes and autonomous work teams (187, 188); Focus groups and one-to-one therapy sessions to address rationalizations for continued tobacco use (289); snapshots of inappropriate exercises taken to discuss potential solutions (297)	9	10
	3.1 Social support (unspecified): Group discussion and sharing positive experiences (57); Mentors assigned in high-involvement work processes (187, 188); Focus group support (289)	4	
	1.4 Action planning: Job redesign actions (186); Job redesign actions (291, 294); Job redesign actions teams (187, 188)	5	
	1.1 Goal setting (behaviour): Goal setting to increase standing and walking (55, 56)	2	
	1.5 Review behaviour goal(s): Participants meet to review job redesign goals (291, 294)	2	

	1.7 Review outcome goal(s): Participants meet to review job redesign goals (291, 294)	2	
	2.4 Self-monitoring of outcome(s) of behaviour: Participants monitor outcomes of job redesign changes (291, 294); Team measures own performance in autonomous work teams (187, 188)	4	
	2.3 Self-monitoring of behaviour: Daily standing and walking time (56); Log given to track daily exercises performed (297)	2	
	11.1 Pharmacological support: Pharmacotherapy for smoking cessation (289)	1	
	11.2 Reduce negative emotions: Pharmacotherapy for smoking cessation (289)	1	
	1.8 Behavioural contract: Written agreements of tasks and roles (187, 188)	2	
	2.1 Monitoring of behaviour by others without feedback: Researchers monitored ergonomic behaviours and participation in the regular exercise program (297)	1	
Persuasion (use communication to induce positive or negative feelings to stimulate action)	9.1 Credible source: Stand-up champions and team leaders (55, 56); Expert tobacco counsellor (289); Clinical support (57)	4	6
	7.1 Prompts/cues: Email reminders to practice mindfulness (57); Daily email reminders to stand (293); Email reminders to stand (55, 56)	4	
	10.10 Reward (outcome): Points awarded for smooth waves (189)	1	
Incentivisation (create an expectation of reward)	2.2 Feedback on behaviour: Positive feedback for aligned behaviours in alignment job redesign (187, 188)	2	2
	2.7 Feedback on outcome(s) of behaviour: Positive feedback for achieving aligned goals in alignment job redesign (187, 188)	2	
	10.4 Social reward: Expressions of management approval in alignment job redesign (187, 188)	2	
	10.2 Material reward (behaviour): Bonuses and raises in alignment job redesign and merit increases in autonomous work teams (187, 188)	2	
Modelling (provide an example for)	6.1 Demonstration of the behaviour: Stand-up champions model standing behaviours (56)	1	1

people to aspire to emulate)			
<p>MSD: Musculoskeletal Disorder.</p> <p>*The BCT taxonomy organizes the 93 techniques into a cluster of 16 groups. The table reports the category and technique numbers, i.e. ‘12.5 Adding objects to the environment’ is the 5th technique within the 12th category named ‘antecedents’.</p>			

4.3.5 Health behaviours

Sedentary behaviour and/or physical activity

Five interventions (55, 56, 292, 293, 295) primarily targeted sedentary behaviour reduction and/or physical activity promotion. All five interventions utilised stand-capable desks to reduce sitting time (*environmental restructuring*) and at least one other intervention component from a different BCW intervention function: *education* (55, 56), *persuasion* (55, 56, 293), *training* (55, 56, 292, 293, 295), *modelling* (56) and *enablement* (55, 56). Positive effects were most reported for sitting time and standing time outcomes compared to physical activity outcomes. Stand-capable desks increased productivity (292), however one study (55) stated that stand-capable hot desks were not perceived by participants as feasible. Overall, interventions were accepted (55, 56), with participants perceiving increased comfort as a factor influencing their standing time (295).

Smoking cessation

One intervention aimed to encourage smoking cessation (289) using three variations of the intervention. The first intervention arm included a health education session followed by an interactive focus group, the second arm additionally included one-to-one behavioural therapy, and the third arm further included pharmacotherapy. Each intervention arm was mapped to varying BCT within *education*, *enablement* and *persuasion*. Each intervention arm increased smoking quit rates (20%, 19%, 20% respectively) and the reduction in tobacco use was higher when introducing pharmacotherapy (26%, 28%, 46% respectively). Many participants complained of high irritability, though it is not clear in the study what this irritability related to.

4.3.6 Physical health outcomes

Musculoskeletal disorders (MSD)

Five interventions (180, 183, 285, 297) (note, (285) reported two separate and eligible intervention studies within one article) primarily aimed to reduce musculoskeletal-related discomfort or pain. Four interventions (180, 183, 297) ((285)[study 1]) provided and/or adjusted the workstation (*environmental restructuring*). All interventions featured a component of ergonomic *training*, whilst two interventions ((285) [study 2], (297)) also implemented an *educational* component. One intervention also utilised enablement (297). Most interventions reported reductions in pain or discomfort (180, 183, 297) ((285)[study 2]) except for one study in which participants found an ergonomic checklist confusing and lengthy ((285) [study 1]).

Vocal health

Three interventions primarily aimed to reduce vocal symptoms (190), improve vocal health (290) or improve vocal performance (296). Interventions included a 2-day vocal training course (190), voice therapy (290) and a biofeedback software (296). All interventions *educated* participants on improving vocal hygiene (habits to support a healthy voice), whilst two interventions also provided vocal *training* (190, 290) and another featured *environmental restructuring* (296). All interventions were reported effective after 3-4 weeks of intervention. The perceived experience of short vocal training course (an indicator for acceptability) was reported to be positive overall (190).

Visual health

One intervention aiming to reduce visual fatigue (182) used *environmental restructuring* by fitting a screen filter on each computer. No beneficial effects were reported at 5 months follow-up.

Sick building syndrome

Two interventions primarily aimed to reduce sick building syndrome symptoms (intensity of dryness symptoms, eyes aching and nose-related symptoms). One study (184) measured the interactive effects of a used or new air filter with higher or lower outdoor air support, resulting in four variations of the intervention. Similarly, another study (185) measured the interactive effects of higher or lower temperatures with higher or lower outdoor air support, also resulting in four variations. All interventions utilised *environmental restructuring*. The first study (184) found that increasing the outdoor air supply rates with new air filters, and replacing used filters with new ones at the high outdoor air supply rate were effective. The second study (185) found that increasing outdoor air supply rates at a higher temperature led to a decrease in a cluster of sick building syndrome symptoms.

4.3.7 Mental health outcomes

Stress

Four intervention studies primarily aimed to reduce stress or stress-related symptoms. Two interventions used a progressive muscle relaxation intervention within a break-time 'silent room' (287, 288). One intervention used a heart rate variability biofeedback device to synchronise respiration and heart rate (189). Both interventions utilised *environmental restructuring* and *training*, whilst the biofeedback device also used *incentivisation*. Finally, one study investigated three variations of an intervention using an online mindfulness stress management programme (57). Each arm featured the web-based programme, with the second and third arms additionally including a group or clinical support to increase adherence, respectively. These arms map to *education*, *persuasion* and *training* intervention functions, and the group and clinical support maps to *enablement*. Each variation of the online mindfulness stress management programme intervention reported

positive reductions in stress outcomes. The addition of group support further reduced stress, though the clinical support provided no additional benefits. The progressive muscle relaxation intervention was reportedly effective, especially post-lunchtime, in reducing emotional and motivational strain states (287) and cortisol levels (288). The biofeedback device was effective for reducing personal stressors (burnout, fatigue, gastrointestinal, headaches). The online mindfulness programme also measured programme feedback, providing insight into intervention acceptability and feasibility. Whilst acceptance was relatively high, researchers identified the lack of time to practice as a potential barrier for successful implementation (57).

Job control and job satisfaction

The primary outcome/aim of three intervention studies was to improve job control (186) or job satisfaction (187, 188). All were job redesign interventions, involving *environmental restructuring* and *enablement*. Two studies investigated three variations of job redesign (187, 188): i) alignment job redesign, ii) high-involvement work processes, and iii) autonomous work teams. Alignment job redesign and autonomous work teams included *incentivisation*, high-involvement work processes included *education* and the latter two included *training*. Most interventions were reported to be effective at increasing job control (186) or job satisfaction (187, 188), except for the autonomous work teams variation.

Wellbeing

Four intervention studies primarily aimed to improve wellbeing (291, 294) ((286); note, (286) reported two separate and eligible intervention studies within one article). Two interventions used participatory job redesign (291, 294) and two introduced plants to the workplace ((286)[study 1 and 2]). All interventions used *environmental restructuring* for either the social (291, 294) or physical environment ((286)[study 1 and 2]). Additionally,

the job redesign intervention utilised *enablement* and *training*. Both job redesign interventions were reported to be effective, whilst neither of the plant studies improved wellbeing.

4.4 Discussion

4.4.1 Research question one – what is the extent, range, nature, and quality of the intervention evidence?

This scoping review identified a low number of peer-reviewed, health-promoting intervention studies for contact centre advisors (28 studies since 2003). Comparatively, another review (168) identified 34 studies (2009-2017) for interventions involving sit-stand desks within a traditional office workplace. Given contact centre advisors are at high risk of poor health due to their working conditions (14, 18, 19, 270) and social determinants of health (56, 271, 298), there is an urgent need for more health interventions research in this setting.

Globally, the US holds the largest proportion of contact centres, followed by the Philippines and India (124). Our review highlighted that interventions were mainly conducted in high-income countries (e.g., US), with few conducted in middle- (e.g., Philippines, India) and low-income countries. Contact centre advisors in low-to-middle income countries likely face even greater risks to health (lower pay, lower levels of education, poor housing, poor working conditions (299)) compared to those in higher-income countries. Accordingly, while more intervention research is needed globally, there is a particular need for health intervention research in low-to-middle income countries that employ a large proportion of global contact centre workforce.

Most participants within the intervention studies were relatively young contact centre advisors (mean of 32.5 years) working day shift hours. Only one study focused on disabled advisors and one on advisors with voice problems. Therefore, contact centre advisors

underrepresented in the current evidence include older adults, night workers, and disabled workers. This is problematic as night workers are likely to suffer from additional negative effects on sleep quality, food habits, addictions, social and mental health (300), poor working conditions are likely to have a more severe impact on disabled workers, and, amidst an aging population, the highest incidence of mental health short-term disability claims within the work environment are among those aged 40-49 years (301). Future intervention research that examines the needs of, and develops interventions for, these especially vulnerable contact centre advisor sub-groups, is warranted.

Few studies adopted an RCT design (35.7%, including two clustered RCTs). This number is low compared to 55.9% of RCT's identified within a similar review assessing interventions for reducing sitting at work (168). Fewer RCT's indicates lower quality evidence to inform intervention guidance. Despite this, it is acknowledged that RCTs pose a high risk of contamination between groups, meaning future research should consider clustered RCT's as a more feasible design within the contact centre setting (56).

The most common intervention functions examined in contact centres were *environmental restructuring* (adding objects to the environment) and *training* (instruction on how to perform the behaviour). Environmental restructuring may be common due to the need to tackle health problems associated with working for prolonged periods on a computer in a static, seated posture (302). Training may also be common due to established, existing training structures operating within contact centres for employees. In contrast, modelling and incentivisation were seldom used. The *modelling* function was only used in one intervention study (56) with stand-up champions encouraging advisors to sit less and move more at work. This was perceived ineffective, as advisors were often unsure who the champions were. Future interventions using modelling in contact centres should promote awareness of the champions, and may find the effective use of

movement champions in non-contact centre office environments informative (303).

Regarding *incentivisation*, only one job redesign intervention (across two studies) aimed to change behaviours through measurement and reward structures (bonuses, raises, management approval). This may be because job redesign interventions require organisational commitment to adjust structural components, or the financial cost of incentives is too high for centres. Health interventions within non-contact centre office environments have effectively used financial incentives to increase employee health (304), which may be informative for future interventions using this method in contact centres. Finally, no interventions featured coercion or restrictions, which have previously been perceived as unacceptable strategies within a workplace environment (305).

Less than half of the interventions identified were underpinned by theory and those without an underpinning theory were mostly ergonomic interventions to improve vocal, visual or musculoskeletal health. This is consistent with previous reviews describing a 'strikingly small' proportion of ergonomic intervention studies with underpinning theory (306), despite researchers identifying relevant theories (307). Theory may help to explain the mechanisms behind the effect of an intervention, however, research has indicated that theory-based versus no-stated theory interventions do not differ in effectiveness (308). Theory can be a valuable resource, but it does not always ensure the effectiveness of interventions; theory may be inconsistently operationalised (put into practice), inappropriate for specific contexts or flawed (309, 310).

Few interventions were implemented long-term, with the longest being 1-year. No interventions had follow-up data collection points beyond 1-year, which is similarly reported in another workplace health intervention review (168). Most interventions were office-based, with only one containing a home-based component (57). This is problematic, as the COVID-19 pandemic sparked a shift to hybrid working, with 64% of contact centre

advisors working remotely in 2021 and this predicted to continue in the long-term (311). Accordingly, there is an urgent need for contact centres and researchers to understand the needs of hybrid/remote workers when developing, adopting and implementing health-promoting interventions. More long-term follow-up intervention studies are also needed.

The multiple outcomes evaluated across the identified interventions may be a result of the many behavioural and health issues that contact centre advisors face. However, despite being linked to work-related stress (312) and social determinants of health (105, 107, 109, 111), only five intervention studies targeted physical activity/sedentary behaviour, and only one study targeted smoking. Further, no intervention targeted alcohol consumption or diet. This demonstrates a gap in the evidence compared to workplace health interventions targeting diet (17 identified) (313) and alcohol consumption (18 identified) in traditional office environments (314). Future research may explore whether behavioural interventions reported as effective in more traditional office environments, are equally effective for contact centre employees.

4.4.2 Research question two – what is the current evidence regarding intervention effectiveness?

Most interventions reported positive effectiveness results for the primary intended outcome. Only four interventions failed to report effective results, including an ergonomic checklist ((285) [study 2]), a screen filter to reduce visual fatigue (182) and two studies putting plants into the workplace to improve wellbeing ((286)[study 1 and 2]). These studies can be interpreted as being amongst the most simplistic interventions, based on the BCW intervention function mapping, with the latter three being single component interventions. This is in-line with a systematic review assessing workplace health

promoting interventions which stated that multi-component interventions were more effective than the single-component interventions (315).

Four (14.3%) interventions identified in this review are cited within health strategy and guidance documents for contact centres, as produced by trade (labour) unions and private sector organisations (42, 45, 273). These interventions focused on air quality and ergonomic training solutions. In contrast, to the authors' knowledge, the remaining 24 intervention studies identified in this review are not cited in any health strategy or guidance document for contact centres. This highlights a lack of translation of published scientific evidence into practice, and the need for better collaboration between researchers and stakeholders concerned with health promotion in contact centres. Further, there is a need for evaluation of the 'good practice' recommendations within existing documents to understand their effectiveness, acceptability, and feasibility. In combination, these actions can help produce evidence-informed health strategy and guidance documents, and promotion of those documents at scale across the industry could improve the health of hundreds of thousands of contact centre advisors.

4.4.3 Research question three – what is the current evidence regarding intervention acceptability and feasibility?

Overall, there was a low proportion of studies reporting acceptability and/or feasibility (5/28 studies). All studies appeared acceptable to participants (55-57, 190, 295).

Regarding feasibility, one study stated that stand-capable hot desks were not feasible (55) and one study highlighted lack of time as a potential barrier as participants needed more time to practice a mindfulness programme (57). This is likely to be a common challenge for contact centre interventions, as advisors have little autonomy and flexibility surrounding break times (316). More acceptability and feasible research is needed within this setting due to its unique working conditions.

4.4.4 Strengths and Limitations

This is the first systematic scoping review on this topic to be submitted for peer-review and provides a needed update on a non-peer reviewed publication in 2010. This review utilised a comprehensive search strategy across four databases and google scholar to identify health-promoting interventions for contact centre advisors. To ensure all relevant studies were captured, the search strategy and inclusion criteria remained broad, ensuring a physical, mental and social health focus. The coding framework was based on the established BCW and BCTs to systematically describe the range and nature of the evidence, providing structure to the findings. The risk of bias assessment for applicable studies provides the reader with an overview of the quality of the evidence-base, highlighting common biases such as confounding within quasi-experimental designs. This resulted in a recommendation for future research to consider clustered RCTs as a preferable study design to reduce bias within contact centre research.

This review's restriction to behavioural and health outcomes could be a limitation. Business and productivity-related outcomes could prove informative for contact centre stakeholders and should be considered for future reviews. This review is also limited in its capacity to make recommendations for the effectiveness of individual interventions, instead this scoping review provides a descriptive account of the available evidence (275). Excluding studies that were not published in English was also a potential limitation, however, this did not affect the findings of the review as only three studies were not available in English, none were interventions and would not have been eligible for inclusion.

4.5 Conclusion

There is a lack of research evidence on health-promoting interventions for contact centre advisors. Most intervention studies were conducted in high-income countries, and in

office-based contact centre advisors, with key research gaps in low-to-middle income countries, and remote/hybrid, nightshift, older and disabled workers. Most intervention studies reported evidence of effectiveness for promoting employee health, though few studies explored intervention acceptability and feasibility. The field needs more higher quality intervention studies using RCT designs, longer evaluation periods, and associated acceptability and feasibility evaluations. Finally, this scoping review has identified and synthesised health intervention research for contact centre employees that can inform future policy and practice in this occupational setting.

Chapter 5. Sequential mixed methods study: exploring the adoption, implementation and evaluation of contact centre health initiatives

5.1 Introduction

Contact centres have evolved beyond traditional ‘call centres’, with frontline advisors providing customer service through multiple digital channels, including chatbot, email, social media, text and video support (8). In 2023, the UK contact centre industry generated £2.6bn in revenue (317) and employed over 4% of the UK workforce (10). Despite their economic significance, contact centres are associated with high levels of advisor attrition and absenteeism (318), which has been attributed to low pay, averaging £11.36 per hour (20) compared to the £12.60 real living wage (21), monotonous and highly-monitored work, difficult customers and performance targets, and a lack of career progression (74, 211). These factors contribute to job-related stress, low job satisfaction, and poorer mental and physical health compared to the UK general working population (25, 319, 320). This exacerbates health inequalities and has significant financial implications, with poor mental health costing the industry over £990 million annually (29). The UK’s National Health Service (27) and academic research (28) emphasise that organisational investment in employee wellbeing can enhance resilience and engagement, reduce sickness absence, and improve overall company performance and customer satisfaction. Supporting contact centres to adopt and implement effective health initiatives is therefore vital for improving the health of a significant proportion of the working population and supporting economic growth in the UK.

Despite a plethora of evidence-based workplace health initiatives, there is often a failure to adopt and implement them into practice (321). Adoption barriers observed in non-contact centre workplaces include a perceived lack of employee interest in initiatives, insufficient staff resources and funding, lack of management support (50) and a lack of awareness of available initiatives (209). To date, only two published studies have explored this in contact centres (19, 54), focusing on factors influencing the adoption of sedentary

behaviour reduction and physical activity promotion strategies. Direct organisational benefits (such as reduced sickness absence and attrition, and optimised productivity) and concern for employee wellbeing facilitated adoption. Adoption barriers included: the unique nature of advisors' job role (highly sedentary with a physical connection to the workspace via a headset (19, 54)); high workload with continuous performance monitoring against targets (19)); perceived lack of interest from employees (54); concerns of discrimination to physically inactive employees (54); limited space available to walk (54); and the cost of initiatives such as height-adjustable workstations (19). While useful, these findings are limited to physical activity and sedentary behaviour initiatives, with an evidence gap for other health initiatives. Additionally, there is an evidence gap for how the increase in home and hybrid working (a work arrangement that allows employees to split their time between working in a physical office and working remotely, often from home) has influenced the adoption of health initiatives, as these two studies were conducted before the COVID-19 pandemic when 19% of contact centres allowed employees to work from home some of the time (58), compared to 81.6% post-COVID (59).

Implementation research is in its early stages despite numerous studies on workplace health initiatives over the past decade (322). Research in non-contact centre workplaces identified leadership engagement (commitment, involvement and accountability of employers) as a key facilitator to successful health initiative implementation (51). Other facilitators included: managers' high self-efficacy to promote health initiatives; prioritising health initiatives over work; and creating a common understanding of goals and objectives for health initiatives among employees (51). A key barrier to successful implementation was when employers/managers believed that health management was an employee's own responsibility (51), which aligns with evidence that senior and middle

management support for health initiatives is a key influence on organisational culture, employees' perception of support, and employee behaviour (52). Contact centre research by Morris et al. identified similar barriers to the implementation of multi-component interventions to help advisors move more and sit less, notably the high workload of team leaders and middle managers (19), team leaders not being able to effectively communicate intervention aims due to a lack of knowledge from not attending training sessions (55), and a conflict team leaders faced when trying to promote health behaviours whilst maintaining customer service levels (56). Unique to the contact centre setting, varied shift patterns and break schedules were also identified as barriers to movement champions encouraging colleagues to move more and sit less (55). Regarding breaks, the only other study in this area to date identified (211) 'limited time' as a barrier to implementing a mindfulness programme during advisors' break times (57). Accordingly, our understanding of factors influencing the implementation of health initiatives in contact centres is limited and research is needed to better inform contact centre practice and future intervention research (210).

Evaluating the success of health initiatives is important for understanding their impact. Industry guidance recommends a combination of qualitative (e.g. interviews or focus groups) and quantitative methods (e.g. surveys) to assess outcomes such as employee satisfaction and motivation, management satisfaction, peer satisfaction, workplace satisfaction, absenteeism and presenteeism, and performance (206). However, there is a lack of research exploring how contact centres evaluate their health initiatives. Broad workplace research suggests that organisations often measure economic outcomes to evaluate the cost-effectiveness of an initiative, which can inform the adoption of future health initiatives or the continuation of the current initiative (60). One contact centre study found that centres placed emphasis on being able to measure the impact of an

initiative through business outcomes such as productivity, customer service scores, average call handling times, sickness absence and employee engagement (19). Despite absence data being important for employers, research has described these methods as reductionist, reducing employees to a number for the financial gain of an organisation (207). More research is therefore needed to explore evaluation practices in comparison to industry guidance.

To address the evidence gaps identified, the aims of this two-phased study were to i) explore decision-makers' perspectives on the factors influencing the adoption and implementation of health initiatives in contact centres, and the evaluation methods and outcomes considered important (phase one), and, ii) assess consensus on the phase one findings among a broader population of UK contact centre decision-makers (phase 2). This study utilised the COM-B model and associated TDF (212, 214) to systematically explore the factors influencing the adoption and implementation of health initiatives.

5.2 Methodology

5.2.1 Study design

This study employed a sequential, two-phase mixed-methods approach. Phase one consisted of a qualitative study using interviews (between November 2022 – May 2023). Phase two used a quantitative survey to assess consensus for the phase one findings among a larger population (distributed from March 2024 to July 2024). Ethical approval was granted from LJMU ethics committee (22/SPS/048).

5.2.2 Phase one: Qualitative study

This study followed the consolidated criteria for reporting qualitative research (COREQ) (Appendix 5.1) (323) and adopted a generic qualitative research design. Qualitative approaches are often used within implementation research to explore participant perspectives and contextual factors that are not easily quantifiable (324). Specifically, this

study used semi-structured interviews, which are effective for understanding barriers and facilitators to adopting and implementing health initiatives (325) and how contact centres evaluate their health initiatives.

Participants and organisations

This study adopted a maximum variation sampling approach, which was used to identify key dimensions of variations (in this case contact centre size and the number of health initiatives implemented) to then purposely recruit contact centres that vary from each other as much as possible (326), for example, from centres with no-to-few health initiatives to centres with many health initiatives. Organisations were classed as very small (1-9 advisors), small (10-50 advisors), medium (51-200 advisors) and large (200+ advisors) based on industry classifications (327). This recruitment approach was chosen as it allows for a diversity of organisations to participate as organisational priorities and resources may differ by size.

Participants self-identified based on their job role as health and wellbeing decision-makers. Participants were considered to be a decision-maker if they had a job role above advisor level and had knowledge of the adoption, implementation and evaluation of health initiatives. During recruitment, examples of roles were provided by the researchers: senior managers, managers, human resource professionals, and health and safety professionals. Based on qualitative guidance, this study aimed to recruit between 9-17 participants (328), similar to previous research exploring the adoption and implementation of workplace health initiatives (51, 329).

Recruitment

Research posters advertised the study to contact centres across the UK, via partner communication channels (email and social media posts). These posters (Appendix 5.2)

contained the researcher's email address for participants to express interest in the study. When contacted, the researcher provided an electronic link to the study information sheet and an online survey to complete prior to the interview. This short survey provided the researcher with contextual information pre-interview to inform prompts, allowing a tailored discussion of identified health initiatives. Consent was collected via a 'tick box' before proceeding to the survey. The online survey collected personal demographic data (gender and job role), demographic data of the contact centre (vertical market [a group of companies focused on a specific niche e.g., financing], geographical location of the contact centre, number of advisors and work approach [remote, office or hybrid working]), and information on the health policies and interventions the contact centre implemented to improve advisor health. The survey asked for the participants' name and email to ensure the survey data was linked to the relevant participant. No incentive was offered for participation.

Data collection tools

A semi-structured interview schedule explored decision-makers' perceptions of health initiatives, relating to adoption, implementation and evaluation. A semi-structured interview schedule was chosen as this gave the interviewer some choice in the wording of each question and for the use of prompts, allowing the researcher to clarify interesting and relevant points (330). This schedule was developed using the COM-B model, the TDF and APEASE criteria. Each question began with a broad (non-theory driven) approach to avoid limiting participants' answers (e.g., what factors affect the adoption of health initiatives within your organisation?); these were then used to develop prompts for participants (e.g., do you have the knowledge [TDF domain associated with the COM-B's psychological capability] of available initiatives). This approach is recommended by

researchers (213, 215) who recognise that existing guidance is useful, but an overly structured application of theory may become restrictive in exploratory research (331).

In a pilot interview, the participant highlighted some confusion with the use of the terms policies and interventions, which was guided by wording in the BCW. Therefore, the final interview schedule (see Appendix 5.3) used the term 'health initiatives' instead, defined as anything the organisation does to improve the health of their advisors. The pilot interview was included within the analysis as the interviewer was able to overcome any confusion and discuss relevant health initiatives effectively.

Reflective stop off

After conducting my first pilot interview I felt overwhelmed with all the detail the participant had provided, referring to contact centre abbreviations/terminology that made me feel like an outsider to the industry; despite having knowledge from the literature and scoping review. Further, having the additional layer of separating the discussion of policies and interventions overcomplicated the discussion, therefore, being able to adapt and combine this discussion during the interview proved beneficial.

When completing my final interviews, I reflected on this first interview and found that my confidence had increased, partially due to increased familiarity with industry terminology and the schedule.

Overall, I felt that all participants were open and honest about their workplace. As an 'outsider' and young researcher I do not feel that there was any power hierarchy that meant participants felt intimidated by the interviews.

Procedure

Depending on the participants' location and preference, eleven interviews were conducted in person (1/11) or virtually via Microsoft Teams (10/11). Research displays how both virtual and face-to-face interviews are feasible, acceptable and generate good-quality data (332). Within this study the researcher observed that both in-person and virtual interviews were of a similar quality. Participants were typically situated within the workplace or at home, in a quiet and private space. Interviews lasted 39 minutes on average (range 16-57 minutes), with no repeat interviews. The in-person interview was audibly recorded, and the virtual interviews were visually recorded using Teams, with no differences in the quality of data collected. Each participant provided verbal consent before the interview began. The researcher had no prior relationship with participants, and participants were informed the researcher was undertaking this research as part of a PhD. Interviews were conducted until information power was reached, meaning the information provided by the sample allowed for sufficient analysis to answer the study aim (333). This approach is supported by Braun and Clarke's reflexive thematic analysis approach which states that analysis can never be complete and new data can always emerge, instead the researcher makes a judgement about when to stop (334).

Reflective stop off

The in-person interview was the first interview I conducted as part of my PhD research. For this, I felt both nervous and excited. This interview took place in one of Liverpool's contact centres, a place I had walked past many times. This initial in-person interview felt particularly valuable, as it brought the research to life, allowing me to observe the physical space of the contact centre. However, as I moved on to conducting virtual interviews with other decision makers, I found that these interviews were of a similarly

high quality, despite the absence of physical presence. While I initially thought that in-person interviews might offer more value, it became clear that the content of the interviews was not significantly different. Reflecting on the practicalities of virtual interviews, particularly in scheduling, made them much easier to arrange, especially with decision-makers who often have very busy schedules. These factors aligned with the pragmatic philosophy underpinning my research approach, which values the practicality and effectiveness of research methods.

On reflection, I would argue that the in-person interview was beneficial not necessarily because of its quality, but because it provided a valuable introduction to the research context. Once I had experienced that, the subsequent virtual interviews were equally effective in generating rich data. The ability to conduct interviews remotely meant that I could access a wider range of decision-makers without the logistical challenges of travel and scheduling.

Analysis

Interviews were analysed using Braun and Clarke's reflexive thematic analysis (335), meaning data was produced based on the participants' reflection of reality, shaped by their cultural context (for example their workplace environment and job role). Reflexive thematic analysis was chosen as it is theoretically flexible and allowed for both inductive and deductive theme generation using the COM-B and TDF. The researcher (ZB) followed each of the six stages of the analysis approach as an iterative process. Firstly, interviews were transcribed verbatim, with any identifiable data anonymised. The researcher then proceeded to familiarise themselves with the transcripts, making short-hand notes of interesting sections relating to the research question. Data was managed and coded using the NVivo programme (release 1.6.1). First, coding was conducted with a semantic,

inductive approach, so data-based meanings were emphasised to display the data as communicated by the participant (336). A public advisor (PM) (an experienced change acceptance manager within a UK-based contact centre) and the researcher (ZB) independently coded the same three interviews, then compared and discussed different perspectives and interpretations. This collaborative coding aimed to enhance understanding, interpretation and reflexivity, rather than reach consensus (337). A thematic map (see Appendix 5.4) was developed to visualise the initial themes, allowing for a clearer reflexive process and making connections between data in a deeper level of analysis. Themes were then reviewed, defined and named in relation to the research questions.

To situate the research within behaviour change theory, the researcher developed a mapping table on themes relating to adoption and implementation, containing each theme alongside relevant quotations. This was sent to the supervisory team so each member (LG, LP, AM, PH) could independently map quotations to the behaviour change theory (COM-B and TDF) to discuss and interpret the findings in relation to the research questions. This approach allowed the researchers to conduct a theoretically flexible analysis (337), creating themes primarily inductively, followed by a discussion of what each theme meant in relation to the COM-B and TDF. This approach was guided by Bonner, Tuckerman (338) who suggested that using both inductive and deductive analysis techniques can help achieve a more comprehensive understanding of organisational implementation problems (339). Having five researchers work on the mapping was valuable as mapping to the TDF can be subjective, requiring a wide range of expertise to reduce bias (338). Finally, in line with Braun and Clarke's reflexive analysis, the 'producing the report' stage of the analysis was a recursive process (with movement back and forth between phases) (336).

Member checking (the method of returning an interview or analysed data to a participant to check and confirm results (340)) was not completed as this technique has been critiqued for taking a realist/positivist approach which does not fit the epistemological assumptions of this research and its reflexive analysis (341). Additionally, research has concluded that there is no evidence that member checking enhances the credibility or trustworthiness of qualitative research (342).

Reflective stop off

Reflecting on my experience as a researcher with no practical experience in the contact centre industry, I found it particularly valuable to collaborate on coding with the public advisor on the project. I found Paul's insights to be invaluable, offering alternative perspectives that I had not considered. Overall, this process allowed me to develop themes that were truthful to the participants and resonated with the industry, enhancing the overall relevance of my findings.

I also found it useful to create mind maps of initial themes, to identify connections. This type of visual thinking is encouraged by Braun and Clarke, and I found it particularly useful as someone who is a visual learner.

5.2.3 Phase two: Survey

Participants

Participants were self-identifying health and wellbeing decision-makers (as described in phase one) from UK contact centres of any size, regardless of the number of health initiatives implemented. The study was also advertised to phase one participants using direct contact through emails.

Recruitment

Purposive and snowball sampling were used to recruit decision-makers. Phase one participants were emailed directly by the researcher (ZB). Recruitment posters (Appendix 5.5) were sent electronically to UK contact centres via partner communication channels (email and social media posts). Partners included the Contact Centre Forum (Northern and Southern), the Call Centre Helper, and the Contact Centre Panel. The emails and posters contained an electronic link and QR code to the online survey and advertised a prize draw for those who completed the survey. Upon accessing the survey, participants were provided an electronic link to the participant information sheet and implied consent was collected via a 'tick box'. After survey completion, participants could provide their email to enter a prize draw for Love2Shop vouchers.

Data collection tools

The survey was developed using the phase one qualitative findings and accessed using the Jisc Online Surveys software (release 2.16.0). Online surveys are advantageous for workplace health research as they offer anonymity, low-costs, and broad distribution (343). To improve face validity and appropriateness for contact centre decision-makers and advisors, the survey was tested by the supervisory team (LG, LP, AM, PH) and a public advisor (PM), who evaluated its content and structure. The surveys collected personal and organisational demographic data, including: the organisation's vertical market (a group of companies focused on a specific niche e.g. financing), geographical location of where the participant lives (town/city), number of advisors, work approach [remote, office or hybrid working], gender, age, ethnicity, disability, job role, and time spent working in the contact centre industry. Participants were presented with a list of factors that may affect the adoption and implementation of health initiatives within contact centres. These factors were informed by phase one findings, for example, 'the availability of money' was

perceived to be an important factor influencing the adoption of health initiatives within decision-maker interviews, therefore, this was included within the phase two survey. Participants were asked to rate these factors for perceived importance within their contact centre on a 5-point Likert scale (1 not at all important, 2 slightly important, 3 moderately important, 4 very important, 5 extremely important) (344). Participants were also asked to rate the methods used to evaluate health initiatives on a 5-point Likert scale for frequency (1 never, 2 rarely, 3 sometimes, 4 almost every time, 5 always), and for the outcomes considered to be important (1 not at all important, 2 slightly important, 3 moderately important, 4 very important, 5 extremely important). The methods stated in the survey were informed by phase one findings. Participants were given the opportunity to provide additional details, within a free text comment box, on any answers provided, or to suggest additional factors/methods/outcomes that had been missed from the survey.

Analysis

The number and percentage of responses for each rating on the Likert scale were presented for each item, alongside the median score (265), interquartile range (IQR), standard deviation (SD) and consensus decision. Consensus was defined by a percentage agreement of 75% (e.g. at least 75% of people choose 4 and 5 in the Likert scale) (266), accompanied with an IQR of 1.25 or less (267) and a SD of less than 1 (265). The IQR and SD can supplement consensus to help quantify and analyse the spread of responses across the group (265). However, it is recommended that these measures are considered alongside percentage agreement, as the IQR or SD may fall within acceptable limits, yet the average value may be low, indicating that experts do not 'strongly agree' with a statement (values 4-5 on a 5-point Likert scale) (268). 'Nearly consensus' was determined for those items achieving the 75% percentage agreement and at least one measure of dispersion (IQR 1.25 or less or a SD of less than 1). This combined approach is

recommended for measuring consensus (268). Descriptive analysis was performed using SPSS (version 28). Qualitative answers provided within the free text questions of the survey were analysed using thematic analysis.

5.3 Results

5.3.1 Phase one

Participant and organisational characteristics of interviewees

Eleven health and wellbeing decision-makers were interviewed (8 identified as women, 3 identified as men), each representing a different organisation. No participants dropped out. The vertical markets, size and location of the organisation varied; however, all organisations offered a hybrid working approach (Table 5.1).

Table 5.1 Participating contact centres and the role of the associated decision-makers.

Participant	Gender	Job role	Centre vertical market	Advisor number	Centre location	Work approach
1	Woman	Operations manager	Finance	200+	Northwest England	Hybrid
2	Woman	HR wellbeing lead	Telecoms	200+	Nationwide	Hybrid
3	Man	Head of health	Outsourcing & Telemarketing	200+	West Midlands England	Hybrid
4	Woman	Site director	Outsourcing & Telemarketing	51-200	Southwest England	Hybrid
5	Woman	Senior HR generalist	Retail and Distribution	200+	Southwest England	Hybrid
6	Man	Director of compliance	Enforcement Services	1-9	Southeast England	Hybrid
7	Woman	Health and safety coordinate	Finance	200+	Scotland	Hybrid
8	Woman	Head of customer services	Public Services	10-50	Northwest England	Hybrid
9	Woman	HR business partner	Retail and Distribution	10-50	Southwest England	Hybrid

10	Man	Functional training lead	Hospitality	51-200	Southwest England	Hybrid
11	Woman	Wellbeing lead	Public Services	51-200	Southwest England	Hybrid

The results are organised into three core sections aligned to the relevant research questions: adoption (research question one), implementation (research question two) and evaluation (research question three). Data extracts with participant numbers are provided throughout the results. The sub-themes are not presented in hierarchical order.

Adoption

Core themes for factors influencing the adoption of health initiatives in contact centres were: (1) considering the financial implications, (2) recognising a need to improve employee health, (3) leadership buy-in, (4) identifying advisors' wants and needs, and (5) organising around events. A thematic map for the adoption themes is represented within Figure 5.1. A summary of how each theme maps to the COM-B constructs and TDF domains is in Table 5.2.

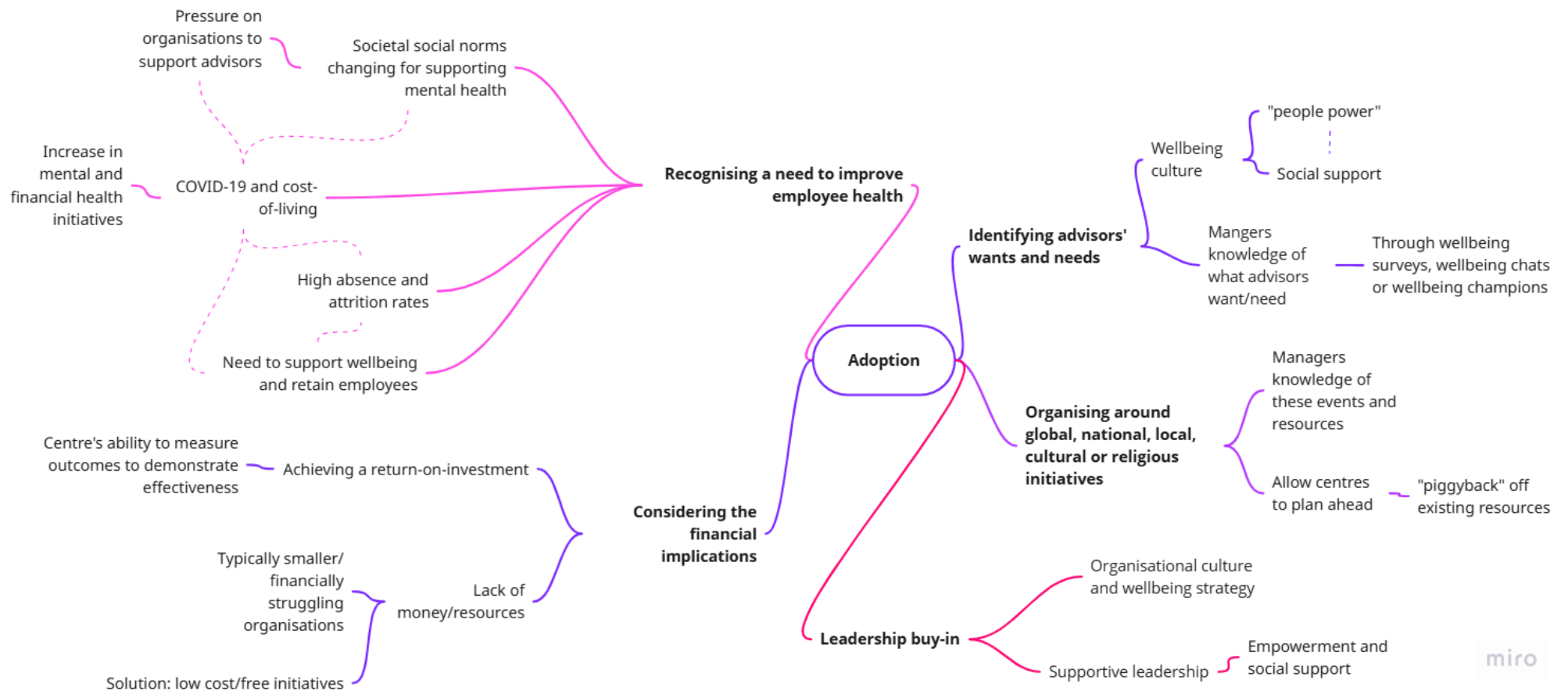


Figure 5.1 Thematic map for adoption themes

Table 5.2: Mapping the adoption themes to the behaviour change theory			
Theme	COM-B	TDF	Explanation
Considering the financial implications	Reflective motivation	Goals	Achieving a return on investment
		Beliefs about consequences	Achieving a return on investment
	Psychological capability	Knowledge	Knowledge of effectiveness outcome measures
		Memory, attention and decision making	Making a decision about whether a health initiative will be beneficial
	Physical opportunity	Environmental context and resources	Lack of money/resources
Recognising a need to improve employee health	Physical opportunity	Environmental context and resources	High absence and attrition rates, COVID-19 and cost of living
	Reflective motivation	Goals	To support advisor wellbeing and retain employees
	Social opportunity	Social influences	Social norms surrounding health and wellbeing changed with pressure on organisations to improve advisor health
Leadership buy-in	Physical opportunity	Environmental context and resources	Developing organisational values and culture
	Reflective motivation	Goals	Strategy goals to promote wellbeing
		Beliefs about capabilities	Professional confidence and empowerment from leaders to adopt health initiatives
	Social opportunity	Social influences	Social support from leaders
Identifying advisors' wants and needs	Physical opportunity	Environmental context and resources	Creating a wellbeing culture and encouraging 'people power'
	Psychological capability	Knowledge	Knowledge of what advisors want and/or need
	Social opportunity	Social influences	Social support from colleagues for advisors to voice their views
Organising around global, national, local, cultural or religious initiatives	Physical opportunity	Environmental context and resources	Global, national, local, culture and religious events and resources
	Psychological capability	Knowledge	Of the events and resources available

1. Considering the financial implications

A return on investment often motivated centres of all sizes to adopt health initiatives.

“From a management perspective, they [managers] always like to see a return on investment [from health initiatives].” (P7)

Participants highlighted the value of being able to measure health outcomes and evaluate health initiatives to demonstrate effectiveness. This allowed participants to evidence why a health initiative is not only the right thing to do but is a good business investment.

“Effectiveness is important because you’re asking the company to spend however much it is for all of us [managers] to go on a mental health champion course, they’re not going to do it for no reason. If it’s not adding value. So, I think it is important that you can demonstrate that not only is it [adopting a health initiative] the right thing to do, it also does provide some value.” (P10)

Despite this, smaller or financially struggling organisations often perceived a lack of money or available resources as a barrier to the adoption of health initiatives. These organisations were particularly incentivised by low cost or free initiatives.

“I’m going to start with cost. We’re a small organisation, we don’t - unlike larger organisations - have a budget for health and wellbeing. So, cost would always be the biggest influence for me to implement something that was brand new, [...] which is why we look for things that don’t involve too much cost” (P4)

2. Recognising a need to improve employee health

High sickness absence and turnover motivated organisations to adopt health initiatives in the hope that they would increase employee health and wellbeing and reduce staff attrition.

“It was very much a case of our sickness absence was really, really high to start off with. Which in itself creates everybody a lot of work because you have to do return to work interviews. So, it [to adopt health initiatives] was actually a need rather than a persuasion.” (P5)

Participants indicated that the COVID-19 pandemic that started in 2020, and the cost-of-living crisis in the UK that started in 2021, worsened absence and attrition rates, and, led to perceptions of a shift within society, as *“support mechanisms outside of work had diminished” (P8)*. These led to a perceived greater reliance on contact centres to provide their employees with health and wellbeing support, which motivated centres to adopt health initiatives.

“So, they [advisors] use us almost as the health service, as a social worker, as a family member, as everything and they bring a lot to work. So, the balance of where you had before, you had your personal life and you had your work life, it's totally shifted. And that means that we have to do more to support people just to keep us on an even keel and actually just to have the level of a workforce.” (P8)

There was an increased focus on the adoption of mental health initiatives when the COVID-19 pandemic started due to a cultural shift in society towards greater awareness of and reduced stigma towards mental health. Mental health was also perceived as a prominent driver of high absence rates.

“I think because there’s been a bit of a culture shift as people started talking to each other about how they were feeling to get rid of that stigma. We saw that mental health was a massive driver of absence. And I think that’s where the wellbeing team was also created because absence across the centres was ridiculously high, as is everywhere now, I think. But back then [during COVID] that was absolutely one of the things.” (P2)

Similarly, the UK cost-of-living crisis was perceived to increase the need for employers to adopt health initiatives focused on mental and financial health. Decision-makers acknowledged that employees were struggling to afford food and were in debt, which motivated the adoption of health initiatives to support this.

“So, if I think about financial wellbeing as one of the big drivers for us. This year [2022], it’s very much been we knew cost of living was coming. We knew it was getting really tough for people to afford to do anything. We knew that our people were in debt and really struggling with the knowledge element of financial wellbeing. We know that some people in our contact centres use food banks because they are absolutely, you know, really up against it.” (P2)

3. Leadership buy-in

The adoption of health initiatives was perceived as less of a ‘battle’ when leaders committed to improving employee health. Support from leaders within the organisation was perceived to facilitate buy-in at every level, facilitating the adoption of health initiatives and a wellbeing culture. Decision-makers were often given a budget to make adoption decisions, with trust placed in them to make the final call.

“I had the sponsorship of my managing director [...]. There has never once been a battle with my directors to say we need this [health initiative]. I’ve got a price for this population, every time it has been like - you know what you’re doing, get on with it [adopting health initiatives].” (P1)

Some centres demonstrated their commitment to health and wellbeing through policy strategies and mission statements, which facilitated the adoption of health initiatives by guiding and motivating decision-makers.

“We have a wellbeing strategy, which guides and motivates a lot of health initiatives.” (P11)

One participant discussed how wellbeing was seen as an inconvenience for a long time and without leadership support, plans to adopt health initiatives “went nowhere”.

“I think if you don't have the support of higher up in the group, then things [health and wellbeing initiatives] go nowhere. It took a long time for it [wellbeing] to become a culture with us. It [wellbeing] was seen as an inconvenience for a long time in the beginning.” (P7)

4. Identifying advisors’ wants and needs

Participants highlighted the value of listening to advisors’ wants and needs through wellbeing surveys, wellbeing chats or wellbeing champions and adopting initiatives that address them. It was believed that health initiatives led by the employee voice were more likely to be adopted.

“I am a believer that things will happen if it is led by the employee voice, so it comes from them. So, it’s not driven by HR, we listen to them – what do

you want? We come up with the initiatives because it's led by them

[advisors]" (P5)

One participant highlighted how employees can be empowered by having their suggestions listened to, creating a 'people power' environment when employee-led health initiatives are adopted.

"I think that it is really good to work in that kind of environment where, you know, I might be a small fish in a big pond, but if I make a suggestion, then people do listen. And I think a lot of people felt that people power." (P7)

5. Organising initiatives around events

Global, national, local, cultural or religious events provided decision-makers with the opportunity to adopt health initiatives that coincide with and celebrate these events. This allowed centres to plan the initiatives they would adopt that year.

"There'll be a lot of planning in the background, maybe towards the end/start of the year, looking at what's social events are coming up internationally and nationally, whether that be religious based, whether that be socially based." (P3)

These initiatives allowed centres to 'piggyback' on existing resources provided by external companies to educate and engage people. It was then the centres' responsibility to communicate these resources to their advisors. In comparison to centres having to develop their own resources, this opportunity to access existing resources promoted adoption.

"So, I'm very much about piggybacking on stuff [external health initiative resources]. There's so much stuff out there, isn't there? [...] Why rewrite

your own when you can use an accredited version that's already there? It's just about communicating it out and getting your staff to buy-in to it.” (P5)

Centres also collaborated with external providers such as local councils when adopting health initiatives. One large centre discussed how they employed a “community person” to pick-up on local health initiatives to get involved with.

*“We have the walk to work and that was an initiative, that was actually a city council initiative, but we jumped on that. So that’s the other thing, is picking up on things that are happening. So, we have a *Company name* in the community person and they’ll pick up on things like that, on initiatives from the council and stuff like that, that potentially we can get involved in, and join in as well. So external people doing stuff and then us being able to go – okay that’s something we can jump on and support.” (P10)*

Implementation

Core themes for factors influencing the implementation of health initiatives in contact centres were: (1) leader buy-in, time availability and capability, (2) adapting initiatives, and (3) the importance of timing to increase employee uptake. A thematic map for the implementation themes is represented within Figure 5.2. A summary of how each theme maps to the COM-B constructs and TDF domains is in Table 5.3.

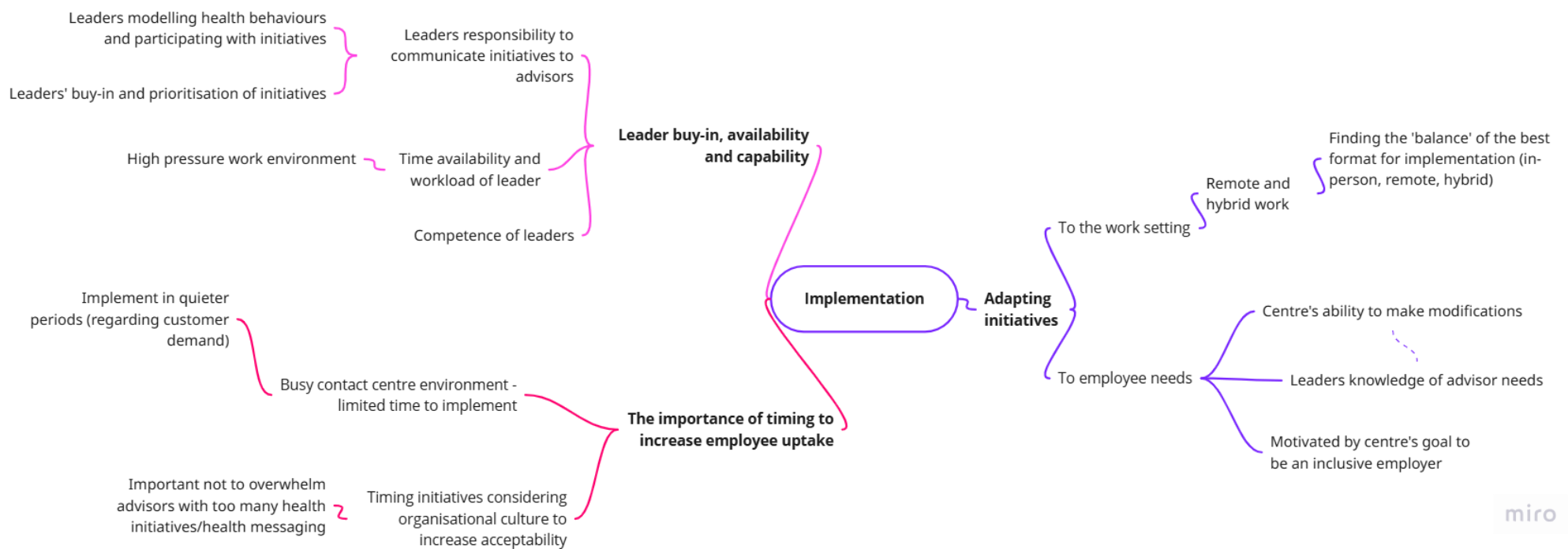


Figure 5.2 Thematic map for implementation themes

Table 5.3: Mapping the implementation themes to the behaviour change theory				
Theme	Sub theme	COM-B	TDF	Explanation
Leader buy-in, availability and capability		Reflective motivation	Social/professional role and identity	Leaders' responsibility to communicate health initiatives and the professional boundaries within their job role to prioritise staff wellbeing
		Social opportunity	Social influences	Modelling of health behaviours and social support from managers
		Physical opportunity	Environmental context and resources	Time availability and the busy nature of contact centre work
		Psychological capability	Skills	The competence of leaders
Adapting initiatives	The work setting	Physical opportunity	Environmental context and resources	Changing to remote and hybrid working
		Psychological capability	Skills	Interpersonal skills of those delivering and participating in health initiatives virtually
	Employee needs	Physical opportunity	Environmental context and resources	Having the ability to make modifications
		Psychological capability	Knowledge	Company knowledge of employees' needs
		Reflexive motivation	Goals	Company goal to be an inclusive employer
The importance of timing to increase employee uptake		Physical opportunity	Environmental context and resources	The internal climate of the contact centre and the busy nature of contact centre work
		Psychological capability	Knowledge	Of other company initiatives or issues
		Automatic motivation	Positive/negative affect	Overwhelming advisors with too many health initiatives

1. Leader buy-in, time availability and capability

Participants reported that the responsibility to communicate health initiatives to advisors, and encourage healthy behaviours/participation in health initiatives, often lay with

managers and team leaders. Participants perceived that a manager or team leaders' lack of buy-in and prioritisation of health initiatives negatively impacted implementation.

[When asked what has affected the implementation of a new EAP] "Buy-in from the team leaders or the operations manager, in terms of how important they think it is in relation to any operational challenges. [...] I was just looking then and not all of the managers are signed up to [the EAP], so that tells the story in itself. [...] as much as I talk about it [the EAP] in the weekly senior team meeting it's then that cascade of filtering down that doesn't always happen as well as it could." (P4)

This lack of buy-in and prioritisation of health initiatives often appeared due to managers and team leaders having a high workload and lack of time.

"It's so easy to run out of time without even thinking about it because it's not necessarily always factored into all of our diaries. We don't have wellbeing meetings as such. So, you've just got to actually take the time out to do it. So, I would say workload is definitely a big part of that." (P11)

Low competence of individuals leading a health initiative was also highlighted as a potential barrier to implementation. One participant described how an inexperienced leader was considered a barrier to a mental health first aid team being implemented as intended.

"Competence of those leading those initiatives [...] and time availability. [...] As an example, we have a mental health first aid team which is made-up with the mental health first aiders. Now, for somebody in particular's development, it was given them to lead that. However, this is actually fairly junior member of the team and her competence in leading that group isn't

very good. She's not very skilled, I'm sure in time that she'll grow. But that does then have an impact on how initiatives are rolled out.” (P9)

2. Adapting initiatives

Sub-themes were a) the work setting and b) employee needs.

The work setting

The COVID-19 pandemic and increased shift to remote working forced participating contact centres to adapt to delivering health initiatives virtually. The leaders of the health initiatives and those participating were required to adapt how they communicated and socialised with colleagues, for example with ‘cameras on’ facilitating the delivery of health initiatives.

“It's just trying to be a bit smarter. For example, Wellbeing Wednesday is all about having a coffee and a chat. OK, easily done face to face, it's visual. You give them the cup of tea, you're talking about how many sugars they have. You're starting the conversation. Your saying, yeah, help yourself to biscuits. It's not the same over teams. It's really not the same. But then the conversation can be the same as long as you've got your video on [...]. So, it does have to be adapted. The message is the same, but it does have to be adapted.” (P5)

Some participants reported that their centre struggled to adapt to the post COVID-19 work approach, with some employees returning to the office whilst many others continued to work remotely. This hybrid approach was perceived to make implementation decisions difficult for health initiative leaders, in terms of what works (i.e. if a yoga session worked better in person, online, or hybrid) and what days to implement in-person initiatives (i.e. if most people came into the office on a certain day). Finding this ‘balance’

was perceived to be something that centres were still adjusting to at the time of data collection.

“We're still struggling to find the balance with people doing hybrid working now, of what works and what days to do things. What days is the busiest in the office? Can we try and encourage people to do things then? The number of things that happen in person or via teams? So, we maybe do like an online yoga session, but some people would rather do an in-person one. So, it's still something we're working on, and I think that's going to continue as we adjust to this new way of working and living.” (P7)

Employee needs

Health initiatives sometimes needed to be adapted to ensure all employees could participate. For this to occur it was necessary for managers and team leaders to have knowledge of employee needs, and for organisations to have the resources to make modifications to deliver initiatives in different ways. One medium-sized organisation described how positive it was to be able to adapt to employee needs but also acknowledged how the organisation did not always have the resources to do so.

“Our team is quite varied and that is one thing I find quite difficult and the only way we get around that is that we know our staff. So, I know what works and actually we tend to have to offer a couple of different ways about it [delivering a health initiative]. Having that capacity to be able to do things in different ways, it's huge and amazing. And sometimes we can do it and sometimes we just can't.” (P11)

Adapting initiatives to employee needs was motivated by the organisation's goal to be an inclusive employer, which some participants acknowledged was still a learning process

when implementing health initiatives. For example, one participant highlighted how their organisation had disabled employees who may not have been able to participate in previous health initiatives that promoted physical activity.

“You get people from all walks of life and all levels of capability. And so, a lot of people just don't feel comfortable doing the more physically active things we used to do pre-pandemic. We would do Scout centres and we'd do abseiling and all those kinds of things. But it's not necessarily inclusive. And we do have disabled people with various limitations in the workplace, so it's trying to make sure that anything you do is inclusive as well. We're not perfect at it. We're getting there. Again, it's always going to be a learning thing for us.” (P7)

3. The importance of timing to increase employee uptake

Participants highlighted the importance of timing the implementation of a health initiative to optimise acceptability and increase the likelihood that initiatives will be received positively. For example, one centre informed employees that they would not receive a pay increase at the same time as a benefits and discounts scheme was launched. This resulted in the health initiative being negatively received, impacting its implementation.

“We have a rewards window open when the new Tax year opens, so you can go on there, you can get benefits and discounts and holiday. You know, critical illness cover things that like would support your wellbeing as well. We put that out there in March and April and said this rewards window is open, JUST as we've announced that we weren't giving people the pay increase that unions wanted. That then gave like an outpour of people just being really unhappy about the fact that they didn't get as much of a pay

increase as they wanted. And because you put that post out there and you've encouraged people to talk about it, the negativity was then all around the pay dispute and not actually what we were trying to achieve by supporting people and saying, you can go and buy weeks holiday, you can do all this great stuff that we've got.” (P2)

The timing of health initiatives in relation to other health and wellbeing messaging was also perceived important, so advisors were not overwhelmed and stressed by too many health initiatives. It was suggested that health-related communications should be paced.

“This was a bit of a lesson that we've tried to establish, is try and pace things a little bit more so we don't throw everything all at once, so there's a lot of things going on. I suppose it goes back to what I was saying before about timing, but just try and pace things a little bit so that people don't feel overwhelmed.” (P8)

Considering the busy nature of contact centre work, it was important for those implementing the health initiative to time the health initiatives for quieter periods (regarding customer demand) to allow more advisors to participate.

“One of the priorities for us is making sure when we're implementing something, we're implementing it when we know it's quiet.” (P4)

Evaluation

There was one core theme for exploring the evaluation of health initiatives in contact centres: there is no single measure of wellbeing. A thematic map for the evaluation theme is represented within Figure 5.3.

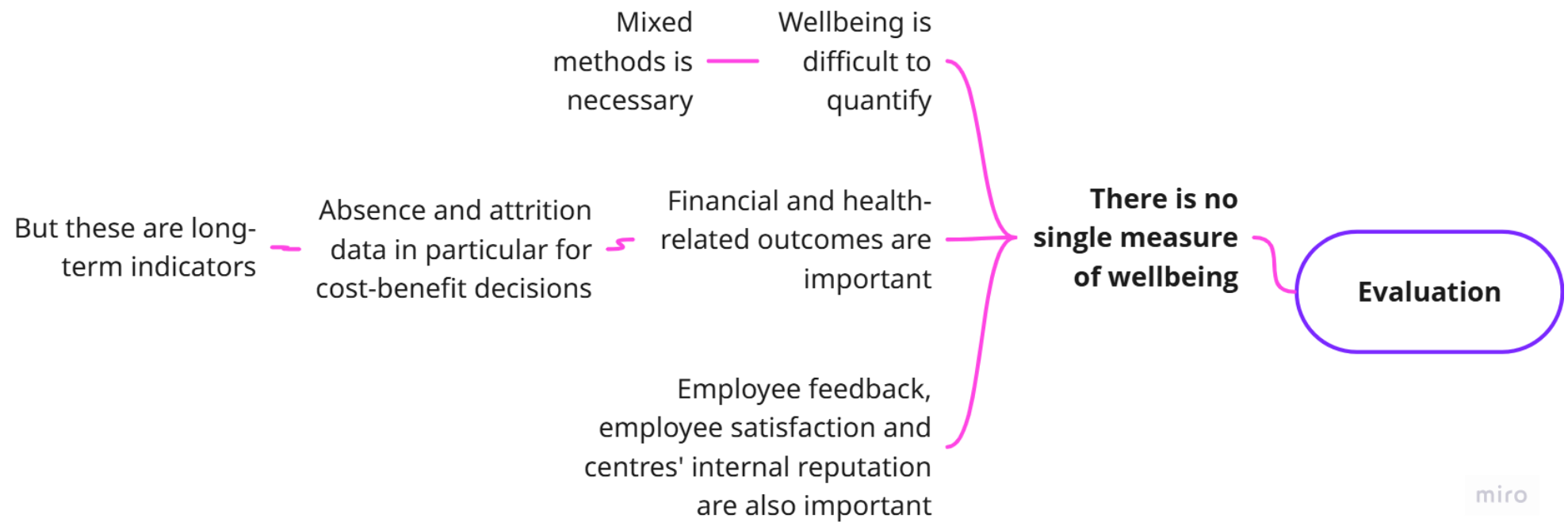


Figure 5.3 Thematic map for the evaluation theme

There is no single measure of wellbeing

Organisations used informal (verbal) and formal (surveys) methods to evaluate health initiatives. A common perspective was that wellbeing is difficult to quantify, therefore a variety of evaluation techniques was perceived necessary to ‘build a picture’ of the true impact of a health initiative.

“In terms of the measures of impact, wellbeing is really difficult to measure in lots of ways and the impact of that. So, our approach is to look at lots of different ways. So that might be engaging with our employee forum. It might be talking to our trade unions, it might be looking at our wellbeing data [absence and attrition data], so talking therapy figures or how many people are using that and then putting that together to build a picture of what that looks like? And there's lots of external factors as well, things like the pandemic, things like the sort of various disasters happening around the world. It all has an impact. So, you can't, there's no sort of one single measure for impact.” (P11)

When asked about the main intended outcomes of health initiatives, most participants described financial and health-related outcomes. Participants recognised that absence and attrition data is an important outcome to evidence the cost-benefit that is often required when organisations are making decisions on whether to maintain, revise, remove, or replace health initiatives.

“It [absence reporting] would certainly give us some weight behind our argument [to keep the health initiative] and our proposals [for new health initiatives].” (P9)

Despite this, absence and attrition data were often seen as a long-term indicator of employee wellbeing that alone gave little insight into the culture and internal reputation of the organisation. For this reason, employee feedback, employee satisfaction and the organisation's internal reputation were seen as important.

“Are you happy in your work? Are you proud to be in the organisation? Are you a good advocate of the organisation? You know, our internal reputation as we go out and about is very important to the board and to exec. So, it's that as well, which is not always measurable. It's not always, you can't quite sort of put your finger on it sometimes, but there is that staff wellbeing and motivation - that's why we do the pulse surveys. And that's a big thing. But for me, I'll be a bit harder than saying - it's how many days sick people have. And generally, if you're working in an organisation where everyone's miserable, there's nothing worse.” (P8)

5.3.2 Phase two

Overall, 38 decision-makers in contact centres, knowledgeable about the adoption, implementation and evaluation of health initiatives, completed the survey.

Personal demographics

There was a similar proportion of participants identifying as a woman compared to a man (Table 5.2). Most participants were aged 35 to 54 years and of a white ethnicity. Two participants were disabled. Decision-makers were located across Northern Ireland and three different regions of England; however, eight participants chose not to disclose this.

Workplace demographics

Decision-makers were mostly team leaders or managers/directors, with one HR professional and one health and safety employee (Table 5.3). Most decision-makers

worked hybrid, with the remainder fully in-office. Most decision-makers were employed by large organisations, employing 200+ advisors. Only two decision-makers worked within a small organisation, employing 10 to 50 advisors, with the remainder of decision-makers working within a medium-sized contact centre employing 51-200 advisors. Contact centres worked across 12 different vertical markets, with three centres working in more than one (8.9%). The most common market was transport and travel.

Table 5.4 Participant and organisation characteristics.

Demographic variable	Frequency	Percentage (%)
Gender		
Woman	20	52.6%
Man	17	44.7%
Prefer not to say	1	2.6%
Age (years)		
25 to 34	10	26.3%
35 to 44	13	34.2%
45 to 54	12	31.6%
55 to 64	2	5.3%
Prefer not to say	1	2.6%
Ethnicity		
Asian or Asian British: Indian	1	2.6%
Mixed or multiple ethnic groups: Any other mixed or multiple ethnic background	1	2.6%
White: English, Welsh, Scottish, Northern Irish or British Irish	33	86.8%
White: Any other white background	3	7.9%
Disability		
Disabled participants	2	5.3%
Location of the participant		
Northwest England	13	34.1%
Northeast and Yorkshire England	12	31.6%
Southeast England	4	10.5%
Northern Ireland	1	2.6%
Participant job role		
Team leader	18	47.4%
Manager/director	18	47.4%
HR professional	1	2.6%
Health and safety	1	2.6%
Work pattern		
In-office	11	28.9%
Hybrid	27	71.1%
Size of organisation (number of advisors)		
10 to 50	2	5.3%

51 to 200	10	26.3%
200+	26	68.4%
Vertical market		
Transport & Travel	14	36.8%
Outsourcing & Telemarketing	5	13.2%
Other	5	13.2%
Manufacturing	3	7.9%
Services	3	7.9%
Finance	3	7.9%
Medical/health or social care	3	7.9%
IT	2	5.3%
Telecoms	2	5.3%
Medical	2	5.3%
Entertainment & Leisure	1	2.6%
Engineering & Construction	1	2.6%

Adoption

Table 5.5 presents the level of consensus for each of the factors perceived to affect the adoption of health initiatives within phase one.

Table 5.5 Consensus indicators for factors perceived to affect the adoption of health initiatives.

Factor	Number (%) for each Likert scale score					Median	Percentage agreement	IQR	SD
	1 not at all important	2 slightly important	3 moderately important	4 very important	5 extremely important				
Having leaders who buy-in and support the adoption of health initiatives	0 (0%)	0 (0%)	1 (2.6%)	13 (34.2%)	24 (63.2%)	5	97.4%	1	0.64
Listening to the wants/needs of advisors	0 (0%)	1 (2.6%)	4 (10.5%)	18 (47.4%)	15 (39.5%)	4	86.9%	1	0.75
The availability of resources (staff and time availability)	0 (0%)	1 (2.6%)	5 (13.2%)	20 (52.6%)	12 (31.6%)	4	84.2%	1	0.74
Perceiving a need to support employees because of the impact of external events (e.g. cost-of-living crisis) *	0 (0%)	1 (2.7%)	4 (10.8%)	18 (48.6%)	14 (37.8%)	4	86.4%	1	0.75
The availability of money to invest	0 (0%)	2 (5.3%)	6 (15.8%)	23 (60.5%)	7 (18.4%)	4	78.9%	0	0.75
Staff attrition rates	1 (2.6%)	5 (13.2%)	3 (7.9%)	16 (42.1%)	13 (34.2%)	4	76.3%	1.25	1.10
Sickness absence rates *	0 (0%)	4 (10.8%)	5 (13.5%)	14 (37.8%)	14 (37.8%)	4	75.6%	1.5	0.99
Having policies and mission statements that demonstrate the centres' commitment to improving employee health *	0 (0%)	3 (8.1%)	8 (21.6%)	12 (32.4%)	14 (37.8%)	4	70.2%	2	0.97
Being aware of events (e.g. mental health awareness day)	0 (0%)	5 (13.2%)	9 (23.7%)	13 (34.2%)	11 (28.9%)	4	63.1%	2	1.02
Being able to evidence a return on investment	3 (7.9%)	6 (15.8%)	9 (23.7%)	15 (39.5%)	5 (13.2%)	4	52.7%	1.25	1.15

* Missing one data set. IQR: interquartile range; SD: standard deviation.

Overall, 94.7% of participants felt somewhat (28.9%), fairly (39.5%) or completely (26.3%) confident completing these questions. There was consensus for five factors: 1) having leaders who buy-in and support health initiatives, 2) listening to the wants and needs of advisors, 3) the availability of resources (staff and time), 4) perceiving the need to support advisors during societal events e.g., cost-of-living, and 5) having the money to invest in a health initiative. Staff attrition rates and sickness absence rates nearly reached consensus. There was a lack of consensus for three factors: 1) having policies and mission statements to demonstrate commitment to improving employee health, 2) awareness of events (e.g. world mental health day), and 3) being able to evidence return on investment.

Within the survey, one decision-maker explained why they rated return on investment lower than other factors. They stated that although evidencing return on investment can be important, the need to have certain initiatives in place to support advisors was more important, regardless of the volume of advisors that engaged.

“Obviously you would like to see a return on investment, however I feel these services should be readily available regardless of the volume of people needing to use them, you never know when that need will occur so return on investment may be few and far between, so I've placed less importance on this” (P1)

Another decision-maker commented that they thought sickness absence rates were important when making adoption decisions, because these absences could indicate poor employee health, which was also perceived to be related to external events such as cost-of-living. This is potential insight into why ‘perceiving the need to support advisors during societal events’ was rated as important/very important by 86.4% of decision-makers.

“I think our absence rates are really high and this is impacted by a lot of things such as mental health, cost-of-living, wellbeing & attrition. It’s important that we look after the front-line staff and the rest will naturally fall in line.” (P2)

Implementation

Table 5.6 presents the level of consensus for each of the factors perceived to affect the implementation of health initiatives within phase one.

Table 5.6 Consensus indicators for factors perceived to affect the implementation of health initiatives.

Factor	Number (%) for each Likert scale score					Median	Percentage agreement	IQR	SD
	1 not at all important	2 slightly important	3 moderately important	4 very important	5 extremely important				
Having manager and team leader buy-in for a health initiative *	0 (0%)	2 (5.4%)	1 (2.7%)	17 (45.9%)	17 (45.9%)	4	91.8%	1	0.78
Allowing/giving leaders time to prioritise the delivery of health initiatives	0 (0%)	2 (5.3%)	5 (13.2%)	21 (55.3%)	10 (26.3%)	4	81.6%	1	0.79
Having an experienced and able leader delivering health initiatives	1 (2.6%)	1 (2.6%)	6 (15.8%)	20 (52.6%)	10 (26.3%)	4	78.9%	1	0.89
Having the flexibility to adapt the delivery of health initiatives in response employee needs *	0 (0%)	0 (0%)	8 (21.6%)	21 (56.8%)	8 (21.6%)	4	78.4%	0	0.67
Being able to adapt the delivery of health initiatives to a virtual, hybrid or in-person format *	1 (2.7%)	2 (5.4%)	5 (13.5%)	18 (48.6%)	11 (29.7%)	4	78.3%	1	0.96
Appropriately timing/pacing the release of health initiatives (e.g., in accordance with other health initiatives)	2 (5.3%)	5 (13.2%)	11 (28.9%)	17 (44.7%)	3 (7.9%)	4	52.6%	1	1.00

* Missing one data set. IQR: interquartile range; SD: standard deviation.

Overall, 94.7% of participants felt somewhat (21.1%), fairly (44.7%) or completely (28.9%) confident completing these questions. There was consensus for five factors: 1) having manager and team leader buy-in, 2) allowing/giving leaders time to prioritise the delivery of health initiatives, 3) having an experienced and able leader to deliver health initiatives, 4) having the flexibility to adapt the delivery of health initiatives to individual needs and to virtual, and 5) hybrid or in-person formats. One factor did not achieve consensus: appropriately timing/pacing the release of health initiatives (e.g., in accordance with other health initiatives). Despite the lack of consensus for this factor, decision-makers commented within the free text box that finding time to release advisors from their duties was the most significant barrier to successful implementation.

“The most important factor in any contact centre is being able to schedule time for a front-line team member to be able to take part in the activity Vs serving customers. As our customer service teams are relatively small and always under resourced it makes it very difficult to release anyone for non-productive activities.” (P9)

Decision-makers also commented on why it was important to adapt the delivery of health initiatives to a virtual, hybrid or in-person format. One participant noted the importance of ensuring health initiatives are available to remote/hybrid/in-office advisors, advisors with different working patterns, and part-time advisors.

“Ensuring all teams/people are able to access the initiative - taking into account work from home/work from office/part time/roster patterns.” (P3)

This was also important for organisations with centres across various locations and time zones, and for those who employed night-shift workers.

“As we have both onshore and operational centres, we always have to design initiatives so that they work across locations and time zones. Also, this is further complicated by having to make them work across 24/7 shift patterns so that they are inclusive for all.” (P9)

Evaluation

Table 5.7 presents how often each method was used to evaluate health initiatives.

Consensus was not assessed as the aim was to descriptively assess current practices taking place in contact centres, rather than decision-maker opinions of these.

Table 5.7 Frequency of method use to evaluate health initiatives.

Factor	Number (%) for each Likert scale score					Median	Percentage of centres using measures sometimes, almost every time or always
	1 never	2 rarely	3 sometimes	4 almost every time	5 always		
Existing organisational software/systems e.g. that collect data on employee absence, attrition, performance, etc...	2 (5.3%)	1 (2.6%)	12 (31.6%)	13 (34.2%)	10 (26.3%)	4	92.1%
Surveys	2 (5.3%)	9 (23.7%)	13 (34.2%)	7 (18.4%)	7 (18.4%)	3	84.4%
Informal discussions	1 (2.6%)	5 (13.2%)	20 (52.6%)	6 (15.8%)	6 (15.8%)	3	84.2%
Employee forums	2 (5.3%)	5 (13.2%)	23 (60.5%)	7 (18.4%)	1 (2.6%)	3	81.5%
Focus groups	4 (10.5%)	7 (18.4%)	20 (52.6%)	6 (15.8%)	1 (2.6%)	3	71%%
Interviews	5 (13.2%)	8 (21.1%)	14 (36.8%)	10 (26.3%)	1 (2.6%)	3	65.7%

Overall, 94.3% of participants felt somewhat (17.1%), fairly (42.9%) or completely (34.3%) confident completing these questions. Each contact centre used at least one of the six evaluation methods identified in phase one. Organisations mainly used existing software/systems to capture employee data as indicators of health and wellbeing. Organisations then tended to use surveys and informal discussions, followed by employee forums, focus groups and interviews.

Table 5.8 presents the level of consensus for the importance of each outcome when evaluating health initiatives.

Table 5.8 Consensus indicators for outcomes perceived important when evaluating health initiatives.

Factor	Number (%) for each Likert scale score					Median	Percentage agreement	IQR	SD
	1 not at all important	2 slightly important	3 moderately important	4 very important	5 extremely important				
Employee engagement	0 (0%)	0 (0%)	2 (5.3%)	21 (55.3%)	15 (39.5%)	4	94.8%	1	0.58
Customer service scores	0 (0%)	1 (2.6%)	6 (15.8%)	20 (52.6%)	11 (38.9%)	4	91.5%	1	0.75
Performance/productivity	0 (0%)	0 (0%)	3 (7.9%)	22 (57.9%)	13 (34.2%)	4	92.1%	1	0.60
Employee motivation	0 (0%)	0 (0%)	5 (13.2%)	18 (47.4%)	15 (39.5%)	4	86.9%	1	0.69
Employee satisfaction e.g. with the health initiative	0 (0%)	1 (2.6%)	4 (10.5%)	19 (50%)	14 (36.8%)	4	86.8%	1	0.83
Workplace satisfaction	1 (2.6%)	0 (0%)	4 (10.5%)	19 (50%)	14 (36.8%)	4	86.8%	1	0.83
Absence rates	0 (0%)	2 (5.3%)	4 (10.5%)	17 (44.7%)	15 (39.5%)	4	84.2%	1	0.83
Management satisfaction e.g. are employees satisfied with their managers *	0 (0%)	0 (0%)	6 (16.2%)	21 (56.8%)	10 (27%)	4	81.6%	1	0.66
Attrition rates *	0 (0%)	1 (2.7%)	6 (16.2%)	17 (45.9%)	13 (35.1%)	4	81%	1	0.79
Peer satisfaction e.g. are employees satisfied with their peer support	1 (2.6%)	2 (5.3%)	5 (13.2%)	23 (60.5%)	7 (18.4%)	4	78.9%	0	0.88
Presenteeism	0 (0%)	2 (5.3%)	10 (26.3%)	18 (47.4%)	6 (15.8%)	4	63.2%	1	0.80
Average call handling times	3 (7.0%)	2 (5.3%)	11 (28.9%)	15 (39.5%)	7 (18.4%)	4	57.9%	1	1.11

* Missing one data set. IQR: interquartile range; SD: standard deviation.

There was consensus for 10 outcomes: 1) employee engagement, 2) customer service scores, 3) performance/productivity, 4) employee motivation, 5) employee satisfaction with the health initiative, 6) workplace satisfaction, 7) absence rates, 8) employee satisfaction with their managers, 9) attrition rates and 10) employee satisfaction with their peers. Two factors did not achieve consensus: presenteeism and average call handling times.

Despite employee engagement receiving the highest percentage agreement, one decision-maker commented that employees feel satisfied with the offer of health initiatives without necessarily engaging with them. This may reflect why decision-makers reported workplace satisfaction as an important outcome.

“Whilst overall health-based initiatives are obviously good for all that take part, the real benefit as an employer is the 'perceived' benefit they offer. i.e. even if an employee doesn't take part, they will feel good that we as an employer are offering them. The same perceived benefit is then amplified through family and friends and also helps with recruitment as a benefit to highlight.” (P20)

With call handling times receiving the lowest percentage agreement, one decision-maker wrote that their contact centre perceives the measure of this outcome as detrimental to employee health, possibly due to the pressure and stress it places on employees to reduce their call times.

“We do not measure average call handling times as this for us is a big health detriment.” (P22)

5.4 Discussion

This sequential mixed-methods study explored factors influencing the adoption and implementation of contact centre health initiatives, and how initiatives are evaluated, from the perspective of health and wellbeing decision-makers working in UK contact centres. Phase one revealed that contact centres were motivated to adopt health initiatives that provide a return on investment, however smaller or struggling organisations often lacked the opportunity to invest in health initiatives. Key facilitators for adoption included a perceived moral obligation to improve employee health, leadership buy-in, responsiveness to employee needs, and aligning initiatives with events. Implementation was often hindered by the busy nature of contact centre work, the capacity and willingness of leaders, and the ability of centres to adapt initiatives. Evaluating the success of health initiatives was frequently described as challenging with the need for multiple evaluation methods to display the true impact of a health initiative. In phase two, consensus was reached on the importance of most adoption factors identified in phase one, except for having policies and mission statements, awareness of events, evidencing return on investment, and staff attrition rates and sickness absence rates nearly reached consensus. Consensus was reached on all implementation factors except for appropriately timing/pacing the release of health initiatives. Evaluation methods varied, with a mix of qualitative and quantitative approaches used. Decision-makers did not agree with the phase 1 findings that presenteeism and average call handling times were important.

5.4.1 Adoption

The phase one finding that financial implications were important when making adoption decisions is reflected within contact centre-specific studies exploring factors affecting the adoption of health initiatives such as height-adjustable workstations (19, 54). Miller and

Haslam (345) state that a business case can be a great economic incentive for organisations to adopt health initiatives, particularly for higher-level activities and resources (e.g., an EAP). Despite this, the phase two survey revealed that evidencing a return on investment received the lowest percentage agreement for importance when making adoption decisions. Ratings for low levels of importance were supplemented with explanations that financial motivations can be important but are overridden by the need for organisations to maintain their reputation by having health initiatives in place for their employees. This aligns with Miller and Haslam (345), who state that, alongside benchmarking data and return on investment, most business cases appeal to people management issues, corporate reputation, and alignment with business objectives. Post COVID-19 pandemic research also supports this, revealing how contact centres are increasingly using health initiatives to attract and retain talent, as well as appearing social responsible (346).

Aligning health initiatives with business objectives was similarly highlighted in phase one, as participants emphasised the importance of leaders being committed to wellbeing and this commitment being evidenced within business strategies/objectives. However, having policies/mission statements demonstrating commitment to employee wellbeing did not reach consensus within phase 2, whereas having leaders who buy-in and support the adoption of health initiatives had the highest percentage agreement. This is supported by research suggesting that a lack of management support can be a barrier to the adoption of health initiatives (50). Accordingly, this study suggests that leadership buy-in is vital for the adoption of health initiatives, with more research needed to determine the importance of demonstrating the financial benefit of health initiatives and their alignment to policies and mission statements within the contact centre.

These findings align with previous research indicating that smaller organisations lack the opportunity to adopt health initiatives due to limited money and resources (50, 209). This was supported by decision-makers in phase two who rated the availability of resources (staff and time) as an important factor for most centres. To overcome this, participants within phase one sought out low-cost or free initiatives that were often structured around global, national, religious, cultural or local events. Although there was a lack of consensus in phase two regarding the importance of event awareness for adopting health initiatives, the inability to explore reasons behind these ratings suggests that this statement should be interpreted with caution, especially if not linked to the offering of low-cost/free resources. These findings highlight the importance of supporting smaller or financially struggling centres and improving the equity of access to health and wellbeing services and resources. With little known about the effectiveness of paid versus free initiatives within the contact centre setting, more research is needed to explore this.

An organisation's moral obligation to protect and promote employee wellbeing is a key factor motivating the adoption of health initiatives (54). The current study reflected this, with concern for employee wellbeing perceived important in both study phases. Phase one participants described how a societal reduction in mental health stigma, reflected within the wider literature around the COVID-19 pandemic (347), led to an increased focus on adopting initiatives to improve the mental health of advisors. This may be beneficial for contact centres as the stressful nature of the advisor role has been shown to result in 45.8% of employees being at risk of mental illness (348), compared to 1 in 8 (12.5%) people living with a mental disorder (349). This finding is also supported Manner et al. who investigated the effects of organisational culture and COVID-19 on the existence of contact centre health initiatives (346). Manner et al.'s study found that post-pandemic employee wellbeing is increasingly prioritised by contact centres largely due to the

spotlight that was placed on mental wellbeing during the pandemic. Participants within the current study also perceived there was an uptake in the adoption of financial health initiatives in response to employees struggling to meet basic living requirements, which was likely influenced by the UK cost-of-living crisis at the time of data collection, and the typical low pay advisors receive (20). Accordingly, beyond fulfilling their duty of care, these findings suggest contact centres are motivated to promote employee health and wellbeing, are an important source of support, and adopt health initiatives in response to external and societal events.

Within the current study, listening to the wants/needs of advisors was perceived as important as decision-makers believed that health initiatives created by employees were more likely to be engaged with and were potentially more effective, increasing decision-makers' confidence in the adoption decision. Similarly, the employee voice facilitated the initial decision-making process within two contact centre studies exploring health initiatives to promote physical activity/reduce sedentary behaviour (19, 350, 351). One of the common barriers identified within the literature was the 'perceived lack of employee interest', therefore, involving employees in the decision-making and planning of health initiatives may help to reduce this barrier or confirm the perceived lack of interest, ensuring only wanted or needed health initiatives are adopted (50, 54). It was also highlighted that the employee voice can empower employees, giving them control over work processes that influence health (352). Recent industry data indicated that 78% of organisations seek input directly from their employees when adopting health initiatives, which also helps with the organisations equity, diversity and inclusion efforts (353). Overall, this study and supporting research suggest that involving employees in the initial decision-making processes is vital for the adoption of health initiatives in contact centres

and is important for an organisation to achieve sustainable success, with mutual benefits for the organisation and employee (354).

5.4.2 Implementation

Phase one of this study emphasised the importance of considering employees' physical opportunity (i.e., time) to engage with initiatives and implementing certain initiatives during periods of lower customer service demand. Whilst there are few studies investigating the implementation of health initiatives within contact centres, two studies similarly highlighted employees' 'limited time' to engage as a barrier to the implementation of a mindfulness programme (57) and to reducing sedentary behaviour (350), which is unsurprising given the low-control, high-performance, high-pressure work environment of contact centres (211, 355). The current study also identified the importance of not overwhelming advisors with too many health initiatives at once, as it reduced their motivation to engage. Research recognises the importance of internal communications for supporting employee health (356), however, considering the organisation's internal environment and the number of communications released when implementing an initiative seemed important from the phase one interviews. Despite this, there was a lack of consensus for the appropriate timing/pacing of a health initiatives (e.g., in accordance with other health initiatives) being important for implementation. In retrospect, this may be due to the wording of the survey question, which may have confused participants without further explanation and examples. This is supported by free text comments that suggested that advisors time availability was an additional important factor. More research is needed to determine how important the timing of health initiatives is for implementation within contact centres.

Participants in phases one and two perceived the buy-in and prioritisation of health initiatives from team leaders and managers as important for the implementation of health

initiatives. This is consistent with contact centre and general workplace research, as leaders' support and prioritisation of health initiatives facilitated implementation, increasing employees' knowledge of the initiative and helping them to feel supported when engaging with health improvement activities (51, 350, 351). Research suggests that management support may be influenced by the support they receive (e.g. training on health topics), their expected roles, and their attitudes towards employee health and company initiatives (52). This is supported by the current study as phase two decision-makers agreed that allowing/giving leaders time to prioritise the delivery of a health initiative was important for implementation. This also related to previous contact centre research that found high workload (19), a conflict with the responsibility to maintain service levels (56, 346) and a lack of knowledge (55) were barriers for middle-management to encourage health improvement behaviours. The current study also highlighted that the capability and experience of leaders is an important barrier to implementation. Consequently, it seems important for organisations to ensure adequate training, support and/or guidance to those responsible for leading/implementing health initiatives in contact centres. It is recommended that such training, support and guidance is co-produced with individuals working within the industry to improve the efficiency and effectiveness of knowledge translation (357).

Participants perceived the adaptability of health initiatives for virtual, hybrid and in-office environments was important for implementation. Within the survey, decision-makers noted that this ability to adapt was also relevant for centres across different locations and time-zones, and for shift-workers and part-time advisors, with the latter especially important given the increase in part-time shift work within the industry, reaching 58.7% in 2023 (64). Adapting initiatives to support advisors on night shifts is also vital, as they are

an especially vulnerable sub-population with increased health risks, such as disordered eating, obesity, substance use and depression (128).

With legislation ensuring reasonable adaptations for disabled employees (358), decision-makers perceived that the flexibility to adapt health initiatives to individual needs was important for implementation. For this to occur, it was emphasised that managers and team leaders must have the knowledge of employees' wants/needs alongside the opportunity to make adaptations. The role of managers and team leaders and their unique knowledge of their team's dynamics and individual advisors has been recognised in previous contact centre research as a prominent factor that can help to tailor health initiatives (19). Therefore, these collective findings support the notion that it is important for centres to have the capability and the opportunity to adapt health initiatives to various organisational contexts, job types and individual needs to support successful implementation.

5.4.3 Evaluation

In line with industry (206) and academic guidance (359), the centres within this study evaluated health initiatives through a mix of qualitative and quantitative measures (i.e., engagement reports, staff satisfaction surveys and staff feedback). However, phase two found that contact centres often favoured organisational software and surveys over discussions, interviews, employee forums and focus groups. This may be because software and surveys are easier for mass data collection across larger organisations, are less time intensive, lower costs and offer anonymity (360).

Overall, qualitative discussions in phase 1 revealed that decision-makers thought wellbeing was difficult to measure, displaying a need for improved education for centres on validated methods that they can use to measure wellbeing. For this, it is suggested that centres partner with external providers who can evaluate their health initiatives. However,

with the previously mentioned barrier of cost, it is also suggested that there may be a need to improve the equity of access to evaluation services for smaller or struggling contact centres.

Participants indicated that measures of absence and attrition were commonly used to evaluate health initiatives and informed the business case for the continuation or adoption of health initiatives. This is consistent with the wider literature for workplace health initiatives (60), despite participants describing that absence and attrition data gave little insight into the effects of a health initiative compared to engagement statistics and anecdotal feedback from employees. Phase two also revealed how presenteeism and call handling times were rated as least important, with no consensus found (although more than half of decision-makers still rated these as important). This contrasts with one study which found that centres within their study placed value on average call handling time metrics to determine the effectiveness of a health initiative (19). The lack of consensus for presenteeism may reflect its multi-layered and complex nature (361), however, this outcome may be valuable for contact centres to consider as studies have shown that presenteeism from mental illness alone costs UK employers more than £15 million per year (362).

5.4.4 Strengths and limitations

To the authors' knowledge, this is the first mixed methods study to explore health and wellbeing decision-maker perspectives on factors affecting the adoption and implementation of contact centre health initiatives, and how these initiatives are evaluated. Exploring these research questions in the post-COVID-19 working world is original within this field. A mixed methods approach allowed the researcher to identify key influences and outcomes that were important to decision-makers, a previously under

researched field, to then provide a larger sample of decision-makers with the opportunity to explore and identify outcomes of importance.

In depth qualitative exploration facilitated understanding of not only which outcomes were considered important, but also why they are important (363). Despite the researcher determining that information power had been reached, there was potential narrowness in the recruitment of participants who identified themselves as 'health and wellbeing decision-makers'. This approach might have resulted in a sample that did not fully represent the diversity of roles and responsibilities involved in health and wellbeing decisions, despite the recruited sample having diverse job roles. To address this potential limitation, future research may benefit from purposefully recruiting a more diverse sample of decision-makers. This would improve the likelihood of including individuals with a comprehensive understanding of the adoption, implementation, and evaluation processes of health and wellbeing initiatives. Despite this, the phase two survey allowed the researchers to feel confident that all/most potentially relevant influences/outcomes were included (363). This was because no additional factors were identified by decision-makers. Research is warranted however to determine the generalisability of the findings beyond the study samples, especially in contact centres in different countries.

Utilising reflexive thematic analysis within phase one allowed the researcher to use a theoretically flexible approach, with a mix of inductive and deductive analysis to frame the factors affecting the adoption and implementation of health initiatives within behaviour change theory. Using the COM-B and TDF helped the researcher to consider the cognitive, affective, social and environmental influences of individual and collective behaviour (215). This provoked a deeper level of systematic analysis, as the researcher were able to reflect on the themes through a behaviour change lens to better identify key

barriers that may prevent the adoption and successful implementation of health initiatives.

Phase two combined three measures of consensus (percentage agreement, IQR and SD), as each alone is not considered as a good proxy of consensus (268) and there is no agreed approach within the literature for measuring consensus using these measures. The Delphi survey is a method to explore consensus among experts, but was not employed in this study due to concerns around participation rates and confidentiality and data privacy issues for contact centres (see section 3.4.1, page 80 for further discussion). Accordingly, more research is needed to determine a consistent approach to measures of consensus, and future research should consider using the Delphi method when exploring similar research questions.

5.5 Conclusion

Multiple factors influence contact centres' capability, opportunity and motivation to adopt and implement health initiatives. Leadership buy-in, listening to the employee voice, the availability of resources (staff and time for advisors to participate), perceiving the need to support employees, and having the money to invest in health initiatives were perceived important for the adoption of health initiatives in contact centres. Return on investment was not agreed as important, with some decision-makers believing that there were more important benefits, such as company reputation. Future work should seek to improve equity of access to health promotion services and resources for contact centres, especially for centres with fewer financial and people resources. The ability to adapt health initiatives to remote, hybrid, shift and night working, and employee needs and preferences, was perceived important for the successful implementation. Contact centres should also ensure that employees chosen to lead health initiatives are appropriately supported and given the time to prioritise implementation. To improve how contact

centres evaluate their health initiatives, especially the impacts on employee health and wellbeing outcomes, it is recommended that contact centres receive greater support externally, though ensuring equity of access to such support is vital.

Chapter 6. Sequential mixed methods study: exploring the awareness of, engagement with and perceived effectiveness of contact centre health initiatives

6.1 Introduction

Contact centre advisors frequently encounter customer verbal aggression or difficult calls (13), noisy and highly sedentary settings (18, 82), repetitive tasks with low autonomy (319) and low pay (20, 21). Such conditions contribute to high levels of psychological distress, poor physical health (22) and an increase in unhealthy lifestyle behaviours (24). Poor health can impose significant costs on contact centres and the UK economy due to sick leave, recruitment and training new employees, amounting to £138 billion (364). Contact centres can adopt and implement initiatives to improve the health of their advisors through changes in policy, practice and the working environment (37, 38). Strategy and guidance documents produced by trade (labour) unions and private sector organisations (42, 273) provide recommended health initiatives for contact centres. However, these solutions are often not (or not transparently) evidence-informed and may be based on expert advice, which can be biased (43). There is limited evidence exploring the types of health initiatives that contact centres use to improve employee health. Understanding the types of initiatives that contact centres use and perceive to be effective is important, as traditional office-based initiatives may not translate well to this unique working environment.

Study 1 (chapter 4) revealed that only 28 peer-reviewed studies for health-promoting interventions were published between 2003 and 2021 (365). Interventions aimed to improve advisors' health behaviours (sedentary behaviour, physical activity, smoking), physical health (musculoskeletal health, visual health, vocal health, sick building syndrome) and mental health (stress, job control, job satisfaction, wellbeing). However, these interventions do not appear to fully encompass the health initiatives adopted by contact centres, which have a broader focus on improving employees' mental, physical, financial, and social health, and enhancing community involvement (366). Further, most

interventions identified predate the introduction of new technologies in contact centres that are changing the nature of work for advisors, such as AI, and the COVID-19 pandemic, which contributed to an increased number of centres allowing partial remote work to 81.6% (58) from 19% pre-pandemic (59). Therefore, it is currently unknown which health initiatives are effective in this evolving working environment, particularly for advisors who work remote or hybrid. There is a well-documented gap between evidence-based health initiatives developed in research and those implemented into practice (47), implying that reviewing research alone is insufficient for a comprehensive understanding of current practices within contact centres. Therefore, further research is necessary to explore health initiatives currently adopted by contact centres, and the perceived effectiveness of these initiatives. Given perceived effectiveness is closely correlated with actual effectiveness (65), new evidence can inform guidance for contact centres on initiatives to improve advisor health and wellbeing.

To facilitate the translation of research into practice, it is also important to understand organisational and individual behaviours affecting health initiatives being put into place. Study 2 (chapter 5) has identified factors influencing the adoption and implementation of health initiatives in contact centres; however, evidence gaps exist on factors influencing advisor awareness and engagement in health initiatives. Workplace research indicates that employee awareness is often poor, with employers reporting the presence of health initiatives at almost twice the rate that employees acknowledge having these initiatives available to them (63). One systematic review also found that engagement levels in workplace health initiatives were typically below 50% (62). With a lack of research specific to the contact centres environment, further research is necessary to offer valuable insights into the user experience of health initiatives within real-world contact centre settings.

Non-contact centre research has identified several factors influencing employee engagement with health initiatives. In particular, management support has been highlighted as a key facilitator, while time constraints, the location of the health initiative, and a high workload are barriers (63, 204). Scheduling conflicts are also significant, particularly for shift and part-time workers, as health initiatives are often designed around fixed-hour employees (63), excluding those with irregular hours (64). This issue could be particularly relevant within contact centres, where the use of part-time shifts has been gradually increasing, reaching 58.7% in 2023 (64). Employees also emphasised the importance of the physical proximity of the health initiative (64), and highlighted potential biases favouring head-office and city-centric locations (63). With the recent surge in hybrid working, these factors may be especially pertinent to explore within the contact centre population. Accordingly, understanding the factors influencing advisor awareness of, and engagement with health initiatives is limited, with more research needed to inform contact centre practice and future intervention research.

To address the evidence gaps identified, the aims of this two-phased study were to i) explore factors influencing advisors' awareness of and engagement with health initiatives, and, identify which health initiatives are perceived to be effective from the perspectives of advisors and health and wellbeing decision-makers within UK contact centres (phase one), and, ii) assess consensus on the phase one findings among a broader population of UK contact centre decision-makers and advisors (phase two). This study utilised the COM-B model and associated TDF to systematically explore advisors' awareness and engagement (212, 214), as well as the BCW to systematically discuss health initiatives (220).

6.2 Methodology

6.2.1 Study design

This study employed a sequential, two-phase mixed-methods approach. Phase one consisted of a qualitative study using interviews (between November 2022 – May 2023) to explore the awareness of, engagement with and perceived effectiveness of health initiatives. Phase two developed a quantitative survey, using phase one findings, to assess consensus for the phase one findings among a larger population (distributed from March 2024 to July 2024) for findings related to engagement and perceived effectiveness. It was not possible to explore awareness within phase two as the anonymous nature of the survey meant that researchers had no prior knowledge of health initiatives within each participant's centre. Ethical approval was granted from LJMU ethics committee (22/SPS/048).

6.2.2 Phase one: Qualitative study

This study followed the COREQ (Appendix 6.1) (323). This study used semi-structured interviews for decision-makers and a combination of semi-structured interviews and focus groups for advisors, which are effective for exploring employee engagement with health initiatives (329) and perceived effectiveness (367). Combining both interviews and focus groups for advisors was a pragmatic approach to data collection, which remain consistent with the study and thesis philosophical underpinning. Focus groups encouraged advisors to elaborate on stories and themes that would help the researcher to understand advisors' social world, and to appreciate a range of different opinions and experiences (368). Alternatively, individual interviews were also offered to advisors who were unable to attend scheduled focus groups; this approach improved equitable access to individuals within contact centres of all sizes. This method combination can help achieve a comprehensive understanding of the phenomena when non-hierarchical comparisons of the data reveal overlapping and complementary findings (369). Additionally, interviews

offered the researcher and participant more time to explore certain experiences or opinions, helping to form a more nuanced understanding of health initiatives within contact centres.

Participants and organisations

This study adopted a maximum variation sampling approach, which was used to identify key dimensions of variations (in this case contact centre size and the number of health initiatives implemented) to then purposely recruit contact centres that vary from each other as much as possible (326), for example, from centres with no-to-few health initiatives to centres with many health initiatives. Organisations were classed as very small (1-9 advisors), small (10-50 advisors), medium (51-200 advisors) and large (200+ advisors) based on industry classifications (327). This recruitment approach was chosen as it allows for a diversity of organisations to participate as organisational priorities and resources may differ by size.

Decision-makers self-identified based on their job role as health and wellbeing decision-makers. Further details can be found in section 5.2.2, page number 122. Decision-makers who had participated in the study 2/3 interviews acted as a gatekeeper for advisor recruitment, displaying researcher posters to advisors within their centre who then volunteered to participate. This study was steered by qualitative guidance stating that 9-17 interviews or 4-8 focus groups is usually sufficient for data saturation to be reached (328) however, data power could not be predetermined ahead of analysis (334).

Recruitment

Please see section 5.2.2, page number 122, for a detailed description on the recruitment of decision-makers. Following decision-makers participation, they were asked if they would like to act as gatekeepers by displaying advisor recruitment posters, provided by

the researcher, across the centre's communication channels (email and social media posts) (see Appendix 6.2). Gatekeepers were required to sign a gatekeeper consent form. For gatekeepers who allowed advisors to participate with focus groups during working hours, advisors were required to express interest to the gatekeeper and the researcher, so the gatekeeper could alter the work scheduling system, allowing advisors to participate during working hours. Due to resource constraints within the centres, focus groups during working hours were not always feasible. Therefore, the researcher also provided gatekeepers with a recruitment poster to advertise to advisors through their centre's communication channels (email and social media posts), advising advisors to contact the researcher to organise a convenient time outside of working hours. This poster included a link to an electronic participant information sheet and a QR code linked to the researcher's email, allowing advisors to arrange an interview or focus group based on their preference and availability. Advisors were offered a £20 Love to Shop voucher as an incentive for their participation.

Conducting focus groups during working hours was beneficial as it facilitated participation for focus groups. However, there were risks associated with using gatekeepers, for example, gatekeeper bias can occur when gatekeepers take control of the sampling process, potentially affecting the study's outcomes (370). Decision-makers may have encouraged advisors likely to speak favourably about the centre or advisors might have felt pressured to participate. To mitigate these risks, several measures were implemented. Gatekeepers were asked to display the study poster to all advisors, without influencing the advisors who volunteered. As recommended by the literature, an informed discussion was held with gatekeepers about their role, the research aims, and the importance of maintaining participant anonymity (370). This was crucial to address any concerns about the company receiving negative feedback from advisors, which might otherwise have

motivated sampling bias. Additionally, it was important to emphasise to advisors that participation was voluntary and that they could decline without any negative consequences.

Data collection tools

For decision-makers

A semi-structured interview schedule (Appendix 5.2) explored perceptions of health initiatives related to engagement and perceived effectiveness. A semi-structured interview schedule was chosen as this gave the interviewer some choice in the wording of each question and for the use of prompts, allowing the researcher to clarify interesting and relevant points (330). This schedule was developed using the COM-B model, associated TDF and APEASE criteria (212, 214) to systematically explore factors influencing advisors' engagement with health initiatives. These theories are commonly used to explore engagement with health initiatives (216). Additionally, the BCW and APEASE (212) were used to explore perceived effectiveness of health initiatives. Each question first maintained a broad, non-theory driven approach to avoid limiting participants' responses (e.g., "what influences advisor engagement with a health initiative?"), followed by theory-informed prompts (e.g., "do advisors have the time [associated with COM-B's physical opportunity] to engage with health initiatives?"). This approach was guided by researchers who state that a theory-led schedule can be useful (213, 215), but an overly deductive interview guide can be restrictive in exploratory research (331).

In a pilot interview, the participant highlighted some confusion with the use of the terms policies and interventions, therefore, the final interview schedule (Appendix 5.3) used the term 'health initiatives' instead (see section 5.2.2, page 124).

A semi-structured interview/focus group schedule (Appendix 6.3) explored perceptions of health initiatives relating to awareness, engagement and effectiveness. The schedule was developed using the COM-B, associated TDF and APEASE criteria (212, 214) to systematically explore factors influencing advisors awareness of, and engagement with health initiatives. Additionally, the BCW and APEASE criteria (212) were used to explore perceived effectiveness of health initiatives. Each question first maintained a broad, non-theory driven approach, followed by theory-informed prompts. Interview schedules were informed by the decision-maker interview by highlighting the health initiatives specific to their centre. A pilot focus group was conducted with advisors, and no changes were made to the interview schedule. The pilot focus group was included within the analysis.

An interactive whiteboard was utilised during focus groups and interviews using Miro software through Microsoft Teams. Prior to these sessions, the researcher listed all health initiatives from the advisors' centre onto the whiteboard, as previously identified by the relevant decision-maker. This tool visually supported the questions asked. For example, when participants were asked about the health initiatives, they were aware of, they could interact with the shared online whiteboard by using reaction emojis to indicate which health initiatives they were aware of. The researcher also added new suggestions to the whiteboard when participants proposed health initiatives that might improve their wellbeing. Please see Appendix 6.4 for an example of the interactive whiteboard.

The whiteboard maintained an interactive element for advisors participating in individual interviews rather than focus groups. The researcher continuously updated the contact centre's whiteboard following each interview or focus group, using previous discussion points as prompts. Although the whiteboard worked well in the pilot, it became clear in subsequent focus groups and interviews that restrictions set by the contact centre

prevented some advisors from accessing it. To adapt, the researcher used the chat function and verbally described each listed health initiative with participants using emojis on their camera to “react” and indicate awareness. This approach also worked and was not perceived by the researcher to not compromise the quality of the discussions, though the researcher found it useful to note participants reactions from the recording and add to the whiteboard retrospectively to aid analysis.

Focus groups were chosen as they offer the use of interaction data as participants are able to elaborate on stories or themes discussed by other advisors, highlighting similarities and differences from a range of perspectives (371). Focus groups and interviews were combined for pragmatic considerations, as interviews were offered to advisors who were unable to attend a focus group (369). Despite triangulation of qualitative methods advocating for increased understanding of a phenomenon, failure to recognise the implications of combining methods can be problematic (369). For example, consideration was given to whether advisors participating in semi-structured interviews were any different to those participating in focus groups. The only difference observed by the researcher was the fact that advisors who participated in interviews often did so because their contact centre was not able to organise a focus group during working hours. For one small contact centre with 1-9 advisors, this was because a focus group would result in no available advisors on the phones to respond to customer queries. Additionally, the interactivity element was not completely removed for those participating in interviews. An interactive online whiteboard used in focus groups was also used in the same way for interviews, as the researcher continuously updated the contact centre’s whiteboard following each interview or focus group, using previous discussion points as prompts; this allowed advisors to agree or disagree with previous points discussed.

Reflective stop off

Conducting focus groups and interviews with advisors was an enjoyable and enlightening experience. Despite my research being focused on improving the health of contact centre advisors, I felt I had yet to have any in-depth discussions and insight from an advisor perspective. Before these interviews, my understanding of advisors' thoughts, feelings, and experiences was primarily informed by decision-makers and literature. I enjoyed hearing each advisors' experiences, as it felt like the moment where all my research began to come together, providing a balanced and comprehensive understanding of the contact centre environment.

Procedure

For decision-makers, 11 interviews were conducted in-person (1/11) or virtually via Microsoft teams (10/11) depending on the location and preference of the participant. Participants were typically situated within the workplace or at home, in a quiet and private space. Interviews lasted an average of 39 minutes (range 16-57 minutes), with no repeat interviews. In-person interviews were audibly recorded, and virtual interviews were visually recorded via Microsoft teams.

For advisors, all interviews and focus groups were conducted virtually and recorded via Microsoft Teams by the researcher. Participants were typically situated within the workplace or at home, in a quiet and private space. A total of 23 advisors across 5 contact centres participated using three focus groups (15 participants across three different organisations) and eight individual interviews (across two different organisations). On average focus groups lasted 43 minutes (range 40-45 minutes), and interviews lasted 25 minutes (range 16-30 minutes).

For decision-makers and advisors, each participant provided verbal consent before the interview began. The researcher had no prior relationship with participants, and participants were informed the researcher was undertaking this research as part of a PhD. Interviews/focus groups were conducted until information power was reached, meaning the information provided by the sample allowed for sufficient analysis to answer the study aim (333), an approach advocated for by Braun and Clarke (334).

Analysis

Decision maker and advisor interviews and focus groups were analysed using Braun and Clarke's reflexive thematic analysis (335). This method was selected for its theoretical flexibility, allowing for both inductive and deductive theme generation through the lenses of the COM-B model and TDF. The researcher transcribed the interviews and focus groups verbatim, ensuring that all identifiable data was anonymised. Shorthand notes were made throughout the transcription process to facilitate familiarity with the data. Data management and coding were conducted using NVivo software (release 1.6.1). Initially, coding was approached semantically and inductively to stay close to the participants' expressed meanings (336). To enhance the accuracy and depth of the coding, a public advisor (PM) (an experienced change acceptance manager from a UK-based contact centre) and the researcher independently coded three interviews with senior employees. This process allowed for comparison and discussion of differing perspectives and interpretations, thus enriching the researchers' understanding, interpretation, and reflexivity (337). While this comparative coding was not applied to advisor interviews or focus groups due to the public advisor (PM) availability constraints, the insights gained from the initial coding process were beneficial for subsequent advisor coding.

To visualise initial themes, the researcher developed a thematic map addressing each research question (Appendix 6.5 for an example). This map integrated data from both

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senior employees and advisors, enabling deeper connections and more comprehensive analysis. Themes were reviewed, defined, and named in relation to the research questions. To align the findings with behaviour change theory, the researcher created a 'mapping table' that paired each theme with relevant quotations. Each member of the research team (LG, AM, PH, LP) then independently mapped quotations to the behaviour change theories (COM-B and TDF for themes related to awareness and engagement; BCW policies and interventions for effectiveness themes). This collaborative mapping was crucial as it provided a range of expertise, which was particularly valuable given the subjective nature of mapping to the TDF (338). This approach not only situated participants' responses within behaviour change theory but also enhanced the research team's reflexivity. Similar to study 2, member checking was not performed.

6.2.3 Phase two: Survey

Participants

Decision-makers (as described in phase one) and advisors self-identified from UK contact centres of any size, regardless of the number of health initiatives implemented. The study was also advertised to phase one participants using direct contact through emails.

Recruitment

Purposive and snowball sampling were used to recruit advisors and decision-makers.

Surveys for advisors and decision-makers were promoted at two distinct time points given the anticipated challenge of reaching advisors (due to the need for organisational permission to distribute the survey) the advisor survey was prioritised. The advisor survey was launched first and remained open for a duration of three months (April-July 2024). One month after the advisor survey was promoted, the decision-maker survey promotion began (May-July 2024).

Phase one participants were emailed directly by the researcher (ZB). Recruitment posters (one for advisors and one for decision-makers) were sent electronically to UK contact centres via partner communication channels (email and social media posts). Partners included the Contact Centre Forum (Northen and Southern), the Call Centre Helper, and the Contact Centre Panel. The emails and posters contained an electronic link and QR code to the relevant online survey and advertised a prize draw for those who completed the survey. Upon accessing the survey, participants were provided an electronic link to the participant information sheet and implied consent was collected via a 'tick box'. After survey completion, participants could enter their email to enter a prize draw for Love2Shop vouchers.

Data collection tools

The survey was developed using the phase one qualitative findings and accessed using the Jisc Online Surveys software (release 2.16.0). Online surveys are advantageous for workplace health research as they offer anonymity, low-costs, and broad distribution (343). To improve face validity and appropriateness for contact centre decision-makers and advisors, the survey was tested by the supervisory team (LG, LP, AM, PH) and a public advisor (PM), who evaluated its content and structure. The surveys collected personal and organisational demographic data for both decision-makers and advisors, including: the organisation's vertical market (a group of companies focused on a specific niche e.g. financing), geographical location of where the participant lives (town/city), number of advisors [decision-makers only], work approach [remote, office or hybrid working), gender, age, ethnicity, disability, job role [decision-makers only], and time spent working in the contact centre industry.

For the study 3 advisor survey, participants were presented with a list of factors that may affect their engagement with a health initiative. These factors were informed by phase

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one of this study, for example, 'having optional health initiatives' was perceived to be important by advisors, therefore, this factor was included within the phase two survey. Participants were asked to rate these factors for perceived importance within their contact centre on a 5-point Likert scale (1 not at all important, 2 slightly important, 3 moderately important, 4 very important, 5 extremely important) (344). Decision-makers and advisors were asked to rate their perceived effectiveness of health initiatives on a 5-point Likert scale (1 very ineffective, 2 ineffective, 3 uncertain, 4 effective, 5 very effective) (372). The health initiatives presented in the survey were based on the initiatives identified within phase one of this study and within the study 1 scoping review (365). Please see Appendix 6.6 for mapping of how each initiative was informed by study 1 or/and study 3 (phase one). Participants were given the opportunity to provide additional details, within a free text comment box, on any answers provided, or to suggest additional factors/health initiatives that had been missed from the survey.

Analysis

The number and percentage of responses for each rating on the Likert scale were presented for each item, alongside the median score, interquartile range (IQR), standard deviation (SD) and consensus decision. Please refer to Chapter 5 (section 5.2.3, page 132) for a detailed description of the analysis.

6.3 Results

6.3.1 Phase one

Participant and organisational characteristics

Eleven health and wellbeing decision-makers were interviewed (8 identified as women, 3 identified as men), each representing a different organisation. Four of these eleven centres continued to participate with advisor interviews/focus groups, resulting in a total of 23 advisors (16 identified as women, 7 identified as men). Advisors from contact centre

1 and 3 participated in one focus group (5 advisors and 8 advisors respectively), advisors from contact centre 2 only participated in individual interviews (5 advisors), and advisors from contact centre 4 participated in one focus group (2 advisors) and three individual interviews. No participants dropped out. The vertical markets, size and location of the organisation varied; however, all organisations offered a hybrid working approach (see table 6.1).

Table 6.1 Participating contact centres and the role of the associated decision-makers

Contact centre number	Decision-maker participant number: role (gender [woman; man])	Advisor participant number: Focus group (FG) or interview (I) (gender [woman; man])	Vertical market	Number of advisors	Location	Work approach
1	P4: Site director (W)	P1-P5: FG (1M;4W)	Outsourcing & Telemarketing	51-200	Southwest England	Hybrid
2	P6: Director of compliance (M)	P6-P10: I (2M;3W)	Enforcement Services	1-9	Southeast England	Hybrid
3	P5: Senior HR generalist (W)	P11-P18: FG (3M;5W)	Retail and Distribution	200+	Southwest England	Hybrid
4	P3: Head of health (M)	P19-P23: FG/I (1M;4W)	Outsourcing & Telemarketing	200+	West Midlands England	Hybrid
5	P1: Operations manager (W)	-	Finance	200+	Northwest England	Hybrid
6	P2: HR wellbeing lead (W)	-	Telecoms	200+	Nationwide	Hybrid
7	P7: Health and safety coordinate (W)	-	Finance	200+	Scotland	Hybrid

8	P8: Head of customer services (W)	-	Public Services	10-50	Northwest England	Hybrid
9	P9: HR business partner (W)	-	Retail and Distribution	10-50	Southwest England	Hybrid
10	P10: Functional training lead (M)	-	Hospitality	51-200	Southwest England	Hybrid
11	P11: Wellbeing lead (W)	-	Public Services	51-200	Southwest England	Hybrid

The results are organised into three core sections to answer the relevant research questions: awareness (research question one), engagement (research question two) and effectiveness (research question three). The mapping is discussed intrinsically throughout the results. Only advisors discussed their awareness of health initiatives, whilst both engagement and effectiveness sections were discussed by decision-makers and advisors. Data extracts with participant numbers are provided throughout the results. The sub-themes are not presented in hierarchical order.

Awareness

There was one core theme for advisors' awareness of health initiatives in contact centres: a lack of detailed communication and suggested improvements. A thematic map for the awareness theme is represented within Figure 6.1. A summary of how the awareness theme maps to the COM-B and TDF is presented in Table 6.2.

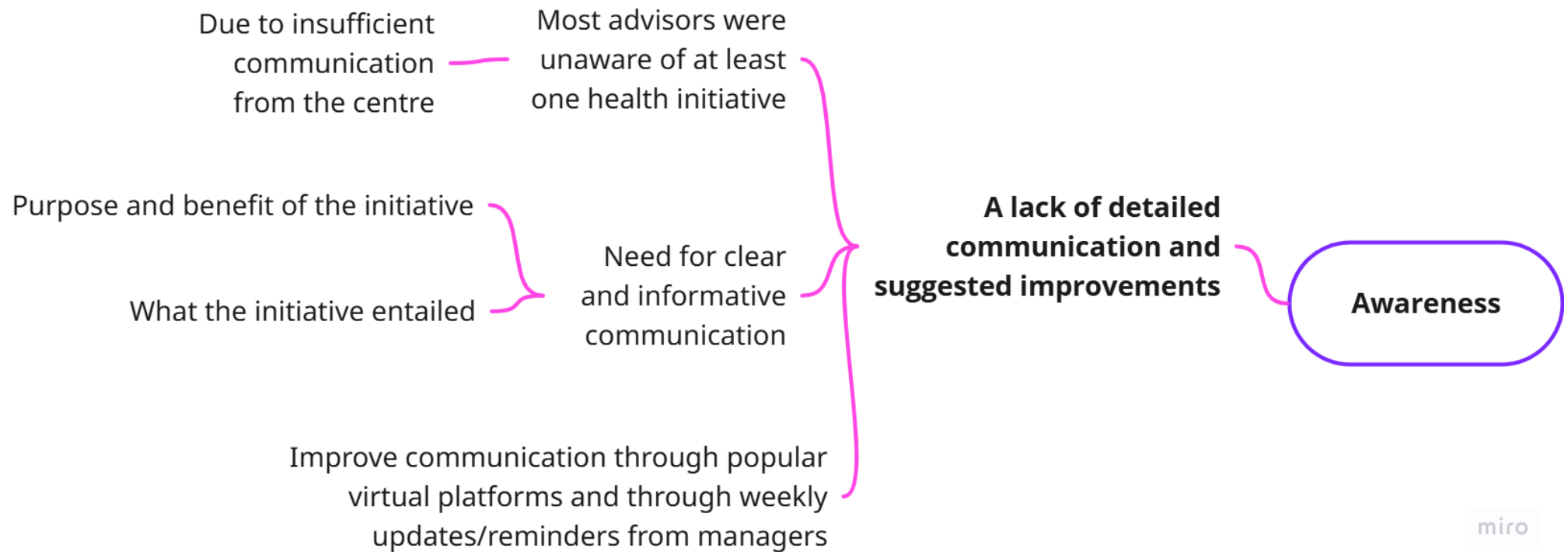


Figure 6.1 Thematic map for the awareness theme

Table 6.2: Mapping the awareness themes to the behaviour change theory			
Theme	COM-B	TDF	Explanation
A lack of detailed communication and suggested improvements	Physical opportunity	Environmental context and resources	Little detailed communication for the health initiative, with various platforms suggested for improved communications.

A lack of detailed communication and suggested improvements

Most advisors reported being unaware of certain health initiatives within their centres.

This lack of awareness was largely attributed to insufficient communication from the organisation. Participants emphasised the need for clear and informative communication, including detailed explanations about what the initiative entailed and how it would benefit them to increase awareness.

“I don't feel like I did have good knowledge about it [EAP] at the time. It was something that our manager just said you can go see this person [councillor provided by the EAP]. You can call these people if you're not feeling OK. If you need someone to talk to. So that was the only communication that we knew at that time. We didn't know what it entailed, or more about this programme.” (P19 advisor, CC4 Interview)

Advisors suggested that awareness of health initiatives could be improved if the organisation increased communication through popular platforms commonly used by employees, such as Yammer. Additionally, advisors in the CC3 focus group, who were generally more informed about the health initiatives, highlighted the effectiveness of having weekly updates and reminders from managers. They noted that this approach ensured that information was consistently disseminated and 'trickled down' through all levels of staff.

“It's [health initiative communication] from reminders, from managers, from blog posts. And then when these regular posts come out, they're like it's normally on a Wednesday. They'll put out the various wellbeing posts, so you see it. So, every week, everyone gets to see something. [...] and it does seem to trickle down through everyone.” (P13 advisor, CC3 Focus group)

Advisors in the CC1 focus group noted that online communications are often overlooked in the busy work environment, emphasising the critical role of ‘word of mouth’ in raising awareness about health initiatives. They specifically highlighted the importance of team leaders in this context, as these individuals can play a crucial role in communicating and reinforcing health initiatives directly to advisors.

“P1: The team leaders need to start talking about it [available health initiatives], using it and just making sure everyone is aware of it. Because, especially with the other systems we use, like people in HR is other one, where sometimes no one looks at the posts or anything like that. So, I feel like it needs to be just more like spoken about.

P2: Yeah. Word of mouth isn't it really.” (P1 and P2 advisors, CC1 Focus group)

Engagement

Core themes for factors influencing advisors’ engagement with health initiatives in contact centres were: (1) confidentiality concerns for mental health first aiders and champions, (2) difficulty accessing health initiatives, and (3) individual choice, need and intentions. A thematic map for the awareness theme is represented within Figure 6.2. A summary of how the engagement themes map to the COM-B and TDF is presented in Table 6.3.

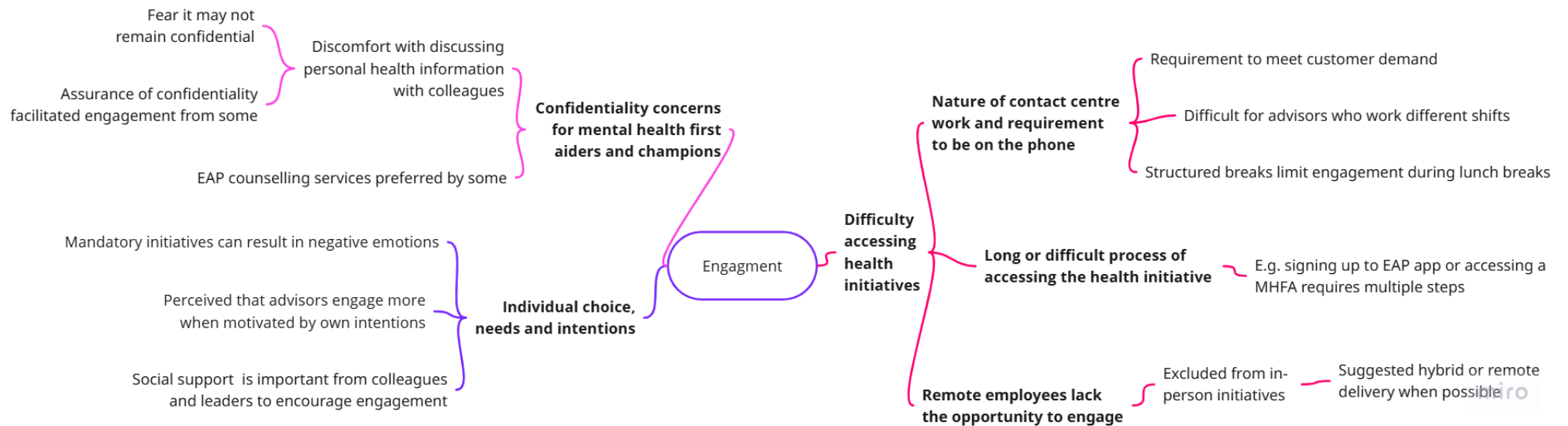


Figure 6.2 Thematic map for engagement themes

Table 6.3: Mapping the engagement themes to the behaviour change theory				
Theme	Sub theme	COM-B	TDF	Explanation
Confidentiality concerns for mental health first aiders and champions		Reflexive motivation	Beliefs about consequences	Belief in the confidentiality of personal information given during a health initiative.
Difficulty accessing health initiatives	Nature of contact centre work and requirement to be on the phones	Physical opportunity	Environmental context and resources	Nature of contact centre work and requirement to be on the phones.
	Long or difficult process of accessing the health initiative	Physical opportunity	Environmental context and resources	Having a difficult process to sign up or engage with a health initiative.
		Reflective motivation	Intentions	Advisors' intentions to seek help for their health and engage with the health initiative.
	Remote employees don't have the opportunity to engage with in-person health initiatives	Physical opportunity	Environmental context and resources	The work approach of the advisor and the nature of the health initiative (delivered remotely, hybrid or in-person).
Individual choice, needs and intentions		Social opportunity	Social influences	Support from managers to engage with optional health initiatives.
		Reflective motivation	Beliefs about consequences	Advisors' belief that they have a choice to engage with a health initiative.
			Intentions	Whether an advisor intends to engage with a health initiative.
		Automatic motivation	Emotion	The negative emotions related to mandatory health initiatives.

1. Confidentiality concerns

In focus groups and interviews, advisors from CC4 discussed the importance of confidentiality when engaging with mental health first aiders (MHFA). Some advisors

expressed discomfort about discussing personal issues with MHFA who may be one of their colleagues, fearing that their conversations might not remain confidential. This concern diminished their willingness to engage with MHFA. One participant indicated a preference for seeking support from a stranger through the EAP, as they felt more comfortable with the anonymity offered by professional support.

“I would say that I prefer the Employee Assistance programme [in contrast to MHFA] because that is strangers, and I would feel more comfortable speaking to strangers than to speak to someone who I know I work with and it would feel like they are talking about your problems to their friends who know you as well. So that's something I'm not really comfortable with.”

(P19 advisor, CC4 Interview)

For some advisors, the assurance that the mental health first aider sessions were confidential improved their reflexive motivation and facilitated their engagement.

“It's comforting to know that [advisors' conversations with MHFA] stays between you and the next person.” (P20 advisor, CC4 Interview)

2. Difficulty accessing health initiatives

Sub-themes were a) nature of contact centre work and requirement to be on the phone, b) long or difficult process of accessing the health initiative and c) remote employees lack the opportunity to engage.

Nature of contact centre work and requirement to be on the phone

Advisors noted that their physical opportunity to engage with health initiatives was significantly constrained by their work requirements, specifically the need to be on the phone to meet customer demand. Advisors often worked different shifts and had

structured breaks, making it challenging to participate in health initiatives that are scheduled at fixed times, such as during lunch breaks or after work.

“But I think it's just a bit difficult because obviously there's only so many people that can do it [Tai Chi] at the same time because we are a call centre. So, we do have to have operators on the phone. And so, if it was a busy period, I don't think there was much time for people to get off the phone to go and do the Tai Chi. [...] But again, it's just trying to find that time where everybody is free at the same time because everyone does different shifts. Everyone's got different lunch break. We do need operators on the phone as well to obviously take the calls.” (P2 advisor, CC1 Focus group)

Long or difficult process of accessing the health initiative

Some advisors reported challenges in accessing health initiatives, for example, advisors struggled to access an EAP app due to missed sign-up emails and the additional step of needing to download the app onto their phone, limiting their physical opportunity to engage.

“It's a very difficult app to access [EAP]. So, you have to be emailed it and then you have to log in with the link. And the only way I have access to it is through the app on my phone, obviously you can't really use your phone in the office space so it can be very difficult. And I heard about it, but I didn't receive the e-mail, so I wasn't able to access it until I received it. And if you have multiple emails, it might go to spam. You won't realise that you've had it.” (P1 advisor, CC1 Focus group)

Another advisor described encountering multiple procedures to access a MHFA, which served as a barrier to engagement. This obstacle was only overcome by the advisor's strong reflexive motivation to seek mental health support.

"I: You've just mentioned that you've got a meeting [with a MHFA], was that easy to do?"

P: Not exactly. You have to go through numerous processes first to be able to get that sorted. [...]. So, it does leave a morale of should I actually do it [...]. But knowing that it needs to be done cause you need to get something off your chest or you need to get sorted in some way." (P20 advisor, CC4 Interview)

Remote employees lack the opportunity to engage

Remote employees reported feeling excluded from in-person health initiatives as they did not have the physical opportunity to engage. They suggested that adapting health initiatives to include hybrid or remote delivery formats would enhance engagement for those working from home.

"I think with the Tai Chi and the idea of yoga and stuff, I don't think the digital team [working remotely] really got to find out about the Tai Chi thing. And I probably would have been interested to an extent - doing exercise and getting paid is rather nice. I think that's something that couldn't have been too hard to do on a zoom call or something like that. To include the work from home people. So maybe that's something to note."
(P4 advisor, CC1 Focus group)

3. Individual choice, needs and intentions

Advisors and decision-makers acknowledged that individuals are more likely to engage with health initiatives when they do so voluntarily and are motivated by their own intentions.

“I think people are far more engaged if they are doing it [engaging with the EAP] of their own free will than being made to sign up to something.” (P4 decision-maker, CC1)

Decision-makers and advisors also perceived that mandatory health initiatives could be associated with negative emotions if advisors felt forced to engage, meaning that their automatic motivation could become a barrier to engagement.

“With a workplace initiative I might even feel a bit resentful, might feel I'm being pressurised into doing something I don't really want to do.” (P6 decision-maker, CC2)

To foster engagement with optional health initiatives, advisors also believed that it was important to have social opportunities for participation, which requires a supportive social environment. Managers and team leaders were seen as crucial in this regard; their role involved understanding their team members' preferences and encouraging engagement without being overbearing.

“That’s where your managers come in - knowing your people. Because they know, actually that person is never going to engage with anything socially in work and they just want to do a good job. They’re not stressed, and they don’t have any problems that we’re aware of, but they know that if they do, they can come and talk to us, but they just want to be left alone and the

fact that we pester them can actually increase their stress levels. You've got to pick your battles in a way.” (P8 decision-maker, CC8)

Perceived effectiveness

Core themes for health initiatives perceived to be effective in contact centres were: (1) having a flexible work approach, (2) culture, connection and engagement, (3) posture and the workstation set-up, (4) providing time and space to reduce stress, (5) external resources: Employee assistance programmes (EAP), wellness apps and financial benefits, and (6) pay. A thematic map for the perceived effectiveness themes is represented within Figure 6.3. A summary of how the perceived effectiveness themes map to the BCW is presented in Table 6.4.



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Figure 6.3 Thematic map for perceived effectiveness themes

Table 6.4: Mapping the effectiveness themes to the behaviour change wheel					
Theme	Sub theme	BCW level	Level category	Explanation	
Having a flexible work approach	Work setting	Policy	Environmental/social planning	Remote/hybrid/office working changes how employees spend their working day.	
			Regulation	Establishing rules around working from home flexibility.	
	Flexible hours	Policy	Environmental/social planning	Flexible working hours changes the working day.	
			Regulation	Establishing rules around flexible working hours.	
	Flexible screen and comfort breaks	Policy	Environmental/social planning	Designing and controlling the logistics of breaks to be more flexible and increase advisor autonomy.	
			Regulation	Establishing rules around comfort breaks	
	Culture, connection and engagement	Increasing understanding and connection in the workplace (celebrating global events and sharing wellbeing stories)	Policy	Environmental/social planning	Changing the social environment to increase understanding and connection between colleagues.
				Communication/marketing	Articles and ‘posts’ celebrating health related events and sharing colleague stories.
Intervention functions			Education	Educational articles for health and wellbeing issues.	
Having approachable leaders and regular wellbeing one-to-ones		Policy	Environmental/social planning	Having a culture of wellbeing with leaders who are approachable and offer regular wellbeing one-to-ones.	
		Intervention functions	Enablement	Having wellbeing one-to-ones with managers for them	

				to signpost and support.
			Training	Training for managers to provide support for employees e.g. mental health first aid training.
	Social support and team connection	Policy	Environmental/social planning	Social engagement and connection with colleagues.
		Intervention functions	Enablement	Having the opportunity to talk and support colleagues.
			Incentivisation	Rewards during engagement activities.
Posture and the workstation set-up		Policy	Guidelines	For correct desk set-up and positioning.
			Regulation	Display Screen Equipment (DSE) checks.
			Environmental/social planning	Designing and controlling the logistics of workstation set ups.
		Intervention functions	Environmental restructuring	Providing desks and equipment.
			Education	Leaflet educating advisors on the correct desk set up and positioning.
Providing time and space to reduce stress	Regulation for recovery time	Policy	Regulation	Away time after a stressful call.
		Intervention functions	Enablement	Manager/team leaders providing advisors with stress management advice, and encouraging stress reducing behaviours during this recovery time.
	Providing a space to disconnect from work	Policy	Service provision	Yoga and breathing exercises.
			Environmental/social planning	Wellbeing room for any health-related behaviour, including exercise/stretching

				and planning the logistics of any group sessions.
		Intervention functions	Environmental restructuring	Providing a break to encourage destressing and/or movement.
			Training	For any yoga/breathing/exercise.
			Incentivisation	If time is offered to practice wellbeing behaviours within the working day.
External resources: Employee assistance programmes (EAP), wellness apps and financial benefits	EAP's providing support through counselling services	Policy	Service provision	EAP and all the services that it offers.
		Intervention functions	Enablement	Counselling through the EAP.
	Wellness apps to support physical activity	Policy	Service provision	Wellness app.
		Intervention functions	Enablement	Physical activity tracking.
			Incentivisation	Global tasks and challenges.
	Financial support and incentives	Policy	Service provision	EAP and financial advice services.
			Fiscal measures	Financial support e.g. for dental and eye healthcare.
		Intervention functions	Incentivisation	Financial support and discounts
			Enablement	Financing and budgeting consultations.
Pay		Policy	Regulation	Company policy on sick pay.
			Fiscal measures	Pay.
			Environmental/social planning	Workplace culture for presenteeism.

1. Having a flexible work approach

This theme is centred around policy-level health initiatives to increase flexibility to the work setting, the working hours and the break schedules. This requires

environmental/social planning to change how employees spend their working day,

alongside regulations to establish rules around flexibility. Sub-themes were a) flexible work setting, b) flexible hours and c) flexible breaks.

Flexible work setting

Decision-makers and advisors acknowledged the value of a flexible work approach that allowed hybrid and remote working for advisors. This was perceived to help with work-life balance and childcare.

“Hybrid working [...] helps people's work life balance. So people are not commuting if they don't need to. Childcare is a big issue for some of ours. So they need to do the school run, we can be a bit more flexible because they've not got to leave the office and come back.” (P8 decision-maker, CC8)

Decision-makers and advisors also highlighted how remote/hybrid working was particularly important for disabled people and employees with a long-term health condition who previously struggled with the daily commute into the office.

“With the working from home flexibility, that's definitely helped [improve health] [...] we've got, for instance, people with MS [Multiple Sclerosis] and what we're finding is, allowing them to not have the commute is making a huge difference to their working day because the commute was exhausting them before they were physically in their workplace.” (P7 decision-maker)

CC7)

Despite the widely reported benefits of remote working, some advisors felt that home working was lonely and office working offered them the opportunity to socially interact with colleagues.

"I work in the office all the time, just because I like seeing people's faces and I'm a sociable person and I don't really like working at home. I think it's a bit lonely." (P3 advisor, CC1 focus group)

Flexible hours

Advisors reported that flexible working hours had the potential to improve work-life balance and wellbeing. One participant discussed how advisors were able to adjust their working hours so they could finish earlier, allowing them to work around their childcare responsibilities.

"There's a certain amount of flexibility for those people who require flexible working. So, for example, I have colleagues who only work part time. I have colleagues that work effectively close to a full day, but they finish, for example, in the late afternoon rather than 5/5:30 because they've got some childcare and so on and so forth. So, there's quite a bit of flexibility around the workday. And I think that helps a lot of people." (P22 advisor, CC4 interview)

Flexible breaks

Decision-makers and advisors recognised the challenges of offering flexible break times within inbound contact centres, as there is a requirement for advisors to be on the phone. To counteract this, some centres offered split breaks when requested (e.g. splitting an hour break into two half an hour breaks), or encouraged advisor autonomy over comfort breaks, with regulations adopted to ensure enough advisors are on the phone at a given time.

"We have 5 minutes of comfort break [every hour] that we really make sure everyone takes. [...] But, we don't set it to that 5 minutes for every hour too

strictly, because again, sometimes people need that little bit longer because they need to go for a walk around the block with a cup of tea or whatever it might be, so just a little things like that, we try and keep it as flexible as we can, but we let the team use their common sense cause we've got our wall board. So rather than us tracking it and logging it when you're going to do it, look at the wallboard and see how many people are on comfort. We've got a set number that we'd like at one time, so we've got enough phone cover rather than rostering it. So, it can be more flexible for people, and it seems to work quite well.” (P11 decision-maker, CC11)

Having flexible screen/comfort breaks was perceived by advisors to increase their autonomy and wellbeing, helping to improve physical health (prevent headaches and reduce sitting time) and mental health. Managers and team leaders were perceived as important for encouraging advisors to take these breaks.

“P: They [managers/team leaders] will always encourage us to take 10/15 minutes - obviously we do have our normal hour lunch between 12 and 2. But they will always advise us to go out in the morning probably around 10 if we need a little bit of a break, just to get away from the screen and stuff like that.

I: So, do you think those screen breaks are effective for improving your health?

P: Yeah, I would say so. Just to have a little break away from the screen, because me personally, if I log on at 8, by 10 o'clock, I feel like sometimes I've been squinting and getting a bit of a headache. So it's nice to just have

a little time away, even if it's just going to make a drink or having a toilet break.” (P6 advisor, CC2 interview)

Reflective stop off

As a researcher with a high level of autonomy – having control over working location, working hours and break times – I found myself comparing this to the limited autonomy experienced by advisors. I also reflected on my previous experiences working in retail where I had no control over when to take breaks, which negatively impacted my mental and physical health. Relating to the advisors' descriptions of the negative impacts of enforced break times and the benefits of having autonomy, I used my own experiences as part of a reflective analytic framework. This approach helped ensure that my interpretations of advisors' descriptions remained true to their experiences.

2. Culture, connection and engagement

This theme is centred around health initiatives that make policy-level changes to the environmental/social planning of the contact centre by changing the culture of wellbeing, connection between colleagues and social engagement within teams. Sub-themes were a) increasing understanding and connection in the workplace, b) having approachable leaders and regular wellbeing one-to-ones and c) social support and team connection.

Increasing understanding and connection in the workplace

Decision-makers and advisors reported on the importance of creating an accepting and inclusive culture by sharing wellbeing-related stories through the centre's communication channels. For example, one decision-maker discussed a mental health podcast that their centre does every few months to promote wellbeing stories that colleagues can relate to.

[When asked what initiatives they perceive to be effective for improving the health of advisors] “We also do a mental health podcast every two to three months where our engagement partner will speak, it could be one of our exec team, it could be somebody who's reached out, who wants to share their story. It creates a physical, known example that people go - I know him. I've worked with him or he's on my team.” (P3 decision-maker, CC4)

When asked about what their organisation does to improve their health, one focus group of advisors discussed how their contact centre regularly promotes educational material on health and wellbeing issues. This was perceived to increase understanding and connection between colleagues who may be facing some of the issues discussed.

“We do regularly get a load of information that discusses a lot of things in-depth: depression, anxiety, borderline [personality disorder]. I think there was one the other day about neurodiversity and how we can incorporate that into the workplace. [...] We do get a lot of articles coming out on [...] our internal communications network, so there's a lot of information like that. Just to raise awareness and to make people understand each other in some ways. [...] The reason why I think it does work is because if you are someone who suffers with that, it's very easy to feel like maybe you're left to deal with it alone and no one will understand or care. So, I think if something like that is shared, and one person feels like – ohh, actually these people understand me. Then you've done a great job anyway.” (P17 advisor, CC3 focus group)

Decision-makers and advisors discussed the importance of having a culture where employees felt like they could discuss health and wellbeing issues with any leader. In particular, regular wellbeing one-to-ones with managers were highlighted as an effective strategy for creating a supportive and accepting culture for employees to express their concerns/issues. One focus group of advisors perceived this as the most effective health initiative, emphasising the key role of team leaders and managers.

“P4: I think as well [...] just being able to get in touch with my manager in a less formal one-to-one fashion and she's kind of just there and it feels more like a friendship rather than like a work relationship. I just think that's not in the company's set things that they do, but it's definitely something that's important to me.

P1: I would say the most important one [is] [...] who they employ in team leader roles and above, the people that we have in office as our team leaders are very approachable. You can go to them with anything. Even other managers as well, like our operations manager or like the senior forecasting, you can go in there and talk to anyone whenever you really want and to have that at your disposal, it's really nice to have - if you have any issues about anything, you can just get it sorted as soon as possible really, so I think that's the best thing that they do.” (P1 and P4 advisor, CC1 focus group)

Two decision-makers also recognised the importance of training leaders to have one-to-ones with advisors. One decision-maker discussed how managers were given mental

health champion training, so they were prepared with resources to support advisors and signpost them to professional support. This was perceived to improve employee health.

“Since we’ve [managers] had the [mental health champion] training, we’ve had, in the last half a year, we’ve probably had 4,5,6 people out of 90 seek out assistance under that mental health umbrella and sought out the champions and had conversations. [...] We’ve managed to make a lot of progress with a few people, and they feel that they have been really helped. So again, through directing them to resources, you know, we’re not counsellors, it’s just about listening to people and telling them where they can get help if they need it.” (P10 decision-maker, CC10)

Social support and team connection

Advisors believed that team connection and engagement activities were important for improving advisors’ health, particularly home workers. This created a relaxed, open and non-judgemental atmosphere for advisors to support each other after dealing with difficult customers.

“Our team culture is very strong and supportive. We all support each other. If there’s any vulnerable customers, we’ve had trouble with, we’d keep confidential, but if we’ve got any personal problems ourselves, difficulties ourselves, we have a very strong team culture to reach out. Very strong and even the company as a whole has a very strong team culture, community culture for such a big company and working from home. We’re always engaging, even though we’re still working from home, we still have that communication with each other.” (P21 advisor, CC4 focus group)

Some of the social connection and engagement initiatives discussed by advisors included daily quizzes or riddles and conversation through Yammer or teams. These were perceived to be effective at reaching home workers and often incentivised advisors to socially engage with colleagues.

“We also have social things, like a social media called Yammer, which is used more regularly than now. And we have teams which is quite good teams to access the people working from home” (P1 advisor, CC1 focus group)

Advisors from CC4 and CC1 discussed past social/team building activities, describing how these were well received and improved health. For both centres, it was expressed that they would like to see more of these.

[When asked what else the company could do to improve their health]

“P2: I’ve spoken to a few people that used to work here before myself and they’ve been here for like 15 years. And they said they used to have, like a family fun day. And that was really good. But they don’t do that, but they’ve not been done since I’ve been here. And so maybe [...] just get together once every few months as a family fun day and do something as a company. They seem to really enjoy that, the people I spoke to previously who’s worked here and who are still currently working here. They missed the family fun days that they had.

P3: I think team building exercises are very important.” (P2 and P3 advisors, CC1 focus group)

3. Posture and the workstation set-up

Advisors and decision-makers recognised the importance of having clear guidelines and environmental planning to optimise workstation setup and equipment. This was important for enhancing comfort and preventing musculoskeletal issues. In particular, advisors from CC2 highlighted the necessity of providing comfortable chairs and properly adjusted desks to maintain good posture.

“Well, I guess for example, they’ll make sure that you’ve got comfy chairs so you don’t end up getting back pains and horrible neck aches and things like that, and desks even the height of desks, because we can adjust them so we make sure that the screens are level so we’re not straining or anything, so obviously maintaining a good body posture as well.” (P6 advisor, CC2 interview)

When asked how their company could further improve their health, another advisor suggested the value of educational materials that remind employees about correct desk setup and posture.

[What else could your company do to improve your health?] “Just making sure – when I first started you get given a leaflet of how you should be sitting at your desk and positioning -but maybe just a reminder of that. Because I know you can get lazy when you’re working, slouching and stuff.” (P7 advisor, CC2 interview)

Advisors across centres recognised the benefits of regular desk assessments, such as yearly DSE checks. Some suggested that more frequent desk evaluations could be beneficial for musculoskeletal health.

“I would say Heads of Company or management could maybe check [desks] maybe. So once every year, but maybe on a yearly basis or even every six months just making sure that proper protocol is being followed in that sense. And I don't think that is checked enough. Obviously if you've got a workforce of people that are going to be sitting at a desk for a long period of time, I think that should be something that is checked maybe a bit more.”

(P9 advisor, CC2 interview)

Additionally, a decision-maker from a larger contact centre perceived that walking meetings and environmental restructuring (e.g. height adjustable desks, treadmill desks and specialist equipment) were effective for reducing standing time and improving musculoskeletal health.

“Walking meetings are a big one. Standing desk. We have some treadmill desks. We have some where you can cross your legs and up and down ones. They're in all our contact centres and we have specialist equipment for people that need it depending on what they do.” (P2 decision-maker, CC6)

Reflective stop off

When conducting, analysing and writing-up findings related to correct desk-set up, posture and having regular screen breaks, I found myself reflecting on my own experiences of this. Conducting most of this qualitative research from my home-based office, these discussions often served as a reminder to fix my own posture and to take regular 5-minute screen breaks. Upon completing these tasks, I often felt the health benefits described by advisors – including improve back-pain and reduced headaches. However, despite my knowledge of the benefits of doing this, I also appreciated the

complexities around actually performing these behaviours which I could explore further for advisors using the COM-B and TDF.

4. Providing time and space to reduce stress

Sub-themes were a) regulation for recovery time and b) providing a space to disconnect from work.

Regulation for recovery time

Some contact centres had implemented regulations that allow advisors time to recover after handling stressful calls. One decision-maker described a system where advisors are given time to step away from their work without any pressure to return quickly, prioritising their wellbeing. This approach was seen as effective in mitigating the stressful and emotional aspects of the job.

“We've got - for example if someone has a difficult call, we have a walk away thing where they go away for their wellbeing. We're not timing it. We don't look at how much they've been on that service, it's not about that. It's about keeping you happy and healthy and making sure you're ready for your next call. So that obviously works really well too.” (P11 decision-maker,

CC11)

One advisor from a centre without such a policy suggested that implementing a recovery policy would provide time to de-stress after challenging interactions which would be beneficial for their health.

“With the customers that we deal with, it tends to get very frustrating at times. And I think for that they should allow if something does happen, to

allow them to either take a breather or something more. So I'm not sure exactly what the resolution would be, but I think that will be great. It will be helpful.” (P20 advisor, CC4 interview)

Providing a space to disconnect from work

Having a dedicated wellbeing space for advisors to de-stress and engage in health-related activities was perceived as effective for improving mental health. One decision-maker emphasised the effectiveness of such a space, noting:

[when asked what is most effective] “I think having a wellbeing room or a dedicated place someone can go to just have a moment when we all do, that's big.” (P2 decision-maker, CC6)

Advisors expressed interest in using this space for activities such as yoga, breathing exercises, and fitness routines, which would involve environmental planning and service provision policies for any wellbeing classes and training delivered, helping to manage job-related stress and improve mental health.

“I: What would you say is the most effective health intervention for improving your health?

P: [...] Yoga Wednesdays, chair yoga, breathing exercises - that is something that I would benefit from because I do get random anxiety attacks at work and I can't breathe, so I feel like that a lot of us would benefit from having those measures in place.” (P19 advisor, CC4 interview)

However, it was also important for advisors to have the time to use the wellbeing room, requiring social planning policies to enable this. The focus group within CC1 discussed how this could be done during breaks, or during working hours as an additional incentive.

This would require adjustments to the work schedule to ensure everyone could participate. Advisors noted that not all employees received breaks long enough to engage in health and wellbeing activities.

“P3: It would be really good if we had a room with the TV and with recordings on it. Or fitness things and then we can just go into the room whenever our break was or our dedicated time was just to do some stretches.

I: Would other people be interested in that?

P2: Maybe, if there was a space where they could just go in, turn it on, and if there was a group of people that had the lunchtime at the same time, yeah, they could go together. [...]

P5: Not everyone gets a lunch break, so if they did it where everyone gets a 10-minute break to go and do it, then maybe more people will do it because some of us don't get a break at all.

P4: I think that's a good point in the sense like I have some days where I don't get a break and like I kind of said the incentive of doing it on a paid shift. I think that would encourage so many more people than having to take that half an hour where you have to eat and recuperate your brain from being on calls for four hours or whatever. I think it would be a really nice touch to just take 10 minutes from your paid day to be able to do something like that.” (P2, P3, P4 and P5 advisors, CC1 focus group)

5. External resources

This theme is centred around health initiatives that provide service provision at a policy-level, with varying intervention functions. Sub-themes were a) EAP's providing support through counselling services, b) wellness apps to support physical activity and c) financial support and incentives.

EAP's providing support through counselling services

Decision-makers and advisors perceived their centre's EAP as effective for improving health, in particular the counselling services. One decision-maker described this service as *"extremely effective"* (P8 decision-maker, CC8), which was reflected within advisor discussions as some believed that this service was something that should be in place given the nature of the stressful job role.

"Many, many times when I do feel like I'm overwhelmed, there is someone who I can speak to. I have used it [EAP counselling], I would say five times. Only recently I started more than usual. I feel like it's something that should be in place because I felt like I was just talking about my problems and talking about my stress and letting them go and this person was just listening to me. I didn't feel like it was something extra or something that they were going the extra mile for." (P19 advisor, CC4 interview)

Decision-makers also recognised the value of EAP services in guiding employees to professional support, acknowledging their own limitations in providing such expertise:

"We're not trained counsellors, no one in the businesses are trained counsellors. They [EAP professionals] are trained counsellors and so at least we know that we can point them in the direction where they can get help."

(P9 decision-maker, CC9)

Wellness apps to support physical activity

During a focus group, one contact centre discussed the benefits of a wellbeing app to support physical activity throughout their typically sedentary working day. The app offered functions such as meditation and physical activity trackers for advisors to participate in 'global tasks' and challenges with people from other sites across the world, acting as a form of incentivisation to participate in physical activity.

"So, they've [the company] got a couple of apps that you can actually use for various different things. So, you can go on and do meditation, but even if you're like, you're walking your dog, are doing exercise, they've got some sort of physical trackers along with resources for things like Thrive Hub for kind of Wellness and bits. So, there's all sorts of bits to point people towards, but to try and get people to engage with, as part of global tasks where we can earn points and challenge each other across site-to-site, country-to-country." (P11 advisor, CC3 focus group)

One participant emphasised that movement of any kind was tracked as 'physical activity' whether it was strenuous or not. They perceived this to be particularly beneficial to their health as they described how working in a contact centre has made them more sedentary which has led to them gaining weight.

"P11: Yeah, I mean you get points for literally just wondering around your house, just a few steps, whether it's walking pets, going out and doing proper exercise, whether it's doing kind of like any fitness, and I used to sign up a lot for the challenges and kind of go and make sure that I'd go and do like a 20 minute like stretch sort of thing. Just so I get the extra points. So, I'd make sure that I did it just I haven't done it quite as much recently. [...]"

It's tracking physical activity in some way shape or form, doesn't matter whether it's strenuous or not, but yet it's to track physical rather than kind of the health and wellbeing side.

I: Is that something that in your job role you feel is beneficial?

P11: Yeah. I'm now finding that since I came to work at this company sort of 5 1/2 years ago, I've become quite sedentary. So doing as much exercise as I can get away with within reason and being encouraged to do so helps me try and not put on even more stones.” (P11 advisor, CC3 focus group)

Financial support and incentives

Advisors and decision-makers discussed how financial schemes and discounts could be effective for improving advisor health. These included discounts on store purchases, eye care and dental care, 24/7 access to a doctor, legal support through EAPs, gym discounts, and cycle-to-work schemes. One advisor mentioned an upcoming digital discount card that gave employees discounts in certain stores, expressing that this will only benefit them if the discounts offered were relevant to them.

“I: Do you see yourself using and benefitting from that [discount card]?

P: It depends on what's listed and depends on whether it meets any of my needs, because like all discount cards, if you don't use that facility then you're not going to bother. You're just like. Yeah, OK, fine. It's a good resource, but it doesn't work for me. Yeah, this can give me 50% off a bike. Absolutely fine. I don't know. If its something from House of Fraser and I don't go to House of Fraser very often. It's not really useful.” (P22 advisor, CC4 interview)

In interviews, two advisors from CC3 highlighted gym discounts and cycle-to-work schemes as initiatives that would motivate them to improve their health, recommending this as something that their company should implement.

“For me, I would like to see, for example, that we have a gym network that everybody can use and it is literally at pence in the pound, I would love something like that or a cycle to work programme. Yeah, okay. [...] I’m not going to cycle to Birmingham. But if I’ve got a cycle to work programme and I want to pick up a bike and I know that I’m doing it via salary sacrifice and also it’s going to be cheaper for me because of the tax implications and so on and so forth.” (P22 advisor, CC3 interview)

Additionally, decision-makers and advisors found value in initiatives that offer financial advice and consultancy from external professionals, enabling advisors to improve their financial health.

“We’ve had the bank people come in, they’ll sit in the car park and give free financial advice, we’ve done that a few times, which has been effective.”
(P10 decision-maker, CC10)

6. Pay

Advisors from a very small and a large contact centre emphasised that a pay increase would improve their health. This was pertinent given the impact of the cost-of-living crisis at the time of data collection. One advisor noted that the recent pay increase did not keep pace with inflation, affecting their financial wellbeing.

“If there was one thing that the company could do better. Probably bring salaries up to parity with the market. [...] I think as much as it’s a very competitive market. You need to make staff feel that they are actually

valued and the cost-of-living crisis at the moment is quite tricky. We did have a salary increase in April, but it was what I think it was 6 percent, 7% maybe. But you know, inflation is just going sky high, so that money has been incorporated into tax and whatever, and you're still barely scraping above the, just above the light red lines. So yeah, I think that would be, I think that would be very helpful.” (P22 advisor, CC4 interview)

Two advisors raised concerns about their current sick pay regulations. One advisor described having to use annual leave for a sick day to avoid missing out on pay, which was stressful due to the cost-of-living pressures. They mentioned a perceived expectation to work from home even when unwell, which increased the likelihood of presenteeism and added to their stress. These advisors believed that sick pay was one of the main initiatives that their company could implement to improve their health.

“P23: I mean, I wasn't very well. I think about 3 weeks ago and I logged in on the morning and I explained the situation and I didn't want to have it unpaid, because as P21 said, it's very stressful to have it unpaid, cause you're losing out on that money. So, I had to take a day annual leave off.

P21: I think there's an assumption when you're working from home you shouldn't be sick. You should still work if you're sick. And you can't, if you've got a really bad cough, you're not able to talk. It's impossible to talk on the phones. So that is stressful, yeah. Then it is like, you're at night-time going- Ohh, no, I'm gonna have to work in the morning and it's just stress. It's just adding to the stress because you're like not feeling well or you're feeling drowsy or... [...]

P23: I would say it's [sick pay] important. I mean [...] because with the cost of living going up and obviously your food bills going up and everything. If you lose out on that bit of income, then your incomes dropped down. But it all depends how long you have off. That's the thing. But I think cause, P21 said it's [the most important initiative is] sick pay.” (P21 and P23 advisors, CC4 focus group)

6.3.2 Phase two

Overall, 156 participants completed the surveys, including 38 decision-makers and 116 advisors.

Personal demographics

Across decision-makers and advisors, there were more women than men, with one non-binary and three transgender advisors (Table 6.5). Most participants were aged between 25 and 54 years and of a white ethnicity. Twenty participants were disabled and 18 of these were advisors. Decision-makers and advisors were located across four different regions of the England, Wales and Northern Ireland. However, seven advisors and eight decision-makers chose not to disclose this.

Workplace demographics

Decision-makers were mostly team leaders or managers/directors, with one HR professional and one health and safety employee. Most decision-makers worked hybrid, with the remainder fully in-office. Most advisors worked hybrid, with 21 advisors working in-office and six working remotely. Most decision-makers were employed by large organisations, employing 200+ advisors. Two decision-makers worked within a small organisation and 10 decision-makers worked within a medium-sized contact centre. The contact centres represented operated across 16 different vertical markets, with 3 decision

makers (8.9%) and 10 advisors (8.6%) working across one or more markets. The most common market was transport and travel.

Table 6.5 Participant and organisation characteristics

Demographic variable		Frequency Decision- makers	Percentage (%) Decision- makers	Frequency Advisors	Percentage (%) Advisors
Gender	Man	20	52.6%	44	37.9%
	Woman	17	44.7%	68	58.6%
	Non-binary	-	-	1	0.9%
	Prefer not to say	1	2.6%	3	2.6%
	Trans	-	-	3	2.6%
Age	18 to 24	-	-	11	9.5%
	25 to 34	10	26.3%	27	23.3%
	35 to 44	13	34.2%	25	21.6%
	45 to 54	12	31.6%	36	31%
	55 to 64	2	5.3%	13	11.2%
	65 or over	-	-	2	1.7%
	Prefer not to say	1	2.6%	2	1.7%
Ethnicity	Asian or Asian British				
	Indian	1	2.6%	2	1.7%
	Pakistani	-	-	1	0.9%
	Any other Asian background	-	-	2	1.7%
	Black, black British, Caribbean or African				
	African	-	-	3	2.6%
	Caribbean	-	-	2	2.6%
	Any other black, African or Caribbean background	-	-	1	0.9%
	Mixed or multiple ethnic groups				
	White and black Caribbean	-	-	1	0.9%
	White and Asian	-	-	1	0.9%
	Any other mixed or multiple ethnic background	1	2.6%	3	2.6%
	White				
	English, Welsh, Scottish, Northern Irish or British Irish	33	86.8%	85	73.3%
	Any other white background	3	7.9%	6	5.2%

	Any other ethnic group	-	-	1	0.9%
	Prefer not to say	-	-	7	6%
Disability	Participants with a disability	2	5.3%	18	15.5%
Location of the participant	Northeast and Yorkshire England	12	31.6%	54	49.5%
	Northwest England	13	34.12%	41	37.6%
	Southeast England	4	10.5%	5	4.6%
	Midland England	-	-	1	0.9%
	Wales	-	-	3	2.8%
	Northern Ireland	1	2.6%	-	-
Decision-maker job role	Team leader	18	47.4%	-	-
	Manager/director	18	47.4%	-	-
	HR professional	1	2.6%	-	-
	Health and safety	1	2.6%	-	-
Work pattern	In-office	11	28.9%	21	18.1%
	Remote	-	-	6	5.2%
	Hybrid	27	71.1%	89	76.7%
Number of employees	10 to 50 advisor positions	2	5.3%	-	-
	51 to 200 advisor positions	10	26.3%	-	-
	200+ advisor positions	26	68.4%	-	-
Vertical market	Transport & Travel	14	36.8%	83	71.6%
	Other	5	13.2%	7	6%
	Services	3	7.9%	8	6.9%
	Medical/health or social care	3	7.9%	7	6%
	Telecoms	2	5.3%	7	6%
	Finance	3	7.9%	5	4.3%
	IT	2	5.3%	5	4.3%
	Medical	2	5.3%	4	3.4%
	Outsourcing & Telemarketing	5	13.2%	1	0.9%
	Manufacturing	3	7.9%	2	1.7%
	Public Services	-	-	4	3.4%
	Retail and Distribution	-	-	3	2.6%
	Food & Drink	-	-	1	0.9%
	Utilities	-	-	1	0.9%
	Entertainment & Leisure	1	2.6%	-	-
	Engineering & Construction	1	2.6%	-	-

Engagement

Table 6.6 presents the level of consensus for each of the factors perceived to affect advisors' engagement with health initiatives within phase one. This is based only on advisors' perceptions.

Table 6.6 List of consensus indicators for each factor perceived to affect advisors' engagement with contact centre health initiatives

Factor	Number (%) for each score on the 5-point Likert scale					Median	Percentage agreement	Interquartile range	Standard deviation	Consensus status
	1 not at all important	2 slightly important	3 moderately important	4 very important	5 extremely important					
Being able to leave your desk/work to engage with a health initiative *	0 (0%)	0 (0%)	8 (7%)	56 (48.7%)	51 (44.3%)	4	93%	1	0.614	Consensus
Feeling that anything you share during the health initiative is kept confidential	1 (0.9%)	2 (1.7%)	7 (6%)	32 (27.6%)	74 (63.8%)	5	91.4%	1	0.763	Consensus
Having health initiatives that are accessible (e.g. virtually or in-person) *	0 (0%)	1 (0.9%)	12 (10.6%)	45 (39.8%)	55 (48.7%)	4	88.5%	1	0.708	Consensus
Having an easy sign-up process to the health initiative	1 (0.9%)	1 (0.9%)	15 (12.9%)	51 (44%)	47 (40.5%)	4	84.5%	1	0.776	Consensus
Optional health initiatives align to/meet your own interests, intentions and motivations *	1 (0.9%)	2 (1.8%)	22 (19.8%)	42 (37.8%)	44 (39.6%)	4	77.4%	1	0.858	Consensus

* One participant did not rate this statement

Overall, 95.8% of participants felt somewhat (21.6%), fairly (30.2%) or completely (44%) confident completing these questions. There was consensus for all five factors: 1) being able to leave your desk/work to engage with a health initiative, 2) feeling that anything you share during the health initiative is kept confidential, 3) having health initiatives that are accessible (e.g. virtually or in-person), 4) having an easy sign-up process to the health initiative, and 5) optional health initiatives that align to/meet your own interests, intentions and motivations.

Advisors provided further detail on some of the answers provided. With high consensus for the importance of confidentiality within health initiatives (i.e., feeling that anything you share during the health initiative is kept confidential), advisors stated that they do not believe that this happens all the time, and therefore, may be a barrier to their engagement.

“I wouldn't trust anyone within the business to maintain confidentiality re wellbeing one-to-ones.” (P45)

This was often because some health initiatives involve sharing private information with colleagues internal to the organisation (i.e., with mental health first aiders or managers).

“Although the conversations/meetings will be kept private, I'm discouraged from using the service as they are done with people I work alongside. I would prefer this to be with someone who doesn't know me in a work or private capacity. This would prevent me from using any counselling meetings if I had an issue.” (P3)

Further, some advisors stated that their health checks or personal conversations were not in a private location (i.e., open space near the canteen, or over the phone), so may be overheard.

“Having a private area for the initiatives is important. Our workplace held finger prick tests to check diabetes/cholesterol levels in an open space near to canteen seating which meant whilst results discussed it was audible to others and visible who was getting the tests.” (P87)

With “being able to leave your desk/work to engage with a health initiative” being the most agreed upon factor, advisors commented on how limited time off the phones is often a barrier to engagement.

“Time is the biggest factor as our off-phone time is very limited and often it means the short slots of allocated time off to engage are not always enough (P16).”

Advisors emphasised that health initiatives should take place during working hours to increase engagement, as *“breaks are precious”* (P80).

“People are more likely to engage if the company commits to time off in work time to attend wellbeing events.” (P2)

Advisors agreed that “having health initiatives that are accessible” was important for engagement, however, this did not only apply for the working location (virtual, hybrid or in-office), but also for those working outside the core-shift hours. One advisor emphasised how they often missed out on health initiatives that did not align with their shift pattern.

“In regard to the above being able to take part in the initiatives is a big thing. a lot of the time if you miss the event or it does not align with your shifts you just lose out.” (P110)

Regarding the factor “optional health initiatives align to/meet your own interests, intentions and motivations”, one advisor wrote that health initiatives *“Should always be*

optional with no pressure placed on individuals in any way to partake” (P9), and another wrote that health initiatives are often forced on advisors.

“Too many times the initiatives are generic and people are pushed to participate. It feels like you have to explain why you can't participate.” (P54)

Within the survey, advisors were also given the opportunity to add additional factors that they perceive to be important for engagement with health initiatives. These factors included:

1. Feeling like you can share personal opinions and experiences without repercussions from employers.

“Being allowed to be open without repercussions from the employer” (P22)

2. Having peer support when engaging with a health initiative.

“Peer support: I think it always helps if there is a group of people that do the health initiative together to hold people accountable and helps with social life.” (P87)

3. Having the option to participate anonymously.

“Many of the initiatives are geared towards group participation. This can be daunting. Many times, I would prefer to participate anonymously.” (P103)

Effectiveness

Table 6.7 presents the level of consensus for the perceived effectiveness of each health initiative from the perspective of decision-makers (n=38) and advisors (n=116).

Table 6.7 List of consensus indicators for each health initiative and its perceived effectiveness

Factor	Advisor (A) or Decision-maker (DM)	Number (%) for each score on the 5-point Likert scale					Median	Percentage agreement	Interquartile range	Standard deviation	Consensus status
		1 very ineffective	2 ineffective	3 uncertain	4 effective	5 very effective					
Having flexible working hours	A	0 (0%)	4 (3.4%)	4 (3.4%)	24 (20.7%)	84 (72.4%)	5	93.1%	1	0.718	Consensus
	DM	2 (5.3%)	1 (2.6%)	0 (0%)	18 (47.4%)	17 (44.7%)	4	92.1%	1	0.998	Consensus
Offering discounts on health care (e.g. eye check-ups or dental care)	A*	0 (0%)	0 (0%)	7 (6.1%)	47 (40.9%)	61 (53%)	5	93.9%	1	0.612	Consensus
	DM	0 (0%)	1 (2.6%)	3 (7.9%)	17 (44.7%)	17 (44.7%)	4	89.4%	1	0.739	Consensus
Having a workplace environment that encourages advisors to speak up about health issues	A	0 (0%)	3 (1.9%)	9 (5.8%)	58 (37.7%)	82 (53.9%)	5	91.6%	1	0.698	Consensus
	DM*	0 (0%)	1 (2.7%)	1 (2.7%)	15 (40.5%)	20 (52.6%)	5	93.1%	1	0.691	Consensus
Having equipment to support a comfortable desk set up (e.g. a comfy chair, forearm support or any other adjustments)	A*	0 (0%)	1 (0.9%)	7 (6.1%)	34 (29.6%)	73 (63.5%)	5	93.1%	1	0.651	Consensus
	DM	0 (0%)	3 (7.9%)	1 (2.6%)	13 (34.2%)	21 (55.3%)	5	89.5%	1	0.883	Consensus

that may be necessary)

Offering professional counselling, if needed	A	0 (0%)	2 (1.3%)	10 (6.5%)	56 (36.4%)	83 (53.9%)	5	90.3%	1	0.681	Consensus
Giving advisors flexibility over their work setting (a choice between remote, hybrid and in-office working)	DM*	0 (0%)	2 (5.4%)	4 (10.8%)	13 (35.1%)	18 (48.6%)	4	83.7%	1	0.871	Consensus
Having a company scheme for sick pay, external from statutory sick pay	A	0 (0%)	1 (0.9%)	4 (3.4%)	29 (25%)	82 (70.7%)	5	95.7%	1	0.591	Consensus
Giving advisors a pay increase	DM	2 (5.3%)	6 (15.8%)	4 (10.5%)	11 (28.9%)	15 (39.5%)	4	68.4%	2	1.270	No consensus
Having a policy that allows advisors time to recover after a stressful call	A	0 (0%)	2 (1.7%)	13 (11.2%)	30 (25.9%)	71 (61.2%)	5	87.1%	1	0.763	Consensus
Having a policy that allows advisors time to recover after a stressful call	DM	0 (0%)	0 (0%)	2 (5.3%)	17 (44.7%)	19 (50%)	4.5	94.7%	1	0.602	Consensus
Having a policy that allows advisors time to recover after a stressful call	A	0 (0%)	2 (1.7%)	10 (8.6%)	22 (19%)	82 (70.7%)	5	89.7%	1	0.723	Consensus
Having a policy that allows advisors time to recover after a stressful call	DM*	1 (2.7%)	1 (2.7%)	3 (8.1%)	17 (45.9%)	15 (40.5%)	4	86.4%	1	0.908	Consensus
Having a policy that allows advisors time to recover after a stressful call	A	0 (0%)	3 (2.6%)	6 (5.2%)	33 (28.4%)	74 (63.8%)	5	92.2%	1	0.598	Consensus
Having a policy that allows advisors time to recover after a stressful call	DM	0 (0%)	4 (10.5%)	5 (13.2%)	18 (47.4%)	11 (28.9%)	4	76.3%	1.25	0.928	Consensus
Having a policy that allows advisors time to recover after a stressful call	A	2 (1.7%)	1 (0.9%)	13 (11.2%)	37 (31.9%)	63 (54.3%)	5	86.2%	1	0.848	Consensus

leaders who offer regular wellbeing one-to-ones, separate from performance meetings	DM	0 (0%)	0 (0%)	3 (11.2%)	12 (31.6%)	23 (60.5%)	5	92.1%	1	0.647	Consensus
Having the workstation set-up and equipment checked regularly	A	1 (0.6%)	3 (1.9%)	17 (11%)	66 (42.9%)	66 (42.9%)	4	85.8%	1	0.852	Consensus
Having increased flexibility over structured breaks	DM	0 (0%)	3 (7.9%)	3 (7.9%)	19 (50%)	13 (34.2%)	4	84.2%	1	0.863	Consensus
	A*	1 (0.9%)	5 (4.3%)	9 (7.8%)	30 (26.1%)	70 (60.9%)	5	87%	1	0.878	Consensus
	DM	0 (0%)	3 (7.9%)	7 (18.4%)	18 (47.4%)	10 (26.3%)	4	73.7%	2	0.882	No consensus
Offering advisors consultancy meetings with financial professionals, confidential from the organisation	A	0 (0%)	3 (2.6%)	15 (12.9%)	63 (54.3%)	35 (30.2%)	4	84.5%	1	0.724	Consensus
Providing educational material on health issues (e.g. depression, post-traumatic stress, the menopause)	DM	1 (2.6%)	2 (5.3%)	6 (15.8%)	22 (57.9%)	7 (18.4%)	4	76.3%	0.25	0.886	Consensus
	A	0 (0%)	3 (2.6%)	16 (13.8%)	45 (38.8%)	52 (44.8%)	4	83.6%	1	0.793	Consensus
	DM	0 (0%)	2 (5.3%)	7 (18.4%)	19 (50%)	10 (26.3%)	4	76.3%	1.25	0.822	Consensus

Offering discount to a local gym	A	2 (1.3%)	5 (3.2%)	21 (13.6%)	80 (51.9%)	45 (29.2%)	4	81.1%	1	0.826	Consensus
	DM*	1 (2.7%)	1 (2.7%)	5 (13.5%)	21 (55.8%)	9 (24.3%)	4	81.1%	0.5	0.866	Consensus
Having mental health champions/first aiders who listen to advisors	A	1 (0.9%)	4 (3.4%)	19 (16.4%)	46 (39.7%)	46 (39.7%)	4	79.4%	1	0.874	Consensus
	DM	0 (0%)	0 (0%)	8 (21.1%)	19 (50%)	11 (28.9%)	4	78.9%	1	0.712	Consensus
Providing advisors with a space (dedicated wellbeing rooms or quiet spaces) to practice wellbeing behaviours	A	1 (0.9%)	2 (1.7%)	20 (17.2%)	43 (37.1%)	50 (43.1%)	4	80.2%	1	0.847	Consensus
	DM	0 (0%)	3 (7.9%)	7 (18.4%)	21 (55.3%)	7 (18.4%)	4	73.7%	1	0.823	No consensus
Allowing advisors to be involved in the design of their job role, working with the organisation to make improvements to the working life	A	0 (0%)	3 (2.6%)	19 (16.4%)	36 (31%)	58 (50%)	4.5	81%	1	0.832	Consensus
	DM	0 (0%)	2 (5.3%)	11 (42.1%)	16 (42.1%)	9 (23.7%)	4	65.8%	1.25	0.855	No consensus

Having social activities to increase team connection	A	0 (0%)	4 (3.4%)	19 (16.4%)	51 (44%)	42 (36.2%)	4	80.2%	1	0.808	Consensus
	DM	0 (0%)	2 (5.3%)	11 (28.9%)	15 (39.5%)	10 (26.3%)	4	65.8%	2	0.875	No consensus
Offering discounts on everyday consumer goods	A	0 (0%)	4 (3.4%)	25 (21.6%)	49 (42.2%)	38 (32.8%)	4	75%	2	0.902	Nearly consensus
	DM*	2 (5.4%)	3 (8.1%)	7 (18.9%)	17 (45.9%)	8 (21.6%)	4	65.8%	2	1.077	No consensus
Having a wide range of inclusive initiatives/events (e.g. International women's day, LGBTQ+ month, etc...)	A*	2 (1.7%)	8 (7%)	25 (21.7%)	48 (41.7%)	32 (27.6%)	4	69.3%	2	0.960	No consensus
	DM*	1 (2.7%)	2 (5.4%)	8 (21.6%)	20 (54.1%)	6 (16.2%)	4	70.3%	1	0.895	No consensus
Having wellness apps (encouraging movement throughout the day using challenges and physical activity trackers)	A	1 (0.6%)	10 (6.5%)	39 (25.3%)	60 (39%)	42 (27.3%)	4	66.3%	2	0.918	No consensus
	DM	1 (2.6%)	2 (5.3%)	13 (34.2%)	15 (39.5%)	7 (18.4%)	4	57.9%	1	0.938	No consensus
Having stand-capable desks (so advisors who are	A	2 (1.7%)	5 (4.3%)	31 (26.7%)	26 (22.4%)	52 (44.8%)	4	67.2%	2	1.025	No consensus

able to, can choose whether to sit or stand across their working day)	DM	1 (2.6%)	3 (7.9%)	10 (26.3%)	12 (31.6%)	12 (31.6%)	4	63.2%	2	1.062	No consensus
Offering smoking cessation support, for advisors who need it	A	3 (1.9%)	8 (5.2%)	55 (35.7%)	57 (37%)	30 (19.5%)	4	56.5%	1	0.919	No consensus
	DM*	1 (2.7%)	3 (8.1%)	13 (35.1%)	16 (43.2%)	4 (10.8%)	4	54%	1	0.901	No consensus
Having a cycle to work scheme	A	2 (1.7%)	5 (4.3%)	42 (36.2%)	41 (35.3%)	26 (22.4%)	4	57.7%	1	0.969	No consensus
	DM	1 (2.6%)	7 (18.4%)	13 (34.2%)	10 (26.3%)	7 (18.4%)	3	44.7%	1	1.079	No consensus

* One participant did not rate the statement

Overall, 94% of advisors felt somewhat (11.2%), fairly (34.5%) or completely (48.3%) confident completing these questions and 94.8% of decision-makers felt somewhat (13.2%), fairly (39.5%) or completely (42.1%) confident completing these questions. There was consensus for 14 health initiatives. For six health initiatives, consensus was gained (or nearly gained for one) among advisors but not decision-makers. For five initiatives no consensus was achieved among both advisors and decision-makers.

From the six initiatives in which advisors and decision-makers disagreed, two of these related to increased flexibility given to advisors over their work setting (95.7% agreement between advisors vs 68.4% agreement between decision-makers) and structured breaks (87% agreement between advisors and 73.7% between decision-makers). Both advisors and decision-makers provided further detail on these ratings. Many advisors described how they often felt “micro-managed”, especially in relation to breaks and shift hours, expressing a need for flexibility to suit individual needs.

“Staff in contact centres are micro-managed. There's no flexibility given to us. Too long at the toilet, don't forget to enter bio [bathroom break], you're 1 minute late back at work. never mind we typically sign on 20 mins before our shift. Staff would like more flexibility on hours.” (A, P87)

One advisor described how their organisation has mandated two days in the office per week, believing it will improve employees’ mental health.

“A choice between remote, hybrid and in-office working - advisors should be able to choose if they want to come into the office to work, rather than the mandated 2 days a week, because someone said so in head office. Mental Health and wellbeing isn't just for those who want to be around people, but

also those who don't. Our company believes that making staff come to work 2 days a week is for their mental health, but they don't consider the impact that has on staff who don't want to be in an office.” (A, P104)

Whilst flexibility was highly agreed upon by advisors, decision-makers described limitations relating to the practicality of offering flexibility around busy periods, alongside the cost-effectiveness. One decision-maker also stated that advisors perform better when in the office, compared to at home.

“It is also difficult offering flexibility, as often breaks will need to be allocated around busy periods and the flexibility of working from home/in office is also somewhat inefficient, colleagues are shown to work better and reach business aspirations for metrics when in the office.” (DM, P6)

Advisors noted that professional counselling, which received consensus from both advisors and decision-makers, needs to be administered by “actual professionals” and not “management who hold no professional qualifications” (P99)

With a lack of consensus from both advisors and decision-makers for wellness apps to encourage movement throughout the working day, one advisor perceived that initiatives such as this were “low effort” compared to more upstream initiatives like sick pay and an acceptable working environment.

“Currently, employers seem to go for the low-effort, low-value options like apps and talking about making things better. We have a tatty workplace with dirty and knackered equipment and a sickness policy that encourages or forces people into the office when unwell to infect their colleagues.”

(P87)

Within the survey, advisors and decision-makers were also given the opportunity to add additional health initiatives that they perceive to be effective. These included:

1. Support groups/resource groups (i.e., menopause, financial, weight loss, disabilities)
2. Healthy and cheap canteen options.
3. Reasonable and flexible adjustments tailored to individual needs (e.g., company policy recognising ADHD time blindness, by implementing flexible start and finish times for those individuals and ensuring that punctuality triggers are not applied to avoid discrimination).
4. Pedal machine allowing advisors to move their lower limbs when sat at their desk.

6.4 Discussion

This mixed-methods study explored how advisors' capability, opportunity and motivation affected awareness and engagement with health initiatives, and used the BCW to identify and explore health initiatives and their perceived effectiveness from a decision-maker and advisor perspective.

Phase one revealed that most advisors were not aware of at least some of their contact centres' health initiatives, suggesting that improved communication is needed to optimise the reach across advisors. For engagement, barriers included confidentiality concerns and limited access to health initiatives due to work demands, being a remote employee, and having a complex sign-up process. Engagement was perceived to be facilitated by organisations offering optional health initiatives, with engagement determined by advisors' own interests, needs and intentions. All six engagement factors reached consensus for importance within phase two. All health initiatives perceived to be effective in phase one were included in the phase two survey, alongside additional initiatives

identified within the wider literature. There was consensus that 14 initiatives were/would be effective for improving advisor health. For six health initiatives, there was (5/6) or nearly was (1/6) consensus among advisors but not decision-makers. For five initiatives no consensus was achieved among both advisors and decision-makers.

6.4.1 Awareness

Consistent with previous literature (350), most advisors had limited awareness of health initiatives available to them, which would likely reduce their psychological capability and hinder their engagement with health initiatives (63). Previous research has indicated that awareness can be improved through increased promotions, particularly using in-person channels such as workplace health events and fairs (373). Advisors within the current study suggested that centres could benefit from digital and person-to-person communication, primarily through team leaders. In agreement with previous research (374) this study recommends that health initiative promotions should provide clearer information about the availability, accessibility, and purpose of health initiatives. These findings support the need for contact centres to encourage team leaders to actively communicate health initiatives to advisors, whilst also ensuring that initiative promotions are clear and accessible for advisors across multiple channels to reach advisors at home and within the office.

6.4.2 Engagement

Confidentiality and anonymity

Confidentiality concerns are one of the most common stigmas preventing people from seeking mental health support (375, 376) and advisors in this study perceived this as a barrier to engaging with health initiatives. Similar findings have been reported in workplace health research regarding employees seeking counselling both within and outside the company (374) and for MHFA specifically (377). Participants in the current

study and other research expressed that they would be more likely to use a mental health support service if assured that their information would be kept confidential from colleagues and employers (374). Despite these assurances, some individuals in the current study still preferred to seek help externally, such as through an EAP. Therefore, it is important for contact centres to offer options for both internal and external support, considering initiatives that offer anonymity for advisors, or to ensure that internal health initiatives have a discreet process and location for employees to access (374).

Access to health initiatives

Consistent with broader workplace research (63, 378), this study revealed that scheduling and synchronising activities to include most staff is often challenging, especially for those working outside core hours. This issue is pertinent in contact centres, where not being able to leave their desk/work to engage with a health initiative received the highest percentage agreement for engagement. In line with previous research (128), this study also revealed that shift work, particularly including night shifts were perceived this as a significant barrier to engagement. Similar to previous findings (63), this study identified that with the rise of hybrid and remote working, advisors reported difficulty accessing office-based health initiatives, creating inequitable access among advisors. This suggests that contact centres could benefit from offering more flexible health initiatives, allowing advisors autonomy over when and where they engage with these initiatives.

Interests, intentions and motivation

Individual interests and motivation were perceived as factors influencing advisors' engagement with health initiatives. These factors are commonly cited as a barrier within workplace literature (379). Decision-makers and advisors recognised that giving employees the autonomy to participate is crucial, which is supported by self-determination theory stating that autonomous motivation enhances sustainable

behaviour change (380). This is also supported by study 1 (chapter 4) that found that no contact centre health interventions within the literature used coercion to improve advisor health (365). Previous research has proposed that organisations can use both formal and informal communication, tailored to each employee, to encourage engagement without compromising their free will to participate (374). Similarly, the current study highlighted the key role of managers and team leaders in navigating this and responding to individual employee interests. For this, research has suggested that two-way communication between employees and management is essential (379), allowing employees to communicate their needs and preferences and co-design health initiatives that they are motivated to engage with (374). This open and psychologically safe relationship is also displayed within study 2 (chapter 5) as a factor that facilitates the adoption of health initiatives. Overall, contact centres are advised to prioritise two-way communication and create psychologically safe environments that empower advisors to express their needs and preferences. By doing so, they can design health initiatives that resonate with employees' interests and motivations, leading to sustainable behaviour change.

6.4.3 Effectiveness

Flexible working

Workplace literature supports the perceived health benefits of time-flexible and location-flexible work policies for improving work-life balance (381), health and absenteeism (381, 382). Within the current study, most advisors and decision-makers agreed on the effectiveness of flexible working hours. However, industry research indicates that 71% of centres are not yet able to give advisors the freedom and flexibility to self-select their own work schedules (383). Self-scheduling is becoming easier with the development of AI and intelligent automation systems to empower advisors whilst ensuring staffing levels meet customer demand (231). Increased flexibility over working hours may help to reduce

inequality as research has found that providing employees with control over scheduling (flexitime) may benefit lower-level workers who are typically less able to access this flexibility when compared to middle- and higher-income positions, and often have difficulties getting predictable enough hours to provide care and support for their families (384).

Additionally, there was high consensus among advisors that a flexible working approach (hybrid, remote or in-office) was, or would be effective for improving their health, whereas there was no agreement between decision-makers. Some advisors reported that being mandated to return to the office for at least two days per week was detrimental to their health. This sentiment is supported by research exploring the return to the office post-COVID-19, which identified increased work-life conflicts, emotional exhaustion, and presenteeism as sources of stress for employees (385). The current study also revealed that decision-makers reported barriers to a flexible working approach, including practical concerns and worries over decreased productivity when advisors work from home. Notably, one contact centre study found that working from home led to a 13% performance increase, highlighting that productivity concerns may be unfounded (386). However, this study was conducted in China in 2015, indicating that more research is needed within the UK post-pandemic working environment to explore productivity in remote working advisors.

Despite statistics showing that a large percentage (81.6%) of contact centres now allow their employees to work from home at least some of the time (58), with the most popular model in 2022 allowing flexible working between the home and office where employees decide where they work on any given day (383), the lack of consensus among decision-makers suggests that this flexibility may be diminishing. Centres appear to fear productivity losses and thus require advisors to return to the office. However, the

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literature suggests that home working can positively impact productivity if advisors have a good quality workspace (e.g., quiet office space, adjustable light source, work equipment) (387, 388). Evidence also suggests that there are mental (389) and physical health (381) benefits of a flexible working approach. Therefore, it is recommended that centres strongly consider these benefits, with a need to educate decision-makers that productivity loss fears may be unfounded and potentially counterproductive. For centres that choose to mandate returns to the office, it is advised that employee consultation takes place before making changes, and that support is provided to aid the transition (e.g. offering flexible transition periods).

Contact centre advisors are also reported to have little autonomy over their break times, with allocated slots for comfort and scheduled breaks, which are all monitored continuously (19). Research has shown that increased autonomy over how break times are spent and when to take breaks results in better recovery (390). It is therefore unsurprising that advisors reached consensus for increased flexibility over break times. These findings align with McFarlane, who recommended increased control over break times to improve advisors' mental health (320). However, decision-makers in the present study did not agree on the effectiveness of providing flexible breaktimes, citing concerns regarding practicality and cost-effectiveness. Despite this, contact centre grey literature suggests that advisors can be given as much freedom as possible whilst retaining customer service standards, for example, setting "essential working hours" for high volume call times whilst offering flexible breaks outside of these periods (231). Similarly, one contact centre in phase one of this study described how their contact centre reduced monitoring of comfort breaks and increased autonomy by using a self-scheduling system that allowed advisors to choose when they went on a comfort break, providing enough advisors were on the phones. Accordingly, advisors' flexibility and autonomy over their

breaks represent a potentially effective health initiative. Therefore, providing educational resources for decision-makers, alongside feasible examples of good practice, could be beneficial for improving advisor health and is an important area for future research.

Workplace culture, connection and engagement

A 'wellbeing culture' refers to the influence of the physical and social environment on behaviours and attitudes relating to health in the workplace (391). The primary constructs of a wellbeing culture include norms, shared values, leadership (formal and informal) support, peer support and climate/morale (391). Academics have noted the distinction between the cultural approach and the more traditional workplace programmes that typically focus on individual behaviour change (391).

One review found that a wellbeing culture positively impacts the mental health and wellbeing of employees (392). In line with this, phase one of this study emphasised the importance of creating a workplace environment that encourages advisors to speak up about health issues, promoting educational material to destigmatise health issues, having approachable leaders who offer regular wellbeing one-to-ones, having mental health champions and organising social activities to enhance team connection. In phase two, advisors reached a consensus on the effectiveness of all these health initiatives, while decision-makers agreed on all except social activities. Research confirms how health and wellbeing champions can have a positive influence on wellbeing culture within organisation, however, this depended on the champions existing role, skills and motivation (393). Therefore, as highlighted by the present study and previous research, it is crucial for contact centres to focus on cultural changes, such as increasing peer and leadership support and encouraging open, informed conversations across the organisation.

Workstation set-up

In this study, advisors and decision-makers found that having ergonomic equipment to support a comfortable desk setup (e.g., a comfy chair, forearm support, or any other necessary adjustments) improved posture and musculoskeletal health. This finding aligns with study 1 (chapter 4) that identified five effective interventions for improving the musculoskeletal health of contact centre employees, including workstation setup adjustments and educational training (365). Similarly, advisors in the current study emphasised the importance of DSE checks and educational components for the correct use of desk equipment and maintaining proper posture, complying with the Health and Safety (Display Screen Equipment) Regulations 1992 (394). The only ineffective intervention noted in the scoping review was a lengthy ergonomic checklist (365). Therefore, both previous interventions and the current study suggest that initiatives aimed at improving desk setup and posture may benefit from incorporating multiple components, including education, supported by guidelines and regulatory policies.

Reducing advisor stress

Interacting with angry or distressed customers can be a stressful experience for contact centre advisors (13, 395) and the CWU advise that contact centre workers should be allowed to take a break after handling a stressful call (45). Participants within the current study identified this as a “recovery policy,” with both advisors and decision-makers agreeing on the effectiveness of this policy for improving advisor health. With a lack of research exploring this policy, the current study provides new insight supporting the effectiveness of this upstream policy for reducing advisor stress.

A scoping review conducted to explore health-promoting interventions within contact centres (365) identified two effective interventions to reduce advisor stress, including muscle relaxation in a ‘silent room’ (287, 288) and an online mindfulness stress

management programme with group support (57). Although these exact interventions were not referenced by participants, the current research found that advisors may benefit from having a safe wellbeing space to destress (e.g. to relax, complete breathing exercising, yoga, exercise, or group activities). However, whilst advisors thought that this initiative was effective, decision-makers did not, further emphasising the importance of listening to the needs and preferences of advisors. Overall, the current study alongside previous contact centre research indicates that stress reducing spaces within the office environment may help to reduce the stress-levels of advisors, however, more research is needed to determine this and to explore how this space can be replicated within a home working environment.

Participants within the current study found EAPs to be effective, mostly for their offer of professional counselling for those who needed it. This is supported by a recent systematic review finding that EAPs improved presenteeism and functioning in employees (179). Despite research reporting that on average only 11% of employees utilise EAPs, the return on investment for organisations is high (for every £1 spent the return is £7.27) (396). Research suggests that EAP usage can be improved with better communication between managers and employees, particularly for assisted referrals (397). With no contact centre-specific evidence for the effectiveness of EAPs, the current study suggests that this may be an effective health initiative, with advisors particularly valuing the offer of professional counselling.

Supporting lifestyle behaviours

Lifestyle management initiatives can help reduce risk factors like smoking and promote healthy behaviours such as regular physical activity or exercise (398). Contrary to existing evidence, both advisors and decision-makers did not gain consensus for the effectiveness of digital apps to increase physical activity (through challenges and tracking movement)

(399, 400), for the cycle to work scheme (401), for smoking cessation support (289), or for stand-capable desks (55, 56, 292, 293, 295). This discrepancy may reflect a gap between published evidence and the real-world implementation of initiatives in contact centres, or it could indicate varied experiences and exposure to these initiatives among participants. In practice, these initiatives may not have been fully implemented or may have been limited to single components. This study's mapping to the BCW revealed that effective lifestyle initiatives often involve multiple components for effective delivery. This is supported by research suggesting that multi-component interventions tend to be more effective at fostering sustainable behaviours as their design allows for the targeting of multiple barriers to change (402). For example, study 1 (chapter 4) found that stand-capable desk initiatives were typically complemented by behaviour change components such as education, training, modelling, persuasion, and enablement, which can help integrate and normalise their use across the organisation. This is further supported by a recent 'Stand Up for Health' intervention designed to reduce sedentary behaviour within contact centres utilising a range of adaptive components (e.g., desk adaptations, stand-capable desks, social activities, goal setting, park run, desktop stretches) (350, 351). Similarly, smoking cessation support in study 1 included education, enablement, and persuasion. While consensus was reached in study 3 on the benefits of local gym discounts, research suggests that a gym discount alone may be less effective in increasing physical activity than a gym discount combined with an educational component and allocated time during working hours for gym visits (403). Therefore, while local gym discounts are recommended as a valuable initiative for contact centre advisors, supporting them with education, training, and time to participate may increase their effectiveness. Overall, more research is needed to assess the effectiveness of multi-component health initiatives and understand whether their design influences participants' perceptions of,

and actual effectiveness. Research into the acceptability, feasibility, and effectiveness of lifestyle management initiatives for remote and hybrid workers is especially warranted.

Financial health

The increase in the cost of living in the UK, which began in late 2021, has generated significant concern among advisors, with over half (52%) reporting difficulties in paying bills and "making ends meet" (33). Aligning with this concern, existing research indicates that a fundamental solution to address financial stress is to ensure employees receive a liveable wage (404). This approach may be particularly relevant for advisors, who typically earn a mean hourly wage of £11.36 per hour (20), below the real living wage of £12.60 (21). As noted within the current study, inadequate sick pay can lead to an increase in presenteeism due to financial pressure, resulting in poorer advisor health (405).

Furthermore, statutory sick pay eligibility criteria exclude low-earning employees and part-time workers, disproportionately affecting groups already experiencing inequality. Specifically, nearly two-thirds of those ineligible for statutory sick pay are women, about a third are disabled, and over half are young workers (406). Thus, to improve advisor health and reduce inequality, both prior research and the current study advocate for more generous company sick pay provisions to reduce presenteeism and its associated physical and mental health consequences (407).

In addition to implementing improved sick pay policies, decision-makers and advisors in the current study agreed that offering discounts on healthcare and consumer goods, along with consultancy meetings with financial professionals, would be effective in improving advisors' financial health. This is supported by the literature stating that effective financial health initiatives are characterised by multiple, integrated components (404), therefore, an increasing number of organisations are adopting diverse health initiatives designed to enhance employees' financial wellbeing (366). A substantial body of research also

supports the positive impact of financial literacy initiatives (408). Recent studies have shown that these programs significantly improve employees' financial behaviours, such as budgeting, saving, and debt management (409). These behavioural improvements contribute to greater financial security, reduced stress levels, increased job satisfaction and engagement, decreased absenteeism, lower turnover rates, and enhanced productivity (409). Moreover, organisations are expanding their benefits and compensation packages to include retirement savings, health and life insurance, and various discounts and payment plans with major brands (404). These programs are effective for increasing productivity, engagement and reducing absence rates (404). This study, being the first to examine such interventions within contact centres, suggests that a combination of financial literacy programs, discount packages, and equitable pay and sick leave policies could significantly improve the financial health of advisors.

6.4 Strengths and limitations

This mixed-method study advances knowledge and understanding of the awareness, engagement, and perceived effectiveness of health initiatives in contact centres, making it the first to explore this area in depth. By integrating multi-stakeholder qualitative and quantitative data, the research offers stronger inferences than studies using a single method alone (410). Sequential methodological triangulation enabled a rich, detailed understanding of participants perspectives, experiences and motivations in this previously under-researched field, contributing to the development of a relevant and comprehensive survey. This approach also facilitated the assessment of generalisability of the qualitative data, offering a more holistic understanding of the research problem (411).

Using the TDF in the phase one improved the likelihood that all relevant factors influencing engagement were considered by integrating multiple theories of behaviour change (215). This structured approach allowed for the systematic analysis and

interpretation of complex behaviours and their multiple influences. Mapping initiatives to the BCW provided a common language and terminology for describing and discussing interventions, facilitating the standardisation and comparability of initiatives across different studies and real-world settings. This offered a structured and systematic approach to understanding, analysing and discussing health initiatives (220).

To measure consensus in the phase two survey, this study followed published guidance recommending the combined measures of percentage agreement, IQR and SD, as each alone can be misleading (268). However, there were cases where the percentage agreement was not within accepted limits, but the IQR and SD were. A Delphi survey might have been beneficial to progress factors/health initiatives that did not reach consensus or were suggested in free-text comments by participants to future rounds, however, the focus of this study was on assessing consensus rather than gaining it. Public advisor opinion was sought after piloting the study to make this decision. These results will be useful in informing industry guidance on how to improve the health of contact centre advisors.

6.5 Conclusion

This mixed-methods study represents the first investigation into the awareness, engagement, and perceived effectiveness of health initiatives within contact centres. The findings revealed significant gaps in awareness and highlights the need for improved communication strategies to ensure advisors are informed about health initiatives. To enhance engagement, it is recommended that health initiatives are designed to meet advisors' needs and preferences, with assurances of confidentiality, and that access and participation time be provided during working hours, especially for remote workers. With consensus reached on the effectiveness of 14 health initiatives, this research lays a foundation for future research and practical applications aimed at improving the health of

contact centre advisors. The study also highlighted a critical disparity between decision-makers' and advisors' perceptions regarding six health initiatives, indicating an important gap that needs to be addressed whilst also highlighting the importance of working with advisors to adopt health initiatives. Overall, this research underscores the importance of understanding the unique working environment of contact centres and highlights the necessity of tailored health initiatives to enhance advisor wellbeing. By addressing communication gaps and designing initiatives that align with advisors' needs and preferences, contact centres can foster a healthier and more supportive workplace environment.

Chapter 7: General Discussion

7.1 Introduction

The overarching aim of this programme of research was to inform the development of the first industry-specific, evidence-informed toolkit to support contact centres to adopt, implement and evaluate evidence-informed health initiatives to improve the working conditions and health of contact centre advisors. This chapter will summarise the key findings for each of the three studies, strengths and limitations, and the integration of studies using Fetter's narrative approach (236). The collective research findings, using overarching themes, will also be presented alongside the relevant literature and theory to discuss how the research informs the development of recommendations for the toolkit.

Reflective stop off

One of the most significant challenges I faced was organising the multitude of findings from each study into clear, concise take-home messages. This task often felt overwhelming, given the extensive and varied nature of the data collected. However, I understood that this process was crucial not only for my understanding, but also for effectively communicating my research to others.

Throughout each of the research studies, I have developed numerous insights, each contributing to the overall aim. The richness of these findings is both a strength and complexity. When asked, "what did you find?" it was tempting to dive into the detailed nuances of each study. However, the real challenge was synthesising these details into a coherent narrative that highlighted the core messages and implications.

Proceeding with this mindset, I approached the discussion chapter with the aim of weaving together these findings into a structured and meaningful framework of the 'bigger picture' to collectively advance understanding of the research question. I also

understood that each insight must connect logically to the next, creating a pathway that is easy to follow. This not only aided my comprehension but also ensured that the final presentation of my research is accessible and impactful. This also deepened my own understanding and appreciation of the journey I have undertaken during the previous 3 years.

7.2 Key findings

The research was undertaken using three studies, each contributing to the overarching aim of the thesis (see figure 3.1, page 77 for an overview of the research design, and study aims).

Study 1: The systematic review revealed a scarcity of high-quality, peer-reviewed health-promoting intervention studies for contact centre advisors, with only 28 studies published since 2003. Most interventions were conducted in high-income countries with office-based advisors; only one intervention contained a home-based component, which is important given the widespread use of remote working since the COVID-19 pandemic. Older adults, night workers, and disabled workers were notably underrepresented in the study samples. When mapped to the BCW, most interventions relied on environmental restructuring and training, while modelling and incentivisation were rarely used, and the absence of coercion or restrictions highlighted a positive emphasis on encouraging advisor autonomy in health initiatives. Less than half of the interventions were theory-based, which can be a valuable resource for explaining the mechanisms behind an initiative.

Study 2: The interview schedule and survey for study 2 were informed by the findings of study 1, for example, 'lack of time' identified as a barrier to a study 1 health initiative was included as a prompt in the study 2 interview schedule. Study 2 identified several factors

influencing the adoption of health initiatives including leadership buy-in, employee voice, moral obligation to support advisors' health, and the availability of resources.

Implementation was influenced by the ability to adapt to different working conditions, leadership buy-in, leaders' capability and experience, and their ability to prioritise health initiatives. Evaluation methods varied, incorporating both qualitative and quantitative approaches. Decision-makers did not agree on the importance of measuring presenteeism and call handling times.

Study 3: Study 3 was shaped by the results of studies 1 and 2, influencing the phase one interview schedule and the phase two survey on effective health initiatives. For example, participatory job redesign initiatives identified in study 1 were included as examples of health initiatives in the study 3 interview schedule and were also included in the study 3 survey. Advisors from phase one were linked to phase one decision-makers from study 2, with some decision-makers assisting in recruiting advisors for study 3. Study 3 found that advisors had limited awareness of available health initiatives, with more detailed communication needed. Advisor engagement was hindered by confidentiality concerns, time constraints, difficulty accessing in-person initiatives and initiatives with complex sign-up processes, and a lack of interest or motivation. Fourteen health initiatives were found to be effective by both decision-makers and advisors, and there was a disparity between decision-makers and advisors' perceptions for six initiatives.

7.3 Integration of findings

To integrate the three studies, Fetter's narrative approach was employed by "weaving" together findings across the respective study chapter discussions (236). This approach involved deeply integrating the study findings to show how they inform each other, presenting the findings on a theme-by-theme or concept-by-concept basis to construct a narrative that makes sense of the data. To aid integration, the study design, aims and key

findings were revisited. The initial process of integration was similar to the first stage of Braun and Clarke's thematic analysis, allowing the researcher to re-familiarise with the data and study findings to enable a deeper level of understanding and integration (412).

To effectively integrate the study findings through a pragmatic lens, themes were created with the overarching thesis aim in mind; to inform the development of a toolkit, aligning with the MRC framework, which emphasises reporting evidence in a way that supports real-world decision making (193). Additionally, the themes were developed by weaving data around the behaviour change theory utilised in each study, enabling a deep analysis and integration of data that accounted for the perspectives of each contact centre stakeholder and their involvement in the health initiatives process. Through this weaving process, three overarching themes emerged:

1. How the application of COM-B and TDF has helped understand the drivers of adoption, successful implementation, and optimisation of advisor engagement in health initiatives.
2. How the application of the COM-B, TDF and BCW has helped understand the initiatives perceived and observed to be effective at improving advisor health.
3. How the thesis has helped understand and optimise the evaluation of health initiatives by contact centres.

7.3.1 How the application of COM-B and TDF has helped understand the drivers of adoption, successful implementation, and optimisation of advisor engagement in health initiatives.

Study 2 and 3 report on factors affecting the adoption and implementation of, and engagement with contact centre health initiatives. The COM-B and TDF frameworks helped reveal the complex interplay between capability, opportunity, and motivation driving both organisational behaviours and advisor engagement. Identifying these specific

barriers and facilitators was critical for creating toolkit recommendations that aim to enhance the practical success of health initiatives.

Adoption

In study 2, reflective motivation emerged as a key driver for decision-makers' adoption of health initiatives, shaped by the environmental context and social opportunities. For instance, a moral obligation to support advisors was heightened by awareness of their financial struggles, exacerbated by the UK's cost-of-living crisis during the data collection period. Additionally, shifts in social norms and organisational support influenced decision-makers' motivation to prioritise advisor wellbeing. Leadership buy-in was also shaped by organisational values and culture, indicating that the centre's policies and mission statements reinforce motivation through a supportive context. Study 2 also revealed that the lack of opportunity to invest was more critical than the motivation to gain financial benefits. This aided toolkit recommendations, emphasising that financially struggling companies should seek low-cost or free resources to aid the adoption of health initiatives. The strength of using the COM-B and TDF frameworks to explore these connections lies in understanding how opportunity influences motivation. This behavioural analysis translates to toolkit recommendations that consider changes to decision-makers social and physical environment to facilitate changes to motivation (e.g., recommending that smaller or financially struggling organisations should leverage low-cost or free resources and partnership).

This interplay of factors affecting the adoption of health initiatives was also true for decision-makers' capability and opportunity. Study 2 highlighted the importance of creating a psychologically safe environment where employees feel safe to voice their wants and needs and have the social support and channels to do so effectively (opportunity). This ensures that decision-makers have the knowledge (capability) of what

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employees want and need. Consequently, decision-makers may be more motivated to adopt effective health initiatives. However, to achieve this, they must consider both opportunity and capability to enable a participatory process. These findings are important because they highlight the complex interplay between motivation, opportunity, and capability in the adoption of health initiatives in contact centres.

Implementation

Understanding barriers and facilitators in the context of behaviour change provides a foundation for creating recommendations that can enhance the successful implementation of effective health initiatives in contact centres. Team leaders' and managers' motivation, opportunity, and capability played a key role in the implementation of health initiatives. Study 2 highlighted that buy-in from team leaders and managers facilitated implementation, and their motivation was often influenced by their responsibility to communicate initiatives to advisors and the boundaries within their job roles that allowed them to prioritise advisor wellbeing. Additionally, leaders' capability was identified as a barrier to implementation, particularly if they were not trained and thus not competent to deliver an initiative. Mapping these factors to COM-B and TDF clarified the complex dynamics at play, underscoring that toolkit recommendations should not only address middle management's motivation but also focus on shaping their environment and enhancing their capability to support the implementation process effectively.

Adaptability to the work setting (i.e., remote, hybrid, in-office, shift, or night working) along with addressing employee needs, played an important role in the implementation of health initiatives. For this to occur, it was emphasised that managers and team leaders must have both the capability (knowledge) of employees' wants and needs and the physical opportunity to make necessary adaptations. By using the COM-B and TDF to

recognise the importance of adaptability and ensuring that leaders are equipped with the necessary knowledge and opportunities, contact centres can better support the implementation of health initiatives.

Engagement

Study 3 identified environmental barriers that limited advisors' opportunity to engage with health initiatives. These included time constraints, the demanding nature of contact centre work, challenges in access to the physical workplace location for remote or shift employees, and complex sign-up processes. These insights underscore the need for centres to make environmental adjustments and adaptations to the delivery of the health initiative to increase advisor engagement.

Motivation also played a significant role, with advisors expressing concerns about confidentiality and advisors' personal interests. Advisors' interest in initiatives was influenced by managers' efforts to create social opportunities that aligned with advisors' interests. Recognising these internal barriers helps shape toolkit recommendations, focusing on changing beliefs (e.g., ensuring confidentiality) and creating supportive environments (e.g., offering confidential initiatives and encouraging managers to understand advisors' interests).

7.3.2 How the application of the BCW has helped understand the initiatives perceived and observed to be effective at improving advisor health

Studies 1 and 3 used the BCW to systematically identify components of interventions based on evidence within the peer-reviewed literature and perceived effectiveness. This analysis helped reveal commonalities between initiatives, contributing to the development of toolkit recommendations that aim to facilitate the translation of evidence into practice (212). In study 1, initiatives discussed in peer-reviewed papers were mapped to intervention functions and specific BCTs. Study 3 mapped initiatives to intervention

functions and relevant policies. This mapping enabled a consistent integration of health initiatives across both studies, making it easier to compare and discuss effective initiatives from both a research and real-world perspective.

Study 1 intervention descriptions provided enough detail to map to BCTs, while study 3, though lacking the same level of detail, contributed valuable insights into organisational context and policy-level health initiatives. This mapping highlights necessary policies to support evidence-based initiatives identified in study 1 and identifies effective BCTs for initiatives from study 3. For example, study 1 identified mindfulness and progressive muscle relaxation interventions using silent rooms within contact centres (mapped to intervention functions and BCTs). Similarly, study 3 emphasised the importance of wellbeing rooms and having space to destress (e.g., practicing exercise or yoga). By effectively integrating the discussion of the initiatives, this thesis was able to identify common intervention functions used across studies 1 and 3 (e.g., environmental restructuring), as well as policies to enable this initiative to work within real-world contact centres (e.g., environmental/social planning) and specific behaviour change techniques identified within the evidence-base (e.g., adding objects to the environment). Table 7.2 explains how health initiatives presented in studies 1 and 3 were integrated and mapped to behaviour change theory. Overall, examining the intervention functions in studies 1 and 3 revealed several commonalities, highlighting a preference for supportive and empowering approaches (environmental restructuring, training, education, enablement, persuasion, incentivisation, and modelling) over coercion and restrictions in contact centres. These multi-component functions reflect the perceived effectiveness of using diverse approaches to enhance health initiatives in contact centres.

The importance of multi-component initiatives is further evidenced by BCW mapping in study 1, where all effective initiatives were multi-component, whereas three of the four

ineffective initiatives were single-component and appeared to be the most simplistic. This aligns with systematic reviews that show multi-component workplace health interventions are more effective than single-component interventions (315). Study 3 supported similar conclusions, with all initiatives mapped to multiple intervention functions and policies within the BCW. This finding is further substantiated by wider literature suggesting that health initiatives are often characterised by multiple, integrated components (315, 402, 404).

In study 3, several key policies were identified to support health initiatives in contact centres, including environmental and social planning (e.g., wellbeing rooms, workstation setups, and flexible work arrangements), service provision (e.g., offering yoga classes and EAPs), regulation policies (e.g., recovery guidelines, flexible work rules, and clear sick pay terms), guidelines (e.g., ergonomic practices, such as desk setup instructions), fiscal measures (e.g., financial support for dental and eye care and incentives for lifestyle improvements), and communication and marketing strategies (e.g., distributed health-related information). These policies helped to create a wellbeing culture within contact centres, enabling health initiatives to effectively promote advisor health. Legislation, however, was notably absent from these initiatives, likely due to its complexity and inflexibility compared to adaptable organisational policies. Study 3 emphasised the importance of supportive policies, particularly environmental and social planning, in supporting health initiatives effectively. This highlights the importance of having policy-level components to support advisor health, supporting an upstream approach to address workplace health.

7.3.3 How the thesis has helped understand the optimisation of evaluation of health initiatives by contact centres.

Study 2 was the first study to explore the methods used by UK contact centres to evaluate health initiatives, and the outcomes that they consider important. In line with industry guidance (197), contact centres reported to use a combination of qualitative methods (e.g., interviews or focus groups) and quantitative methods (e.g., surveys), however, there was a preference for quantitative methods (organisational software and surveys) over discussions, interviews, employee forums and focus groups. This preference is likely due to the efficiency, lower costs, and anonymity that software and surveys offer, making them ideal for mass data collection across larger organisations (360). While these tools are efficient, centres may miss out on the depth of insights provided by qualitative methods. Therefore, the evidence gathered suggests that centres should continue leveraging organisational software and surveys for their efficiency but also explore efficient ways of collecting in-depth qualitative data. For example, using digital platforms for virtual focus groups or forums can reduce time and costs. Centres should also consider partnering with external providers to evaluate their health initiatives. However, given the barrier of cost, there may be a need to improve the equity of access to evaluation services for smaller or struggling contact centres.

Study 2 highlighted how absence and attrition data are seen as long-term indicators of employee wellbeing but alone provide little insight into the culture and internal reputation of the organisation. Most centres placed more value on outcomes such as employee engagement, customer service scores, performance/productivity, employee motivation, employee satisfaction with health initiatives, workplace satisfaction, absence rates, and attrition rates. Therefore, the evidence gathered suggests that centres should ensure that they have evaluation measures in place to assess all short and long-term outcomes that they consider as important. These findings can also help researchers when

designing initiatives, allowing them to align the initiative with organisational goals. This may enhance the adoption and sustainability of these health initiatives within centres (205).

7.4 Toolkit recommendations

Table 7.1 and Table 7.2 present recommendations that could be included in a future industry-specific toolkit. The recommendations are mapped to relevant behaviour change theories and linked to the specific studies within this programme of research that informed each recommendation. A theory of change is also presented in Figure 7.1 to demonstrate how these toolkit recommendations can lead to benefits for contact centres and their staff.

Reflective stop off

It wasn't until I created the tables for my recommendations that I could envision the final toolkit. Developing these recommendations allowed me to plan for the practical guidance that would form the basis of the online toolkit. This process provided the last bit of motivation I needed to finish writing the discussion chapter, especially after three years of writing and feeling like I was running out of steam. Knowing that my work would lead to something practical and impactful reinvigorated me. I am now looking forward to co-designing the toolkit and creating resources that will make a meaningful difference.

Table 7.1 Toolkit recommendations for what contact centres can do to improve the health and working conditions of their advisors mapped to supporting evidence within the thesis

Toolkit recommendation	Mapping to behaviour change theory			Underpinning evidence from the thesis
	BCW policy	BCW intervention functions	BCTs	
Improve mental health				
Organisational initiatives that increase job control and autonomy through job redesign and increased flexibility	Environmental/social planning: making changes to the working day by allowing advisors flexibility between remote/hybrid/office working, making changes to working hours with increased flexibility and designing and controlling the logistics of breaks to be more flexible and increase advisor autonomy. Regulation: establishing rules around working from home flexibility, flexitime and having flexible break times.	Environmental restructuring	12.2 Reconstructing the social environment: job redesign changes.	Study 1 and 3
		Enablement	1.2 Problem Solving: steering group to identify problematic aspects of work organisation to recommend job redesign action.	
Reducing stress associated with difficult customer interactions with a recovery policy (allowing advisors to take a break after a stressful call)	Regulation: establishing rules allowing advisors time to recover after a difficult call.	Enablement	11.2 Reduce negative emotions: giving advisors advice on stress management. 8.2 Behaviour substitution: suggest that an advisor goes for a walk/practices wellbeing behaviour rather than continuing to work and stressing.	Study 3
Promoting educational materials on health issues	Environmental/social planning: fostering a positive workplace	Education: educational articles for health and wellbeing issues.		Study 3

(e.g., depression, post-traumatic stress, menopause)	culture to increase health literacy and connection between colleagues. Communication/marketing: articles and 'posts' celebrating health related events and sharing colleague wellbeing stories.			
Manager support through weekly wellbeing one-to-ones	Environmental/social planning: having a culture of wellbeing with leaders who are approachable and offer regular wellbeing one-to-ones.	Enablement: having wellbeing one-to-ones with managers for them to signpost and support. Training: training for managers to provide support for employees e.g. mental health first aid training.		Study 3
Improving peer support via social activities to increase team connection and offering advisors mental health first aid training to support colleagues.	Environmental/social planning: social engagement and connection with colleagues to facilitate a positive workplace culture.	Education and training: MHFA training. Enablement: Having the opportunity to talk and support colleagues. Incentivisation: Rewards during engagement activities.		Study 3
Wellbeing rooms/spaces and practicing stress-reducing behaviours such as yoga and mindfulness individually or as a group. This can also be	Service provision: Yoga/exercise and breathing exercises. This can be web-based. Environmental/social planning: Wellbeing room for any health-	Environmental restructuring: Providing a wellbeing space and a break to encourage destressing and/or movement.	12.5 Adding objects to the environment: Creating a wellbeing space.	Study 1 and 3

practiced within a home environment, online.	related behaviour, including exercise/stretching and planning the logistics of any group sessions.			
		Training: For any yoga/breathing/exercise.	4.1 Instruction on how to perform the behaviour: e.g. guided meditation or progressive muscle relaxation. 8.1 Behavioural practice/rehearsal: e.g. guided meditation or progressive muscle relaxation. 6.1 Demonstration of the behaviour: e.g. guided meditation/yoga or exercise.	
		Incentivisation: If time is offered to practice wellbeing behaviours within the working day.		
		Enablement: practicing behaviours in a group and supporting each other.	3.1 Social support (unspecified): Group discussion and sharing positive experiences of practicing stress reducing behaviours.	
		Education: how to manage stress.	5.1 Information about health consequences: Educational stress management articles.	
		Persuasion: reminder to practice stress-reducing behaviour.	7.1 Prompts/cues: reminders to practice mindfulness e.g. through email.	
Professional counselling available to advisors who need it, for example, through EAPs	Service provision: EAP or similar and all the services that it offers.	Enablement: receiving professional counselling.	1.2 Problem solving: Working with a health professional to analyse behaviours and develop coping strategies.	Study 3

			3.1 Social support (unspecified): Receiving support through counselling.	
Improve physical health				
Making ergonomic adjustments to create a comfortable and supportive desk set-up and support musculoskeletal health. Allowing advisors to have regular screen breaks to protect visual health, prevent headaches, and support musculoskeletal health.	Guidelines: For correct desk set-up and positioning. Regulation: Display Screen Equipment (DSE) checks and allowing for regular screen breaks. Environmental/social planning: Designing and controlling the logistics of workstation set ups.	Environmental restructuring: Providing desks and equipment.	12.5 Adding objects to the environment: e.g., armband and trackball or adjustable chairs with arm rests, footrests and screen stands. 12.1 Restructuring the physical environment: Modifications made to the physical workstation e.g., forearm support.	Study 1 and 3
		Education: increase advisors' knowledge on MSD prevention.	5.1 Information about health consequences: Educate on the benefits of MSD prevention training.	
		Training: correct positioning and stretches.	4.1 Instruction on how to perform the behaviour: ergonomic skills training and regular stretching exercises. 8.1 Behavioural practice/rehearsal: Skill-based training programme for MSD 6.1 Demonstration of the behaviour: Skill-based training programme for MSD.	
Reduce 'sick building' symptoms by ensuring that used filters are replaced with new ones that have high outdoor air supply rates (10 l/s/p) at a temperature of 24.5 degrees Celsius.	Environmental/social planning: Controlling the air quality within the office environment.	Environmental restructuring: to air filters within the office.	12.1 Restructuring the physical environment: Filter and outdoor air supply.	Study 1

Improve financial health				
Offer advisors fair pay (at least the real living wage) and comprehensive sick leave.	Regulation: Company policy on sick pay. Fiscal measures: Pay. Environmental/social planning: Workplace culture for presenteeism.			Study 3
Offer advisors financial literacy support (e.g., meetings with professionals on debt management) alongside various discounts and compensation packages.	Service provision: EAP and financial advice services. Fiscal measures: Financial support e.g. for dental and eye healthcare.	Incentivisation: Financial support and discounts. Enablement: Financing and budgeting consultations.		Study 3
Improve lifestyle behaviours				
Stand-capable desks to encourage advisors to stand more at work. This should be supported by additional components such as education and training.	Environmental/social planning: The workspace to facilitate the addition of stand-capable desks. Service provision: Education and training sessions for desk use.	Environmental restructuring: giving advisors stand-capable desks.	12.5 Adding objects to the environment: Stand-capable desk.	Study 1 and 3 (phase 1)
		Education: educating advisors on the health consequences of high sitting time.	5.1 Information about health consequences: Education sessions on posture changes, active breaks and standing work.	
		Persuasion: prompts to stand.	7.1 Prompts/cues: Daily email reminders to stand.	
		Training: for desk use.	4.1 Instruction on how to perform the behaviour: Stand-capable desk use and training session on posture changes, active breaks and standing work.	

		Modelling: stand-up champions.	6.1 Demonstration of the behaviour: Stand-up champions model standing behaviours.	
		Enablement: identifying how advisors can move more and monitoring their own behaviours.	1.2 Problem Solving: Advisors work collectively to identify practical strategies for moving more. 2.3 Self-monitoring of behaviour: Daily standing and walking time.	
Gym discount alongside educational and training components and ensuring that advisors can access the gym easily and have time to engage.	Service provision: For the gym and any education/training	Incentivisation: gym discount.	10.1 Material incentive (behaviour): gym discount.	Study 3
		Environmental restructuring: close physical proximity of available gym to the advisor.	12.1 Restructuring the physical environment: By encouraging a connection with local gyms, the organisation is reshaping employees' environment to support a healthier lifestyle.	
		Education: on physical activity behaviours.	5.1 Information on health consequences: provide information about the health consequences of increasing physical activity.	
		Training: how to perform physical activity behaviours.	4.1 Instruction on how to perform a behaviour: advise advisors on exercise that they can perform in the gym. 6.1 Demonstration of the behaviour: Provide access to a personal trainer or videos demonstrating exercises/stretchers advisors could use.	

Table 7.2 Toolkit recommendations for how contact centres can successfully adopt, implement, increase advisors' awareness of and engagement with, and evaluate health initiatives mapped to supporting evidence within the thesis

Toolkit recommendation	Mapping to behaviour change theory		Underpinning evidence from the thesis
	COM-B	TDF	
How to successfully adopt health initiatives			
Establish channels for open and psychologically safe communication between advisors and decision-makers to support the adoption of health initiatives. For example, consider using surveys, wellbeing chats, or wellbeing champions. This will enable employees to express their needs/interests and co-design health initiatives that they are motivated to engage with.	Psychological capability	Knowledge of what employees need and opportunity.	Study 2 and 3
	Social opportunity	Social influences: support from colleagues for advisors to voice their views.	
	Physical opportunity	Environmental context and resources: Having channels for advisors to communicate wants/needs	
Encourage leadership buy-in by displaying organisational support from other leaders and within the organisation's values and culture.	Reflective motivation	Goals and beliefs about capabilities: leadership can be achieved through leaders' consideration of organisational goals to promote wellbeing and their professional confidence and empowerment from leaders to adopt health initiatives.	Study 2
	Social opportunity	Social influences: Social support from leaders.	
	Physical opportunity	Environmental context and resources: Developing organisational values and culture.	
Smaller or financially struggling organisations should leverage low-cost or free resources and partnerships. Partnerships may be found at local health departments, non-profit organisations, community groups, and online. Centres can also adopt low-cost initiatives that have been observed and perceived to be effective in contact centres, such as increasing flexibility policies and promoting a wellbeing culture with management and peer-support.	Physical opportunity	Environmental context and resources: lack of money/resources	Study 2

How to successfully implement health initiatives			
Ensure adequate training, support, and guidance for those responsible for leading and implementing health initiatives in contact centres. Co-produce this training and support with individuals working within the industry to improve the efficiency and effectiveness of knowledge translation. Leaders should also be given the time to prioritise the implementation of initiatives.	Reflective motivation	Social/professional role and identity: team leaders' and managers' responsibility to communicate health initiatives and the professional boundaries within their job role to prioritise staff wellbeing.	Study 2
	Physical opportunity	Environmental context and resources: Leaders' time availability and the busy nature of contact centre work	
	Psychological capability	Skills: the ability and experience of leaders to implement a health initiative.	
Offer health initiatives that are adaptable to employee needs and various work settings, including remote, hybrid, shift, and night work environments.	Physical opportunity	Environmental context and resources: having the ability to adapt to various settings and make modifications for employees.	Study 2
	Psychological capability	Knowledge of modifications needed to support employee needs.	
How to improve advisors' awareness of health initiatives			
Improve communication about health initiatives by promoting them across various channels, including verbal announcements by managers and team leaders and virtual announcements on internal social channels. Provide clear information about the availability, accessibility, and purpose of these initiatives.	Physical opportunity	Environmental context and resources: little communication on health initiatives informing advisors on what initiatives are, how they can help and how they can be accessed.	Study 3
How to improve advisors' engagement with health initiatives			
Ensure that health initiatives are easily accessible to advisors across different locations, time zones, shifts (including night shifts), and part-time work schedules. For example, having an easy sign-up process and having adaptable and time-flexible initiatives.	Physical opportunity	Environmental context and resources: remote/shift worker advisors do not have the opportunity to engage with in-person health initiatives; having a long or difficult process of accessing a health initiatives.	Study 2 and 3
Offer initiatives that provide anonymity for advisors or ensure that internal health initiatives have discreet processes and locations for employees to access. This is especially important for mental health initiatives, and it is recommended that	Reflective motivation	Beliefs about consequences: some advisors believed that personal information given during a health initiative may not remain confidential.	Study 3

centres provide both internal (e.g. mental health first aiders) and external support (e.g. counselling through EAPs).			
Offer optional health initiatives and leverage the unique knowledge of managers and team leaders about their team's dynamics and individual advisors to tailor health initiatives and their communication effectively.	Social opportunity	Social influences: support from managers to engage with optional health initiatives.	Study 2 and 3
	Reflective motivation	Beliefs about consequences and intentions: advisors' belief that they have the choice to engage and whether they intend to.	
	Automatic motivation	Emotion: advisors' emotions related to mandatory health initiatives.	
How to improve the evaluation of health initiatives			
Utilise more nuanced and comprehensive evaluation metrics beyond traditional absence and attrition rates to better capture the true impact of health initiatives on employee wellbeing. For example, alongside surveys centres should also consider the benefits of in-depth insights from discussions, employee forums and focus groups. Centres should consider partnering with external providers to evaluate their health initiatives.	-	-	Study 2
Centres should consider a range of outcomes, ensuring that they have evaluation measures in place to assess these outcomes.	-	-	Study 2

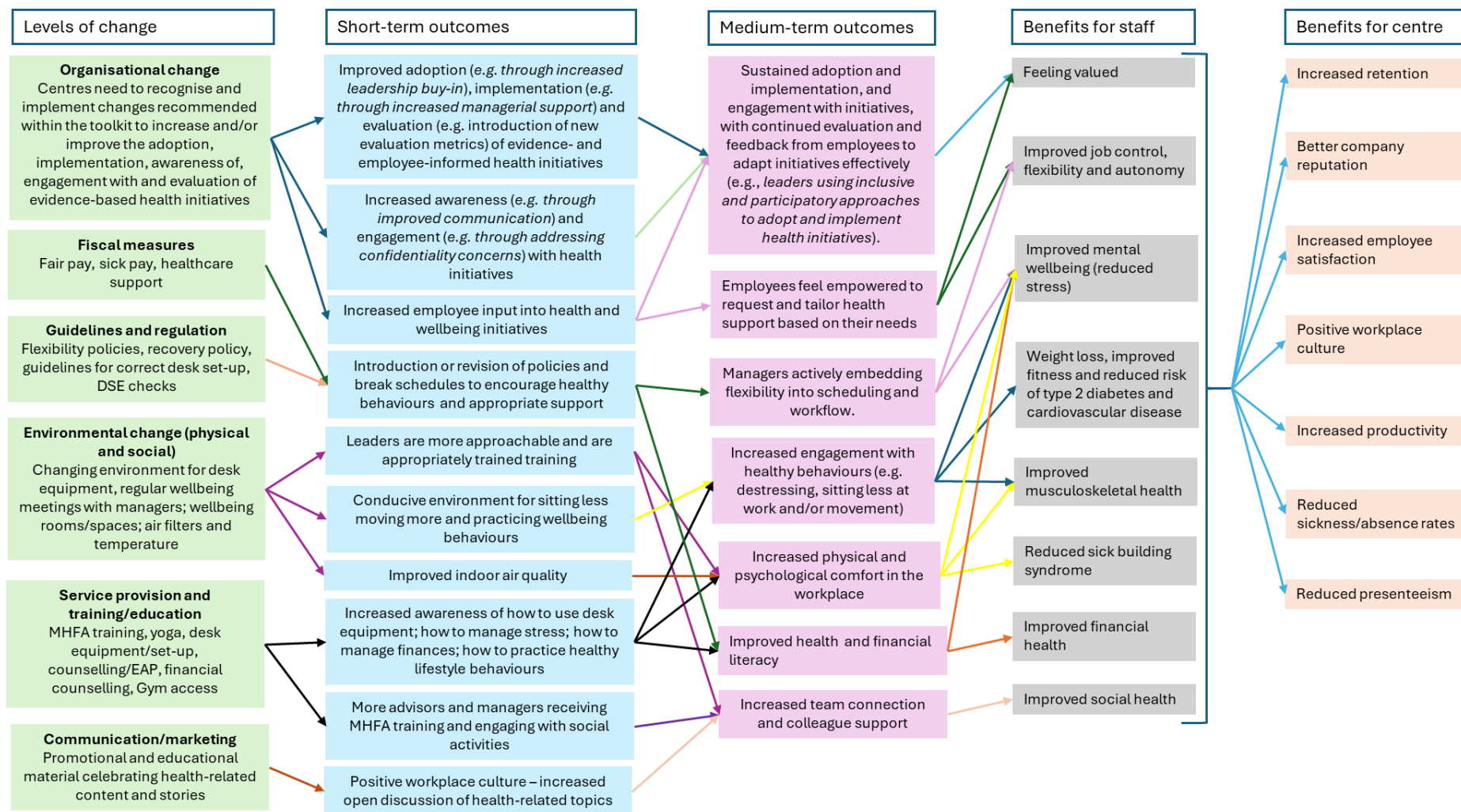


Figure 7.1 Theory of change model for toolkit recommendations

7.5 Strengths and limitations

A significant strength of this research lies in its real-world relevance. By exploring what is effective within the evidence-base and existing practices in contact centres across the UK, the research aligns with the MRC framework for developing complex interventions. This framework emphasises that complex intervention research does not always begin with new or researcher-led initiatives (191). The formative development of an evidence-informed toolkit as a practical guide for contact centres exemplifies this alignment, providing actionable insights and recommendations grounded in real-world evidence.

The incorporation of behaviour change theories adds depth to the understanding of the mechanisms underlying the health initiatives. This theoretical foundation allows for a nuanced exploration of organisational behaviour, contributing to a more thorough comprehension of how and why health initiatives may work within the real-world. By examining underlying mechanisms of health initiatives, the research not only identifies practices perceived to be effective but also interprets the pathways through which they may influence advisor health and wellbeing. While the APEASE criteria were effectively used to structure the interview schedules for decision-makers and advisors in studies 2 and 3, the researcher initially intended to use APEASE to structure the surveys in study 3 (phase two) as well. For example, participants would have been asked to rate each health initiative against the APEASE criteria when considering perceived effectiveness. However, after consulting with public advisors, it was decided to remove this component from the survey. The consultation revealed that including the APEASE criteria would make the survey too lengthy, which could potentially reduce participation rates. This pragmatic decision aimed to balance the depth of data collection with the need to maintain participant engagement.

The initial step of conducting a scoping review was crucial due to the limited knowledge available on health initiatives in contact centres. This review provided a clear outline of existing evidence, identified gaps, and set a foundation for future research. Unlike a systematic review, which requires a more substantial body of evidence, the scoping review was more appropriate given the dated and sparse nature of the existing literature.

The thesis employed two sequential exploratory mixed methods designs to study the adoption, implementation, evaluation of, engagement with, and perceived effectiveness of health initiatives in UK contact centres. This approach was chosen over an explanatory mixed methods design (where a survey precedes qualitative research) because study 1 identified a lack of recent research on the effectiveness, acceptability and feasibility of contact centre health initiatives. This gap was deemed insufficient to comprehensively inform a survey on the perceived effectiveness of health initiatives. Additionally, there was insufficient evidence to inform survey questions regarding the adoption, implementation, evaluation, and engagement with health initiatives. The qualitative research phase was essential to gather insights and generate data that could subsequently inform a quantitative phase, making the exploratory design more suitable under these circumstances (250). While integrating findings from both phases requires careful synthesis to ensure that the qualitative insights meaningfully inform the quantitative analysis and vice versa, balancing these two phases has contributed to a more coherent and comprehensive understanding of the research questions.

The phase two survey increased the generalisability of the findings from studies 2 and 3, to contact centres across the UK. The research recruited centres with diverse characteristics across the UK, including centres of all sizes, across several different vertical markets and locations. While a future toolkit, informed by this thesis, will include recommendations, it is essential for each centre to consider these recommendations in

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the context of their own centre. A limitation of this research is that the findings cannot be extended to outside of the UK, highlighting the need for similar research in other countries with a high proportion of contact centres, such as the US, Philippines, and India (124).

Another potential study design was also explored which involved conducting a Delphi survey instead of the phase two surveys (study 2 and 3) to assess consensus on the phase one findings. However, this was deemed impractical due to several pragmatic decisions made throughout the research (detailed in section 3.4.1). Despite this, collecting data on a larger scale across the UK was deemed an important and practical decision made by the researcher to improve generalisability of the findings to inform a future toolkit. The decision to conduct a survey that assessed consensus without needing to achieve it directly was made in line with the thesis' and studies' pragmatic philosophy to choose a practical method that would best inform a future toolkit. This study effectively highlighted areas of disconnect between advisors and decision-makers and identified initiatives that did not reach consensus, which may require future research to understand the underlying reasons.

Overall, an alternative research design could have focused on identifying evidence-informed initiatives studied within general office environments and assessing their acceptability and feasibility within the contact centre setting. However, the current research approach was chosen as the literature indicates that contact centre advisors face a unique working environment and job role, for example, high levels of stress from high performance targets and customer interactions (70), and limited autonomy and opportunities to reduce their sitting time due to a need to respond to customer demand (19, 54). Consequently, advisors may face distinct vulnerabilities and health needs, necessitating health initiatives that differ from those typically implemented in general

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office environments. Additionally, a gap between research and practice was recognised, underscoring the importance of exploring what is effective within real-world contact centres rather than testing the feasibility of general workplace initiatives from the literature.

Despite these limitations, the research provides valuable insights into effective health initiatives in contact centres, contributing to the development of an evidence-informed toolkit that can enhance employee wellbeing and organisational performance.

7.6 Recommendations and implications for research, policy and practice

7.6.1 Future directions for researchers

This thesis has contributed to the limited body of evidence on contact centre health interventions, particularly regarding their adoption, implementation, evaluation, engagement, and perceived effectiveness. The research can inform the development of an industry-specific toolkit. It is recommended that this toolkit is co-developed with relevant stakeholders (e.g., advisors, decision-makers, implementers, HR and occupational health staff, experts in pedagogy, behaviour change and management/leadership training, union representatives (e.g., CWU, Unison), and policymakers from the Department for Work and Pensions). It is also recommended that this co-developed toolkit undergoes feasibility testing through pilot and evaluation studies in line with the MRC guidance for developing complex interventions (191). Future studies should assess the toolkit's acceptability and feasibility, then effectiveness and impact, as well as its implementation for sustainable scaling, monitoring, and adaptation as recommended by the MRC framework. By conducting these evaluations, it can be determined whether this toolkit is effective, practical and scalable for widespread use in the contact centre industry.

This thesis also highlighted several research gaps, requiring further exploration. Study 1 highlighted how more research is needed exploring the effectiveness of health-promoting interventions to improve the health of contact centre advisors. Future research should prioritise high-quality studies using RCT designs, longer-term evaluation periods, and comprehensive evaluations of acceptability and feasibility. Study 2 highlighted how health initiatives being designed for contact centres should consider the facilitators and barriers to behaviour identified within this programme of research to increase the likelihood that initiatives designed by researchers are successful within the real-world. For example, researchers developing health initiatives for contact centres should ensure that these initiatives can be easily adapted to meet advisor needs.

Study 3 recommends that future initiatives incorporate multiple, integrated components to maximise their effectiveness, considering the intervention functions and policies highlighted within the research. This study is also the first to highlight a gap between decision-makers and advisors regarding the perceived effectiveness of certain health initiatives. Future research should explore this relationship further to understand its impact on organisational dynamics. These findings support the need for open communication channels and the importance of listening to employees' wants and needs.

Overall, more research is needed to develop and co-design the toolkit and explore the acceptability and feasibility of the toolkit, and its impact in line with the MRC framework. Similar work has been conducted for the development, implementation, and refinement of two online workplace mental health toolkits (413). For example, when developing these mental health toolkits researchers explored stakeholders' views on the layout and formats (such as articles, podcasts and programmes) of the toolkit to support employers. A final recommendation is to funders. Funders such as the NIHR or The Colt Foundation can release more tailored funding calls that encourage research in underserved

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occupational groups, such as contact centre workers. This will help encourage the necessary research that fills evidence gaps and help tackle health inequities in workers in most need of support.

7.6.2 Future directions for contact centres

While further work is needed to co-produce the toolkit, as well as test for acceptability, feasibility and effectiveness, action from both senior and middle management within contact centres across the UK is crucial to the success of a future toolkit. As seen in the recommendations in Table 7.1 and 7.2, action is required from senior management and middle management (team leaders, planning teams, etc.) to improve the adoption, implementation, engagement with, and evaluation of health initiatives within individual contact centres. However, it will be the responsibility of each individual centre to determine which recommendations are useful and applicable to their centre, and how the resources can be best utilised.

Continued collaboration between the contact centre industry and researchers is crucial for the ongoing development and refinement of the toolkit. This partnership will help to improve the uptake of the toolkit and facilitate real-world impact. For example, when exploring the implementation of mental health toolkits, researchers found that some users considered the volume of resources available in the toolkit to be a strength, while others found it overwhelming to navigate (413). Continued research and collaboration with the contact centre industry would thus enhance the design and impact of the toolkit.

7.6.3 Future directions for sector stakeholders (service providers, forums, and unions)

Stakeholders such as contact centre forums (e.g., Contact Centre Forum), management associations (e.g., Call Centre Management Association), service providers (e.g., Calabrio) and unions (e.g., CWU) can utilise the evidence in this thesis to inform the products, services, training, guidance and/or support they provide to their members and the sector.

To facilitate this though, the aforementioned co-development work with industry stakeholders is needed, and representatives from sector stakeholders are encouraged to participate in this future research when approached. Once a toolkit is developed, sector stakeholders will be crucial to the promotion and endorsement of the toolkit as a stand-alone tool, or integration of the research evidence/toolkit content into their existing resources. This will improve the likelihood that the toolkit reaches a higher proportion of UK contact centres (41, 42, 44, 45). Specifically for unions and local authorities, by integrating the evidence-informed recommendations presented in this thesis into their guidance, they can help establish contemporary industry standards and best practices fit for the current working environment in the contact centre industry, fostering a healthier and more supportive work environment for advisors.

Finally, service providers recognised across the UK or worldwide can contribute by introducing certification and accreditation programmes, based on the original evidence generated in this thesis, for contact centres that meet high standards of employee wellbeing. For example, this could be similar to the Workplace Wellbeing Charter, an accreditation standard developed and delivered by Health@Work (414). Recognised certifications can enhance the reputation of companies and attract talent. This approach aligns with findings from this research, which highlight that decision-makers are motivated to adopt health initiatives when they see the potential for improved company reputation and talent attraction.

7.7 Summary

The overarching aim of this thesis was to inform the development of an industry-specific, evidence-informed toolkit to improve the health and working conditions of contact centre advisors. By integrating the findings from three studies, this research has provided

valuable insights into the adoption, implementation, evaluation, engagement, and perceived effectiveness of health initiatives within the contact centre industry.

The findings emphasised the importance of flexible, adaptable, and comprehensive health initiatives, supported by open communication, adequate training, and supportive leadership. Implementing these evidence-based strategies has the potential to significantly improve contact centre advisors' mental, social, physical and financial health, contributing to the overall success and sustainability of the industry. The studies highlighted significant research gaps to address, whilst offering practical recommendations for senior and middle management, as well as policy recommendations for sector stakeholders and funding bodies. These recommendations aim to enhance the adoption, implementation, evaluation, and engagement of evidence-based health initiatives, and promote research in this underserved occupational group, ultimately fostering a healthier and more supportive work environment for contact centre advisors.

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9. Appendix

Appendix 4.1: Scoping review search strategies

MEDLINE Search Strategy

“call agent*” OR “call cent* agent*” OR “call cent* employee*”

Health OR “health and safety” OR “occupational health” OR “wellbeing” OR “stress” OR “workplace stress” OR “occupational stress” OR “job stress” OR “occupational ill-health” OR “job-related strain” OR “mental health” OR “physical activity” OR “sedentary behaviour” OR diet OR “healthy eating” OR smoking OR alcohol OR “working conditions” OR “work environment” OR “work organi?ation” OR “health promotion” OR “workplace solutions” OR “workplace health promotion” OR ergonomics OR “job redesign” OR “work design” OR intervention OR “quasi-experiment” OR experimental OR randomi?ed OR random* OR trial OR strateg* OR guid*

“contact cent*” OR “call cent*”

1 AND 2

4 AND 3

CINAHL Search Strategy

1. “Call agent*” OR “call cent* agent*” OR “call cent* employee*”

2. Health OR “health and safety” OR “occupational health” OR “wellbeing” OR “stress” OR “workplace stress” OR “occupational stress” OR “job stress” OR “occupational ill-health” OR “job-related strain” OR “mental health” OR “physical activity” OR “sedentary behaviour” OR diet OR “healthy eating” OR smoking OR alcohol OR “working conditions” OR “work environment” OR “work organi?ation” OR “health promotion” OR “workplace solutions” OR “workplace health promotion” OR ergonomics OR “job redesign” OR “work design” OR intervention OR “quasi-experiment” OR experimental OR randomi?ed OR random* OR trial OR strateg* OR guid*

3. “contact cent*” OR “call cent*”

4. 1 AND 2

5. 4 AND 3

PsycInfo Search Strategy

1. "Call agent*" OR "call cent* agent*" OR "call cent* employee*"

2. Health OR "health and safety" OR "occupational health" OR "wellbeing" OR "stress" OR "workplace stress" OR "occupational stress" OR "job stress" OR "occupational ill-health" OR "job-related strain" OR "mental health" OR "physical activity" OR "sedentary behaviour" OR diet OR "healthy eating" OR smoking OR alcohol OR "working conditions" OR "work environment" OR "work organi?ation" OR "health promotion" OR "workplace solutions" OR "workplace health promotion" OR ergonomics OR "job redesign" OR "work design" OR intervention OR "quasi-experiment" OR experimental OR randomi?ed OR random* OR trial OR strateg* OR guid*

3. "contact cent*" OR "call cent*"

4. 1 AND 2

5. 4 AND 3

Web of Science Search Strategy

"call agent*" OR "contact cent* agent*" OR "call cent* agent" OR "call cent* employee*"

Health OR "health and safety" OR "occupational health" OR "wellbeing" OR "stress" OR "workplace stress" OR "occupational stress" OR "job stress" OR "occupational ill-health" OR "job-related strain" OR "mental health" OR "physical activity" OR "sedentary behaviour" OR diet OR "healthy eating" OR smoking OR alcohol OR "working conditions" OR "work environment" OR "work organi?ation" OR "health promotion" OR "workplace solutions" OR "workplace health promotion" OR ergonomics OR "job redesign" OR "work design" OR intervention OR "quasi-experiment" OR "experimental" OR "randomi?ed" OR trial OR "random*" OR strateg* OR guid*

"contact cent*" OR "call cent*" OR "service cent*"

1 AND 2

4 AND 3

Appendix 4.2: Scoping review charting form

Evidence Source Details and Characteristics

Citation details e.g. author/s, year, title, journal/company, URL

Details/Results Extracted from Source of Evidence

Country

Setting (available details of contact centre e.g. organisational level/structure/ type)

Participants details e.g. number, details (eligibility), demographics

Source purpose and aims (broad)

Methodology design/ Recruitment design/ Data analysis

Key characteristics of health intervention/ policy document

Authors' conclusions (Effectiveness? Feasibility? Acceptability? Recommendation?)

Appendix 4.3: Intervention description table

Intervention description table for the 28 included intervention studies (from 26 intervention articles)		
Authors (Year)	Intervention	Intervention description
Allexandre et al (2016) (57)	Web-Based Mindfulness Stress Management Program (WSM) and group support	<p>Web-Based Mindfulness Stress Management Program: an 8-week online, interactive, educational program based on mindfulness meditation. Participants receive different themes each week through audio (online or downloaded) to be played at home or in work. There are also educational articles and (e.g., mindfulness in everyday eating) x2 email reminders.</p> <p>Group support: groups of 11-12 for 1 hour (once a week) for 8 weeks in work time (during low call volume periods). They started with a deep breathing exercise for 2 minutes, then listened to a 10-minute audio recording of the weekly lesson and practiced the 20 to 30 min guided meditation exercise of the week. The final 20 minutes was a discussion, sharing of positive experiences.</p> <p>Clinical support: followed the same meeting schedule as groups, but their discussions were facilitated by a clinical counsellor/ social worker.</p>
Bond, Flaxman & Blunce (2008) (186)	Participatory Action Research (PAR) Intervention	<p>Procedures: Formation of a steering committee (12 team members); research team facilitated two. 2-hour steering committee meetings began two months after the Time 1 questionnaires. Meeting 1- committee provided with results from Time 1 that identified work organisation characteristics. Committee aims were to: (1) identify specific instances of these problematic aspects of work organisation and (2) recommend changes that might address these problems to improve the outcomes. Committee consulted with colleagues between meetings to finalise recommendations for change. Committee proposed: team members be given greater control and influence over their team's daily and weekly work plans, and be allowed more discretion over the selection, timing and ordering of their work tasks. They implemented systems for this during the 5th month, allowing members to participate in work planning process. They also implemented</p>

		regular one-to-one meetings with team leaders to solve problems and develop/plan training needs.
Chau et al (2016) (293)	Sit-stand desk	Participants received a sit-stand desk (Rumba “2 Stage” Sit-Stand Workstation from Zenith) and brief training on its use. Daily e-mail reminders to stand up more during the workday were sent out for the first 2 weeks after sit-stand desks were installed.
Chi & Lin (2009) (182)	Screen filter	The manufacturer of the screen filter claimed its product has ergonomic advantages for users, such as reduction of surface reflection and glare up to 98%, with 90% high transmission to maintain the brightness and colour presence of the LCD screen.
Cook et al (2004) (180)	Forearm support	Workstations were adjusted to support forearms (but not elbows) on the desk surface, maintaining neutral shoulder elevation. The keyboard was positioned so that the top row of keys was level with fingertips when the forearms were supported comfortably on the worksurface. The mouse was positioned next to the keyboard, so that at least half of the forearm was supported on the desk while working. Participants were also given a prompt sheet outlining how to maintain the forearm support position.
Garrett et al (2016) (292)	Stand-capable desks	Employees received brief training on their new workstations. The workstations used for this intervention were the SteelCase™ (Grand Rapids, MI) Series 5 Desk (sit-to-stand) which were adjustable with an electronic motor from 65 cm to 130 cm, allowing the user to adjust the desk surface height for both sitting and standing. In comparison to a sit-to-stand workstation that can be adjusted by the user to any posture between seated and standing during the day, the stand-biased workstation is adjusted to a range of standing heights. The stand-biased workstations had a raised height or bar height task chair. The Neutral Posture Inc. (Bryan, TX, USA) U4IA4692 Mesh Back Stool was used, with attached foot platform at 15.24 and 25.4 cm and a seat height that can be adjusted between 64.77 and 91.44 cm (Fig. 2). Footrests that allow a user to prop one foot up at 20.32 or 30.48 cm were purchased for stand-biased desk users. Anti-fatigue mats were purchased for sit-to-stand users. Monitor arms for a dual monitor set-up were purchased and installed at each workstation.

Holman et al (2010) (294)	Participatory job redesign intervention	<p>The job redesign process had two main phases: 1) Assessment and redesign, and 2) implementation. Assessment and redesign: Teams identifying core job tasks and obstacles that prevent effective working. The current job design was then rated (scale 1-10) for effects on wellbeing and performance. The job characteristics were <i>job control</i>, <i>skill utilization</i>, <i>feedback</i>, <i>participation</i>, and <i>task obstacles</i>. Teams then discussed job characteristics that would maximise wellbeing and performance. Implementation: Teams given responsibility to implement the proposed job redesign changes. Two representatives per team agreed to monitor progress on job design changes, and to attend three implementation meetings (spread over 3 months) with the research team to discuss progress. <i>Job control</i> - the adoption of new tasks and procedures e.g. changing customers names and access to new customer info; <i>Participation</i> - involvement in design of new IT system, team member setting work schedules and breaks; <i>Skill utilization</i> - training on the new tasks previously outlined; <i>Feedback</i> - performance criteria specified more clearly and feedback given more often; <i>removal of task obstacles</i> - visiting other teams to increase knowledge share and understand other department procedures.</p>
Holman & Axtell (2016) (291)	Participatory job redesign intervention	<p>The job redesign process had two main phases: 1) Assessment and redesign, and 2) implementation. Employees participated in the assessment phases (2-day workshop) facilitated by the research team; this included the discussion of advisor survey results. Participants proposed changes perceived to have a positive impact on well-being and performance – these were discussed between employees, management and researchers. Implementation: advisors were given responsibility for a range of administration tasks (previously conducted by team leaders) such as organising breaks, logging working time and performance data. Advisors were also given greater discretion over handling 'minor' queries/complaints and trained on this. Agents and team leaders improved the clarity of the performance criteria and simplified the feedback process. Advisors were given responsibility for running and delivering weekly team briefing sessions. Teams were tasked with implementing the proposed initiatives within 4 months and monitoring the effectiveness with the support of the research team.</p>

Kennedy & Pretorius (2008) (189)	Portable heart rate variability (HRV) biofeedback device	A biofeedback device named the 'StessEraser'. The device guides users to maximise their HRV by finding their unique breathing pattern via their heart rate wave so that respiration and heart rate (HR) covary in a synchronous phase relationship. This usually involves breathing somewhere between 4.5 and 7.5 breaths per minute but varies from person to person. Each time users meet a certain threshold, they receive points. Points are awarded for smooth waves when HRV is increased but not awarded when disruptions in the wave occur through improper breathing or excessive limbic activity.
Kirk et al (2013) (285)	Office ergonomic checklist <i>(Study 1)</i>	Office ergonomic checklist designed by the in-house occupational health and safety officer. The paper-based checklist outlined office ergonomic recommendations for the placement and/or adjustment of equipment and furniture at static computer workstations.
	Skill-based training programme to self-manage Work-Related Musculo-Skeletal Disorder risk factors <i>(Study 2)</i>	One-on-one skill-based ergonomic intervention delivered in-situ by the researcher. Designed around a series of actions, training demonstrated how to judge the 'best possible' position of furniture and equipment and how to make those adjustments. The training sequence coincided with an operator stepping up to, sitting down at the workstation, and getting ready to start work. Delivery involved demonstration, followed by the trainee rehearsing the skills for each ergonomic recommendation. Adjustments were made based on the operators' or trainees' personal anthropometry, allowing recommendations to be fine-tuned to meet individual needs. Training actions were supported by an explanation of the effect of this ergonomic recommendation on work posture, the benefits of achieving a relaxed neutral work position, and the health consequences of common workstation adjustment errors. Training concluded with instructions that made trainees consciously aware of the relaxed neutral work posture achieved through the process of making the ergonomic adjustments, the need to actively 'rest' this position at the end of each call and were asked for feedback on how this work posture felt.

Krajewski, Wieland & Sauerland (2010) (288)	Progressive muscle relaxation (PMR) break in a 'silent room'	During the first part of the lunch break (12:00 to 12:20) a snack was served. The second part of the break (12:30 –13:00) took place in a noise-subdued, dimly lit (10 lux), gaze-dense lockable cabin, called the “silent room,” wearing eye masks. PMR instructions were given via wireless headphones (including calm instrumental background music) while the subjects lay on medical daybeds.
Krajewski, Sauerland & Rainer (2011) (287)	Progressive muscle relaxation (PMR) break in a 'silent room'	During the first part of the lunch break (12:00 to 12:20) a snack was served. The second part of the break (12:30 –13:00) took place in a noise-subdued, dimly lit (10 lux), gaze-dense lockable cabin, called the “silent room,” wearing eye masks. PMR instructions were given via wireless headphones (including calm instrumental background music) while the subjects lay on medical daybeds.
Lehto et al (2003) (190)	2-day vocal training course	Vocal training for 2 days by a speech-language therapist, including both indirect and direct therapy methods. The first day consisted of 6 h divided into two sections. The first section consisted of lectures on the theory of voice production, resonance and articulation. The basics of vocal hygiene, balanced breathing patterns and the importance of good body posture were also discussed as tools to reduce tension when speaking. The subjects were also provided with information about the kinds of foods and drinks that may have a negative effect on their voice. The second part of the day included vocal activities. The subjects were taught different vocal exercises: they were informed of how to use their voice more economically and they learned exercises to warm up or cool down their voice. The exercises that were used are widely recognised and clinically used. The whole second day of the training course was spent practising these vocal exercises.
Mishra et al (2010) (289)	Health Education sessions and focus group	The interactive Health education session covered current statistics of tobacco use, health hazards of tobacco, the different methods of quitting tobacco, and information about the trial. The entire management and all the employees (whether they were tobacco users or not) were invited to participate in the health awareness lectures.

		<p>The focus groups were conducted in small groups of 7-10 employees. The participants were employees consuming tobacco. These interactive counselling sessions were conducted by an expert tobacco counsellor. The initial sessions were aimed at initiating the thought process among tobacco users regarding positive need to quit tobacco, make them reflect on their own strengths and coping capacity, how they can use the same regarding tobacco cessation, and to promote decisions toward healthy lifestyles.</p> <p>Subsequent sessions focused on sharing of quitting experiences by the tobacco users and coping with withdrawals. Later sessions focused on how to prevent relapses and need to maintain sustained efforts at quitting.</p>
	Health Education sessions followed by focus group and Behavioural therapy (one-to-one counselling)	In addition to education sessions and focus groups, one-to-one counselling was provided to the tobacco users in the third arm. This involved added resources in the form of separate time dedicated to each tobacco user. The rationalisations for continuing tobacco use at the individual level were addressed.
	Health Education sessions followed by focus group, Behavioural therapy (one-to-one counselling), and Pharmacotherapy	In addition to education sessions, focus groups and behavioural therapy this intervention also added Pharmacotherapy in the form of bupropion. This was offered to tobacco users based on the individual need assessment. This was offered in the preparatory phase.
Morris et al (2021) (56)	Multicomponent intervention with height-adjustable workstations (SLAMM+)	A height-adjustable workstation (Posturite DeskRite 100 or VARIDESK ProPlus) was installed outside of work hours. This allowed work to be conducted in either a seated or a standing posture and enabled frequent transitions between postures. Attached were instructions. Interpersonal strategies: Stand Up Champions and team leaders were used to encourage and support participants to sit less and move more at work through

		<p>discussions and modelling; there was no pressure of coercion. Support emails were sent in months 1-3, and monthly in months 4-10. Intrapersonal Strategies: 4 30-min researcher-led education and training sessions in working hours. Sessions outlined, and reinforced (weeks 3, 9, month 6) the intervention aims and benefits of sitting less and moving more and identified opportunities and strategies for this with emphasis on frequent posture changes, active breaks and standing work (SLAMM+ only). In week 1, agents worked collectively to identify practical ways to incorporate sitting less and moving more into their working practice. The sessions also introduced (week 1) and reinforced (week 3 and 9) a goal setting and self-monitoring strategy to gradually increase standing and light activity (walking) at work to 2-4 h/day. Agents received a diary and timer and were encouraged to monitor (timer) and log (diary) their daily standing (weeks 1-12) and walking (weeks 4-12) time at work against incremental goals suggested in the diary. Agents received paper-based individual feedback, and group-level feedback via presentations, on anthropometric, cardiometabolic (both week 1, month 6) and behavioural outcomes (week 9, month 6).</p>
	<p>Multicomponent intervention without height-adjustable workstations (SLAMM)</p>	<p>Interpersonal strategies: Stand Up Champions and team leaders were to encourage and support participants to sit less and move more at work through discussions and modelling; there was no pressure of coercion.</p> <p>Intrapersonal Strategies: In week 1, agents worked collectively to identify practical ways to incorporate sitting less and moving more into their working practice. The sessions also introduced (week 1) and reinforced (week 3 and 9) a goal setting and self-monitoring strategy to gradually increase standing and light activity (walking) at work to 2-4 h/day. Agents received a diary and timer and were encouraged to monitor (timer) and log (diary) their daily standing (weeks 1-12) and walking (weeks 4-12) time at work against incremental goals suggested in the diary. Agents received paper-based individual feedback, and group-level feedback via presentations, on anthropometric, cardiometabolic (both week 1, month 6) and behavioural outcomes (week 9, month 6).</p>

<p>Morris et al (2019) (55)</p>	<p>Multicomponent intervention with height-adjustable workstations</p>	<p>Height-adjustable workstation (Posturite DeskRite 10 small, UK) installed during work hours. Workstations allowed work to be conducted in either a seated or a standing posture and enabled frequent transitions between postures. Attached were instructions. Interpersonal strategies: Team leaders were specifically educated, trained and encouraged to a) encourage walking in their one-to-one and team meetings with agents, b) discuss agent experiences of the intervention during one-to-one and team meetings, c) provide daily verbal support and encouragement to agents to sit less and move more, and d) forward a weekly intervention email to their agents. The movement champion was specifically encouraged to provide daily verbal support for agents to sit less and move more, and encourage team leaders to complete the above actions. Team leaders and the movement champion left the session with a laminated information sheet that detailed the intervention aim, timeline and components, and suggested strategies to promote their agents to sit less and move more at work. Support emails were also sent, which contained an infographic encouraging and suggesting ways for advisors to break up prolonged periods of sitting and be active during breaks. Intrapersonal Strategies: A 40-min researcher-led education and training sessions in week 1 and 5. Sessions introduced (week 1) and reinforced (week 5) the benefits of moving more and sitting less each day at work and the risks of prolonged sitting and standing. Using the intervention components as a point of departure, agents engaged in guided discussions to identify how they could utilise each intervention component to facilitate their behaviour change. Agents were given the opportunity to discuss their intervention experiences, including barriers to sitting less and moving more. In week 1 agents wrote a short-term goal to help them sit less and move more at work, for example, 'I will go for a walk during my lunch break tomorrow'. This goal was discussed and reflected on in the week 5 session.</p>
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Pickens et al (2016) (295)	Stand-capable desks	Employees received brief training on their new workstations. The workstations used for this intervention were the SteelCase™ (Grand Rapids, MI) Series 5 Desk (sit-to-stand) which were adjustable with an electronic motor from 65 cm to 130 cm, allowing the user to adjust the desk surface height for both sitting and standing. In comparison to a sit-to-stand workstation that can be adjusted by the user to any posture between seated and standing during the day, the stand-biased workstation is adjusted to a range of standing heights. The stand-biased group used the same workstations but were used only in individually set height ranges relative to the floor. The sit-to-stand group used a SteelCase™ Think Chair Model 6205 that had an adjustable seat height ranging from 40.5 cm to 53 cm and most were paired with anti-fatigue mats from Uline® (model H-2011). Stand-biased subjects used the Neutral Posture Inc. mesh back stool (seat height: 64.5 cm and 91.5 cm) with an attached footrest platform. Most stand-biased workstations (83%) were also equipped with an additional Wall-Saver footrest from Neutral Posture Inc. for under the desk. Monitor arms from Neutral Posture Inc. were purchased and installed for both types of stand-capable workstations for a dual monitor setup.
Rempel et al (2016) (183)	Forearm support band, trackball and ergonomics training	The arm board is a wraparound, padded arm support that attaches to the top, front edge of the work surface (30.5 cm depth, 76.2 cm width, 2.5 cm height: MorencyRest, R&D Ergonomics, Freeport, ME, USA). The trackball (16.5 cm depth, 8.6 cm width, 4.6 cm height, with a 4 cm diameter ball; Marble Mouse, Logitech, Fremont, CA, USA) was installed next to the keyboard. The ergonomics training involved conventional recommendations: 15 which included maintaining an erect posture while sitting, adjusting the chair height so that the thighs were approximately parallel to the floor, adjusting the arm support and worksurface height so that the forearms were approximately parallel to the floor, adjusting the mouse and keyboard location to minimise the reach, adjusting the monitor height so that the centre of the monitor is approximately 15 degrees below the visual horizon, and a reminder to take scheduled breaks.

Schneider et al (2012) (296)	Biofeedback on Voice Use	To prevent occupational voice disorders, the vocal awareness needs to be trained. A biofeedback software program that monitors the main parameters F0, SPL, and syllables per minute has been developed and introduced into the workplace environment of CCA. This biofeedback tool can provide real-time biofeedback for the employee during conversation with a customer by phone or afterward as summarised feedback.
Sharifi, Denesh and Gholamnia (2022) (297)	Multicomponent ergonomic intervention	<ol style="list-style-type: none"> 1. Comprehensive office ergonomic training: two 90-minute group training sessions were held at the workplace to increase participants awareness of basic office ergonomic principles. Topics included etiology of work-related musculoskeletal disorders (WRMSDs) and significance of work layout alterations and workplace stretching exercises to avoid WRMSD. Participants were also taught risk self-assessment skills so they could readjust the workplace accordingly. At the end of the session, a concise visual pamphlet, which consisted of all the materials taught during the sessions, was given out. 2. Work layout improvement: Modifications were made to the physical workstation, including improvements to existing chairs and replacement of non-adjustable chairs equipped with arm and head rests and provision of footrests and standard stands for the screens. 3. Supervised on-site face to face visits: The day after the training sessions, researchers monitored how the education was translated into the working day. These visits also utilised motivational interviewing to elevate intrinsic motivation. Snapshots were taken if there was an inappropriate exercise. Pictures were put into a discussion and potential solutions were generated. After face-to-face training researchers visited participants on a bimonthly basis to ensure consistent healthy work practices and postural habits. 4. Provision of quality break time encompassing regular exercise program: Employees were given an additional rest break opportunity halfway through their shift. It was up to employees to select this time (that did not impact the workflow). During the

		training program the length of the session was discussed, and 10 minutes was agreed. Participants were advised to perform a set of stretching and joint mobilization exercises, targeting the whole body, once a day when they felt their muscles were tense or fatigued. A log was then given to each participant to be ticked everyday when the exercise had been performed. Later it was then monitored by supervisors and researchers on a weekly and bimonthly basis, respectively.
Tham (2004) (185)	Temperature and outdoor air supply	Blind intervention settings of temperature (T) and ventilation (V). Set points: T1 =22.5C, T2 =24.5C, V1=51 /s/p, V2=101 /s/p. Transitions: Week 1 (T1+V1), week 2 (T2+V1), week 3 (T1+V1), week 4 (T1+V2), week 5 (T2+V2), week 6 (T2+V1), week 7 (T2+V2), week 8 (T1+V2), Week 9 (T1+V1).
Thatcher et al (2020) (286)	Office Plants: Working environment (study 1)	A total of 21 large, 40 cm grow pots and 3 large, 60 cm rectangular pots were installed in the office space amounting to one plant unit for about every 14 m ² . The foliage plants used were Sanserveria Trifasciata (mother-in-law tongue; 9 × 40 cm grow pots), Chamaedorea Seifritzii (reed palm; 8 × 40 cm grow pots), Ficus Alii (banana-leaf fig, 3 × 40 cm grow pots), Ficus Lyrata (fiddle leaf fig, 1 × 40 cm grow pot), and Aglaonema (silver queen; 3 × 60 cm, rectangular pots).
	Office Plants: Working environment (study 2)	A total of 21 large, 40 cm grow pots and 3 large, 60 cm rectangular pots were installed in the office space amounting to one plant unit for about every 14 m ² . The foliage plants used were Sanserveria Trifasciata (mother-in-law tongue; 9 × 40 cm grow pots), Chamaedorea Seifritzii (reed palm; 8 × 40 cm grow pots), Ficus Alii (banana-leaf fig, 3 × 40 cm grow pots), Ficus Lyrata (fiddle leaf fig, 1 × 40 cm grow pot), and Aglaonema (silver queen; 3 × 60 cm, rectangular pots).
Wargocki, Wyon and Fanger (2003) (184)	Air filters and outdoor air supply rates	1. New versus used filter (a filter that had been in place for 6 months, the normal service life of the filter in this call-center). 2. Constant outdoor air supply rate 8% versus 80% of total supply air flow.

		<p>All combinations of the two interventions new/used filter, low/high outdoor air supply rate occurred in each of two successive 4-week periods, each combination being maintained for one week at a time.</p> <p>Week 0 (used filter & low outdoor air supply), week 1 (new filter & low outdoor air supply), week 2 (new filter & high outdoor air supply), week 3 (used filter & high outdoor air supply), week 4 (used filter & low outdoor air supply), week 5 (new filter & low outdoor air supply), week 6 (new filter & high outdoor air supply), week 7 (used filter & high outdoor air supply), week 8 (used filter & low outdoor air supply).</p>
<p>Workman & Bommer (2003) (187)</p>	<p>Alignment job design (AJD)</p>	<p>The alignment effort was to set performance measures congruent with business objectives inasmuch as what is measured becomes a goal or a milestone. A key aspect of the alignment would reduce the pressure to quickly solve problems so that specialists could focus on giving correct solutions. Management continued to track the number of problems solved, but only in the aggregate. The existing management structure was kept in place, and managers continued to conduct performance reviews. Performance rewards, however, such as bonuses, raises, and expressions of management approval, were administered based upon the new measures. This intervention also included a new process to support the strategic goals and facilitate learning. Coined the “hot seat,” the process was devised to enable specialists to spend some portion of their time off the phones and working on problems in their open-problem queues. Support specialists would work three days on the phone (hot seat) and two days off the phone working on problems they had been unable to solve.</p>
	<p>High-involvement work processes (HIWP)</p>	<p>Structural changes - (1) elevating member–leader participation, (2) establishing customer and business feedback loops, (3) expanding member knowledge of the total work system, and (4) creating structural alignment.</p> <p>This was accomplished by instituting member-leader cross participation process-improvement teams (PITs) for ongoing job-redesign efforts. Among the structural changes devised by the PITs was a formal escalation team, into which specialists would</p>

		<p>rotate off of the phones on a biweekly basis. In the escalation team, junior specialists were paired with senior specialists who acted as mentors.</p> <p>To encourage leader-member participation in PITs, managers and specialists attended a one-week training seminar that encouraged a participative environment and focused on achieving personal and organizational potential. In addition, a series of “lunch and learn participation workshops” were conducted with managers and support specialists at regular intervals. The lunch and learn sessions were also used to uncover stumbling blocks in the structure and processes, as well as to expand the specialists’ knowledge of the larger work system by exposing them to companywide processes. Customer survey scores (good and bad) were discussed to increase customer issue awareness and to formulate team plans for corrective actions. Similar to the AJD-group, PITs in the HIWP-group restructured the performance measurement system to align it with strategic business objectives. Specifically, individual quotas were eliminated and replaced with quotas at the team level; and rather than percentage of volume, a percentage of problems were incorporated in open queues to drive down the number of difficult problems going unresolved.</p>
	Autonomous work teams (AWT)	<p>The teams were group-focused and self-managed; they collaborated on task assignments; they planned and scheduled their work; and they used group decision making. Team members developed written agreements covering peer review criteria and the roles and tasks the team would assume. To encourage participation in the teams, specialists attended the same type of training seminar as in the HIWP intervention. In the AWT intervention, the previous measurement and reward structure that concentrated on individual production was replaced with team-based measurements and rewards. The new structure focused on thorough problem research and resolution, and problems were worked as a collective in the teams. This group also created a work design similar to the hot seat used in the AJD group. On a one-day-a-week rotation, two members from each of the teams would man the phones, while unsolved problems were passed to those members in the teams who were off the phones. These teams also organized themselves</p>

		into “specialties.” For instance, team 1 tended to focus on problems involving networking, whereas team 2 tended to focus on problems involving core system components. Team members were allowed to self-select their specialty.
Workman & Bommer (2004) (188)	Alignment job design (AJD)	Efforts are directed at measurement and reward structures to align organisational and individual goals. Employee involvement is low , and the traditional management structure remains in place. The focus is on management driving the alignment of measurement and rewards. Three objectives were set for the AJD group intervention: Examine the performance measurements and determine their outcomes; adjust them according to strategic organizational objectives; and adapt the structure and reward systems around these new measures. During the examination phase, they found that as problem volumes continued to increase, specialists reached a point where they were forced to concentrate on simple problems and set the harder problems aside in their open problem queues in hopes of returning to them later. This had the effect of causing the most difficult problems to go unsolved for extended periods of time. Therefore, a key aspect of the alignment reduced the pressure to quickly solve problems so that specialists could focus on giving correct solutions - adjusting the measurement system toward thorough problem resolution (e.g., looking at the number of repetitive calls and eliminating quotas); further, the number of escalations was tracked, as was the number of problems in open problem queues. Performance reward, such as bonuses, raises and the expressions of management approval were administered based on the new measured. Job rotation was also implemented to allow advisors to work days off the phone to resolve their open problems.
	High-involvement work processes (HIWP)	Structural changes - (1) elevating member–leader participation, (2) establishing customer and business feedback loops, (3) expanding member knowledge of the total work system, and (4) creating structural alignment. HIWP raises individual discretion and involvement in the development of organisational structures through team-oriented practices, problem-solving groups, or

		<p>quality circles (member–leader cross-participation process improvement teams (PITs) were devised for ongoing job redesign efforts. The structural changes devised by the PITs included a formal escalation team (research team), into which specialists would rotate off the phones on a biweekly basis. In the research team, junior specialists were paired with senior specialists who acted as mentors, but it leaves the supervisory structure in place. To encourage leader–member participation managers and specialists attended a 1-week training seminar that encouraged a participative environment and focused on achieving personal and organizational potential. In addition, a series of ‘lunch and learn participation workshops’ were conducted with managers and support specialists at regular intervals. The lunch and learn sessions were also used to uncover stumbling blocks in the structure and processes, as well as to expose the specialists to company-wide processes to expand their knowledge of the larger work system. Employee involvement is moderate (problem-solving teams and quality circles), specialists are involved in important decisions.</p>
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	Autonomous work teams (AWT)	<p>Entirely group focused. AWT utilise group-level autonomy and redistribute the control of the group structure and processes to the group members, replacing traditional management with a cooperative of independent peers. Enables expertise to be shared.</p> <p>The team (1) assigned jobs to members, (2) planned and scheduled work, (3) made service-related decisions, and (4) took action to remedy problems. Management relinquished control of performance measurement and assessment to the group. Team members developed written agreements covering roles and tasks the team would assume, along with peer review criteria. To encourage participation in the teams, specialists attended the same type of 1-week training seminar as the HIWP intervention.</p> <p>The previous measurement and reward structure concentrating on individual production was replaced with team-based measurements and rewards. The new measurement structure focused on thorough problem research and resolution, and problems were worked as a collective in the teams. The teams in this intervention created a work design similar to the AJD group. On a 1-day weekly rotation, two members from each team would 'man the phones,' while unsolved problems were passed to those members in the teams who were 'off the phones.' These teams also organized themselves into 'specialties.' For instance, team 1 focused more on problems involving networking, whereas team 2 tended to focus on problems involving core system components. Team members selected their own specialty. Merit increases were given to each team as a whole based on meeting team-defined quality and productivity objectives.</p>
Yesilyurt & Yelken (2020) (290)	Voice therapy	<p>For voice therapy, vocal hygiene and diaphragm breathing training were given in two groups, but voice exercises and laryngeal massage were applied to each client in the form of a specific therapy program. Voice therapy was performed 1 time per week. Each session lasted 35-40 minutes and a total therapy period of 4 weeks. Within the scope of vocal hygiene training, the clients were informed about different forms of vocal rest,</p>

		suggestions to prevent reflux, not speaking in noisy places, resting the voice occasionally while talking, avoiding extreme behaviours related to phonation, speaking at the middle pitch and violence level, increasing hydration, avoiding substances-foods and drinks that could harm the sound.
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Appendix 4.4: Characteristics of included intervention studies

Characteristics of the 28 included intervention studies (from 26 intervention articles)									
Study Details			Intervention Details						
Authors (Year); Country; Contact centre details*	Population	Design*	Duration	Data collection time point(s)	Intervention delivery (setting)***	Theoretical underpinning	Intervention aim(s)	Primary outcome(s)	Other outcome(s)
Alexandre et al (2016); USA; Corporate call centre (57)	- Contact centre advisors - N=161; 83.2% female - Mean age: 40 years (SD 13) - 77% C/W	RCT	8 weeks	Baseline, 8 and 16 weeks, and 1-year	I1 (hybrid): Ed/T/P (weekly mindfulness themes and meditation techniques taught through written and audio formats; educational articles (e.g., mindfulness in everyday eating) and x2 email reminders). I2 (office for meetings; hybrid for I1): Ed/T/P (as I1) and En (followed by face-to-face group meetings, 1h x1 per week x 8 weeks; discussion and sharing positive experiences). - <i>Delivered by selected company employees who participated in the web-based programme before the start of the study.</i> I3 (office for meetings; hybrid for I1): Ed/T/P (as I1) and En (Face-to-face group meeting, discussion facilitated by clinical support on week 3, 6 and 8.)	Based on mindfulness meditation principles	Increase mindfulness to reduce workplace stress	Perceived psychosocial stress	- Mindfulness - Burnout - Psychological and emotional wellbeing - Productivity - Acceptability and feasibility of the intervention

					- <i>Delivered by a clinical counsellor or licensed social worker</i>). C (office): Waitlist control filling in outcome questionnaires only.				
Bond, Flaxman & Blunce (2008); UK; Two contact centres of a large financial services organization (186)	- Contact centre advisors - N=181; 67% female - Mean age: 33 years (SD 10) - Ethnicity NA	cRCT	14 months	2 months pre-intervention and 14 months	I (office): En/ER (steering group formed x12 team members; identified work organization problem areas and implemented change; including increased job control and meetings with team leaders to solve problems and develop training needs). - <i>Delivered as a collaborative relationship between the researchers and organization members.</i> C (office): Work as usual.	Based upon the principles of participative action research	Increase job control	Job control (moderated by psychological flexibility)	- Psychological distress - Absence levels - Intrinsic job motivation
Chau et al (2016); Australia; Large telecommunications company (293)	- Contact centre advisors - N=31; 45% female - Mean age: 33 years (SD 10.8) - Ethnicity NA	Q-E	19 weeks	Baseline, 1, 4, and 19 weeks. Measurements conducted across the whole week (Monday-Saturday).	I (office): ER/T/P (sit-stand desk; brief training; daily e-mail reminders to stand for the first 2 weeks post installation). - <i>Deliverer unclear.</i> C (office): Work as usual with regular desks.	-	Reduce sitting time and increase physical activity	- Work and non-work sitting - Work and non-work physical activity	- Productivity

Chi & Lin (2009); Taiwan, China; Established under the Employment and Vocational Training Administration (182)	- Contact centre advisors (with disability) - N =22; 50% female - Mean age : 25.6 years (range 24-55) - Ethnicity NA	PP	12 months	2.5, 5 and 12 months	I (office) : ER (screen filter fitted). - <i>Deliverer unclear.</i>	-	Reduce visual fatigue	Visual fatigue	-
Cook et al (2004); Australia; Newspaper contact centre (180)	- Contact centre advisors - N =59; 91.5% female - Mean age : 39 years (range 21-68) - Ethnicity NA	RCT	6 weeks	1, 6 and 12 weeks	I (office) : ER/T (workstations adjusted to provide forearm support; prompt sheet given on how to maintain forearm support). - <i>Delivered by researchers.</i> C (office) : Desks as usual, then given the intervention at 6 weeks.	-	Decrease neck/shoulder and wrist/hand musculoskeletal discomfort	Musculoskeletal discomfort	- Workstation setup - Working posture - Comfort

Garrett (2016); USA; Provide telephonic health and clinical advising (292)	- Contact centre advisors - N=167; 70.7% female - Mean age NA - Ethnicity NA	Q-E	6 months	Continuously over 6 months	I (office): T/ER (training, stand-capable workstations, dual monitor set up, footrests and anti-fatigue mats installed). - <i>Deliverer unclear.</i> C (office): Seated at a traditional desk with dual monitor set up.	-	Reduce sitting time and increase standing time at work, and increase productivity	- Sitting time at work - Standing time at work - Productivity	-
Holman et al (2010); UK; Department in a large UK company providing health insurance and health care (294)	- Contact centre advisors, administrative employees and support section employees - N=119; 55% female - Mean age NA - Ethnicity NA	Q-E	6 months (to fully implement)	1-month pre intervention and 1-month after full implementation	I (office): En/ER/T (assessment and redesign (<i>phase one</i>) to identify obstacles; one day off site x3. Implementation (<i>phase two</i>) occurred over the next few months, with progress monitored by the team's representatives who attend progress meetings over 3 months. Design changes involved training to increase skills). - <i>Delivered by the research team (facilitated phase one) and employees (led proposed initiatives).</i> C (office): Serendipitous event created an inert-treatment control group (outsourcing initiative, announced and introduced by management just before the assessment and redesign phase.	Job demands – resources theories of job design	Enhance job design characteristics	Job-related wellbeing	- Job control - Decision making - Feedback - Skill utilisation - Task obstacles

					This meant the key active ingredient of the job redesign did not occur).				
Holman & Axtell (2016); UK; Department in the UK civil service dealing with transport-related issues (291)	- Contact centre advisors - N=62; 56% female - Mean age NA - Ethnicity NA	Q-E	6 months (to fully implement)	1-month pre intervention and 2 months after full implementation	I (office): En/ER/T (assessment and redesign (<i>phase one</i>) to identify obstacles; two-day workshop then 2 weeks to develop proposals for a meeting with the managers and researchers. Implementation (<i>phase two</i>) occurred over the next few months, with the effectiveness monitored by the teams. Design changes involved training to increase job control). - <i>Delivered by the research team (facilitated phase one) and employees (led proposed initiatives).</i> C (office): Active control – completed initial survey.	Multiple mediator/multiple outcome model of job redesign intervention	Change job characteristics	Job-related wellbeing	- Job control and feedback - Job performance - Psychological contract fulfilment
Kennedy & Pretorius (2008); South Africa; Assists external company's staff with mental health/behavioral problems (189)	- Contact centre advisors - N=19; 78.9% female - Mean age NA - Ethnicity NA	PP	NA	Baseline and end of the intervention	I (office): ER/Ed/P (portable heart rate variability biofeedback device; guides users by finding their unique breathing pattern so that respiration and heart rate are synchronised; points awarded for smooth waves). - <i>Deliverer unclear.</i>	-	Reduce work-related stress symptoms	Stress-related symptoms	Environmental stressors (supportive work environment and resource management).

Kirk et al (2013); Australia; Major metropolitan contact centre (285) (Study 1)	- Contact centre advisors - N=214; Female NA - Mean age NA - Ethnicity NA	Q-E	NA	1-month pre- and post-intervention	I (office): ER/T (paper-based ergonomic checklist delivered in-situ to each team member). - <i>Designed by the in-house occupational health and safety officer and team leaders delivered the checklist.</i> C (office): Work as usual.	-	Reduce work-related musculoskeletal disorders	Physical discomfort	-
Kirk et al (2013); Australia; Major metropolitan contact centre (285) (Study 2)	- Contact centre advisors - N=NA; Female NA - Mean age NA - Ethnicity NA	Q-E	NA	1-month pre- and post-intervention	I (office): T/Ed (based on a paper-based ergonomic checklist; one-on-one skill-based training session included demonstration on adjustments and positions, followed by rehearsal; training followed by an explanation of the positive effects of the training and the health consequences of common errors). - <i>Delivered in-situ by the researcher.</i> C (office): Work as usual.	-	Reduce work-related musculoskeletal disorders	Physical discomfort	-
Krajewski, Wieland & Sauerland (2010); Germany; Inbound contact centre (288)	- Contact centre advisors - N=14; 57% female - Mean age: 38 years	RCT	6 months	1 week pre-intervention (baseline) and 2, 4, and 6 months. Measurements conducted at 12:00, 13:00,	I (office): ER/T (lunch break with progressive muscle relaxation; snack served, then progressive muscle relaxation in the 'silent room', wear eye masks, lie on medical daybed, instructions through headphones with calming music). - <i>Delivered by researchers.</i>	Systematic relaxation techniques	Reduce stress levels	Strain states (emotional, mental, motivational and physical)	-

	- Ethnicity NA			16:00, and 20:00 on assessment days.	C (office): lunch break involving small talk in company staff room with self-chosen colleagues.				
Krajewski, Sauerland & Rainer (2011); Germany; Contact centre details not available (287)	- Contact centre advisors - N=14; 57.1% female - Mean age: 38.4 years - 100% C/W	RCT	6 months	1-day per month at five time points (awakening, awakening +30 min, start of lunch break, end of lunch break, and bedtime)	I (office): ER/T (lunch break with progressive muscle relaxation; snack served, then progressive muscle relaxation in the 'silent room', wear eye masks, lie on medical daybed, instructions through headphones with calming music). - <i>Delivered by researchers.</i> C (office): lunch break involving small talk in company staff room with self-chosen colleagues.	Cognitive- behavioural model of relaxation	Reduce stress levels	Cortisol levels (through saliva samples) to indicate stress levels	-
Lehto et al (2003); Finland; The largest Finnish telecommunica tions operator (190)	- Contact centre advisors (without severe voice problems) - N=48; 79% female - Mean age: 27.5 years	PP	2 days	Baseline and 3 weeks	I (office): T/Ed (vocal training on 2 days including vocal hygiene, activities and practice). - <i>Delivered by a speech language therapist and speech teacher.</i>	-	Reduce voice failures	Perceived vocal symptoms	- Acceptability and feasibility of the intervention

	(range 21-40) - Ethnicity NA								
Mishra et al (2010); India; Four different business process outsourcing companies (289)	- 23.1% managers/admin staff, 74.2% advisors and 2.8% researchers/analysts who smoked N = 646; 19.7% female - Mean age : 23.1 years (SD 3.7) - Ethnicity NA	cRCT	12 months	Across 18 months: regular follow up visits every 2-3 months	I1 (unclear) : Ed/En/P (educational health awareness sessions followed by focus group discussion to reflect on barriers to smoking cessation and to identify strengths to overcome these (7-10 employees). I2 (unclear) : Ed/En/P (I1 above plus one-to-one counselling was provided to address rationalizations for continuing tobacco use at an individual level) I3 (unclear) : Ed/En/P (I2 above plus bupropion was offered based on individual need assessment) - <i>Delivered by researchers (sessions) and expert tobacco counsellor (focus groups and one-to-one counselling).</i> C (unclear) : Distribution of pamphlets (information on hazards of tobacco).	-	Increase tobacco cessation	Tobacco cessation	Knowledge, attitude and practice regarding tobacco use
Morris et al (2021); UK; Inbound contact centre (56)	- Contact centre advisors - N =59; 68% female	RCT	10 months	Baseline, 3 and 10 months	I1 (office) : En/T/M/P/Ed (x4 30-min education and training sessions; stand-up champions and team leader support; self-monitoring and health check feedback provided).	Socioecological model, the COM-B model and Behaviour	Reduce sitting time and increase standing and	Sitting time at work	- Feasibility and acceptability of the intervention Various outcomes for:

	- Mean age: 30.6 years (SD 11.5) - Ethnicity NA				I2 (office): ER/En/T/M/P/Ed (multicomponent intervention with height-adjustable workstations; instructions provided and reminders to stand via emails; x4 30-min education and training sessions; stand-up champions and team leader support; self-monitoring and health check feedback provided). <i>- Delivered by researchers.</i>	Change Wheel	movement time at work		<ul style="list-style-type: none"> - Anthropometric - Behavioural - Cardiometabolic - Musculoskeletal - Psychosocial (wellbeing) - Work
Morris et al (2019); UK; Inbound contact centre (55)	- Contact centre advisors and team leaders - N=19; 78% female - Mean age: 39.3 years (SD 11.9) - 78% C/W	PP	8 weeks	Baseline and 8 weeks	I (office): ER/En/T/P/Ed (multicomponent intervention with height adjustable workstation; team leaders provided daily verbal support in one-to-one meetings; 1-hour education and training session week 1 and 5; weekly emails). <i>- Delivered by researchers.</i>	Socioecological model, the COM-B model and Behaviour Change Wheel	Reduce sitting time and increase standing and movement time at work	Acceptability and feasibility outcomes	Various outcomes for: <ul style="list-style-type: none"> - Behavioural - Cardiometabolic - Anthropometric

Pickens et al (2016); USA; Provided telephonic health and clinical advising (295)	<ul style="list-style-type: none"> - Contact centre advisors - N=138; 66.7% female - Mean age: 32.9 years - 22.5% AA, 70.3% C/W 	Q-E	6 months	A 2-day collection period at baseline, 3 and 6 months	<p>I1 (office): T/ER (training; sit-to-stand workstation, dual monitor set up, anti-fatigue mats and chair with adjustable seat height - purchased by the company after consultation with the research team).</p> <p>I2 (office): T/ER (training/ stand-biased workstation, mesh back stool and footrest - purchased by company).</p> <p>- <i>Delivered by managers (assigned and purchased desks to install).</i></p> <p>C (office): Seated at a traditional desk.</p>	-	Reduce sitting time and increase standing time at work	<ul style="list-style-type: none"> - Sitting time at work - Standing time at work 	<ul style="list-style-type: none"> - Physical activity levels - Workstation usage - Acceptability and feasibility of the intervention
Rempel et al (2006); USA; Large healthcare company (183)	<ul style="list-style-type: none"> - Contact centre advisors - N=182; 94% female - Mean age: 40 years (SD 11.6) - 47.8% C/W, 20.9% AA, 17.6% A/P, 1.1% N-A 	RCT	52 weeks	Weekly for 52 weeks	<p>I1 (office): T/ER (ergonomic training; trackball installed).</p> <p>I2 (office): T/ER (ergonomic training; armband provided).</p> <p>I3 (office): T/ER (ergonomic training; trackball + armband).</p> <p>- <i>Interventions delivered by researchers.</i></p> <p>C (office): Ergonomic training only.</p>	-	Prevent upper body musculoskeletal disorders	Pain intensity (neck/shoulders, right elbow/forearm/wrist/hand, and left elbow/forearm/wrist/hand)	<ul style="list-style-type: none"> - Work schedule - Medication uses for pain - Acute injury events during the week

Schneider et al (2012); Austria; One of the largest Austrian telecommunication companies (296)	- Contact centre advisors - N=76; 49% female - Mean age: 29.3 years - Ethnicity NA	Q-E	4 weeks	Baseline and 4 weeks	I1 (office): ER/Ed (biofeedback programme installed; providing real time feedback). - <i>Delivered by researchers.</i> C (office): The control group used the biofeedback programme similarly, but the results were blinded and made visible only to the examiners.	-	Improve vocal health	- Vocal self-assessment -Vocal performance	- Vocal constitution - Vocal risk factors
Sharifi, Denesh and Gholamnia (2022); Iran; Private telecommunication company (297)	- Contact centre advisors - N=84; 76% female - Mean age: 28.1 years (SD 3.69) - Ethnicity NA	PP	6 months	Baseline and 6 months	I (office): ER/T/Ed/E (Modifications to the physical workstation, and adjustable chairs with arm rests, footrests and screen stands added to the environment; given an additional 10-minute rest break to perform an exercise program; Ergonomic skills training; visual pamphlet on ergonomic skills training; educated on the etiology of MSD; snapshots of inappropriate exercises taken to discuss potential solutions; Log to track daily exercises; researchers monitored ergonomic behaviours and tracked exercise program participation). - <i>Delivered by researchers.</i>	-	Reduce work-related musculoskeletal symptoms	- Musculoskeletal symptoms	- Fatigue - Mental workload

Tham (2004); Singapore; Telecommunication company (185)	- Contact centre advisors - N=56, 100% female - Mean age: 28 years (range 25-36) - Ethnicity NA	PP	9 weeks	Weekly (morning and afternoon)	I1 (office): ER (temperature 22.5C and 51 set points (level of outdoor air supply rates)). I2 (office): ER (temperature 24.5C and 51 set points (level of outdoor air supply rates)). I2 (office): ER (temperature 22.5C and 101 set points (level of outdoor air supply rates)). I2 (office): ER (temperature 24.5C and 101 set points (level of outdoor air supply rates)). - <i>Deliverer unclear.</i>	-	Reduce sick building syndrome symptoms	Sick building syndrome symptoms	- Perceptions of the indoor environmental conditions - Self-assessed productivity
Thatcher et al (2020); South Africa; Large IT company (clients in Africa, Europe, and the Middle East) (286) (Study 1)	- Contact centre advisors - N=32; 56% female - Mean age: 31.6 years (SD 10.8) - Ethnicity NA	PP	6 weeks	Baseline and 6 weeks	I (office): ER (plant provision into the office). - <i>Delivered by researchers.</i>	Attention Restoration Theory and Stress Reduction Theory	Improve wellbeing	Perceived psychological and physical wellbeing	- Perceived productivity - Perceived work engagement - Evaluations of the work environment - Connectedness to nature
Thatcher et al (2020); South Africa; Small medical	- Contact centre advisors	PP	14 weeks	Baseline and 14 weeks	I (office): ER (plant provision into the office). - <i>Delivered by researchers.</i>	Attention Restoration Theory and Stress	Improve performance and wellbeing	Perceived psychological and physical wellbeing	- Perceived productivity - Absenteeism

insurance company (286) (Study 2)	- N=34; 56% female - Mean age: 28.9 years (SD 4.7) - Ethnicity NA					Reduction Theory			- Perceived work engagement - Job satisfaction. - Evaluations of the work environment - Perceived attractiveness of the plants
Wargocki, Wyon and Fanger (2004); Denmark; Addressed national directory enquiries (184)	- Contact centre advisors - N=26; Female NA - Mean age: NA - Ethnicity NA	PP	Each intervention alternated weekly; each implemented twice across 8 weeks	1-week	I1 (office): ER (new filter with low outdoor air supply rate). I2 (office): ER (new filter with high outdoor air supply rate). I2 (office): ER (used filter with high outdoor air supply rate). I2 (office): ER (used filter with low outdoor air supply rate). - Deliverer unclear.	-	Reduce sick building syndrome symptom intensity	Sick building syndrome symptom intensity	- Perceived air quality (including acceptability measures) - Environmental perceptions - Self-estimated productivity
Workman (2003); USA; Large international computer company (187)	- Contact centre advisors - N=149; 44% female	RCT	NA	Baseline and post-intervention	I1 (office): ER/En/In/P (alignment job redesign; employee structure and reward system aligned to organizational goals e.g. management approval and raises). I2 (office): ER/En/T/Ed/P (high-involvement work processes; raises	Alignment theory and Cooptimize d systems theory	Improve employee job attitudes	Job satisfaction	- Task relationship orientation

	- Mean age: NA - Ethnicity NA				individual discretion and involvement in organizational development; team problem solving; mentors assigned; 1-week training programme for advisors and managers; lunch and learn participation workshops to expand knowledge of the larger work system). I3 (office): ER/En/T/In/P (autonomous work teams; entirely group focused redistributing control and creating written contracts for roles; team measures own performance; 1-week training seminar; team-based measurements and rewards). - <i>Deliverer unclear.</i> C (office): Work as usual.				
Workman & Bommer (2004); USA; Large international computer company (188)	- Contact centre advisors - N=149; 44% female - Mean age: 31 years (range 21-56)	RCT	6 months	Baseline and 6 months post-intervention	I1 (office): ER/En/In/P (alignment job redesign; employee structure and reward system aligned to organizational goals e.g. management approval and raises). I2 (office): ER/En/T/Ed/P (high-involvement work processes; raises individual discretion and involvement in organizational development; team problem solving; mentors assigned; 1-week	Alignment theory and Cooptimize d systems theory	Improve employee job attitudes	Job satisfaction	- Organizational commitment - Degree of group orientation

	- Ethnicity NA				<p>training programme for advisors and managers; lunch and learn participation workshops to expand knowledge of the larger work system).</p> <p>I3 (office): ER/En/T/In/P (autonomous work teams; entirely group focused redistributing control and creating written contracts for roles; team measures own performance; 1-week training seminar; team-based measurements and rewards).</p> <p>- <i>Delivered by external consultants (organizational developers).</i></p> <p>C (office): Work as usual.</p>				
Yesilyurt & Yelken (2020); Turkey; Contact centre details not available (290)	<p>- Contact centre advisors with voice problems</p> <p>- N=13; 100% female</p> <p>- Mean age: NA</p> <p>- Ethnicity NA</p>	PP	4 weeks	Baseline and 4 weeks	<p>I (unclear): Ed/T (voice therapy, vocal hygiene and diaphragm breathing training given in groups; voice exercises and laryngeal massage delivered individually; all performed x1 per week lasting 35-40 minutes).</p> <p>- <i>Deliverer unclear.</i></p>	-	Improve vocal health	Vocal health	-
<p>Footnotes: NA: Not available; I: intervention; C: control; SD: Standard deviation; C/W: Caucasian/White; AA: African American; A/P: Asian or Pacific Islander; N-A: Native American.</p>									

* See online supplementary 7 for intervention study reference list.

** Study designs: RCT: Randomised controlled trial, cRCT: Clustered randomised controlled trial, Q-E: Quasi-experimental, PP: Pre-post study (within-subjects).

*** Intervention function: T: Training, En: Enablement, P: Persuasion, Ed: Education, ER: Environmental restructuring, In: Incentivisation, M: Modelling.

Appendix 5.1: Study 2 COREQ Checklist

COREQ (Consolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
<i>Personal characteristics</i>			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	125
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	23
Occupation	3	What was their occupation at the time of the study?	23
Gender	4	Was the researcher male or female?	23
Experience and training	5	What experience or training did the researcher have?	23
<i>Relationship with participants</i>			
Relationship established	6	Was a relationship established prior to study commencement?	127
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	127
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	127
Domain 2: Study design			
<i>Theoretical framework</i>			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	71
<i>Participant selection</i>			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	124-125
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	124-125
Sample size	12	How many participants were in the study?	127
Non-participation	13	How many people refused to participate or dropped out? Reasons?	133
<i>Setting</i>			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	127
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	127
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	133
<i>Data collection</i>			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	125
Repeat interviews	18	Were repeat interviews carried out? If yes, how many?	127
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	127
Field notes	20	Were field notes made during and/or after the interview or focus group?	128
Duration	21	What was the duration of the interviews or focus group?	127
Data saturation	22	Was data saturation discussed?	127
Transcripts returned	23	Were transcripts returned to participants for comment and/or	130

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
<i>Data analysis</i>			
Number of data coders	24	How many data coders coded the data?	129
Description of the coding tree	25	Did authors provide a description of the coding tree?	359
Derivation of themes	26	Were themes identified in advance or derived from the data?	128-129
Software	27	What software, if applicable, was used to manage the data?	128
Participant checking	28	Did participants provide feedback on the findings?	130
<i>Reporting</i>			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	134-152
Data and findings consistent	30	Was there consistency between the data presented and the findings?	134-152
Clarity of major themes	31	Were major themes clearly presented in the findings?	134-152
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	134-152

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

Once you have completed this checklist, please save a copy and upload it as part of your submission. DO NOT include this checklist as part of the main manuscript document. It must be uploaded as a separate file.

Appendix 5.2: Study 2 and 3 (phase one) recruitment posters for decision makers



NIHR | National Institute
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**LIVERPOOL
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**Lancaster
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**CALL
NORTH
WEST**



**south
west
contact
centre
forum**

ABOUT THE RESEARCH

Liverpool John Moores University (LJMU) and Lancaster University have collaborated with Call North West (CNW) and the South West Contact Centre Forum (SWCCF) to conduct research to **improve the health of contact centre advisors**.

We are **now looking to speak to senior health and wellbeing decision makers** to discuss your centres health and wellbeing strategies. We are looking for centres of all sizes, regardless of the number of initiatives that you implement.

WHAT'S INVOLVED:

Questions will relate to the health initiatives that your centre implements. How effective you perceive them to be, and how they are adopted and implemented



- One 45-60 minute interview
- Virtual (over teams) or in person
- The interview will be recorded, but everything you say will be anonymised
- Opportunity for further **collaboration** to receive **personalised health and wellbeing feedback**



**IF YOU WOULD LIKE TO TAKE
PART IN THE STUDY, CONTACT
Z.E.BELL@2022.LJMU.AC.UK**

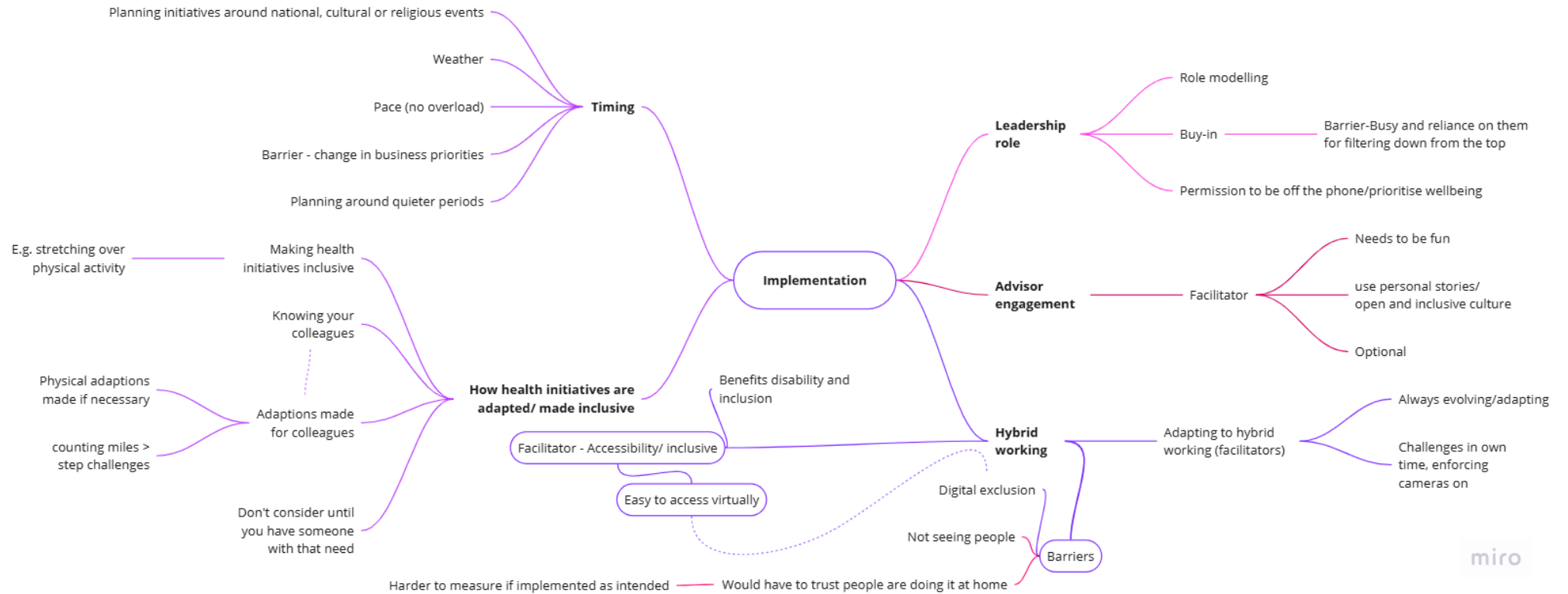
Appendix 5.3: Final interview schedule for decision makers

Decision maker interview schedule to explore the adoption, implementation, engagement, effectiveness and evaluation of health initiatives		
Aim	Questions	Analysis
Explore the factors perceived to influence adoption of workplace health initiatives in contact centres.	<p>Introduction: Going to talk about health initiatives- anything that your company does to improve the health of its advisors. <i>Provide an overview of the health promoting initiatives their contact centre reported in the survey; if they don't have any give some clear examples; policy to give gym discounts, break schedules, regulation that restricts the promotion of unhealthy food within the workplace, delivering stress reduction programs, any participatory job redesign strategies, ergonomic adjustments, financial wellbeing.</i></p> <p>Icebreaker – What is your role within the organisation? How did you become involved with health and wellbeing?</p> <p><i>Give description of adoption: the action of <u>choosing to</u> initiate a health promotion initiative.</i></p> <p>What influences the adoption of workplace health initiatives? <i>Prompt: (can refer to specific examples identified within that contact centre).</i></p> <ul style="list-style-type: none"> - Capability (physical or psychological) e.g., Knowledge of the intervention or understanding of how to participate? Affordability? - Opportunity (social or physical) e.g., Resource allocation and support? - Motivation (automatic or reflective) e.g., manager willingness/ the evidence base, 'right thing to do'/cost of living, or employee willingness? 	Mapped to the COM-B model, the Theoretical Domains Framework (TDF) and APEASE (affordability).
Explore the factors perceived to influence	<p><i>Give description of implementation: the process of <u>putting</u> a health promotion initiative into effect; execution.</i></p>	Mapped to the COM-B model, the Theoretical

<p>implementation of workplace health initiatives in contact centres.</p>	<p>What influences the degree to which any health initiatives are delivered as intended? <i>Prompt: (can refer to specific initiatives identified within that contact centre.)</i> Are the key elements delivered successfully- how do you know? Are there any adjustments/adaptations- how do you know?</p> <p>What has facilitated successful implementation? Are there any obstacles to successful implementation?</p> <ul style="list-style-type: none"> - Capability (physical or psychological) e.g. office vs remote workers? - Opportunity (social or physical) e.g. 'nature of the CC work/lack of time'? - Motivation (automatic or reflective) e.g. is there motivation to implement the initiative? <p>Has <u>delivery</u> been influenced by your work approach - fully remote or hybrid work approaches?</p> <p>Context for Q5: Poor working conditions are likely to have a more severe impact on disabled workers and workers with long-term health conditions, and they require greater levels of autonomy than other workers to enable them to work around their health/impairment.</p> <p>How does your contact centre consider the needs of disabled workers and workers with long-term health conditions when implementing workplace health policies and interventions?</p>	<p>Domains Framework (TDF) and APEASE (practicability, equity).</p>
<p>Explore the factors perceived to influence advisors' engagement with</p>	<p>What do you think would influence advisors' engagement with initiatives? <i>Prompt:</i> are there any barriers to advisors' taking part with this initiative? Is there anything that facilitates engagement?</p> <ul style="list-style-type: none"> - Capability (physical or psychological) e.g. are all advisors physically able to take part? 	<p>Mapped to the COM-B model, the Theoretical Domains Framework (TDF) and APEASE (acceptability).</p>

workplace health initiatives in contact centres.	<ul style="list-style-type: none"> - Opportunity (social or physical) e.g. social norms/acceptability (colleagues, team-leaders, managers), have access to the initiative? - Motivation (automatic or reflective) e.g. employee willingness/interest. 	
Explore which health initiatives are most effective and why.	<p>What initiatives are effective for improving health? Why? <u>Prompt</u>: Give examples from the survey or any discussed previously. If they do a lot, what are the most effective?</p> <p>How do you measure effectiveness? What are the main intended outcomes – are these achieved? Is the initiative effective for all advisors e.g. remote/night time workers? Are there any unintended consequences/outcomes?</p>	Mapped to the COM-B model, the Theoretical Domains Framework (TDF) and APEASE (effectiveness, side-effects, equity).
Explore how contact centres evaluate the effectiveness of health initiatives, and what do they consider to be effective?	How do you measure effectiveness? What are the main intended outcomes – are these achieved?	Mapped to APEASE (effectiveness).

Appendix 5.4: Thematic map example



Appendix 5.5: Study 2 and 3 (phase two) recruitment poster for decision makers



ONLINE SURVEY

ABOUT CONTACT CENTRE HEALTH INITIATIVES



WHO CAN TAKE PART?

- **Contact centre employee, above advisor level,** with knowledge of factors affecting the adoption and implementation of health initiatives.

WHAT'S INVOLVED?

- Complete a 10-minute survey online.
- You will be asked about the **adoption** and **implementation** of health initiatives at your contact centre and if you think they are **effective**.
- Your responses are **anonymous** and will **inform future guidance**.
- To take part scan the QR code.



Please contact
z.e.bell@2022.ljmu.ac.uk with any questions

NIHR | National Institute for Health Research

Appendix 6.1: Study 3 COREQ Checklist

COREQ (Consolidated criteria for Reporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
<i>Personal characteristics</i>			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	189
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	23
Occupation	3	What was their occupation at the time of the study?	23
Gender	4	Was the researcher male or female?	23
Experience and training	5	What experience or training did the researcher have?	23
<i>Relationship with participants</i>			
Relationship established	6	Was a relationship established prior to study commencement?	186
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	186
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	23 and 186
Domain 2: Study design			
<i>Theoretical framework</i>			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	71
<i>Participant selection</i>			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	181-182
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	181-182
Sample size	12	How many participants were in the study?	186
Non-participation	13	How many people refused to participate or dropped out? Reasons?	191
<i>Setting</i>			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	181-182
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	181-182
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	191
<i>Data collection</i>			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	183
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	186
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	186
Field notes	20	Were field notes made during and/or after the inter view or focus group?	187
Duration	21	What was the duration of the inter views or focus group?	186
Data saturation	22	Was data saturation discussed?	187
Transcripts returned	23	Were transcripts returned to participants for comment and/or	188

Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	183
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Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
<i>Data analysis</i>			
Number of data coders	24	How many data coders coded the data?	187
Description of the coding tree	25	Did authors provide a description of the coding tree?	378
Derivation of themes	26	Were themes identified in advance or derived from the data?	187
Software	27	What software, if applicable, was used to manage the data?	187
Participant checking	28	Did participants provide feedback on the findings?	188
<i>Reporting</i>			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	192-225
Data and findings consistent	30	Was there consistency between the data presented and the findings?	192-225
Clarity of major themes	31	Were major themes clearly presented in the findings?	192-225
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	192-225

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

Once you have completed this checklist, please save a copy and upload it as part of your submission. DO NOT include this checklist as part of the main manuscript document. It must be uploaded as a separate file.



CONTACT CENTRE HEALTH RESEARCH - PARTICIPANTS NEEDED!

WHO CAN TAKE PART

- You can take part if you currently work within a **contact centre** as an **advisor/agent**.
- You are over age 18.

WHAT'S INVOLVED

- Questions will explore reasons why you may or may not take part with health initiatives, and what you think works.
- One **50-minute focus group** via Microsoft Teams with other advisors from your organisation.
- The session will be recorded, but everything you say will be anonymised and your employers will not know you have taken part.



REIMBURSEMENT

You will be compensated for your time with a **£20 Love to shop voucher**



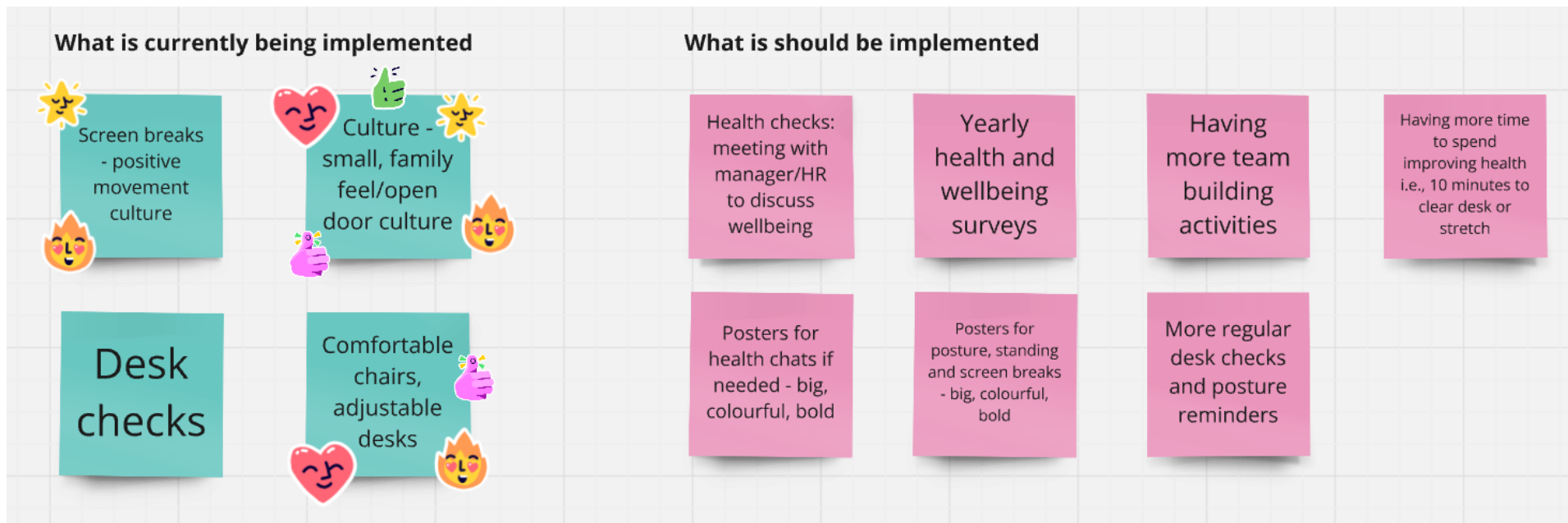
If you would like to take part in the study contact:
z.e.bell@2022.ljmu.ac.uk or scan the QR code above

Appendix 6.3: Final interview schedule for advisors

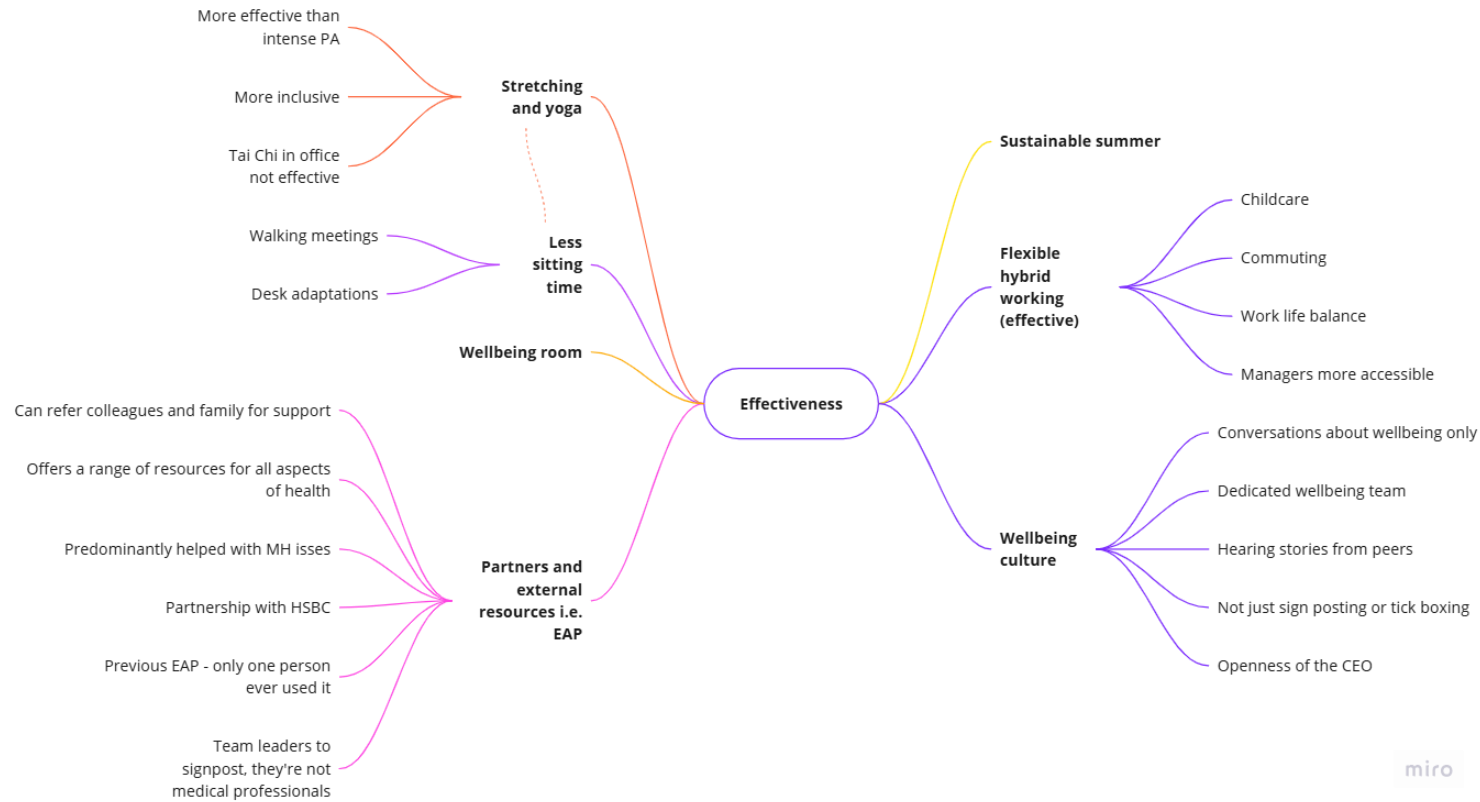
Advisor interview schedule to explore the awareness of, engagement with and effectiveness of health initiatives		
Aim	Questions	Analysis
Explore which health initiatives are most effective and why.	<p>Introduction: Going to talk about health initiatives- anything that your company does to improve your health. By health we mean a state of complete physical, mental, social and financial wellbeing.</p> <p>Icebreaker – Can you describe a typical working day? Hybrid, office or remote?</p> <ol style="list-style-type: none"> 1. What does your company do or could do to promote your health? <i>Prompt:</i> Are these effective/ what is the most effective? Are any not, if not why? Is the initiative inclusive/effective for all advisors e.g. remote/nighttime workers? What would they need to do to increase equity? Are there any unintended consequences/ outcomes? 2. How can these initiatives be improved? 	Mapped to the Behaviour Change Wheel (BCW) intervention functions and policy categories, and APEASE (effectiveness).
Explore advisors' awareness of health initiatives, and factors perceived to influence this.	<p>**Interactive/ Task question: For this have pre-prepared shared whiteboard online, displaying health initiatives implemented within their contact centre (informed from survey and interviews with decision makers) so participants can indicate which initiatives they were aware of using online emojis. Questions can then follow this prompted by the participants answers:</p> <ol style="list-style-type: none"> 3. Are you aware of these other initiatives? If not, why? 	Mapped to the COM-B model and the Theoretical Domains Framework (TDF).
Explore the factors perceived to influence advisors' engagement with		Mapped to the COM-B model, the Theoretical

workplace health initiatives in contact centres.	<p>4. What do you think would influence engagement with these initiatives? <u>Prompt</u>: are there any barriers to you taking part with this initiative? Is there anything that encourages you to make part?</p> <ul style="list-style-type: none"> - Capability (physical or psychological) e.g. do you feel physically able to take part? - Opportunity (social or physical) e.g. social norms, have access to the initiative? - Motivation (automatic or reflective) e.g. employee willingness/interest/acceptability. 	Domains Framework (TDF) and APEASE (acceptability).
Explore which health initiatives are most effective and why.	<p>5. Are they effective? If not, why? do you think there is potential for your organisation to improve employee health through implementing these policies/interventions? Equity? Would hybrid/remote working be a barrier/engaged to not? Side-effects?</p> <p>6. What else could they do?</p>	Mapped to the BCW intervention functions and policy categories, and APEASE (effectiveness, side-effects, equity).

Appendix 6.4: Example of an interactive whiteboard used in advisor interviews/focus groups



Appendix 6.5: Thematic map example



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Appendix 6.6: Summary of how each initiative maps to study 1 or study 3 (phase one)

Table 1 Summary of how each initiative maps to study 1 or study 3 (phase one)

Health initiatives listed in the survey	Evidence source informing the question
Having flexible working hours	Study 3
Offering discounts on health care (e.g. eye check-ups or dental care)	Study 3
Having a workplace environment that encourages advisors to speak up about health issues	Study 3
Having equipment to support a comfortable desk set up (e.g. a comfy chair, forearm support or any other adjustments that may be necessary)	Study 1 and 3
Offering professional counselling, if needed	Study 1 and 3
Giving advisors flexibility over their work setting (a choice between remote, hybrid and in-office working)	Study 3
Having a company scheme for sick pay, external from statutory sick pay	Study 3
Giving advisors a pay increase	Study 3
Having a policy that allows advisors time to recover after a stressful call	Study 3
Having approachable leaders who offer regular wellbeing one-to-ones, separate from performance meetings	Study 3
Having the workstation set-up and equipment checked regularly	Study 3
Having increased flexibility over structured breaks	Study 3
Offering advisors consultancy meetings with financial professionals, confidential from the organisation	Study 3
Providing educational material on health issues (e.g. depression, post-traumatic stress, the menopause)	Study 3

Offering discount to a local gym	Study 3
Having mental health champions/first aiders who listen to advisors	Study 3
Providing advisors with a space (dedicated wellbeing rooms or quiet spaces) to practice wellbeing behaviours	Study 1 and 3
Allowing advisors to be involved in the design of their job role, working with the organisation to make improvements to the working life	Study 1 and 3
Having social activities to increase team connection	Study 3
Offering discounts on everyday consumer goods	Study 3
Having a wide range of inclusive initiatives/events (e.g. International women's day, LGBTQ+ month, etc...)	Study 3
Having wellness apps (e.g., encouraging movement throughout the day using challenges and physical activity trackers)	Study 3
Having stand-capable desks (so advisors who are able to, can choose whether to sit or stand across their working day)	Study 1 and 3
Offering smoking cessation support, for advisors who need it	Study 1
Having a cycle to work scheme	Study 3