MENTUPP

Finalised Guidance Report

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D5.1 Finalised Guidance Report

Version History

Version number (date)	Details
1.0 (21.12.20)	Initial submission to EC
2.0 (26.03.21)	Changed MINDUP to MENTUPP throughout the deliverable including addition of published WP5 protocol paper in Appendix 7.2

1 Executive Summary

In order to provide insights that may help future implementation efforts for the MENTUPP Pilot Study and cRCT, this D5.1 Finalised Guidance Report aimed to identify and document research reporting on the implementation of mental health promotion interventions currently being delivered in workplace settings, and to understand the factors (barriers and facilitators) that influence the successful delivery of these interventions. A systematic scoping review using the 6-stage scoping review framework (1) was conducted using a step-wise approach, and including feedback from authors of key studies (trials) of effectiveness of workplace interventions, for mental health and stigma. The protocol for this review was registered under ResearchRegistry (2) and has been accepted for publication by the Journal of Systematic Reviews (see Appendix 2). The systematic scoping review was complimented with stakeholder views conducted using a Delphi survey. The literature was synthesised into 4 key messages for the MENTUPP intervention teams (WP7 and WP9), in relation to Participation, Adaptation, Communication and Support with one key action to facilitate addressing the 4 key messages.

2 Introduction & Background

MENTUPP aims to improve mental health and wellbeing in the workplace by developing, implementing, and evaluating a comprehensive, multilevel intervention targeting both clinical (depressive, anxiety disorders) and non-clinical (stress, burnout, wellbeing, depressive symptoms) mental health issues, as well as combating the stigma of mental (ill-) health.

WP5 focuses on implementation challenges of mental health promotion in SMEs, specifically within the construction, health, and ICT sectors. We will systematically review and synthesise the evidence base relating to successful and unsuccessful implementation of mental health promotion programmes (online, face-to-face, written materials and mixed methods of delivery) and will report barriers and facilitators to a successful implementation.

WP5 Objectives

• To review the evidence base on barriers and facilitators to successful implementation of mental health promotion programmes, with a specific focus on e-mental health, in the occupational setting by systematically reviewing the international qualitative and quantitative research with a focus on SMEs and the selected sectors (construction, health and ICT).

• To consult with stakeholders in construction, health, and ICT SMEs, to identify relevant additional literature, and to obtain their perspectives on barriers and facilitators on implementing mental health promotion programmes in the selected occupational settings.

• To produce a guidance report by synthesising the results of the systematic review and outcomes of the stakeholder engagement to inform the implementation of the MENTUPP intervention in the pilot phase and cRCT (WP7, WP9).

• To build a programme logic and conceptual model, that explains which aspects are considered crucial for a successful implementation and how these should be measured in the pilot phase and cRCT (WP7, WP9).

These WP5 aims will be achieved by the completion of tasks 5.1 to 5.6 within the MENTUPP DOA and this deliverable report D5.1 reports on the first 5 of these WP5 tasks.

3 Approach

This Finalised Guidance Report has focused primarily on feasibility and process evaluation studies to identify factors associated with successful and unsuccessful implementation. The main aim of WP5 has been to identify evidence-based factors associated with successful implementation of mental health interventions in occupational settings, and therefore it is not a review of the effectiveness of specific mental health interventions in relation to mental health outcomes in the workplace. Reviews of effectiveness have been completed within WPs 2, 3 and 4 and this review (WP5) complements and dovetails with this work. The authors of papers included in the reviews of effectiveness carried out in WPs 2, 3, and 4 have been consulted in this (WP5) review.

A systematic scoping review using the 6-stage scoping review framework (1) and a stepwise review methodology was employed (see diagram in Appendix 1). The stepwise approach is an efficient and effective methodology particularly useful for reviews undertaken within tight timeframes. The review methodology identifies the highest quality evidence in a systematic way. A number of contingency plans were built into the review protocol to allow an iterative approach to the search depending on the completeness of research evidence or evidence gaps found in each phase.

This report has been based on the conduct of the following tasks:

3.1 Task 5.1 Protocol design for systematic review.

A protocol design for the systematic review was developed in accordance with the PRISMA statement (3, 4) and literature relating to staged reviews (1), and we defined the inclusion and exclusion criteria, search strategy and terms, and iterative steps and details of the data extraction and data synthesis methods. This protocol was registered under Research Registry (1) and is currently under review in the Journal of Systematic Reviews.

3.2 Task 5.2 Conduct the systematic review.

The protocol for the review was then implemented with searches, and criteria for article inclusion/exclusion applied by 2 researchers independently to achieve consensus on eligibility for inclusion of relevant papers and reports. Any disagreements were resolved by discussion within the team in WP5. In accordance with the pre-defined protocol (see Appendix 2), we systematically searched for high quality reviews that address barriers and facilitators for workplace mental health promotion in SMEs in the selected sectors, followed by searches for primary quantitative and qualitative studies. Final searches of grey literature and scanning of the reference lists of already selected studies were also conducted.

3.3 Task 5.3 Synthesise the evidence of the systematic review.

Meta narrative techniques were used for data synthesis to provide a comprehensive overview of the range of literature and a detailed analysis of current knowledge combining evidence tables with narrative. The data synthesis was guided by a number of frameworks within implementation research, to differentiate barriers and facilitators into structural, organisational, stakeholder/employee/employer, and innovation related determinants and implementation outcomes such as adoption, fidelity, cost of implementation, penetration, and sustainability.

3.4 Task 5.4 Consultation with stakeholders in construction, health, and ICT SMEs.

This was conducted via an online (Delphi) survey in partnership with WPs 2, 3, 4, 7, 8 and 10, whereby stakeholders/experts in construction, health, and ICT were surveyed to obtain their perspectives on barriers and facilitators on implementing mental health promotion programmes in the selected occupational settings. These data were then compared and contrasted with the evidence from published literature to enhance our sector specific knowledge of barriers and facilitators.

The Delphi survey was developed and conducted as follows:

The Delphi process was the result of work by WP2, 3, 4, 5 and 8, with support from WP7 and 10, and was led by WP3 and UCC. A shared need for information from an expert consultation was identified across WP2, 3, 4, and 5 and so to optimise resources and minimise demands on experts' time it was agreed to merge this into one consultation process. WP2, 3, 4, and 5 all separately identified the knowledge gaps they needed to answer for their area in the expert consultation, and designed questions accordingly. Weekly meetings were held throughout March, April, and May to review progress, chaired by WP3, and attended by all the involved WPs. A sub-group of WPs 2, 3, and 4, with input from WP5, formulated the agreed content into a cohesive questionnaire which was piloted to members of the consortium and external experts for feedback before a final version was sent to all members of the consortium and signed off in June. An information sheet was also designed, led by EAAD in WP3, with support from the other WPs and WP10, to provide experts with information about MENTUPP and the expert consultation process. The ethics application was submitted to the Social Research Ethics Committee in UCC in June and approval was received at the end of August. This process was led by UCC with support from WP2 and WP3. WP5 also obtained ethical approval for 'stakeholder consultation' from the University of Stirling General University Ethics Panel (dated May 2020). WP8 agreed to carry out the data analysis and provided guidance on data analysis, storage, and the process for sending out the questionnaire in multiple languages.

WP3 partners were responsible for contacting partners in the intervention countries (WP7) and providing all the information about the Delphi questionnaire so that intervention country partners could identify and reach out to between 5 and 25 experts in each intervention country. The experts had to meet the following inclusion criteria of a minimum of 5 years of experience in one of the following: 1) sectors of ICT, healthcare, or construction, 2) be a member of an SME organisations, 3) academic experts, 4) occupational health specialist groups, 5) advocacy groups or 6) labour union groups. Exclusion criteria were to be part of the MENTUPP consortium. The research officer in each intervention country (WP7) was responsible for organising a translation into the local language where applicable, based on a template created by WP3.

At the beginning of September, a Qualtrics license was acquired by UCC and the questionnaire was uploaded to the Qualtrics online platform (www.qualtrics.com) by WP3 and distributed to the intervention partner countries, who were responsible for sending out the Delphi questionnaire link and reminders. Local language questionnaires were sent as a Word document to experts who could not respond in English, and local research officers were responsible for translating these answers and entering the data into the Qualtrics questionnaire link directly in English.
The final date for questionnaire response was 5th Oct 2020. WP3 reviewed the responses in Qualtrics and sent the data file to WP8 for analysis. All data analyses were carried out by WP8, and the results interpreted by WP 2, 3, 4, and 5.

3.5 Task 5.5 Compilation of guidance report

The combination of (1) the key findings from the systematic scoping review of evidence for implementation (Tasks 5.3), alongside (2) knowledge from sector specific stakeholders regarding barriers and facilitators to implementation (Task 5.4), form the basis of this Guidance Report for the implementation of the MENTUPP pilot cRCT (WP7) and the main MENTUPP cRCT (WP9). This also includes providing knowledge on process outcomes and process evaluation to the Evaluation team (WP8).

4 Results

Key themes identified from across the literature have been summarised in line with an adapted model by Fridrich (5). Fridrich's model considers context, process, and outcome of occupational health interventions, which will now be explained. The *organizational levels* represent different groups of stakeholders that should be considered differently throughout the process of implementation and evaluation (further detail below). *Context* refers to the landscape in which all intervention activities are conducted and *change,* and *outcomes* occur.

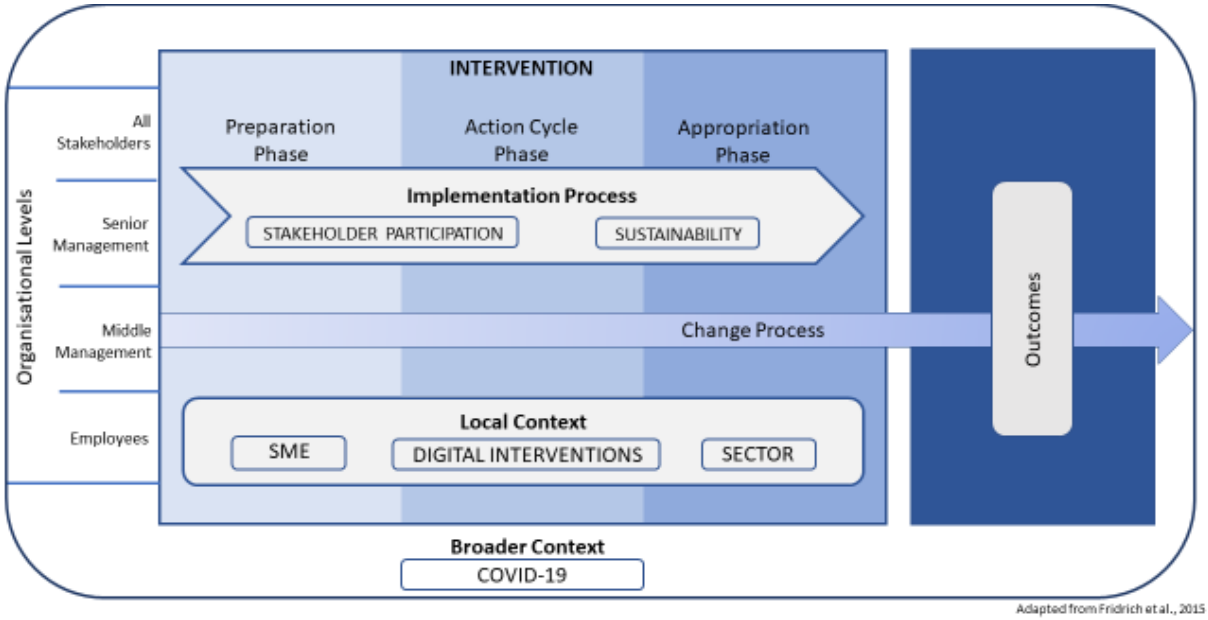


Figure 1 Adapted Fridrich model

While the *local context* includes situational variables, e.g., organizational size, sector, culture specific factors (e.g., a high turnover of staff, technology literacy, mental health literacy, etc.), the *broad context* refers to the wider setting, e.g., the outbreak of the COVID-19 pandemic, economic stability of the country, etc. *Process* includes (i) the *implementation process* is the time limited process of implementing all components and stages which lead to (ii) the *change process*, which includes all intended and unintended observable and non-observable mechanisms of change, the result of which are long-term and short-term *outcomes*. The model includes three temporal phases, starting with the *preparation phase*, which includes all activities needed to adapt the intervention into the context and ensure commitment from the organisation, e.g., conducting presentations & workshops with decision

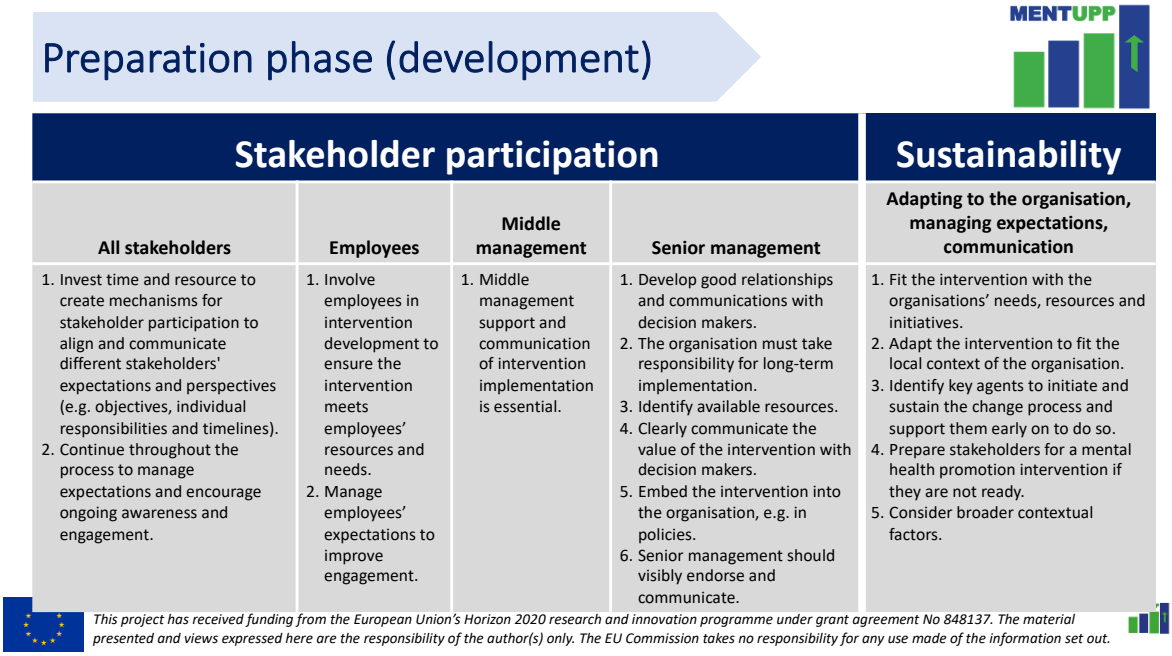
makers, qualitative context analysis, planning intervention architecture (who is involved, when and how), establishing a steering group and project leader and project champion. The *action phase* follows and involves all activities required to trigger a change to promote mental health, e.g., subphase analysis, action planning, implementation, and monitoring. The *appropriation phase* is the final phase. This involves all activities that support continuation of the change process and occurs when the implementers have left the organization (i.e., the research ends).

We present our findings in line with each of the three temporal phases described above (Preparation, Action Cycle, and Appropriation). Two major themes were identified from the evidence: Stakeholder Participation and Sustainability. Subthemes under Stakeholder Participation include All Stakeholders (e.g., intervention implementers, employees, management, organisation, union, health & safety representatives, human resource (HR) managers, etc.), Employees, Middle Management (e.g., supervisors, health and safety managers, HR managers) and Senior Management (owners, the organisation, HR managers, CEOs). Subthemes under Sustainability include adapting to the organisation, managing expectations and communication. We will also present any findings related to the relevant local context factors: sectors, SMEs, and digital health interventions.

4.1 Preparation Phase:

In the Preparation Phase and in relation to All Stakeholders, the evidence indicates that, firstly, time and resource is required to create mechanisms for stakeholder participation to align and communicate different stakeholders' expectations and perspective. For example, intervention implementers should have the same expectations as senior management, in relation to timelines and resources, and employees should have the same expectations as middle managers to avoid the negative impact of unmet expectations. Second, expectations should continue to be managed while also encouraging ongoing awareness of the intervention. At the Employee Level, the evidence endorses using bottom-up solutions during the Preparation Phase, whereby employees are involved in the intervention development e.g., via employee representation in decision making groups or focus groups. This is considered a key success factor for implementation because it ensures that their needs and resources are met, expectations are managed, a sense of ownership over the intervention is developed, the intervention is more likely to be viewed as beneficial, therefore leading to better engagement and likelihood of success and sustainability. At a Middle Management Level, continued support and communication is a key factor for intervention sustainability, for example management support is required for staff engagement and a lack of it is seen as a key barrier to implementation. Indeed, the greater the involvement and support from managers, the better the intervention implementation. At the Senior Management Level, it is crucial to develop good relationships and communications with key decision makers. This encourages realistic expectations to be agreed, for example, in terms of allocating resources, agreeing timelines, embedding the intervention into the organisation's policies, making a commitment to the long-term responsibility of supporting the intervention. It also provides an opportunity for the value of the intervention to be communicated to key decision makers, which is deemed particularly important in the context of SMEs. For example, messages communicated can include that it fits with the organisation's targets, it will help maintain job resources, and engagement will evidence the organisation's commitment to workplace mental health. Another important factor identified in the evidence relating to the Senior Management Level is that their endorsement of the

intervention should be visible to all other stakeholders. Therefore, a top-down change can be promoted alongside a participative approach with employees.



Preparation phase (development)

MENTUPP

Stakeholder participation				Sustainability
All stakeholders	**Employees**	**Middle management**	**Senior management**	**Adapting to the organisation, managing expectations, communication**
1. Invest time and resource to create mechanisms for stakeholder participation to align and communicate different stakeholders' expectations and perspectives (e.g. objectives, individual responsibilities and timelines). 2. Continue throughout the process to manage expectations and encourage ongoing awareness and engagement.	1. Involve employees in intervention development to ensure the intervention meets employees' resources and needs. 2. Manage employees' expectations to improve engagement.	1. Middle management support and communication of intervention implementation is essential.	1. Develop good relationships and communications with decision makers. 2. The organisation must take responsibility for long-term implementation. 3. Identify available resources. 4. Clearly communicate the value of the intervention with decision makers. 5. Embed the intervention into the organisation, e.g. in policies. 6. Senior management should visibly endorse and communicate.	1. Fit the intervention with the organisations' needs, resources and initiatives. 2. Adapt the intervention to fit the local context of the organisation. 3. Identify key agents to initiate and sustain the change process and support them early on to do so. 4. Prepare stakeholders for a mental health promotion intervention if they are not ready. 5. Consider broader contextual factors.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 848137. The material presented and views expressed here are the responsibility of the author(s) only. The EU Commission takes no responsibility for any use made of the information set out.

Figure 2 Key aspects of Preparation phase

With regards to Sustainability during the Preparation Phase, a key message identified within the evidence are to adapt the intervention to fit with the organisation's needs, resources, initiatives, and local context. In relation to the local context, helpful factors to consider include organisational politics, policies, long-term initiatives, resources, and culture (e.g., psychosocial safety climate), staff turnover, sector, and size. Where the psychosocial safety climate is poor, a staged approach, involving initial psychoeducation or anti-stigma work, may be required. The evidence also highlights the need to identify key agents to initiate and sustain the change process at an early stage, and to provide them with the tools and support they need to do so. In doing so, arrangements are set up early to resist factors that are detrimental to intervention sustainability, such as the withdrawal of external implementers, reduced commitment over time and weakened participatory structures. Consideration of broad contextual factors (e.g., restructuring, management changes, downsizing, etc.) was also identified as key to successful implementation and sustainability.

4.2 Action Cycle Phase (Implementation)

During the Action Cycle Phase, key points which support implementation that were identified in the evidence and relate to All Stakeholders are to (i) collect process information from key stakeholders to identify how they facilitate/hinder implementation, and to (ii) subsequently identify who is responsible for taking corrective action, if implementation gaps emerge, and how they will do this. At an Employee Level, this may be assessing how participants perceive the context or frequently monitoring participant's attitudes towards the intervention. Evidence indicates that a more positive psychosocial

safety climate increases the likelihood of altering job-stress and that more frequent monitoring helps maintain awareness of the intervention and that long intervals between assessments reduce participation.

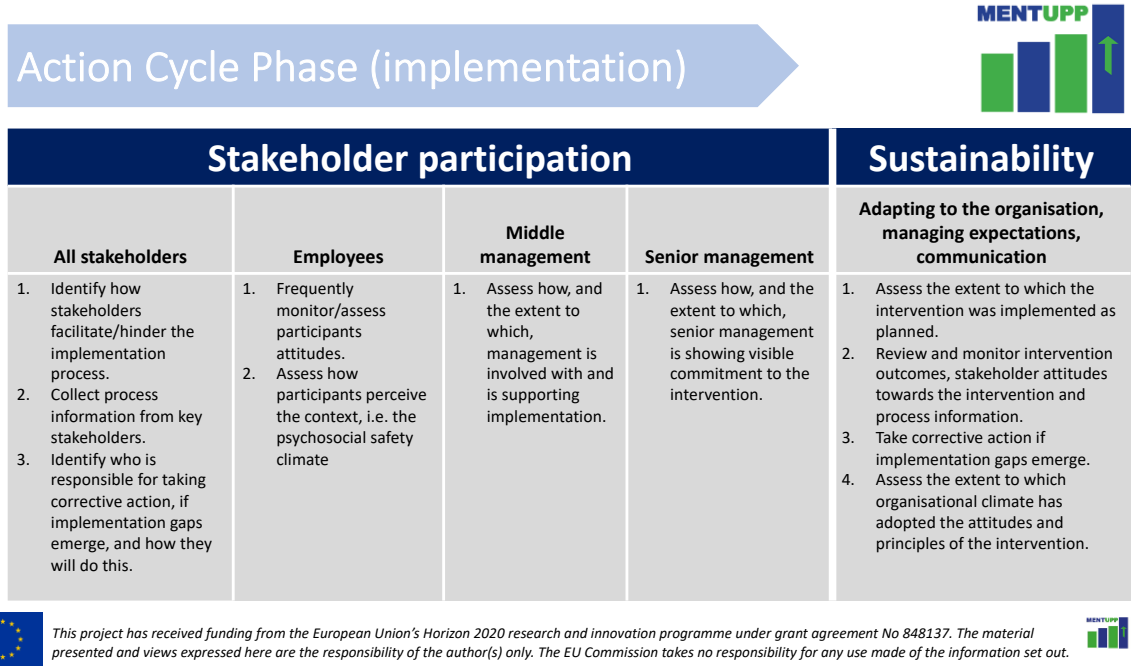


Figure 3 Key aspects of the Action Cycle Phase

At a Middle Management and Senior Management Level, recommended information to collect is how and the extent to which management is involved with and is supporting implementation and is showing visible commitment to the intervention, respectively. Long lasting and far-reaching interventions particularly require commitment from organizational leaders.

Assessment was also the central message from the literature terms of Sustainability. Key areas of assessment are highlighted under Sustainability in Figure 3.

4.3 Appropriation Phase

In relation to Stakeholder Participation in the Appropriation Phase, key factors identified in the evidence base which are associated with successful implementation include ensuring measures are in place to facilitate a continued participative approach and to identify who is responsible for what and what resources and support are required, in terms of further developing and sustaining changes. For example, managers and steering groups can play an active role in talking about the intervention in order to remind stakeholders, particularly employees, of the changes that have been implemented, and such changes can be consistently followed-up.

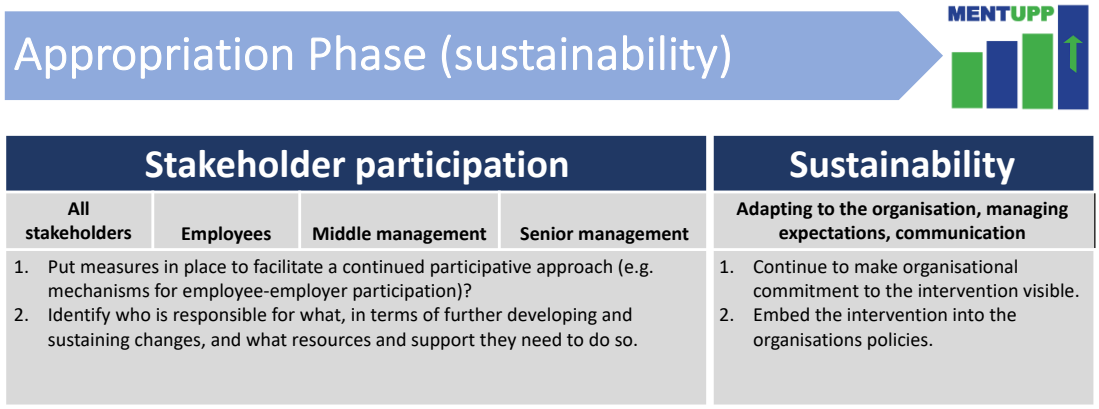


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Figure 4 Key aspects of the Appropriation Phase

4.4 Local Context

Issues associated with successful implementation of mental health promotion interventions in the workplace will now be discussed in relation to Local Context factors, i.e., sector, digital interventions, and SMEs.

4.4.1 Sector

There are specific challenges that relate to each of the three sectors. The construction sector, for example tends to have a male dominated culture, which is a barrier to help-seeking. As such, anti-stigma work is likely to be important. The intervention must also be delivered so that employees in the construction industry will relate, for example, reduce the focus on psychology/mental health jargon and signposted or obtain endorsement from those within the industry. Furthermore, to increase motivation for help-seeking, the intervention should be visible and accessible on site. Finally, consider the transient nature of jobs and languages of immigrant workers within the construction sector to ensure the intervention has a broad reach.

Within the healthcare sector, there are challenges to implementing mental health promotion interventions that relate to shiftwork, the hierarchy and different cultures between healthcare professions and the clinical nature of the job. Regarding the latter, intervention flexibility and support will be key. For example, the intervention should be flexible enough to use for short periods of time and to fit into inconsistent schedules, e.g., 10-minute task with in-programme guidance that can be accessed anywhere (i.e., a smartphone), and employees will need support to balance clinical demands and the intervention.

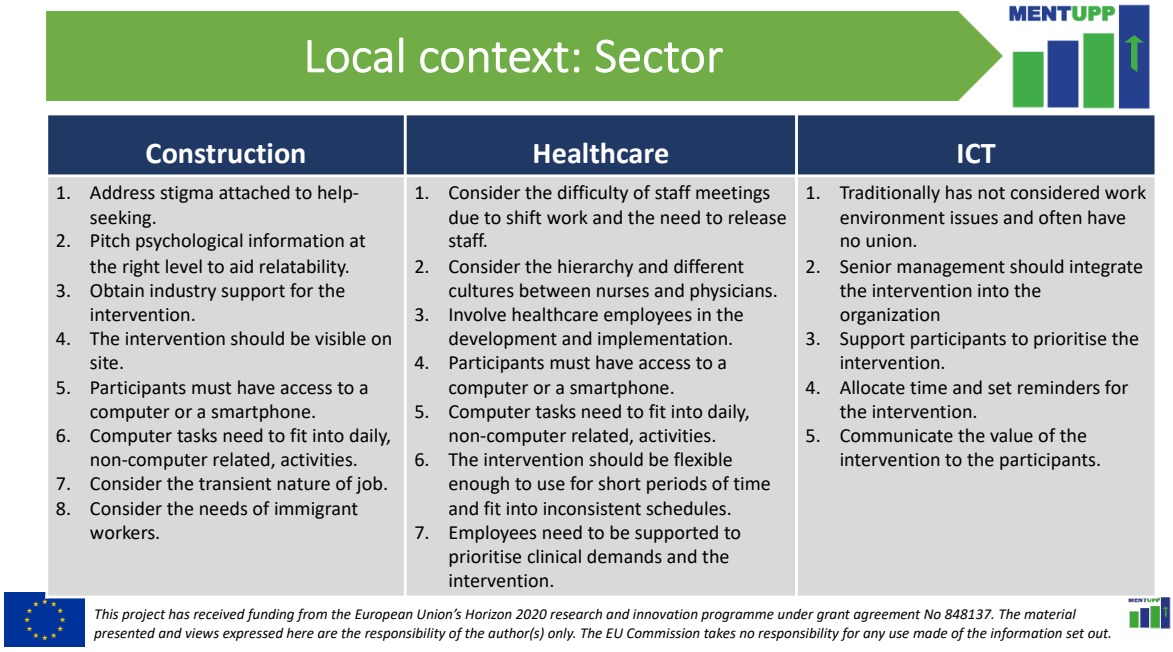

Figure 5 Local Context considerations for the Construction, Health, and ICT sectors

The ICT sector also has individual implementation challenges relating to mental health promotion interventions. For example, traditionally, the sector has not considered work environment issues and there is often no union. It is a highly stressful environment with no room for error, therefore employees need supports to prioritise the intervention alongside the workload, for example through support and endorsement from middle and senior management. Furthermore, having a lack of time, forgetting, and having a lack of perceived need have been identified as barriers to engagement at an employee level, therefore reminders of the value of mental health promotion interventions delivered in a relatable manner will likely be important for successful implementation and sustainability.

4.4.2 Digital Interventions

There is a distinction between organisational and individual level factors which affect implementation of mental health promotion workplace interventions. At an organisational level, it is important to create opportunities for employees to discuss and develop suggestions for change, be an active part of identifying solutions, trying them, and making changes (i.e., the Action Cycle). Therefore, employees can follow the development and be part of the ongoing discussion in parallel with the change process for the organisation. At an individual level, it is important for employees to have anonymity in completing intervention tasks, feel protected from stigma, and also feel supported by managers to engage with the intervention. One suggestion to achieve this is through middle managers circulating intervention information and broadly encouraging its use. On a practical level, employees must have an appropriate IT literacy level, the intervention needs to be flexible enough to fit into daily activities (whether those activities are computer-related or not). Digital interventions are notorious for low levels of engagement. However, the evidence indicates that interactive interventions have better engagement than non-interactive interventions. Furthermore, regularly updating materials, providing

time-unlimited materials (e.g., new models of task each week that become time-unlimited) and indicating an estimated time to complete for each task/module have been identified as important factors for engagement. Personalisation is also seen as important. For example, allowing individuals to choose the frequency of login reminders and individually tailoring feedback (e.g., tracking progress through number of minutes/modules completed) have been identified as useful features to increase engagement.

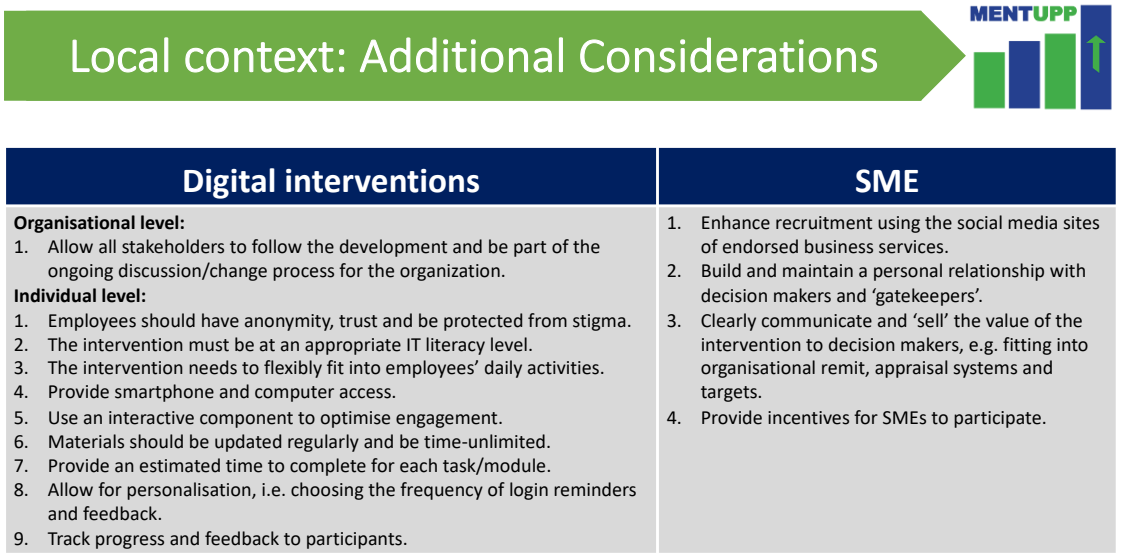

Figure 6 Local Context: Additional Considerations

4.4.3 SMEs

There are specific challenges to implementation of mental health promotion programmes in SMEs, such as recruitment and retention. To enhance recruitment to stress management interventions, previous studies have used social media sites endorsed by business services. Other recommendations identified in the literature include, building a personal relationship with decision makers and 'gatekeepers', clearly communicating the value of the intervention to decision makers and providing incentives to participate and remain engaged.

4.5 Consultation with Stakeholders

We present a summary of the analysis of Delphi survey results, which have been matched to key findings within the literature (highlighted in yellow). The Delphi survey asked experts about barriers to implementing methods/policies/interventions aimed at promoting employee mental health, and about implementing anti-stigma interventions specifically.

Figure 7 Barriers to Implementing Interventions

Figure 7 presents the most common barriers, identified by experts, in relation to implementing employee level mental health promotion interventions. These are consistent with those identified in the evidence base, e.g., financial constraints, lack of policy addressing mental health, lack of policy addressing mental health, approach is too generic or insufficient, time-management issues and stigma.

Similar barriers arose when experts were asked about barriers to the implementation of anti-stigma interventions, e.g., shame based on stigma (n=11), lack of knowledge (n=11), lack of time (n=4), thinking that such activities are not relevant (n=5), organizational culture (n=3), lack of support by managers (n=2).

Figure 8 Facilitators to Implementing Interventions

The Delphi survey also asked about facilitators for implementing methods/policies/interventions aimed at promoting employee mental health. Figure 8 presents the most common facilitators to implementing mental health promotion interventions for employees identified by experts. Again, these are consistent with those identified in the literature (highlighted in yellow), e.g., flexibility in the workplace concerning working hours and adaptation of tasks if needed, invest in long-term strategic planning of mental health promotion, strengthen the commitment of managers/supervisors, create a safe environment (e.g., balanced workload, stable workplace, psychological safety, diversity), develop positive awareness in company's culture, align the needs of all actors.

The Delphi survey also asked experts about factors which may influence the acceptability of an intervention in the area their expertise, in relation to managers and supervisors, employees and online tools. 53% and 52% of experts said managers would be concerned about the *lack of resources* for implementation and that employees will *access interventions during work time* or *using work resources*, respectively, to a large extent. 66% and 60% of experts said *information on the economic benefits* of mental health interventions and *testimonials from other managers* who have implemented mental health interventions, respectively, would influence whether managers chose to implement such interventions in their own workplace to a large extent. 69% of experts said *confidentiality, discrimination or stigma*, and *career progression* or *job security* would prevent participants from participating in mental health interventions in the workplace, to a large extent. In relation to online tools, 71% of experts agreed or strongly agreed that individual employees would be *uncomfortable accessing online tools at work*. However, 57% and 69% of experts agreed or strongly agreed that employees have *easy access to a computer or smartphone*, respectively, during working hours.

The Delphi survey asked experts whether there were gender differences in relation to help-seeking for mental health problems, and whether gender-specific aspects should be considered when supporting an employee's mental health. There was not complete consensus across participants. For example,

35% of experts said there is a huge difference in help-seeking behaviour between males and females (i.e., females are more likely to talk openly and seek help overall, and sooner), while 14% said there is no gender difference. 37% of experts said specific needs should be considered in male/female dominated workplaces, while 6% said support should not focus on gender. Finally, 27% of experts said gender-specific aspects should be considered when supporting employee's mental health, while 16% said there should not be gender differences, however reasoning for the latter was because mental health support is important regardless of gender.

4.6 Summary of findings

We aimed to present the findings from the highly complex and detailed systematic scoping review in a distilled way to our WP partners so this research evidence (of barriers and facilitators to implementation of mental health promotion interventions in the workplace) would be highly implementable. Therefore, the findings have been summarised as 4 key messages, as seen in Figure 9.

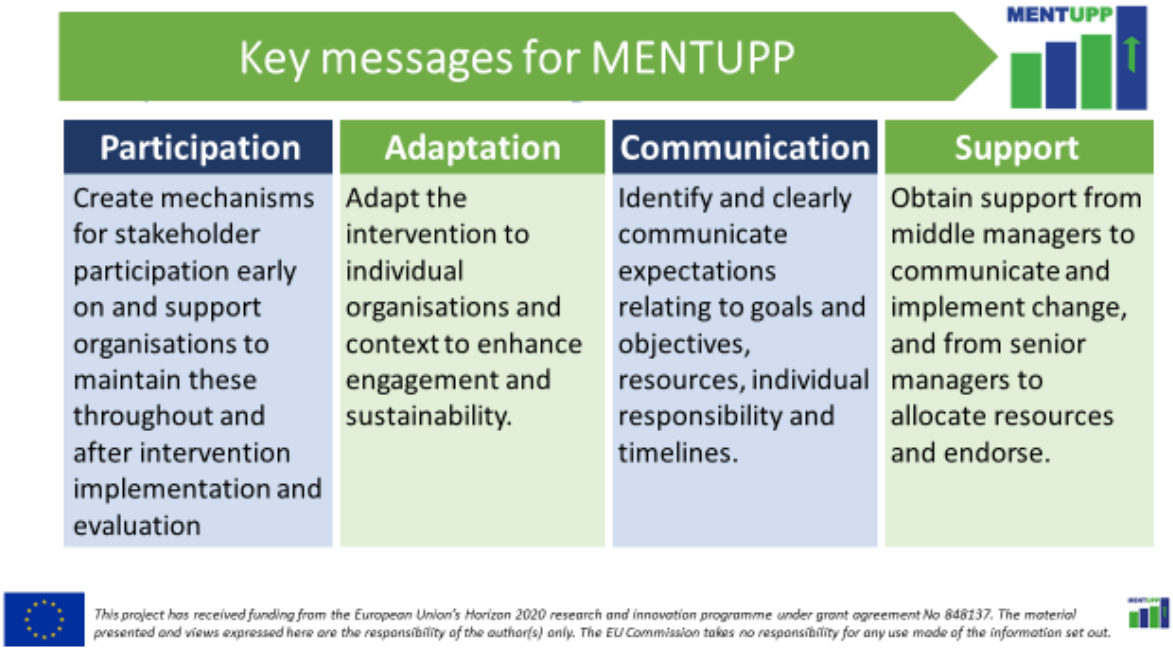

Figure 9 Key Messages for the MENTUPP Intervention team from our findings

Additionally, we wanted to provide brief action-oriented advice as to how best to achieve implementation of these key messages in the process of implementing the MENTUPP interventions in the workplace within the pilot RCT and the main RCT. This has been distilled into one key action that will carry forwards throughout the entire project: from the Preparation phase, during the Action Cycle phase, and on to ensuring the Appropriation phase. This key action is as presented in Figure 10.

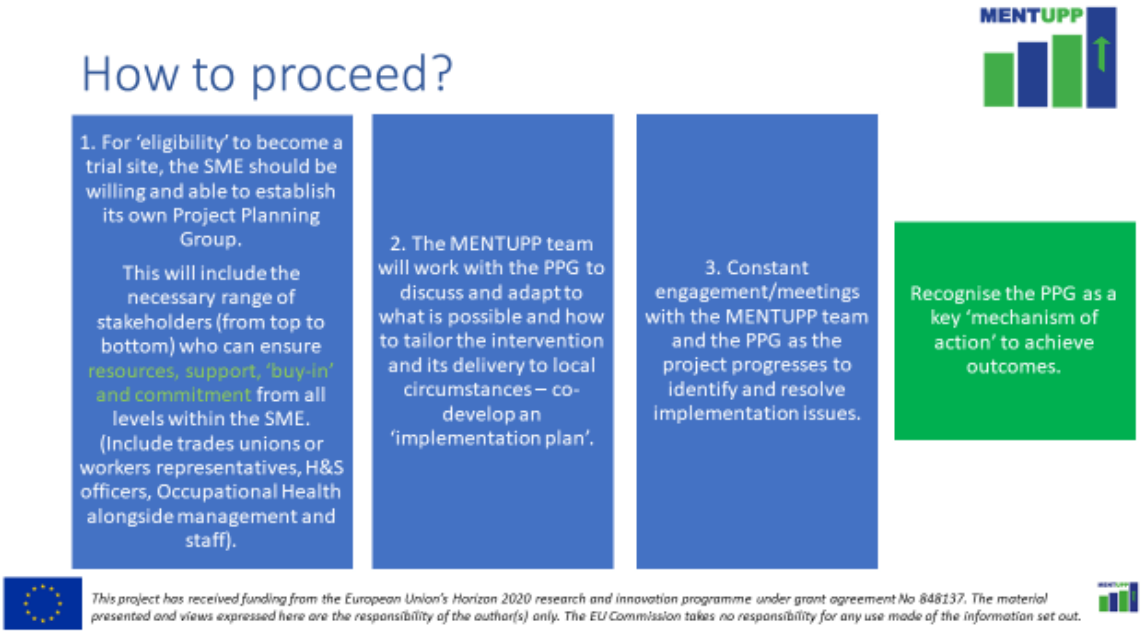

Figure 10 Key Action for the MENTUPP Intervention team from our findings

5 Impact & Conclusion

The findings from this WP5 systematic scoping review and Delphi survey were presented to WPs 2, 3, 4, 7, 8 and 9 in a combined meeting focusing on the development of materials for the MENTUPP intervention (WPs 2, 3 ,4), the evaluation of the MENTUPP (pilot and main RCT) (WP8), and the implementation of the pilot (WP7) and the main RCT (WP9). This report constitutes a written version of the presentation of the guidance to implementation and evaluation of the MENTUPP programme. The findings (from this report) will be taken forward in all future WP 7 and 9 meetings and WP7 has a good steer to planning the implementation of the MENTUPP intervention in the pilot regions.

The key output of our Guidance Report will be guidance to implementation of the MENTUPP intervention, that reflects evidence and best practice globally to date, which will evolve along the MENTUPP project lifetime.

6 References:

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7 Appendices

7.1 Appendix 1 Stepwise Review methodology

Step 1: Search for high quality systematic reviews							
Reference screening	Screen by title topic and then by abstract to select studies for inclusion. Retrieve full article and screen for eligibility.	**Step 2: Search for primary studies with particular attention paid to gaps in evidence identified in step 1**		**Step 3: Search for grey literature with particular attention paid to gaps in evidence identified in steps 1 and 2**			
		Study types included	Qualitative studies; surveys; trials with process evaluations				
Quality control check	Quality control check of selected references by a second reviewer	**Reference screening**	Reviewers' screening by title topic and then by abstract to select references for inclusion. Retrieve article.	**Internet search[3]**	Data bases to be specified	**Step 4: Evidence appraisal and synthesis**	
Identify gaps in the evidence	Selected references mapped to the 3 sectors to identify gaps.	**Quality control check**	Quality control check of selected references by team members	**Snowball**	Scan reference lists in literature retrieved (Steps 1 and 2) for further publications.	**Data extraction**	Extract data in a pre-agreed format tailored to the review requirements
Team consensus on studies for inclusion	Final agreement on studies for inclusion. Gaps in evidence? If so, progress to step 2.	**Identifying gaps in the evidence**	Selected references mapped the 3 work sectors	**Call for evidence**	Stakeholders consulted to identify published and unpublished literature that may have been missed.	**Quality assessment** Tabulate high, moderate, low, very low quality evidence for each sector.	Use critical appraisal tools for quantitative and qualitative studies by Critical Appraisal Skills Programme [4]
		Team consensus on studies selected for inclusion	Final agreement on studies selected for inclusion. Gaps in evidence? If so, progress to step 3.	**Identifying gaps Team consensus on evidence**	Selected references mapped to sectors to identify gaps. Final agreement on studies selected for inclusion. Gaps in evidence? If so, clearly document. Go to step 4	**Data synthesis**	Meta-narrative approach

7.2 Systematic scoping review protocol manuscript accepted by Systematic Reviews

Systematic Reviews

Evidence for Implementation of Interventions to Promote Mental Health in the Workplace: A Systematic Scoping Review Protocol

--Manuscript Draft--

Manuscript Number:	SYSR-D-20-00528R1
Full Title:	Evidence for Implementation of Interventions to Promote Mental Health in the Workplace: A Systematic Scoping Review Protocol
Article Type:	Protocol
Funding Information:	Horizon 2020 (848137) — Prof Ella Arensman
Abstract:	Background Mental health problems are common in the working population and represent a growing concern internationally, with potential impacts on workers, organisations, workplace health and compensation authorities, labour markets and social policies. Workplace interventions that create mental health-supportive workplaces, promote mental health awareness, destigmatise mental illness and support those with mental disorders are likely to improve health and economical outcomes for employees and organisations. Identifying factors associated with successful implementation of these interventions can improve their quality and evaluation and facilitate the uptake and expansion. Therefore, we aim to review research reporting on the implementation of mental health promotion interventions delivered in workplace settings, in order to increase understanding of factors influencing successful delivery. Methods and analysis A scoping review will be conducted incorporating a stepwise methodology to identify relevant literature reviews, primary research and grey literature. This review is registered with Review Registry (reviewregistry897). One reviewer will conduct the search to identify English language studies in the following electronic databases from 2008 through to July 1, 2020: Scopus, PROSPERO, Health Technology Assessments, PubMed, Campbell Collaboration, Joanna Briggs Library, PsycINFO, Web of Science Core Collection, CINAHL, Institute of Occupational Safety and Health (IOSH). Reference searching, Google Scholar, Grey Matters, IOSH and expert contacts will be used to identify grey literature. Two reviewers will screen title and abstracts, aiming for 95% agreement, and then independently screen full texts for inclusion. Two reviewers will assess methodological quality of included studies using the Mixed Methods Appraisal Tool, and extract and synthesize data in line with the RE-AIM framework, Nielson and Randall's model of organisational-level interventions and Moore's sustainability criteria, if the data allows. We will recruit and consult with international experts in the field to ensure engagement, reach and relevance of the main findings. Discussion This will be the first systematic scoping review to identify and synthesise evidence of barriers and facilitators to implementing mental health promotion interventions in workplace settings. Our results will inform future evaluation studies and randomised controlled trials and highlight gaps in the evidence base.
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Response to Reviewers:	Dear Prof Marti-Carvajal, RE: 'Evidence for Implementation of Interventions to Promote Mental Health the in the Workplace: A Systematic Scoping Review Protocol' Thank you for your response dated 17th November 2020 regarding the submission of the above paper for consideration for publication in Systematic Reviews BMC. Thank you also for the encouraging comments and helpful suggestions. Please see our responses to reviewer's comments below. Please note that reviewer's comments are in italics. '…if you could also explore Compassion Satisfaction and Secondary traumatic stress that would be worth studying.' We agree that both compassion satisfaction and secondary traumatic stress are worth studying. As we searched for stress in multiple iterations broadly, and included compassion fatigue, stress and occupational stress in our string, we believe that we will include compassion fatigue and secondary traumatic stress under the umbrella of empathy-based stress (1). We will verify our review selections to ensure that, should there have been any process evaluations of interventions targeting 'empathy-based stress' including compassion fatigue and secondary traumatic stress in our results, we consider them. '…page-5, line-113 the MINDUP can be cited and the reference should be added at the end as online resource.' We have created a citation, on line 113, and included the reference as an online source at the end of the manuscript. We have also updated the acronym of the project to MENTUPP, due discovering that a similar acronym has already been registered as a trademark by another organisation, the Hawn Foundation (see footnote). There will be no changes to the name of the project: 'Mental Health Promotion and Intervention in Occupational Settings'. We hope that the above revisions are satisfactory and in line with the standards of Systematic Reviews. We look forward to hearing from you. Kind regards,

	Charlotte Paterson
Additional Information:	
Question	**Response**
Covering letter concerning your manuscript	Dear Dr Pieper and Dr Catalá-López, Ref. “Evidence for Implementation of Interventions to Promote Mental Health in the Workplace: A Systematic Scoping Review Protocol” We would be grateful if you considered the above manuscript for publication in Systematic Reviews, BMC. In this protocol, we present the design for a systematic scoping review of evidence of the implementation of mental health promotion interventions in the workplace. The review is part of a wider project (MINDUP) funded by the European Union’s Horizon 2020 research and innovation programme under grant agreement No 848137. MINDUP aims to develop, implement and evaluate mental health promotion interventions in the workplace, particularly in small- to medium-sized enterprises and healthcare, construction and information and communication technology sectors. Our review aims to inform the implementation of mental health promotion interventions for the workplace, particularly in small- to medium-sized enterprises and healthcare, construction and information and communication technology sectors. We believe our paper is suitable for Systematic Reviews, BMC, because we have taken steps to ensure that the review is of a high quality. Additionally, for the first time, it will synthesise evidence on the implementation of these important and timely interventions, therefore contributing to the current evidence-base and aiding organisations in making decisions regarding mental health promotion intervention implementation. All authors have approved the manuscript for submission, we have no competing interests and the manuscript is not considered for publication elsewhere. We are looking forward to hearing from you. Sincerely yours Dr Charlotte Paterson

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Systematic Reviews

PROTOCOL Open Access

Evidence for implementation of interventions to promote mental health in the workplace: a systematic scoping review protocol

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Abstract

Background: Mental health problems are common in the working population and represent a growing concern internationally, with potential impacts on workers, organisations, workplace health and compensation authorities, labour markets and social policies. Workplace interventions that create workplaces supportive of mental health, promote mental health awareness, destigmatise mental illness and support those with mental disorders are likely to improve health and economical outcomes for employees and organisations. Identifying factors associated with successful implementation of these interventions can improve intervention quality and evaluation, and facilitate the uptake and expansion. Therefore, we aim to review research reporting on the implementation of mental health promotion interventions delivered in workplace settings, in order to increase understanding of factors influencing successful delivery.

Methods and analysis: A scoping review will be conducted incorporating a stepwise methodology to identify relevant literature reviews, primary research and grey literature. This review is registered with Research Registry (reviewregistry897). One reviewer will conduct the search to identify English language studies in the following electronic databases from 2008 through to July 1, 2020: Scopus, PROSPERO, Health Technology Assessments, PubMed, Campbell Collaboration, Joanna Briggs Library, PsycINFO, Web of Science Core Collection, CINAHL and Institute of Occupational Safety and Health (IOSH). Reference searching, Google Scholar, Grey Matters, IOSH and expert contacts will be used to identify grey literature. Two reviewers will screen title and abstracts, aiming for 95% agreement, and then independently screen full texts for inclusion. Two reviewers will assess methodological quality of included studies using the Mixed Methods Appraisal Tool and extract and synthesize data in line with the RE-AIM framework, Nielson and Randall's model of organisational-level interventions and Moore's sustainability criteria, if the data allows. We will recruit and consult with international experts in the field to ensure engagement, reach and relevance of the main findings.

(Continued on next page)

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(Continued from previous page)
Discussion: This will be the first systematic scoping review to identify and synthesise evidence of barriers and facilitators to implementing mental health promotion interventions in workplace settings. Our results will inform future evaluation studies and randomised controlled trials and highlight gaps in the evidence base.

Systematic review registration: Research Registry (reviewregistry897)

Keywords: Barriers and facilitators, RE-AIM, Workplace, Mental health promotion, Implementation science, Scoping review, Organisational interventions, Workplace interventions, Process evaluation, Wellbeing promotion

Background

Mental health problems are common in the working population and represent a growing concern, with potential impacts on workers' wellbeing, health and discrimination; organisations through lost productivity; workplace health and compensation authorities due to growing job stress-related claims; and social welfare systems owing to increased working age disability pensions for mental disorders [1]. Mental health refers to 'a state of wellbeing in which the individual realizes his or her own abilities, can cope with normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community' [2]. Mental health problems therefore include daily worries, stress, burnout and poor wellbeing, as well as mental health conditions such as depression or anxiety [3]. Psychosocial stresses in the workplace, such as job uncertainty, low job control, poor management, harassment and bullying, poor communication and long hours, have been shown to undermine mental wellbeing [4]. A negative working environment may lead to physical and mental health problems, harmful use of substances or alcohol, absenteeism, presenteeism and lost productivity [5]. Although it is acknowledged that mental health problems exist in the workplace, stigma and the social exclusion of people with mental health problems may be leading to under-recognition of such problems and the subsequent low treatment rate of mental health problems [6–8]. Under-treatment has been shown to increase the indirect cost of mental disorders, physical morbidity and mortality [9, 10].

Several studies have evaluated workplace interventions targeting mental wellbeing [11]. Workplace interventions that support mental health and wellbeing have been shown to help reduce sickness absence [12]. In addition, workplaces that promote mental health awareness, destigmatise mental illness and support people with mental disorders are more likely to reduce levels of depression and absenteeism while increasing productivity as well as benefiting from associated economic gains [13]. Improving access to evidence-based interventions for minor stress-related depressive symptoms in occupational sectors associated with high suicide rates, e.g. construction, healthcare and information communication and technology (ICT), is likely to prevent the development of severe depressive disorders and comorbidities, and subsequent suicidal behaviour [13].

Although high-quality evaluations underpin evidence-based interventions (EBI), implementation research can improve the quality of such evaluations and facilitate the uptake and reach of EBIs and other research findings into practice [14]. One effective way to do this is to identify factors that influence the delivery and uptake of interventions during development, feasibility, evaluation and implementation stages [15].

So far, research into specific mechanisms and process factors associated with the successful delivery of mental health promotion interventions in the workplace is limited [16, 17]. This review aims to identify and analyse research on the implementation of workplace mental health promotion interventions; specifically, to understand the barriers and facilitators that influence their delivery in order to provide insights and inform future intervention, evaluation and implementation efforts. This work represents a direct response to recent calls within intervention research to examine the mechanisms through which interventions bring about change and the documentation of contextual and procedural considerations that either facilitate or limit implementation [16, 17].

Aims and objectives

This review is part of a wider project intending to develop, evaluate and implement a multi-level intervention (Mental Health Promotion and Intervention in Occupational Settings, MENTUPP) [18], which aims to improve mental health and wellbeing in the workplace involving 15 European and Australian partners, with a particular focus on small to medium sized enterprises (SMEs) in three sectors with high prevalence rates of mental health problems and suicidal behaviour, namely ICT, healthcare and construction sectors. More broadly, the purpose of this review is to collate and critically appraise workplace mental health intervention implementation literature to understand how and why certain interventions are more effectively implemented than others and inform MENTUPP and future programmes. The objectives of the review are to:

1. Systematically identify and document research explicitly reporting on the quality of *delivery and implementation* of mental health promotion interventions in workplaces (e.g. reporting the quality of implementation, a process evaluation or realist evaluation) and, if the evidence allows, specifically in ICT, construction and healthcare settings and SMEs.

2. Identify the barriers and facilitators associated with the quality of implementation of mental health promotion interventions in workplace settings and, if the evidence allows, specifically in ICT, construction or healthcare settings and within SMEs, as it relates to the MENTUPP programme of work.

Based on these objectives, our *research questions are:*

i. What is the scope of research with explicit analysis of implementation aspects of mental health promotion interventions in the workplace?
ii. What are the barriers and facilitators to implementing mental health promotion interventions in the workplace?
iii. What are the barriers and facilitators to implementing mental health promotion interventions in SMEs and in the ICT, construction and healthcare sectors?

Methods/design

Study design

We will conduct a systematic scoping review using the 6-stage scoping review framework [19, 20] to systematically identify the implementation evidence and factors associated with successful implementation of mental health promotion in workplace settings. Scoping reviews aim to map a broad field of literature and to summarise and disseminate research findings [19, 21], rather than address very focussed questions. This approach is in line with the aims of this review, given the wide range of potential successful and failed interventions, contexts and implementation factors. We will comprehensively explore the relevant research, using iterative methods to develop a rigorous and systematic search of the existing literature [20]. We will recruit and consult with international experts in the field according to both applied organisational and research experience at key stages of the review process and subsequently to ensure engagement, reach and relevance of the process and main findings. The active involvement of people affected by a research topic has been argued to be beneficial to the quality, relevance and impact of research [22, 23], and it enhances the perceived usefulness of systematic review evidence and addresses barriers to the uptake of synthesised research evidence [24, 25].

Our protocol was developed using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Protocol checklist (PRISMA-P) [26] (see Additional file 1). The present protocol has been registered within the Research Registry (reviewregistry897). The results of our scoping review will be reported in accordance with PRISMA-ScR [27].

Operationally, the current review will systematically conduct the searches based on the following *definition of key terms*:

- *Implementation*: The results of this review will inform the design of a feasibility and definitive trial of mental health promotion in the workplace. As such, implementation refers to interventions being delivered at feasibility and piloting, evaluation and implementation stages of the Medical Research Council (MRC) framework (15).
- *Mental health promotion* refers to interventions or programmes that aim to treat (intervene to improve mental health), prevent (inhibit the escalation of subclinical symptoms to clinical severity or prevent the onset of mental health problems) and promote (improve mental health by targeting positive components of mental health) mental health and wellbeing [28].
- *Barriers* are defined as any variable or condition that impedes the implementation or delivery of mental health promotion interventions.
- *Facilitators* are defined as any variable or condition that facilitates or improves the implementation or delivery of mental health promotion interventions.
- *Workplace settings* include any organisation operating with paid employees. Therefore, mental health promotion interventions must be delivered through, or be associated with, the workplace. Sector-specific definitions from the European Commission were used [29]. The ICT sector will include telecommunications activities, information technology activities and other information service activities (divisions 61–63); the healthcare sector will include healthcare provided by medical professionals in hospitals or other facilities and residential activities, but not social work activities (divisions 86–87); and the construction sector will include construction of buildings, civil engineering and specialised construction activities (divisions 41–43). Small- to medium-sized enterprises include those employing < 250 employees [30].

Information sources and search strategy

We will use iterative methods to develop and apply a rigorous and comprehensive search strategy, combining a series of free text terms and Medical Subject Headings (MeSH) terms for key concepts: (a) workplace AND (b) mental health, AND (c) interventions, AND (d) implementation. A preliminary search strategy (see Additional file 2) has been developed for PsycINFO, using established search terms (from Cochrane and other previous

search strategies [31–33], peer-reviewed in accordance with PRESS guidelines [34]. Boolean operators will be used to maximise the penetration of terms searched, and appropriate "wild cards" will be employed to account for plurals, variations in databases, and spelling.

We will use a stepwise methodology [35] to identify the highest quality evidence in a systematic way and capture grey literature. Grey literature will be included because it is likely that due to publication bias some unsuccessful interventions have not been published in peer-reviewed journals. A number of contingency plans have been built into the methods to allow an iterative approach to the search and selection of evidence for the review (Additional file 3). We will use established search terms and adapt searches for each of the following major electronic databases outlined below.

In step 1, we will search the following electronic databases for systematic reviews:

- Scopus
- PROSPERO
- Health Technology Assessments
- PubMed
- Campbell Collaboration
- Joanna Briggs Library
- Web of Science Core Collection

In step 2, we will look for primary studies reporting implementation of mental health promotion interventions in the following electronic databases:

- PsychINFO
- Scopus
- PubMed
- Web of Science Core Collection
- CINAHL
- Institute of Occupational Safety and Health (IOSH) research database.

Step 3 will involve supplementary searches involving a thorough review of relevant study references, grey literature and personal contacts using a systematic approach (Additional file 3). This will include searching:

- *Reference searching*: relevant studies included in published guidelines, relevant systematic reviews and listed in the included studies' reference lists and bibliographies.
- *Grey literature*: Google Scholar (25 pages relevant), Grey Matters and the Institute of Occupational Safety and Health (IOSH) research database.
- *Personal contacts*: we will contact international experts and authors of papers reporting trials (from 2008) on workplace interventions to address mental health promotion.

Criteria for considering studies for inclusion

Overview

The scoping review will address factors associated with successful implementation and therefore focus primarily on feasibility and process studies or realist evaluations. Although we will look at the relation between implementation and effects, the main aim of the review is to identify factors associated with implementation, specifically barriers and facilitators. The focus of this review will be cognisant of outcomes indicating successful implementation, including programme uptake, retention and impact.

Study designs

We will include any paper, regardless of study design, using either quantitative, qualitative or mixed-methods, which *explicitly* investigates, reports or discusses, in the title or abstract, any aspect of implementation of specific mental health promotion interventions (i.e. quality of implementation, a process evaluation including rich data or a realist evaluation) delivered in the workplace. This includes literature reviews (systematic reviews, scoping reviews, meta-analyses) and primary research studies published either in the peer-reviewed scientific literature or in the grey literature. We will exclude opinion pieces, commentaries, website discussions, blogs and magazine and newspaper articles.

Population

We will include studies with adult participants (aged 16–65) who are in formal employment, including those on sickness absence leave and are expected to return to work.

Interventions

Interventions, whose implementation is of interest, are purposefully applied strategies delivered in the workplace, targeting either workers, supervisors, managers, occupational health professionals, owners/executives or entire organisations. Included interventions will aim to (i) help protect mental health by reducing work-related risk factors (e.g. job strain, poor working conditions and job stressors such as job insecurity, psychological harassment (e.g. due to stigma), low social support at work, organisational injustice, and effort-reward imbalance); (ii) promote workplace mental health wellbeing by creating positive aspects of work, and develop employees' strengths (e.g. satisfaction, wellbeing, psychological capital, positive mental health, resilience and positive organisational attributes such as authentic leadership, supportive workplace culture and workplace social capital); and (iii) respond to mental health problems when they occur (e.g. interventions targeting burnout, stress, anxiety, depression or return to work) [36]. We will exclude studies that evaluate the implementation of general mental health interventions that are not specifically associated with workplace factors or delivered in work contexts (e.g. healthy eating or exercise at home), mental

health interventions that are not formally implemented in the workplace (e.g. online work-related mental health interventions freely available online without association to an organisation) and one-off events (e.g. distribution of mental health educational material or one-off information sessions through guest lecturers). Interventions not directly targeting psychological wellbeing or mental health will be included if the primary outcome is related to psychological wellbeing or mental health (e.g. a physical activity programmes delivered in the workplace with a primary outcome for improving mental health). Interventions that target a wide range of health and wellbeing outcomes, e.g. physical activity, obesity, smoking cessation and stress, will be excluded.

Outcomes of interest

We will only include studies reporting rich data on any implementation outcomes and will categorise outcomes within our data charting. We anticipate that identified outcomes may include fidelity, reach, dose delivered, dose received, adoption, penetration, feasibility, acceptability, context factors, process factors, sustainability factors, programme theories, theories of change and failure theories. We will exclude studies focusing on only the impact of interventions on disease end points, i.e. which do not evaluate implementation quality.

Types of settings

We will include studies conducted in any geographical location, and we will categorise the location based on relevance to Europe and Australia during data charting. The intervention must be delivered in, or in association with, a workplace setting and be implemented in the work schedule, work systems or administrative structures.

Language

Studies published in English will be included in steps 1 and 2. Studies published in English, French and German will be included in step 3.

Publication date

Studies published in the last 13 years will be included. The World Health Organization's (WHO) Global Plan of Action on Work's Health (2008–2017) [37] and the Mental Health Action Plan (2013–2020) [38] highlight the importance of promoting good mental health in the workplace. Furthermore, the field of implementation science is fairly new; therefore, literature published after 2008 is deemed to be most relevant to this review.

Study selection

Rayyan will be used for the study selection process [39]. Two reviewers will be utilised for a provisional screening of all titles (CP, CL), removing any clearly irrelevant papers. To ensure reliability between reviewers, 15% of the study titles will be reviewed blindly by both reviewers independently, aiming for 95% agreement. Where 95% agreement is not reached, a further 15% will be reviewed by both reviewers independently. Any discrepancy between reviewers will be discussed and, if necessary, will involve a third reviewer to resolve. The remaining study titles will be screened for abstract review by a single reviewer. Two reviewers will then be involved in screening the remaining potential abstracts (CP, CL) and rate them as relevant, irrelevant or unsure. To ensure consistency between reviewers, 15% will be checked independently, and where agreement does not reach 95%, a further 15% will be reviewed by both reviewers. Studies that are ranked as irrelevant will be excluded. We will obtain the full papers for the remaining studies. Two reviewers (CP, CL) will then independently assess each of these against the selection criteria. We will resolve any disagreement through discussion and will involve a third independent reviewer if needed.

Charting the data

Data extraction

We will pilot a data extraction template on the first four included studies and amend as required. We will extract key study details (e.g. study design, country, sample size, sector, intervention characteristics, impact on primary outcome, etc.) and implementation data (e.g. direct quotes, page numbers) will be structured using an adapted version of the RE-AIM framework [40] which has been complemented using selected categories from Nielson and Randall's model of organisational-level interventions [16] and Moore's sustainability criteria [41]. To ensure reliability, data from 15% of included papers will be coded by two reviewers (CP and CL) independently. Any ambiguity identified will be resolved through discussion with other members of the review team. Study authors will be contacted via email where data are missing or unclearly reported.

Data coding

Data will be coded as follows:

- Stage of intervention development/evaluation will be coded according to the MRC framework (i.e. feasibility, evaluation or implementation) [15].
- Countries will be coded using the World Bank classification [42] to identify countries of relevance to future research, e.g. Europe and Australia.
- Implementation evidence will be mapped using a modified version of the RE-AIM framework [40], which is organised into five categories: reach, effectiveness, adoption, implementation and maintenance. This

framework also allows evaluation of implementation at an individual and organisational level.

- Nielson and Randall's model of organisational-level interventions [16] will supplement the RE-AIM framework for this review allowing for extraction based on the intervention itself, the context in which it was delivered and participants' mental models.
- Intervention sustainability will be coded using Moore's definitions of sustainability [41], e.g. continued delivery, behaviour change, evolution/adaptation and continued benefits.

Quality appraisal

In line with previous systematic and scoping reviews that include mixed methods literature [32, 43], the methodological quality of included studies will be assessed using the Mixed Methods Appraisal Tool (MMAT) [44] for quantitative, qualitative and mixed methods research designs. Each study will receive a methodological rating between 0 and 100 (with 100 being the highest quality), based on the evaluation of study selection bias, study design, data collection methods, sample size, intervention integrity and analysis. Where studies integrate the process evaluation into the study design, the quality of the entire study will be assessed. Methodological quality will be rated by two reviewers (CL and CP). To ensure consistency between reviewers, 15% will be rated independently, and if agreement is reached, one reviewer will rate the remaining papers. Any ambiguity identified will be resolved through discussion with other members of the review team.

Collating, summarising and reporting

Descriptive characteristics of included studies will be tabulated and brought together using a narrative synthesis. To answer question one, we will summarise the type of evidence relating to the implementation of the interventions in workplace settings. To answer questions two and three, barriers and facilitators will be categorised according to the RE-AIM framework [40], modified using Nielson & Randall's (2013) model for evaluation organisational-level interventions [16] and Moore's sustainability criteria [45]. We will present tabulated data by sector and then occupational level (i.e. organisational, managerial, etc.) and intervention type. If the evidence allows, to further answer research question three, we will present tabulated data from included studies focusing specifically on SMEs using the same format. Key findings will be brought together within a narrative synthesis [46, 47].

Discussion

The aim of this systematic scoping review is to identify research that reports on the feasibility and implementation of mental health promotion interventions that are delivered in workplace settings, and to specifically understand the factors (barriers and facilitators) that influence the successful delivery of mental health promotion interventions in the workplace. This review is part of the MENTUPP project [18] which aims to develop, evaluate and implement mental health promotion interventions for the workplace, particularly in SMEs in the construction, healthcare and ICT sectors. As such, our review will aim to focus on intervention implementation barriers and facilitators in SMEs and in the construction, healthcare and ICT sectors. This work addresses recent calls within intervention research to examine the mechanisms through which interventions bring about change and the documentation of contextual and procedural considerations that either facilitate or limit implementation [16, 17]. Additionally, this timely review responds to international policy regarding mental health in the workplace [8]. In an effort to maintain quality and identify all relevant information, we have presented a rigorous and systematic approach to this scoping review. We have maintained a broad search strategy in order to capture the variety of implementation research that may be available, and we will consult with stakeholders to ensure the main findings are useful and relevant. The results of this review will identify barriers and facilitators to implementation of mental health promotion interventions in the workplace and inform future pilot and definitive RCTs within the MENTUPP project [18]. This will help inform future interventions, and the evaluation and implementation efforts of such interventions, which will subsequently improve outcomes for employees and organisations through improved mental wellbeing; reduced symptoms of depression, anxiety and stress; and reduced presenteeism and absenteeism. In addition, this review will contribute to implementation science related to workplace mental health promotion.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s13643-020-01570-9.

Additional file 1. PRISMA-P checklist.

Additional file 2. Draft Search Strategy.

Additional file 3. Outline of the step-wise review methodology.

Abbreviations

ICT: Information and communication technology; IOSH: Institution of occupational safety and health; MRC: Medical research council; MeSH: Medical subject heading; MMAT: Mixed methods appraisal tool; PRISMA: Preferred reporting items for systematic reviews and meta-analyses; PRISMA-P: Preferred reporting items for systematic reviews and meta-analyses; PRISMA-ScR: Preferred reporting items for systematic reviews and meta-analyses extension for scoping reviews; RCT: Randomized controlled trial; RE-AIM: Reach, effectiveness, adoption, implementation and maintenance; SMEs: Small-to-medium sized enterprises; WHO: World health Organization

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Authors' contributions
The protocol was conceptualised, designed, reviewed and approved by all authors. MM and CP contributed to the writing of the protocol. The subsequent study, review of abstracts, full studies and synthesis will be conducted by CP and CL and supported by MM, BG and BA.

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Availability of data and materials
All data generated or analysed during this study will be included in the published scoping review article and will be available by request to the corresponding author.

Ethics approval and consent to participate
Not applicable.

Consent for publication
Not applicable.

Competing interests
The authors have no competing interests.

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