World Health Organization

WHO guidelines on mental health at work

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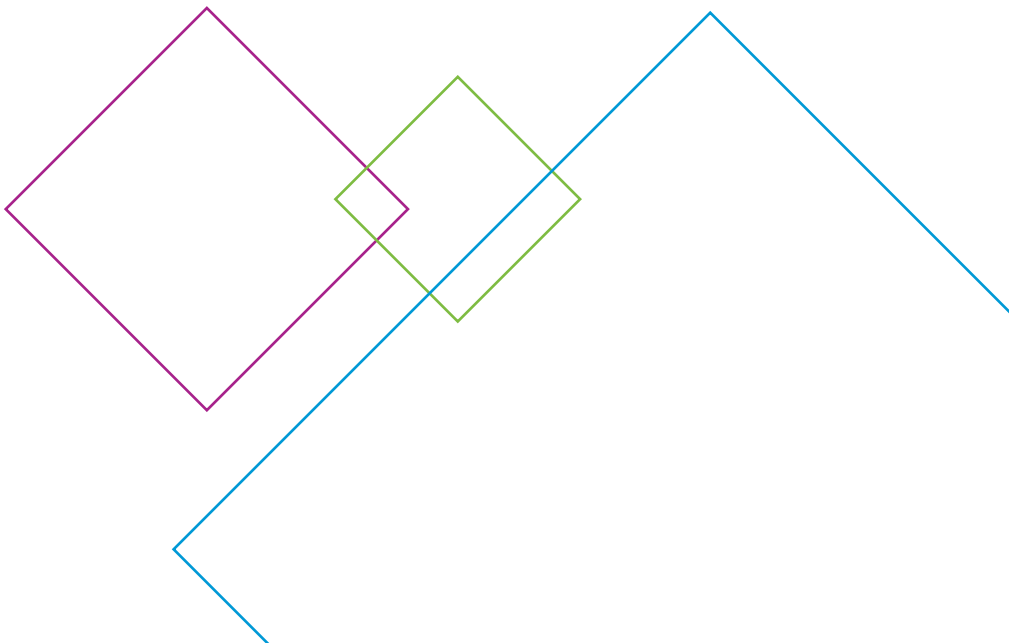

Foreword

Working people, like all people, deserve an inherent right to the highest attainable standard of mental health at work, regardless of their type of employment. And people living with mental health conditions have a right to access, participate and thrive in work. Governments and employers have a responsibility to uphold that right by providing work that simultaneously prevents workers from experiencing excessive stress and mental health risks; protects and promotes workers' mental health and well-being; and supports people to fully and effectively participate in the workforce, free from stigma, discrimination or abuse.

Yet the world of work is changing. Across the globe, technology, globalization, demographic shifts, emergencies and climate change are reshaping how and where we work. The COVID-19 pandemic has disrupted labour markets and accelerated the pace of change – especially in remote work, e-commerce and automation. Some jobs are being lost; some are being created; almost all are changing. For many, these changes are creating new pressures or exacerbating existing stresses around work that have the potential to undermine workers' mental health.

Addressing mental health at work effectively will help prepare for the future of work and a changing world.

Managing mental health at work can appear challenging. But it should not be seen as onerous. Rather, it offers an opportunity for growth and sustainable development. Safe, healthy and inclusive workplaces not only enhance mental and physical health but likely also reduce absenteeism, improve work performance and productivity, boost staff morale and motivation, and minimize conflict between colleagues. When people have good mental health, they are better able to cope with the stresses of life, realize their own abilities, learn and work well and contribute actively to their communities. And when people have good working conditions, their mental health is protected.

These guidelines provide evidence-based recommendations on interventions that can be implemented to better prevent, protect and promote, and support the mental health of workers. It highlights the importance of organizational interventions, manager and worker training and interventions for individuals. Particular attention is given to workers living with mental health conditions and the interventions that can be used to support them to gain employment, return to work following an absence or to be supported by reasonable accommodations at work.

The World Health Organization (WHO) is committed to supporting Member States to promote and protect the mental health of workers. Indeed, the Comprehensive mental health action plan 2013–2030 emphasizes the need for countries to promote safe, supportive and decent working conditions for all. The WHO Global Strategy on Health, Environment and Climate Change identifies workplaces as an essential setting for the prevention of a range of modifiable risks, particularly for non-communicable diseases. These guidelines mark a milestone in leveraging workplaces as a platform for action, providing a framework for the evidence-based action required to ensure effective prevention, promotion and support for mental health at work.

In all countries and across sectors, the wealth of enterprises and societies depends on the mental health of workers.

We encourage governments, enterprises and all stakeholders in the world of work to use and implement these guidelines as an effective tool for securing safe, healthy and inclusive workplaces that promote and protect mental health.

Soumya Swaminathan

WHO Chief Scientist

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Abbreviations

CBT	cognitive behavioural therapy
CerQual	confidence in the Evidence from Reviews of Qualitative research
cRCT	cluster-randomized controlled trial
CRE	WHO office of compliance, risk management and ethics
ERG	external review group
EtD	evidence-to-decision (framework)
GDG	guideline development group
GRADE	grading of recommendations, assessment, development and evaluation
GRC	WHO guideline review committee
ICD	international classification of diseases
ILO	International Labour Organization
LMIC	low- and middle-income country
mhGAP	WHO mental health gap action programme
MHPSS	mental health and psychosocial support
PICO	population intervention comparator outcome
RCT	randomized controlled trial
RTO	responsible technical officer
SME	Small and medium enterprise
UN	United Nations
UNCRPD	United Nations convention on the rights of persons with disabilities
WHO	World Health Organization
WHO SG	World Health Organization steering group

Executive summary

For a large proportion of the global population, mental health and work are integrally intertwined. Mental health is more than the absence of mental health conditions. Rather, mental health is a state of mental well-being that enables people to cope with the stresses of life, to realize their abilities, to learn well and work well, and to contribute to their communities. Mental health conditions occur irrespective of whether work has causally contributed to them. Poor mental health has a negative effect on a person's cognitive, behavioural, emotional, social and relational well-being and functioning, their physical health, and their personal identity and well-being as related to work. A person's capacity to participate in work can be consequently impaired through a reduction in productivity and performance, reduction in the ability to work safely, or difficulty in retaining or gaining work. Presenteeism (or lost productivity, which is where the largest financial costs lie), absenteeism and staff turnover affect both workers and employers and, in turn, the society's economy. An estimated 15% of working-age adults have a mental disorder at any point in time. The size of the public health problem of mental health conditions is greater than the volume of investment to address it. This is the case despite international conventions calling for the protection of workers' physical and mental health through national policies in occupational safety and health.

In these guidelines, the World Health Organization (WHO) provides evidence-based global public health guidance on organizational interventions, manager and worker training, and individual interventions for the promotion of positive mental health and prevention of mental health conditions, as well as recommendations on returning to work following absence associated with mental health conditions and gaining employment for people living with mental health conditions. The guidelines indicate whether and what interventions can be delivered to whole workforces – e.g. within a workplace (universal), to workers at-risk of mental health conditions (selective), or to workers experiencing emotional distress (indicated) – or to workers experiencing mental health conditions. Through the provision of these new WHO recommendations, it is anticipated that the guidelines will facilitate national and workplace-level actions in the areas of policy development, service planning and delivery in the domains of mental and occupational health. The guidelines seek to improve the implementation of evidence-based interventions for mental health at work.

The guidelines were developed in accordance with the *WHO handbook for guideline* development and meet international standards for evidence-based guidelines. In collaboration with the Guideline Development Group (GDG), the WHO Steering Group developed key questions and rated outcomes in order to identify those which were critical for the development of the guideline. Conflicts of interest from all individual guideline contributors were declared, assessed and managed in line with WHO's Compliance, Risk Management and Ethics (CRE) policy.

Systematic evidence reviews were used to develop the summary of findings tables, according to the Grading of Recommendations, Assessment, Development and Evaluations (GRADE) approach. The GDG developed recommendations that considered a range of elements, namely: the certainty of the evidence; the balance between desirable and undesirable effects; values and preferences of beneficiaries; resource requirements and cost-effectiveness; health equity, equality and discrimination; feasibility; human rights; and sociocultural acceptability.

Recommendations for organizational interventions

1 Universal organizational interventions

Organizational interventions that address psychosocial risk factors, including interventions involving participatory approaches, may be considered for workers to reduce emotional distress and improve work-related outcomes.

Conditional recommendation, very low-certainty of evidence

2 Organizational interventions for health, humanitarian and emergency workers

Organizational interventions that address psychosocial risk factors, for example reductions to workload and schedule changes or improvement in communication and teamwork, may be considered for health, humanitarian and emergency workers to reduce emotional distress and improve work-related outcomes.

Conditional recommendation, very low-certainty of evidence

3 Organizational interventions for workers with mental health conditions

Reasonable work accommodations should be implemented for workers with mental health conditions, including psychosocial disabilities, in line with international human rights principles.

Strong recommendation, very low-certainty evidence

Recommendations for training managers

4 Manager training for mental health

Training managers to support their workers' mental health should be delivered to improve managers' knowledge, attitudes and behaviours for mental health and to improve workers' help-seeking behaviours.

Strong recommendation, moderate-certainty of evidence

5 Manager training for health, humanitarian and emergency workers

Training managers to support the mental health of health, humanitarian and emergency workers should be delivered to improve managers' knowledge, attitudes and behaviours for mental health.

Strong recommendation, moderate-certainty of evidence

Recommendations for training workers

6 Training for workers in mental health literacy and awareness

Training workers in mental health literacy and awareness may be delivered to improve trainees' mental health-related knowledge and attitudes at work, including stigmatizing attitudes.

Conditional recommendation, very low-certainty of evidence

7 Training for health, humanitarian and emergency workers in mental health literacy and awareness

Training health, humanitarian and emergency workers in mental health literacy and awareness may be delivered to improve trainees' mental health-related knowledge and attitudes at work, including stigmatizing attitudes.

Conditional recommendation, very low-certainty of evidence

Recommendations for individual interventions

8 Universal individual interventions

8A

Universally delivered psychosocial interventions that aim to build workers' skills in stress management – such as interventions based on mindfulness or cognitive behavioural approaches – may be considered for workers to promote positive mental health, reduce emotional distress and improve work effectiveness.

Conditional recommendation, low-certainty of evidence

8B

Opportunities for leisure-based physical activity – such as resistance training, strength-training, aerobic training, walking or yoga – may be considered for workers to improve mental health and work ability.

Conditional recommendation, very low-certainty of evidence

9 Individual interventions for health, humanitarian and emergency workers

9A

Universally delivered psychosocial interventions that aim to build workers' skills in stress management – such as interventions based on mindfulness or cognitive behavioural approaches – may be considered for health, humanitarian and emergency workers in order to promote positive mental health and reduce emotional distress.

Conditional recommendation, low-certainty of evidence

9B

Psychosocial interventions – such as stress management and self-care training, or communication skills training – may be made available for health, humanitarian and emergency workers who are experiencing emotional distress.

Conditional recommendation, low-certainty of evidence

10 Individual interventions for workers with emotional distress

10A

For workers with emotional distress, psychosocial interventions such as those based on mindfulness or cognitive behavioural approaches, or problem-solving training, may be considered in order to reduce these symptoms and improve work effectiveness.

Conditional recommendation, very low-certainty of evidence

10B

For workers with emotional distress, physical exercise, such as aerobic training and weight-training, may be considered in order to reduce these symptoms.

Conditional recommendation, very low-certainty evidence

Recommendations for returning to work after absence associated with mental health conditions

11 Returning to work after absence associated with mental health conditions

For people on absence associated with mental health conditions, (a) work-directed care plus evidence-based mental health clinical care or (b) evidence-based mental health clinical care alone should be considered for the reduction of mental health symptoms and reduction in days of absence.

Conditional recommendation, low-certainty of evidence

Recommendations for gaining employment for people living with mental health conditions

12

Gaining employment for people living with mental health conditions

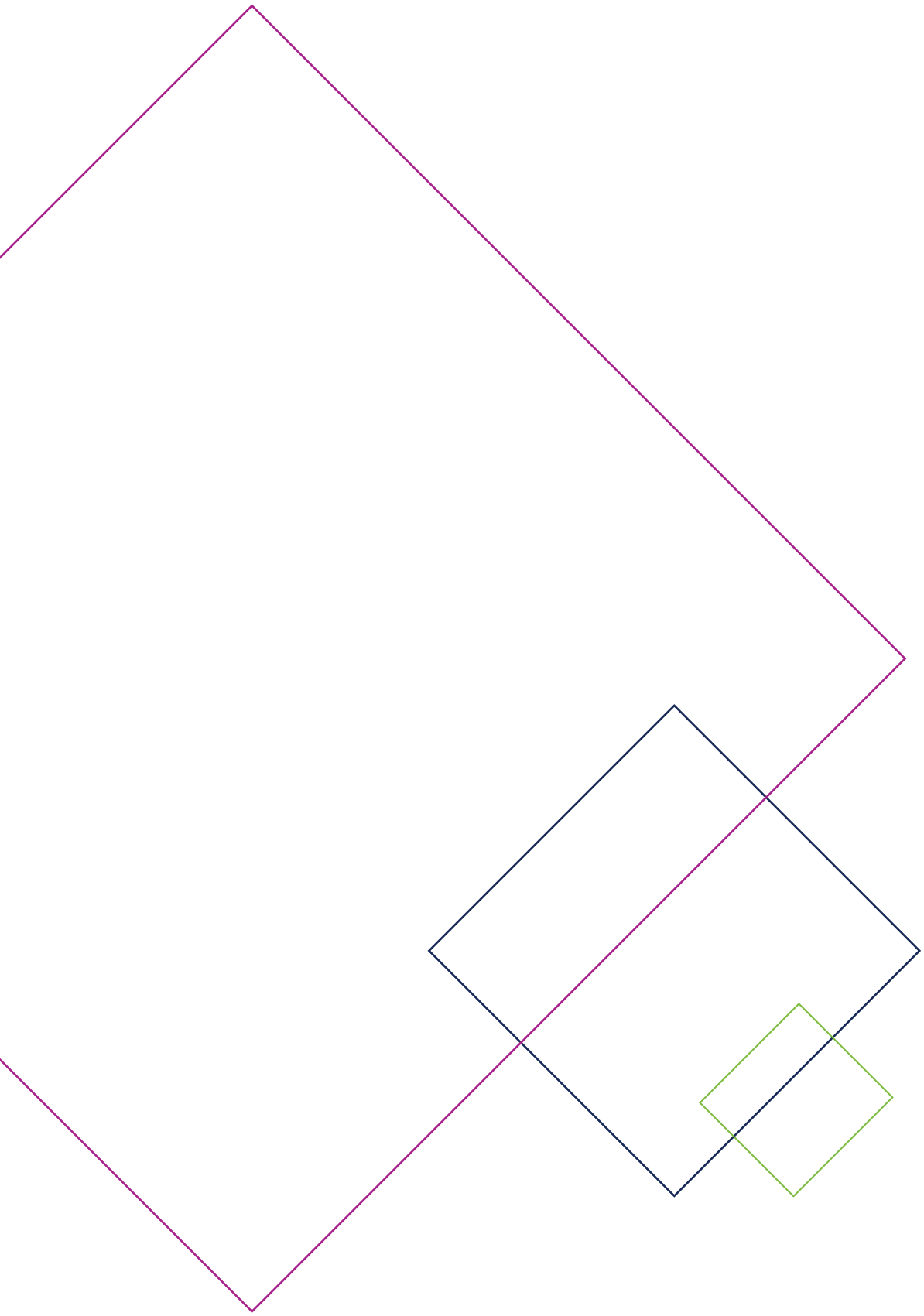
Recovery-oriented strategies enhancing vocational and economic inclusion – such as (augmented) supported employment – should be made available for people with severe mental health conditions, including psychosocial disabilities, to obtain and maintain employment.

Strong recommendation, low-certainty of evidence

Screening programmes

Key question 13: Screening programmes

As it is unclear whether the potential benefits of screening programmes outweigh potential harms, the GDG did not make a recommendation for or against screening programmes during employment.



Introduction

Background

For a large proportion of the global population, mental health and work are integrally intertwined. Mental health is more than the absence of mental health conditions. Rather, *mental health is a state of mental well-being that enables people to cope with the stresses of life, to realize their abilities, to learn well and work well, and to contribute to their communities*. Mental health conditions occur irrespective of whether work has causally contributed to them. Poor mental health has a negative effect on a person's cognitive, behavioural, emotional, social and relational well-being and functioning, their physical health, and their personal identity and well-being as related to work. A person's capacity to participate in work can be consequently impaired through a reduction in productivity and performance, reduction in the ability to work safely, or difficulty in retaining or gaining work. Presenteeism (or lost productivity, which is where the largest financial costs lie), absenteeism and staff turnover affect both workers and employers and, in turn, the society's economy.

An estimated 15% of working-age adults have a mental disorder at any point in time[1]. Globally, as of 2019, 301 million people were living with anxiety,[1] 280 million people were living with depression, [1] 64 million people were living with schizophrenia or bipolar disorder,[1] and 703 000 people died by suicide each year *(1)*. Many of these individuals were of working-age. The most prevalent mental health conditions (i.e. common mental disorders such as depression and anxiety), are estimated to cost the global economy US$ 1 trillion each year, with the cost driven predominantly by lost productivity *(2)*. People living with severe mental health conditions – including psychosocial disabilities[2] (such as schizophrenia and bipolar disorder) – are, for reasons such as stigma and discrimination, largely excluded from work despite the fact that participation in economic activities is important for recovery.

Work is a social determinant of mental health. Meaningful work is protective for mental health; it contributes to a person's sense of accomplishment, confidence and their earnings, and contributes to recovery and inclusion for people living with psychosocial disabilities. However, harmful or poor working conditions, hazardous work environments and work organization, poor working relationships or unemployment – and the prolonged exposure to these, rather than to positive working conditions – can significantly contribute to worsening mental health or exacerbate existing mental health conditions. There is reasonable consensus on the influence of certain risk factors, also called *psychosocial risks (3)*, on mental health at work. Box 1 lists some of these risk factors, but there are many additional risks which may be specific to certain countries or occupations, and emerging risks are seen as the culture of work changes over time or as the result of major societal events (such a global pandemic or conflict).

Society-level events influence mental health and work. Economic recessions or emergencies elicit risks such as job loss, financial instability, organizational restructuring, reduced employment opportunities, increased unemployment, and increased work without full-time or formal contracts *(4)*. Work can be a microcosm for amplifying wider issues which negatively affect mental health, including discrimination and inequality based on sociodemographic factors and their intersectionality, such as age, caste, class, disability, gender identity, migrant status, race/ethnicity, religious beliefs and sexual orientation. While addressing bullying in school-aged persons draws attention, the same cannot be said for the volume of abusive conduct (whether by third parties or between colleagues) experienced by adults at work *(5, 6)*. Most critically, the stigma surrounding mental health conditions remains a dominant barrier to disclosure at work *(7)*, to the implementation of support at work for people living with mental health conditions or, indeed, to the uptake of available support for workers.

[1] Global Burden of Disease (GBD) Results Tool. In: Global Health Data Exchange [website]. Seattle: Institute for Health Metrics and Evaluation; 2019 (http://ghdx.healthdata.org, accessed 1 November 2021). Note: these are IHME GBD 2019 data and do not necessarily represent ICD-11 categorization.

[2] WHO recognizes that many people with lived experience of mental health conditions prefer the term 'psychosocial disabilities.' For consistent reading, "mental health conditions" will primarily be used, as will "mental health conditions including psychosocial disabilities" when required. Psychosocial disabilities are included within the umbrella definition of "mental health conditions".

An estimated two billion workers (over 60% of the global worker population) are in the informal economy *(8)*. Compared to the formal sector, informal workers, who are often women or members of marginalized groups, are not offered social protections that provide access to health care and coupled with low incomes and poor working conditions, risk the likelihood of poor mental health *(9–11)*. In turn, workers who may face greater exposure to psychosocial risks, and who may, but not always, be within the informal economy include agricultural workers, street vendors, domestic workers, casual labourers and may include some family businesses, or the gig economy[3].

Changes in the way people work, while benefiting economic development, can also exacerbate work-related stress as workers are increasingly working longer hours. Globally, one third of the workforce is estimated to work more than 48 hours per week, especially in lower-resourced contexts *(12)*. Evolving knowledge on the impacts of changes to flexible working and teleworking, while proving invaluable for some sectors in the context of the COVID-19 pandemic, shows a mixed array of advantages and disadvantages *(13)*.

Box 1. Psychosocial risks to mental health at work

Ten categories of risk factors for poor mental health (as well as poor physical health) related to the workplace have broadly been identified *(adapted from: 14, 15)*.

- **Work content/task design:**
  e.g. lack of variety or short work cycles, fragmented or meaningless work, under-use of skills, high uncertainty, continuous exposure to people through work;
- **Workload and work pace:**
  e.g. work overload or under-load, machine pacing, high levels of time pressure, continual subjection to deadlines;
- **Work schedule:**
  e.g. shift-working, night shifts, inflexible work schedules, unpredictable hours, long or unsociable hours;
- **Control:**
  e.g. low participation in decision-making, lack of control over workload, pacing, etc.;
- **Environment and equipment:**
  e.g. inadequate equipment availability, suitability or maintenance; poor environmental conditions such as lack of space, poor lighting, excessive noise;
- **Organizational culture and function:**
  e.g. poor communication, low levels of support for problem-solving and personal development, lack of definition of, or agreement on, organizational objectives, organizational change; high competition for scarce resources, over-complex bureaucracies;
- **Interpersonal relationships at work:**
  e.g. social or physical isolation, poor relationships with superiors, interpersonal conflict, harmful work behaviours, lack of (perceived, actual) social support; bullying, harassment, mobbing; microaggressions;
- **Role in organization:**
  e.g. role ambiguity, role conflict, and responsibility for other people;
- **Career development:**
  e.g. career stagnation and uncertainty, under-promotion or over-promotion, poor pay, job insecurity, low social value of work;
- **Home-work interface:**
  e.g. conflicting demands of work and home, including for persons with caregiving responsibilities, low support at home, dual career problems; living at the same site where the work is done, living away from family during work assignments.

[3] A gig economy is a free market system in which temporary positions are common and organizations hire independent workers for short-term commitments.

The size of the public health problem of mental health conditions is greater than the volume of investment to address it. This is the case despite international conventions calling for the protection of workers' physical and mental health through national policies in occupational safety and health *(16)*. Programmes for work-related mental health promotion and prevention of mental health conditions are among the least frequently reported promotion and preventions programmes, by countries (35%) *(17)*.

The promotion of mental well-being and the prevention of mental health conditions have been recognized as means to achieving the global priority for the reduction of premature mortality from noncommunicable diseases (NCDs) by one third (United Nations Sustainable Development Goal, target 3.4). *The WHO Comprehensive Mental Health Action Plan, 2013–2030 (18)*sets a global objective for promotion and prevention and for the provision of comprehensive, integrated and responsive services in community-based settings (including workplaces). The WHO global strategy on health, environment and climate change *(19)* identifies workplaces as essential settings for the prevention of a range of modifiable risks, particularly for NCDs. Mental disorders are recognized in the ILO list of occupational diseases which was revised in 2010, under '*mental and behavioural disorders*'.[4] Some countries have extended their list to cover work-related stress, burnout, depression and sleep disorders. Some countries also recognize work-related suicide and include it in their systems of reporting, notification and compensation.

Well-being is a billion-dollar industry, where interventions related to mental health may go unregulated for their quality or evidence base. Although several countries and professional societies have guidelines on the topic of work and mental health, these are specific to the country population. International standards on workplace mental health have been developed, with a specialist focus on the management of psychosocial risks *(20)*.

Persons of working age spend a significant proportion of their time working. An estimated 62% of the global population aged 15 years and above are economically active *(21)*. Work presents an opportunity to promote good mental health and to prevent and support people living with mental health conditions *(22)*. To date, global evidence-based guidelines for the promotion, prevention and support of mental health related to work are lacking; the above rationale highlights the need for guidelines now.

[4] ILO Recommendation No. 194 concerning the List of Occupational Diseases and the Recording and Notification of Occupational Accident and Diseases specifically covers mental health and behavioural disorders, including *"(2.4.1) Post-traumatic stress disorders" and "(2.4.2) Other mental and behavioural disorders not mentioned in the preceding item where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to risk factors arising from work activities and the mental and behavioural disorder(s) contracted by the worker."*

Guideline objectives

These guidelines provide recommendations on interventions – defined in further detail below – in the following areas: organizational interventions, manager and worker training and individual interventions for the promotion of positive mental health and prevention of mental health conditions. It also includes recommendations on returning to work following absence associated with mental health conditions and gaining employment for people living with mental health conditions. The guidelines indicate whether and what interventions can be delivered to whole workforces (universal) – e.g. within a workplace – to workers at risk of mental health conditions (selective), for workers experiencing emotional distress (indicated), or for workers already experiencing mental health conditions.

Through the provision of these recommendations, it is anticipated that these guidelines will facilitate national and workplace-level actions in the areas of policy development, service planning and delivery in the domains of mental health and occupational health. The guidelines seek to improve the implementation of evidence-based interventions for mental health at work.

Scope of the guidelines

The guidelines focus on civilian adults, aged 18 years[5] and above, who are engaged in paid formal or informal work. The guidelines do not address interventions for military personnel or persons exposed to forced labour, trafficking and modern slavery, or child labour. The populations considered in this guideline include all workers with or without known mental health conditions, or persons with mental health conditions or psychosocial disability seeking to gain work or return to work.

Workers in at-risk occupations are included, that is, occupations with an increased likelihood of exposure to adverse events (e.g. potentially traumatic events or a series of events which are extremely threatening or horrific) that increase the likelihood of mental health conditions. These include emergency workers (such as national police or fire services), humanitarian workers (international or national), and health workers *(23-25)*[6]. While many occupations face adversities that place them at elevated risk for poor mental health (e.g. due to harmful working conditions), these specific occupations were selected because of frequent requests to WHO for guidelines for these groups. The recommendations for these selective groups of at-risk workers may, however, be applicable to other occupations that are likely to experience disproportionate risks to mental health at work.

[5] According to the Minimum Age Convention, 1973 (No. 138), the general minimum age for work is set at 15 years of age (13 years for light work) and for hazardous work is 18 years (16 years under strict conditions), with the possibility of initially setting the general minimum age at 14 years (12 years for light work) where the economy and educational facilities are insufficiently developed. The age of 18 years was set as the minimum for this guideline, as younger workers are at a different cognitive, emotional, biological and social developmental stage and may need additional considerations for their mental health in relation to work.

[9] Health workers are "*all people primarily engaged in actions with the primary intent of enhancing health*" – i.e. health, nursing and care occupations in the *International standard classification of occupations 2008* (ILO ICSO-08). Humanitarian workers are international or national workers who deliver humanitarian assistance. Emergency workers provide public emergency services e.g. police, fire, emergency medical response, search and rescue (See: Guidelines on decent work in public emergency services. Geneva: International Labour Organization, 2018 (https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/normativeinstrument/wcms_626551.pdf, accessed 25 May 2022).

All interventions in these guidelines are delivered in, or are related to, work. Workers may access some interventions outside of a work context, but the intervention has been designed to specifically support workers. The interventions within the scope of the guidelines are as follows:

Organizational interventions

These seek to assess, modify, mitigate or remove work-related psychosocial risks to mental health conditions. They are planned actions that directly target working conditions with the aim of preventing deterioration in mental health, physical health, quality of life and work-related outcomes of workers. The interventions can include activities directed at teams. Organizational interventions are often focused on primary and secondary prevention but may also include tertiary prevention (e.g. interventions to support the return to work of workers with mental health problems). Organizational interventions focused on an individual include reasonable accommodations at work (i.e. changes to work to accommodate the person's needs).

Training managers and workers

Manager training for mental health is delivered to workers who supervise others. It aims to build capacity to protect and support the mental health of direct supervisees through, for instance, a manager knowing when and how to support a person. Similar training is also available for workers to support themselves through increased awareness and knowledge of mental health (worker training).

Individual interventions

These include interventions delivered directly to a worker (completed by the worker, with or without guidance). They include psychosocial interventions (i.e. interventions that use a psychological, behavioural or social approach, or a combination of these) and leisure-based physical activities such as exercise (not physical labour as a part of work).

Return-to-work programmes

This is designed to support workers in a meaningful return to work and in reducing the symptoms of mental ill-health following periods of absence. These can be multi-component interventions combining any mix of individual, manager and organizational interventions.

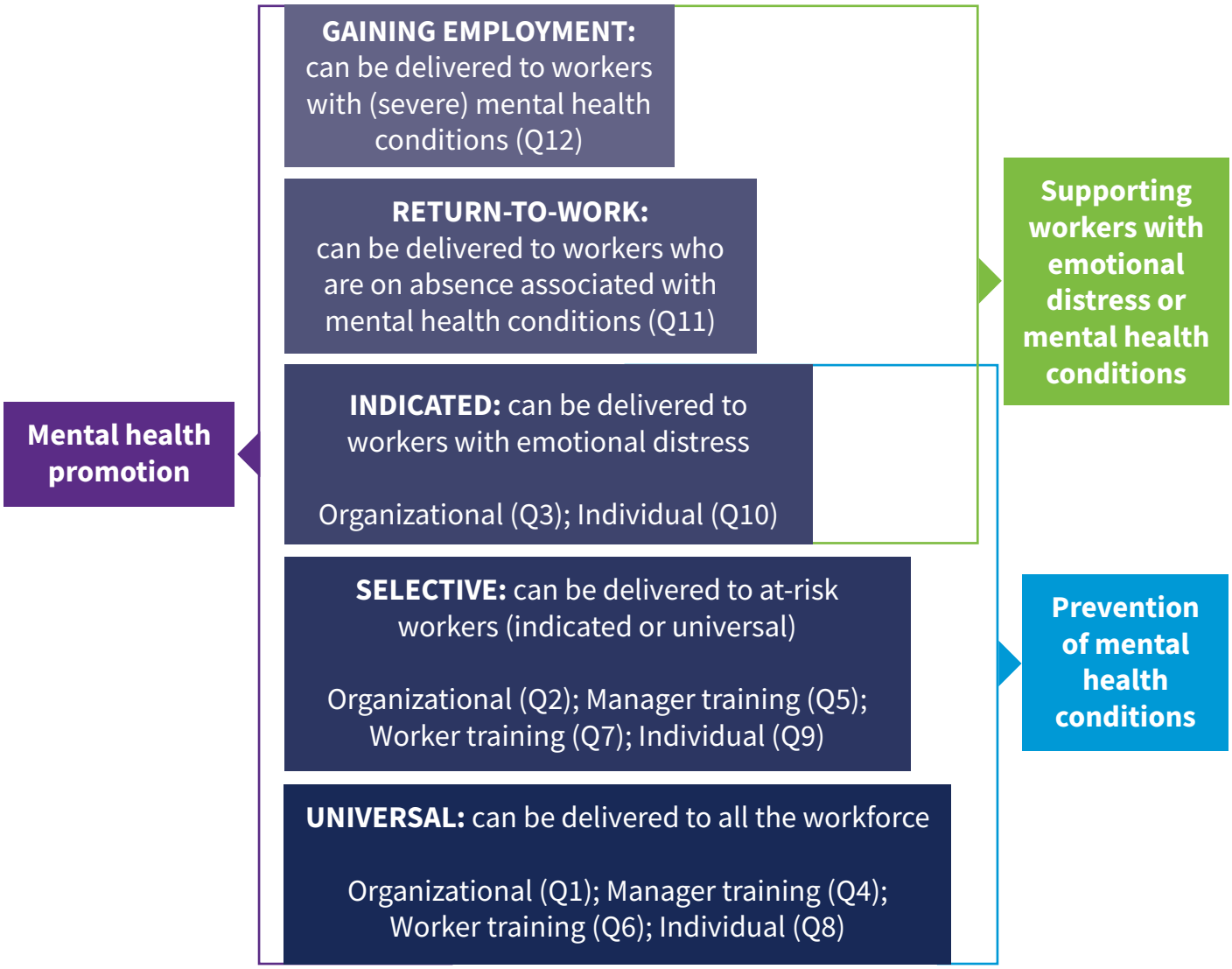
Gaining employment programmes

In the context of the present guidelines, these interventions are designed to support the entry into paid work of people living with mental health conditions. These are also multi-component interventions.

These guidelines also explored screening programmes delivered during employment (reported under key question 13 [Q13]). The aim of the screening is to identify symptoms of mental health, followed by referral to an appropriate level of care.

Fig. 1 shows the interventions addressed in these guidelines at different population levels.

Fig. 1. Interventions covered in the guidelines on mental health at work



Target audiences of these guidelines are primarily individuals or entities responsible for the planning, programming or implementation of measures for the health, safety and well-being of workers. These can include occupational health & safety and mental health providers as well as service-delivery managers, employers and workers and their unions, organizations or cooperatives, human resource services, professional bodies, and employee education, well-being or training services. The guidelines and its derivative products will also have implications for international and national policy-makers, planners, programme managers and researchers in mental health, occupational health and labour.

Method

How the guidelines were developed

The guidelines were developed in accordance with the *WHO handbook for guideline development (26)* and meet international standards for evidence-based guidelines. The steps for the development of WHO guidelines include the following, with further detail provided in the relevant annexes.

Guideline contributors
Identifying who will be the contributors to the guideline process (Annex 1), and how conflicts of interest will be managed (Annex 2)

Scoping the guideline
Deciding what the guideline should be about and what it will not address; the key questions that should be asked; and what the outcomes of interest are (Annex 3)

Evidence reviews
Searching for the best available evidence to answer the key questions [and supporting evidence] (Annex 4)

Certainty of evidence
Deciding how confident we are about the certainty of that evidence in answering our key questions (Annex 4)

Formulating recommendations
Developing the recommendation statements based on the above work (Annex 5)

Drafting
Drafting this guideline document, and obtaining more inputs through wide peer review (Annex 6)

Quality check
Review for approval to publish by WHO's quality assurance body (GRC)

Publication
Publishing the guideline, and actively supporting its dissemination

Recommendations

This section includes the recommendations and key remarks, a summary of the main highlights of the evidence, the rationale for the recommendations and the evidence-to-decision considerations. For full evidence profiles and supplementary evidence, see the web Annex. To interpret the certainty of the evidence (i.e. the differences between very low, low, moderate and high certainty of evidence), see Annex 4. To interpret the strength of the recommendation (i.e. the meaning of conditional and strong recommendations), see Annex 5.

Overarching remarks across all recommendations

- Each recommendation represents one category of intervention options. These interventions are preferably delivered comprehensively – i.e. by embedding delivery of organizational interventions, manager training and training for workers, individual interventions, return-to-work programmes and gaining employment programmes in existing or newly-developed work health policies, rather than delivering interventions independently of each other without comprehensive integration.

- The recommendations for these guidelines rely on preconditions and principles which would facilitate the uptake, implementation, benefit, and reduction of harm towards addressing the mental health of people who work. These include, but are not limited to:

  - the protection of people with mental health conditions from discrimination and otherwise unfair treatment in the world of work and the promotion of their rights to access decent work on an equal basis with others and to be supported when there is a need to return to work or a desire to participate in work (United Nations Convention on the Rights of Persons with Disabilities [UNCRPD]; ILO Conventions 111, 159 and 190 and their recommendations; WHO Comprehensive Mental Health Action Plan 2013-2030);
  - the protection of mental health at work (ILO Conventions 155, 161, 187 and 190 and their recommendations; WHO Comprehensive Mental Health Action Plan 2013-2030);
  - the fundamental right of everyone to work within decent working conditions, to be protected from unemployment, to be fairly and equally compensated (Universal Declaration of Human Rights, Article 23); including support to the informal sector to transition to the formal economy (ILO Recommendation 204);
  - access to safe, supportive and decent working conditions for all people who work (including informal workers), with attention to organizational improvements in the workplace; implementation of evidence-based programmes to promote mental well-being and prevent mental health conditions (WHO Comprehensive Mental Health Action Plan 2013-2030);
  - the cross-cutting principles of the WHO Comprehensive Mental Health Action Plan 2013-2030, namely: universal health coverage (all persons should be able to access, without the risk of impoverishing themselves, essential health and social services); human rights (mental health strategies, actions and interventions must be compliant with the UNCRPD and other international and regional human rights instruments); evidence-based practice (mental health strategies, actions and interventions need to be based on scientific evidence and/or best practice, taking cultural considerations into account); a life-course approach (policies, plans and services for mental health need to take account all stages of the life course); a multisectoral approach (a coordinated response which partners health with relevant sectors such as employment and labour); and the empowerment of persons with mental disorders and psychosocial disabilities (people with lived experience should be involved and should participate in all aspects of mental health policy, planning and implementation).

Recommendations for organizational interventions

Universal organizational interventions

Organizational interventions that address psychosocial risk factors, including interventions involving participatory approaches, may be considered for workers to reduce emotional distress and improve work-related outcomes.

Conditional recommendation, very low-certainty of evidence

Key remarks:

- Universal organizational interventions are organizational interventions which can be delivered or applied universally, that is, to a whole of a given workforce or work-setting.

Common implementation remarks across all organizational intervention recommendations:

- An assessment of the work-related or psychosocial risk factors affecting workers' (mental and physical) health should be undertaken in planning organizational interventions and should be integrated in continual and regular overall occupational health risk assessment and monitoring protocols at work – including whenever there are changes in the work or in the organization of work which may have a negative impact on health.
- Fidelity to implementation processes for organizational intervention – i.e. the extent to which an intervention was delivered as conceived and planned – is undervalued and understated, yet adherence to fidelity would likely benefit (health) outcomes.

Subgroup remarks:

- Culturally and contextually sensitive planning and delivery of interventions is required. Some sociodemographic groups may be adversely and differentially affected by psychosocial risk factors more than others are; assessment and planning which takes account of the diversity of a workforce would identify such differences. Changes applied universally to psychosocial risk factors may benefit work settings with workers from diverse sociodemographic backgrounds. However, persons responsible for implementing organizational interventions should monitor the impact of the changes on workers to identify whether there are disproportionate impacts on some workers (such as, whether some workers who have flexible working arrangements experience negative job consequences such as lack of networking opportunities).

Monitoring and evaluation remarks:

- Include work-related outcomes and mental health outcomes as part of continual monitoring of the impact of organizational interventions (where monitoring is designed so that no single individual's health outcomes can be identified).

Additional remarks:

- No direct evidence was obtained on preventing suicidal behaviours. Some occupations or work environments may have ready access to lethal means of suicide. Restriction of access to the means of suicide is one of the key suicide prevention measures (Mental Health Gap Action Programme (mhGAP) guideline for mental, neurological and substance use disorders, 2015. Geneva: World Health Organization; 2015). This can include not only regulations at national level but also the implementation of organizational policies at the work level – e.g. banning highly hazardous pesticides, restricting or regulating firearms, and restricting access to high-toxicity medicines.

Evidence and rationale

Key question 1 investigated whether universally delivered organizational interventions (e.g. interventions or approaches targeting the mitigation, reduction or removal of psychosocial risk factors at work) have a beneficial impact on worker outcomes (Annex 3). Evidence was extracted from five systematic reviews comparing usual practice (care as usual/other intervention/no intervention) to: **flexible working arrangements (flexitime)** *(27)*, **flexible working arrangements (teleworking)**[7] *(27)*; **participatory organizational interventions targeting job design**[8] *(28)* ; **changes to workload or breaks**[9] *(29)*; **nudging strategies**[10] **targeting the physical work environment** *(30)*; providing **performance feedback/reward** *(31)* (web Annex). All extracted evidence was of very low certainty, except where otherwise indicated.

For **flexible working arrangements (flexitime)** there were small effects in favour of flexitime on mental health symptoms (e.g. psychological health) and correspondingly low-certainty evidence for the small positive effects on the work-related outcome of job satisfaction. Additional evidence[11] supports the view that offering control in flexible working arrangements (such as self-scheduling) may have favourable impacts on health *(32)*. For **flexible working arrangements (teleworking)** there were small positive effects in favour of teleworking on mental health symptoms. Teleworking was inversely related to absenteeism in one study reported in Kröll *(27)* using a cross-sectional study design in Europe.

For **participatory organizational interventions targeting job design**, narrative findings from individual trials were available. One cluster-randomized controlled trial (cRCT) reported that work unit-level[12] interventions with worker participation and dialogue, job redesign, and organizational learning found a significant decrease in mental health symptoms (depersonalization and somatic symptoms) but no significant findings on other critical or important outcomes (Annex 3). It should be noted that participatory approaches are a method of delivery, and the interventions themselves either target different risk factors or are of differing designs *(28, 29, 33)*.

For **changes to workload or breaks**, (e.g. through task rotation such as changing job tasks from high to low workloads) one study which included proxy workers for the informal sector (e.g. refuse collection sector) reported low certainty of evidence for no effect of a job rotation intervention on mental health symptoms (i.e. the need for recovery) at 3- , 6- and 12-month follow-up. **For nudging strategies targeting the physical work environment** there were small effects in favour of the physical environment (walking strategies) for work performance. For **performance feedback/reward**, one study reported that a multicomponent intervention containing performance bonus, job promotion opportunities and mentoring support had higher retention rates compared to a matched wait list control group (i.e. given the intervention after 12 months) at 12- and 36-month follow-up.

[7] Flexible working arrangements facilitate workers' control over when (flexitime) and/or where (teleworking) they work.
[8] Participatory approaches involve including workers alongside employers and other key stakeholders in the planning, design, implementation and evaluation of organizational interventions. Job design refers to the content, tasks, activities or duties of a worker.
[9] Changes to workloads or breaks include examples such as setting limits on working hours, introducing planned breaks, including weekend breaks, or fewer days on shift/rotations within a week.
[10] Nudging strategies include prompting a person to engage in an activity such as verbal or technology-based reminders.
[11] Additional evidence is evidence identified by the review teams within web Annex evidence profiles, which were not subject to GRADE. These were high quality reviews which met inclusion criteria for the key questions, however were not selected for GRADE, in the circumstance that other reviews may have better or more comprehensively addressed the critical and important outcomes for the key questions.
[12] Unit-level: such as within a team, department or organization.

Overall, no outcomes were reported for positive mental health, quality of life and functioning, suicidal behaviours, substance use and adverse effects. No direct evidence was available on the harms of implementing universally delivered organizational interventions, which may be due to publication bias or may reflect minimal harms *(28)*.

Critically, the GDG took into account the wider body of evidence which indicates that psychosocial risks at work are negatively associated with mental health and related outcomes. For example, for **job content/task design**, job/task rotation demonstrated positive effects on mental health symptoms (stress/burnout) *(34)*. For **workload and work pace**, high workload increases the risk of symptoms of mental health conditions *(35, 36)*. For **work schedule**, the evidence for an association between overtime/long working hours and depression which meets diagnostic status is not conclusive *(37)*. However, long working hours are associated with symptoms of depression *(38)* and an increased likelihood for the onset of new risky alcohol use in people working 49–54 hours per week, and over 55 hours a week *(39)*. Shift work has been associated with binge drinking disorders *(40)*, and the odds of suicidal behaviours (ideation) increase with long working hours/shift work *(41)*. Factors associated with **job control** (i.e. low authority in decision-making in own's work) are associated with symptoms of mental health conditions *(36)*; whereas higher decision latitude is protective for depressive symptoms *(42)* and higher job control is associated with reduced emotional exhaustion burnout *(35)*. Low job control has been associated with increased odds of suicide *(41)* and with increased odds of absence related to mental health diagnosis *(43)*. **Job strain** (combining low decision latitude and high demands) is associated with depressive symptoms *(42)* and diagnostic-status depression *(44)*. For **organizational culture and function**, low organizational justice[13] is associated with subthreshold mental health symptoms *(35, 36, 42)*. As for **interpersonal relationships at work**, workplace bullying (which was defined by the review as a person perceiving they are experiencing bullying) is associated with symptoms of depression, anxiety and stress *(45)*; workplace violence is associated with depressive disorder *(46)*; and low co-worker support and low supervisor support increase the risk of subthreshold symptoms *(36)*, suicidal behaviours (ideation), and suicide mortality *(41)*. With regard to a person's **role in an organization**, role ambiguity and role conflict are associated with depression outcomes *(47)* and, as for **career development**, job insecurity is related to higher risk of depressive symptoms *(42, 48)* and risk of suicidal behaviours (ideation) *(41)*. With regard to the **home–work interface** (e.g. prioritization of time between work and private life), increased work–family conflict was associated with greater use of psychotropic medications *(49)*. Additionally, the **effort–reward imbalance** (combining high efforts at work and low rewards in terms of wages, promotion prospects, job security, appreciation and respect) is associated with increased risk of depressive disorders *(50)*.

[13] i.e. perceived fairness at work.

Evidence-to-decision considerations

People who work **value** the changes to their working conditions through the means of organizational interventions which address psychosocial risks for benefits on their health and well-being (web Annex: Values and preferences survey). A particularly high value is placed on participatory approaches such that workers, leadership and other key stakeholders make decisions together for the betterment of their health.

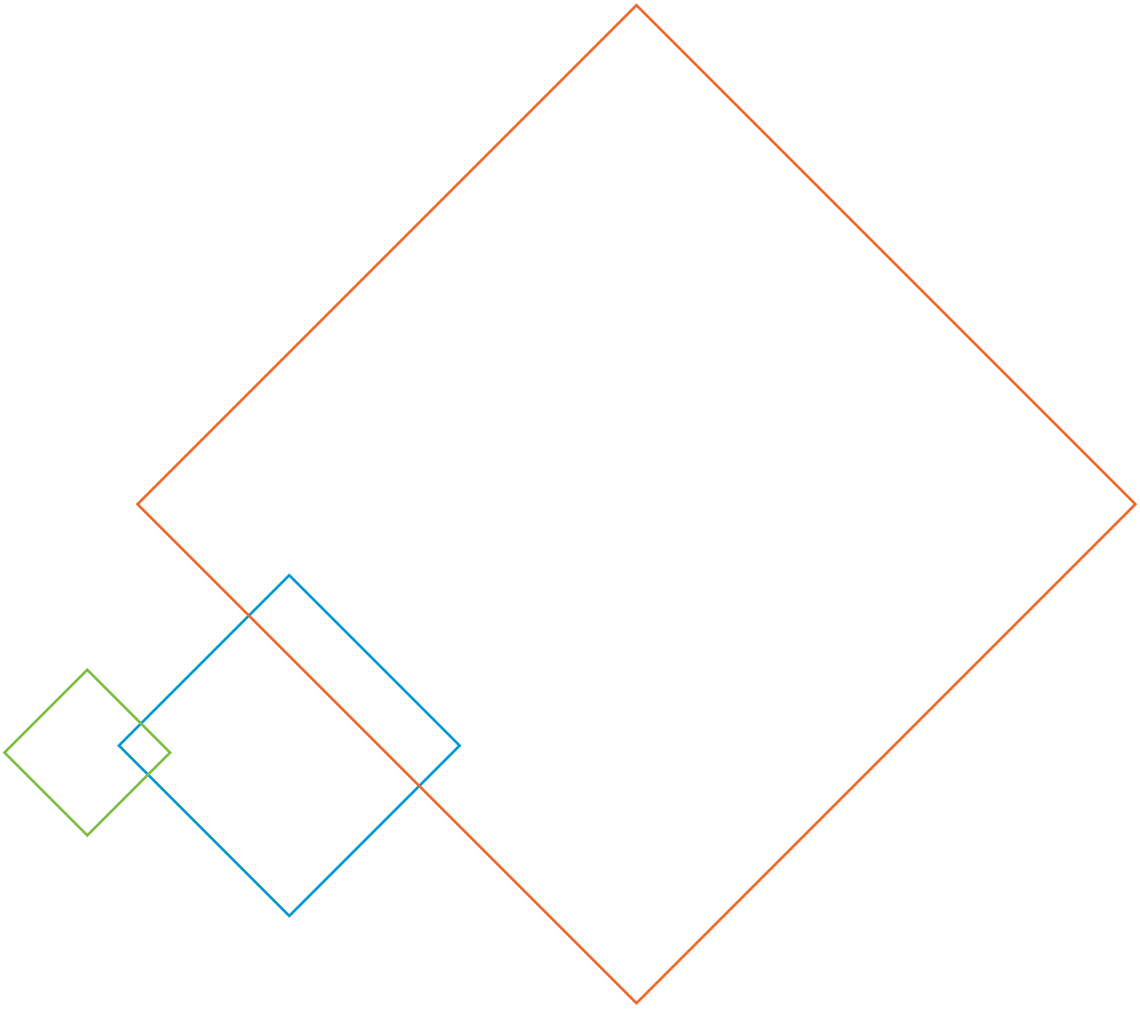
There is variability in the **resources required** to implement organizational interventions. Participatory organizational interventions were identified as ranging from 6 to 12 months *(33)*. Variation in the composition and costs of the delivery agents, or whether equipment is required, will have an impact on human resource costs. Resources (such as financial expenses) may be incurred by workers themselves, such as during teleworking. No reviews directly examined **cost-effectiveness**. Yet, during the implementation of a participatory organizational intervention in Japan, the cost of implementation was estimated to be ¥ 7660 per employee (approximately US$ 70) and the benefit was equivalent to approximately US$ 139-209 per employee in the following 12 months *(51)*.

For **health equity, equality and discrimination**, no moderating differences were identified on the basis of sociodemographic characteristics (such as gender and race) regarding the impact of organizational interventions on the outcomes *(27)*. There are geographical, occupational, class and gender differences in the likelihood of experiencing risk factors related to poor working conditions *(52)*. Organizational interventions for the prevention of these risk factors and improvement of working conditions are likely to reduce health inequalities for all workers, and for those most likely to experience disproportionate psychosocial risks at work in formal and informal sectors (web Annex).

Regarding **feasibility**, evidence was obtained from studies conducted in high-income countries in Asia-Pacific, Europe and North America. Good practices of organizational interventions have been reported in low- and middle-income countries (LMICs), including those using participatory approaches *(53)*. Small and medium-sized enterprises (SMEs) or the informal sector may benefit from guidance from primary health-care services or the vocational sector, who may be able to provide advice on addressing risk factors at work, where there is capacity to do so *(54)*. Nevertheless, interventions such as teleworking, when conducted with limited organizational support or resources, may conversely produce negative effects *(13)*. The necessity to continue to understand emerging risks (as work organization and conditions evolve) and their impact on mental health is underscored by this point.

The interventions are in accordance with universal **human rights principles** (e.g. Article 23 of the United Nations Universal Declaration of Human Rights *(55)*). Interventions would need to be **socioculturally** adapted for the level of the work setting or the sector itself and for the intended recipients. Organizational interventions via the primary prevention of psychosocial risks to protect workers' mental health are included in international labour standards *(56)*. The necessity to develop good working conditions is included in the WHO global strategy on health, environment, and climate change *(57)*.

The GDG concluded that, despite very low certainty of the available evidence, the likely benefits of organizational interventions on reducing emotional distress and improving work-related outcomes outweighed the possible harms of implementing these interventions. This was supported by evidence for risk factors at work which negatively affect mental health outcomes, indicating that interventions to reduce, remove or mitigate risk factors could improve these outcomes. The GDG considered several research remarks on the body of work on organizational interventions, noting that there is a need to strengthen the growing evidence base in this area and particularly to strengthen the methodological rigour of the research, given the complexity of their implementation as compared to individual interventions.



RECOMMENDATION 2

Organizational interventions for health, humanitarian and emergency workers

Organizational interventions that address psychosocial risk factors, for example reductions to workload and schedule changes or improvement in communication and teamwork, may be considered for health, humanitarian and emergency workers to reduce emotional distress and improve work-related outcomes.

Conditional recommendation, very low-certainty of evidence

Key remarks:

- Organizational interventions for health, humanitarian and emergency workers are selective as they target a specific at-risk group (health, humanitarian or emergency workers).
- Health, humanitarian and emergency work is subject to risks that can disproportionately affect the prevalence of mental health conditions in these occupations. Risks include exposure to potentially traumatic events (such as violence and harassment), long working hours and high work and emotional demands. Various subgroups may be further disproportionately affected by risk factors at work (e.g. health workers in direct support roles, national humanitarian staff, women, members of marginalized groups, younger workers). However, further expansion on what the considerations would be for these subgroups in relation to organizational approaches is urgently needed.
- The majority of direct evidence was obtained in health worker populations.

Implementation remarks:

- All common implementation remarks as indicated under Recommendation 1 apply. As with Recommendation 1, these can be organizational interventions which may include participatory processes.

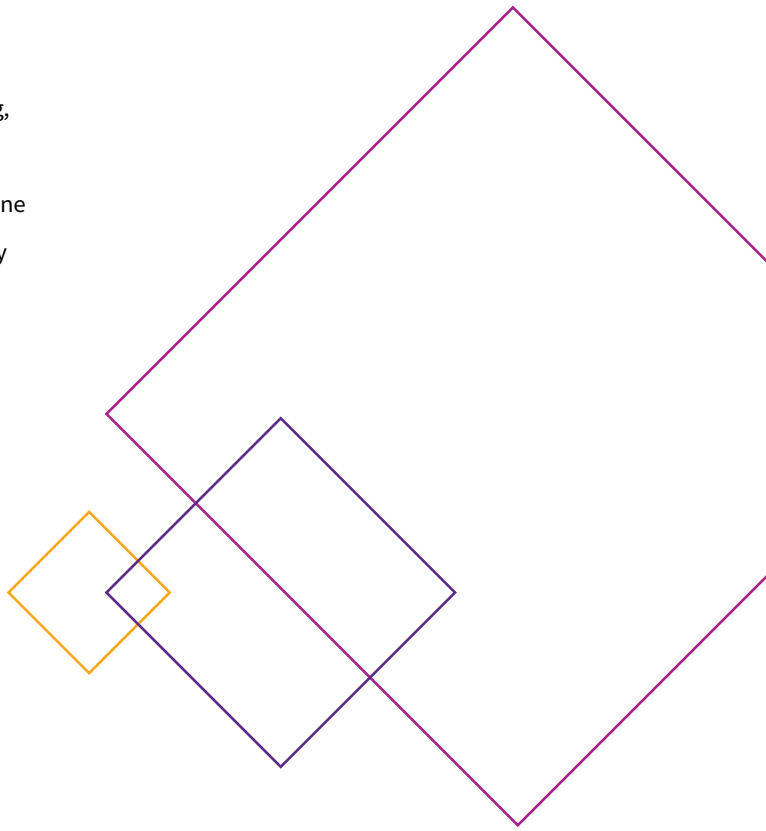
Evidence and rationale

Key question 2 investigated whether organizational interventions delivered to at-risk workers have a beneficial impact on outcomes (Annex 3). Evidence was extracted from five systematic reviews comparing care as usual/ other intervention/no intervention to **communication and teamwork interventions** *(58-60)*, **workload and schedule interventions** *(61)*, and **participatory organizational interventions** (focused on work break schedules, workload changes and task variation) *(29)* (web Annex). All extracted evidence was of very low certainty except where otherwise indicated.

For **communication and teamwork**, three controlled trials reported mixed effects on emotional distress, with two indicating small positive effects (e.g. reduction) on burnout. One trial observed a beneficial impact on job satisfaction, while another found a reduction in absenteeism in health workers who had received a 6-month communication and teamwork intervention based on improving workplace civility (a structured intervention designed to address within-team problems where violence, including bullying, could occur). Four randomized controlled trials (RCT) reported mixed findings for job performance, with only one finding improvement in teamwork behaviours (as a proxy for performance).

For **workload and schedule**, low-certainty data from eight RCTs suggested that there were small positive effects in favour of workload and schedule changes on burnout. **For participatory organizational interventions** (focused on work break schedules, workload changes and task variation), one controlled study among health workers reported a reduction on the need for recovery[14] at 12-month follow-up.

Overall, there were no outcomes reported for quality of life and functioning, suicidal behaviours or substance use. For communication and teamwork training, one cRCT found no effect on potential adverse effects of compromised health-care delivery – i.e. the quality of health care (maternal or neonatal adverse outcomes) provided by health-care workers was not negatively affected by the intervention. No other direct evidence was available on the harms of implementing these universally delivered organizational interventions to at-risk groups.



[14] Need for recovery is the self-perceived extent to which recovery is required for mental and physical energy to return to sufficient levels to engage in work *(29)*.

Evidence-to-decision considerations

Work-related risks in the health, humanitarian and emergency sectors place this group of workers at risk of mental health conditions. Organizational interventions to address such risks are considered a priority *(62, 63)*. Organizational interventions that address working conditions are **valued** among workers in these sectors who express concern that the delivery of individual interventions alone is equated with personal blame (for having a mental health condition or perceived inability to cope) *(61)*.

No direct evidence was identified for the **resources required** to implement organizational interventions, as these vary by geographical, national, subnational and intervention contexts. It is of note that communication and teamwork interventions were identified as ranging from 4- hours to 6- months in duration so costs depend on the intensity of the intervention. No reviews examined **cost-effectiveness** directly, which is a critical gap *(61)*.

For **health equity, equality and discrimination**, organizational interventions for the prevention of risk factors and improvement of working conditions are likely to reduce health inequalities for at-risk workers, including those most likely to experience disproportionate psychosocial risks at work – such as young workers, women, national humanitarian staff and health workers with direct client-facing roles. However, since one review *(61)* pointed to younger workers benefitting less from multi-modal interventions, including organizational interventions, greater attention is needed on the subgroup considerations for organizational intervention in those most at risk – i.e. tailoring interventions to the needs of different groups.

With regard to **feasibility**, only one study was conducted in the African Region *(64)*, while the majority of studies were conducted in high-income countries in Europe and North America. The majority of direct evidence considered was obtained in health workers. No studies were conducted in the humanitarian sector, yet national and international humanitarian staff may prefer organizational approaches *(65)*. The interventions are in accordance with universal **human rights principles**. **Sociocultural** adaption is required, and participatory methods may facilitate such adaptations.

The GDG concluded that a conditional recommendation for organizational interventions was warranted for at-risk workers. Although the overall certainty of the available evidence was considered very low, the benefits on emotional distress and work-related outcomes outweighed the likely harms. Most promising for mental health were interventions involving changes to the work schedule; these were highlighted by the GDG as especially pertinent for workers in these sectors facing long hours and shift work. While most of the evidence was obtained in health workers, this population was considered a proxy for other at-risk groups such as humanitarian and emergency workers, or for workers in other at-risk sectors.

RECOMMENDATION 3

Organizational interventions for workers with mental health conditions

Reasonable work accommodations should be implemented for workers with mental health conditions, including psychosocial disabilities, in line with international **human rights principles**.

Strong recommendation, very low-certainty of evidence

Key remarks:

- The guidelines review process did not identify direct evidence. The indirect evidence (a systematic review that did not include data suitable for GRADE) involved a narrative summary of the evidence available for four categories of work accommodation interventions that can be implemented for workers with mental health conditions, namely: accommodations regarding communication, flexible scheduling, modification of job description, or modification to the physical work environment.
- Article 27 of the United Nations Convention on the Rights of Persons with Disability (UNCRPD) states: "Ensure that reasonable accommodation is provided to persons with disabilities in the workplace". For this reason, a recommendation was developed.
- Both the terms *mental health conditions and psychosocial disabilities* were explicitly used in the recommendation to ensure that beneficiaries are likely to recognize themselves within the recommendation.
- Providing reasonable accommodations promotes an inclusive work environment for workers with mental health conditions by enhancing equitable access to opportunities and resources at work.

Implementation remarks:

- In line with UNCRPD Article 27 on Work and Employment, workers with mental health conditions should not be discriminated against. However, there are concerns that accessing or benefitting from such support will identify a worker as having a mental health condition or as being perceived as unable to cope with work, which may subject that worker to discrimination unless measures are taken proactively within an organization to mitigate mental health stigma and protect the privacy of the person.
- Organizational mitigation of stigma for mental health conditions may contribute to reducing concerns about confidentiality and stigma and can facilitate ease of access to accommodations by promoting voluntary disclosure. Accommodations can be implemented without identifying workers to wider colleagues or in accordance with the worker's preference.
- There is insufficient evidence to identify whether one category of interventions is superior to another. Workers living with mental health conditions should be accommodated to work in a person-centred manner, according to their needs, requirements and preferences. Direct supervisors play a critical role in supporting workers.
- Reasonable accommodations may be applied for any worker with a mental health condition(s) including those returning from absence associated with a mental health condition. However, they may also be utilized for workers living with mental health conditions, who have not been on absence, and who remain in work or who newly join work.
- Respect for the human rights of people living with mental health conditions or psychosocial disabilities is a necessary precondition for this recommendation; otherwise, the implementation of reasonable accommodations may risk lacking a rehabilitative approach.
- Lower-resourced settings in LMICs, and globally SMEs, can be supported by the public (health) sectors where there is capacity, to receive guidance on implementing reasonable accommodations. Workers and employers need access to coordinated multidisciplinary support, which could be provided feasibly through models of group occupational services (ILO Convention 161, Article 7) *(66)*.
- Managers or employers should be provided with training and resources to better support workers who are in receipt of accommodations.
- All common implementation remarks, as indicated under Recommendation 1, apply.

Evidence and rationale

Key question 3 investigated whether organizational interventions delivered to workers with mental health conditions including psychosocial disabilities were beneficial. Such interventions are referred to as *(reasonable) workplace or work accommodations* (Annex 3). These are designed to foster sustainable participation in work activities by providing favourable and adapted working conditions, matching the needs and requirements of workers living with disabilities. Only indirect evidence was available via a systematic review that provided a narrative summary of the available evidence *(67)* (web Annex).

Within the review, 15 mixed-method observational studies were identified. The primary outcomes were mental health (e.g. change in diagnostic status) and employment outcomes, such as length of job tenure and income. Four types of accommodation were identified, as follows:

- **communication accommodations**, such as regular supportive meetings with supervisors, or communication according to the preferences on how to receive information (written or verbal);
- **scheduling accommodations**, such as using frequent breaks or extra time allowance for completing tasks;
- **job description accommodations**, such as being gradually reintroduced to tasks, or job or task-sharing;
- **physical environment accommodations**, such as access to private space for rest, or access to refrigeration for medication storage**.**

The available evidence from observational studies points towards positive associations between work accommodations, length of employment and improvement of mental health status *(67)*. The most commonly implemented accommodations were related to communication and scheduling. For workers receiving work accommodations, job tenures were reported to be 7–24 months longer than the tenures of workers who did not receive accommodations *(67)*. In one trial, workers who received sufficient work accommodations, compared to those who did not, were less likely to have a mental health condition after one year *(68)*. In one qualitative study, undesirable effects included workers reporting feeling overprotected, patronised and under-challenged at work *(69)*.

Evidence-to-decision considerations

Workers with mental health conditions and psychosocial disabilities experience significant barriers to sustaining their participation in work despite their interest, willingness, and capacity to participate in work. Work accommodations seek to ensure that the outcomes that stakeholders **value** are improved: sustaining time on the job (i.e. tenure) and improved mental health. However, stigma and fear of repercussions remain critical barriers to workers' confidence in feeling safe to disclose their mental health status, and consequently to access accommodations *(71)*.

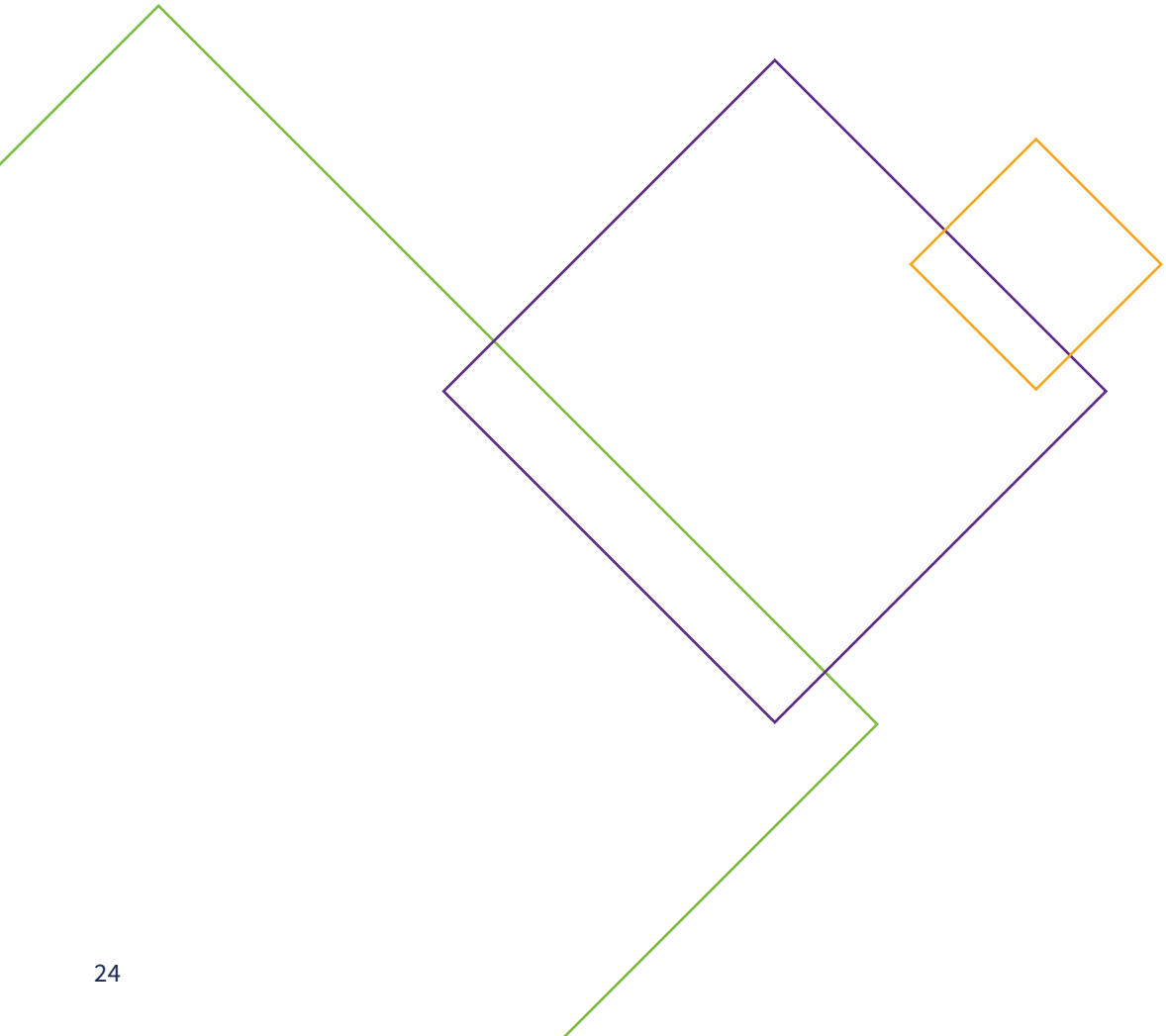
Resource requirements vary by the type of accommodation provided. In a dated national survey conducted in the USA, over half of workplaces reported no initial direct costs or maintenance costs of the accommodations they applied. One third reported initial and maintenance costs of less than US$ 100, with a minority reporting these costs larger than US$ 500 *(72)*. No specific study on cost-benefit or **cost-effectiveness** analysis was identified. One study reported on cost savings of implementing accommodations, resulting in US$ 11.73 saved per person via financial assistance programmes in the USA – reportedly a 68% greater saving than people who did not receive accommodations *(73)*.

For health equity, equality and discrimination, providing reasonable work accommodations promotes an inclusive work environment by enhancing equitable access to opportunities and resources at work and, when implemented successfully and without prejudice, can mitigate stigma. Work accommodations are therefore likely to reduce inequalities between workers with and without mental health conditions – i.e. by providing optimal circumstances for workers in need of accommodations to participate in their work.

Accommodations were not frequently implemented to the level required by workers with mental health conditions. In one study, only 30.5% of workers received all required accommodations, while 16.8% received no accommodations *(74)*. Potential **feasibility** concerns include lack of support to employers to implement legislation for accommodations, what options/actions are available to support their workers, and attitudinal concerns that such actions are expensive *(67)*. All studies in the included review were conducted in high-income countries, chiefly in the USA. The majority of studies included people working with severe mental health conditions.

Provision of work accommodations is in line with **human rights** conventions *(70)* and reasonable accommodations need to be in line with the UNCRPD and national disability, equality or discrimination law. Consequently, workers with mental health conditions including psychosocial disabilities are, in most countries, legally entitled to reasonable work accommodations. Relevant international labour standards are: the Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983 (No. 159) *(75)* and the Vocational Rehabilitation and Employment (Disabled Persons) Recommendation, 1983 (No. 168), where Recommendation No. 168 refers to providing reasonable adaptations *(76)*. While **sociocultural acceptability** is high for workers who wish to be supported by accommodations, there remains a barrier for workers who fear disclosure of their mental health status at work. Workers who are unable to disclose their status consequently do not benefit from access to accommodations and, in turn, job tenure is shortened *(71)*. Efforts to reduce mental health stigma at work and actively promote relevant equality or discrimination legislation may help to make persons who would benefit from disclosure feel supported to do so.

The GDG made a strong recommendation in favour of work accommodations for people living with a mental health condition(s) and psychosocial disabilities. The available – albeit limited – evidence suggested that the balance of potential benefits on job tenure and mental health status outweighed the harms. Protection from harms of stigma requires the protection of persons through the enactment of equality and discrimination laws. This decision was critically influenced by the UNCRPD *(70)* which calls for the application of reasonable accommodations for persons with disabilities. Such instruments, which depend on national and workplace policies for their enactment, are in place to ensure the participation of people with disabilities on an equal basis with others, and to ensure their right to participate in society, including economic activity. Given that 15% of the working-age adult population is estimated to have a mental disorder, the recommendation has the potential to have an impact on substantial numbers of people.



Recommendations for training managers

RECOMMENDATION 4

Manager training for mental health

Training managers to support their workers' mental health should be delivered to improve managers' knowledge, attitudes and behaviours for mental health and to improve workers' help-seeking behaviours.

Strong recommendation, moderate-certainty of evidence

Key remarks:

- Manager training for mental health is designed to enable managers to identify and respond to workers who require support related to mental health, to give managers the confidence to recognize, engage with and support team members with mental health problems and to adjust job stressors in working conditions. Such training, however, is not designed for managers to become mental health-care providers. Managers cannot – and should not – be in a position to diagnose or treat mental disorders after such training.

Common implementation remarks for manager training for mental health:

- Managers include persons who are in direct supervisory roles, responsible for supervision/management of one or more workers. Managers can include administrative managers or managers who are technical specialists in their field.
- Attention should be paid to ensure the evidence base (the quality and effectiveness) of the training before delivering it to managers.
- Assessment of training transfer – the extent to which participants in the training have been able to apply the knowledge and skills (i.e. the extent of competency) to their work outside of the training – should be conducted alongside training implementation.
- Training should be offered preferably during normal paid working hours. Training may need to be repeated periodically or refreshed; however, there is a need for further research on duration in order to indicate the ideal frequency of repetition.
- Senior leadership commitment is required to encourage other managers to utilize the training and to culturally sustain the effects of training.
- Manager training for mental health can be delivered via face-to-face, digital or blended methods.
- Manager training for mental health can be delivered as part of on-the-job training or can be integrated within relevant curricula for training prospective managers or leaders (or other pre-employment training).

Evidence and rationale

Key question 4 investigated whether training managers has a beneficial impact on outcomes for managers and workers (Annex 3). Two broad categories of manager training were identified during the review: 1) **manager training for mental health**, which comprises components such as mental health and psychosocial risks (e.g. job stressors) knowledge, early identification and response to emotional distress, taking appropriate actions to respond to distress (including referral to other sources of support), and communication and active listening skills; and 2) **leadership-oriented training**, which is a form of human resource management training aimed at improving manager-worker interactions, and managers' capacity to design a work environment and work organization in favour of health and well-being.

The evidence for manager training for mental health compared to no training/wait list control was extracted from one meta-analysis *(77)* which was updated for the purpose of these guidelines. Evidence for leadership-oriented training compared to no training/wait list control was extracted from a Cochrane review *(78)* (web Annex).

For **manager training for mental health**, moderate-certainty evidence suggested strong beneficial effects on managers' knowledge for mental health. Strong effects were observed from very low- certainty evidence on managers' skills/behaviours for supporting workers. High-certainty evidence pointed towards a small positive effect on managers' stigmatizing attitudes towards mental health. High-certainty evidence also showed a very small significant effect on supervisee-reported mental health outcomes favouring the intervention. Low-certainty evidence from one study suggested substantial benefits of manager training for mental health on workers' subsequent help-seeking behaviour *(79)*. For work-related outcomes, low-certainty evidence from one study indicated a marginally significant reduction in perceptions of job insecurity in workers, and there was no effect on workers' job performance in two other trials.

For **leadership-oriented training**, only results for work-related outcomes were identified. Very low-certainty evidence from individual trials showed that there were small positive effects on workers' organizational commitment, work-related motivation and engagement; however, most effects (from three out of five studies) were not statistically significant. In turn, no effects were observed on workers' job satisfaction, turnover intention, team effectiveness or work–life effectiveness (i.e. time spent between work and personal life).

Overall, no outcomes were available for adverse effects, change in leadership style, positive mental health, quality of life, substance use or suicidal behaviours. No direct evidence was available on the harms of implementing manager training.

Evidence-to-decision considerations

Both managers and workers **value** the outcomes that manager training for mental health seeks to achieve and have fewer concerns regarding this intervention than other types of interventions. Managers express a preference to receive further information about mental health and how to support their workers through training (web Annex: Values and preferences survey). Yet there is hesitation from some managers regarding whether such training and the actions of supporting a worker are within the role of their job, possibly owing to lack of awareness of what the training involves and a lack of awareness of the mechanisms by which the job stressors (psychosocial risks) can have an impact on workers.

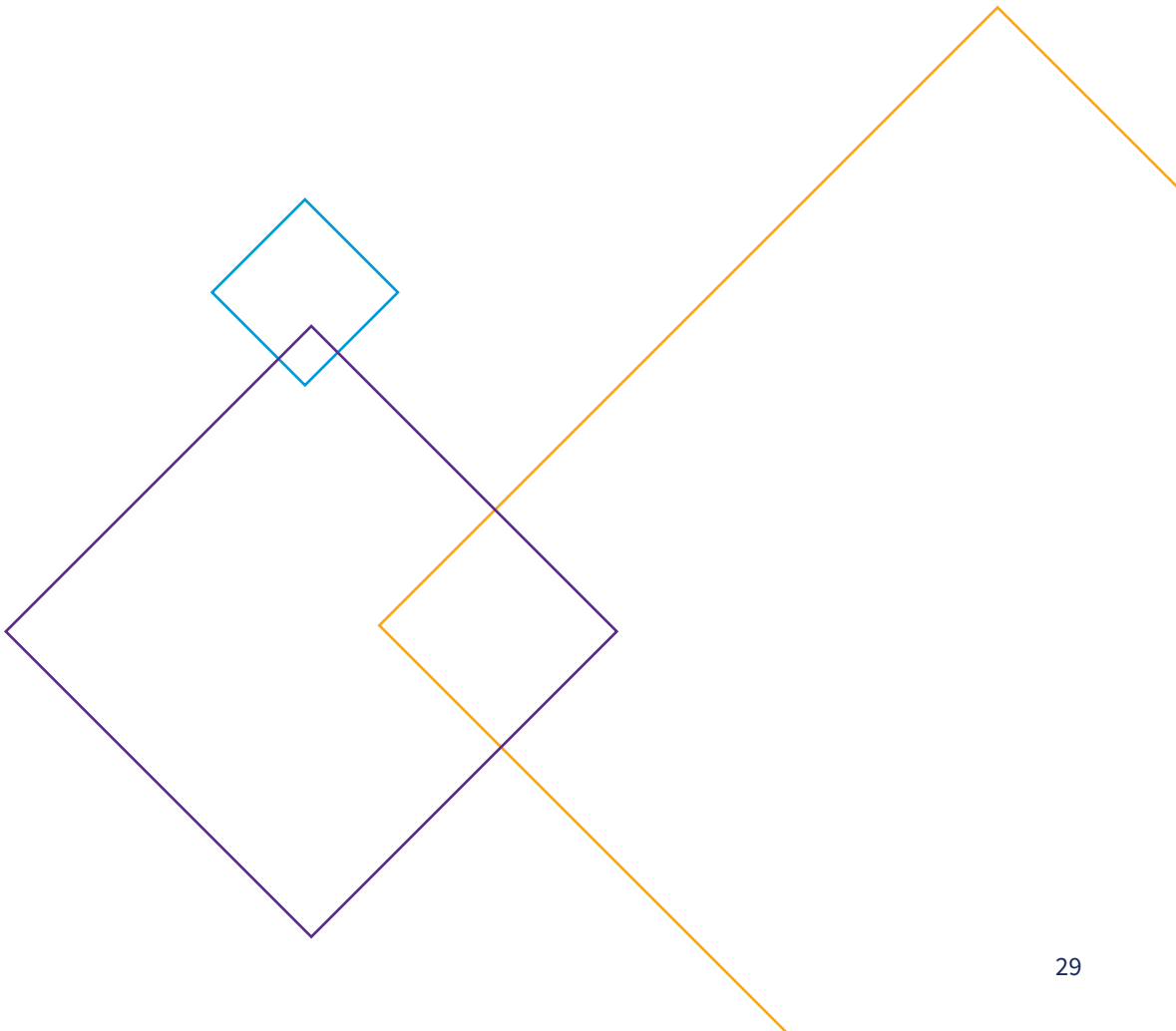
Managers vary in their preferences as to how to access such training (e.g. individually, in groups, digitally, face-to-face or blended approaches). A variety of training durations are offered, ranging from 2.25 hours to 14 hours, with delivery in single sessions or over periods of up to 10 weeks *(77)* and with varying licensure/commission costs of training packages. The modality of training varies between didactic educational learning and skills-based practical learning. Such variability has an impact on **resource requirements**. No reviews directly examined **cost-effectiveness**.

For **health equity, equality and discrimination**, there were no identified analyses that investigated the differential benefits between subgroups of managers or their workers based on sociodemographic characteristics (such as gender or race). Manager training for the benefit of workers' health can include training on equality and diversity *(80)*, and human rights-based training with respect to mental health conditions. However no included studies in the reviews considered these elements. All identified studies within the reviews were carried out in high-income countries, usually in medium-to-large organizations.

It was noted that **feasibility** may be challenging in smaller enterprises which may lack resources to participate in such training without closer inspection and mitigation of the barriers *(81)*. In this situation, managers across multiple smaller enterprises could combine resources to participate in such training – such as through group occupational services. Such training could be offered during pre-employment or on-the-job training, including in management curricula. Training which improves managers' attitudes to, and knowledge of mental health may improve the uptake of other levels of interventions available for workers by mitigating concerns about stigma or retaliation (web Annex: Implementation review). It is likely that the sustainability of training effects requires senior leadership to support behaviour changes in managers as a result of their training (web Annex: Implementation review). In additional evidence, the training effects of one-time training for managers appear to diminish after 6 months, suggesting that a biannual repetition of training may be needed as a minimum to sustain effects *(82)*.

The benefit of manager training for mental health on manager attitudes (reduced stigma) and improvement of skills/behaviours (non-discrimination) is aligned with universal **human rights principles** and would facilitate the implementation of the UNCRPD Article 27. Including human rights components in the training alongside efforts to reduce discrimination through improving knowledge, attitudes and skills/behaviours may strengthen managers' knowledge of **human rights principles** for mental health, although this was not explicitly included in the interventions examined by the evidence. For **sociocultural acceptability**, there is indirect evidence that mental health interventions can be adapted to various cultures, and there are methodologies for how cultural adaptations should take place. These methodologies may prove pertinent for potentially adapting manager training in contexts where there is limited openness for personal discussion in work settings *(83)*.

The GDG concluded that a strong recommendation for manager training for mental health was warranted. The overall certainty of evidence was considered moderate, and the benefits on knowledge, attitudes, skills/behaviours and workers' help-seeking behaviours outweighed the possible harms. No recommendation was made at this time for leadership-oriented training owing to there being no available desirable effects on health outcomes and mixed desirable effects on work-related outcomes. The GDG concluded that leadership-oriented training is designed for developing better leadership skills in managing and improving working conditions and by setting the tone of the organizational culture. However, substantially more research is required which includes the impact of such training on workers' mental health outcomes.



RECOMMENDATION 5

Manager training for health, humanitarian and emergency workers

Training managers to support the mental health of health, humanitarian and emergency workers should be delivered to improve managers' knowledge, attitudes and behaviours for mental health.

Strong recommendation, moderate-certainty of evidence

Key remarks:

- Recommendation 4 and its key remarks on manager training are relevant for managers of at-risk workers. However, unlike in Recommendation 4, there was no available evidence for the impact of manager training on workers' help-seeking behaviours.

Implementation remarks:

- All common implementation remarks, as indicated under Recommendation 4, apply.
- Inflexible face-to-face delivery may be difficult for this population who are by the nature of their work inherently shift workers, and their clients may be dispersed in different locations from their supervisors. Flexible, brief or digital delivery may be feasible to access training.
- Proactive approaches are needed to minimize stigma and increase mental health knowledge in these work settings.
- Funding or person-coverage for this population may need to be coordinated to allow for participation in programmes during the working day. Training can also be delivered as part of pre-service vocational training or study/education, on-the-job continued professional training or pre-deployment training. Training should be adapted to reflect the context of the different sectors.

Evidence and rationale

Key question 5 investigated whether manager training in selective at-risk sectors has a beneficial impact on outcomes for managers and workers (Annex 3). The evidence for **manager training for mental health**[15] in at-risk sectors compared to no training/wait list control and for two other types of manager training for mental health –**mental health awareness training for managers**[16] compared to **peer-led manager training** (e.g. increasing awareness of the lived experience of mental health conditions, delivered by people with lived experience) – was extracted from one meta-analysis *(77)* which was updated for the purpose of these guidelines. Evidence for **leadership-oriented training** compared to no training/wait list control was extracted from two systematic reviews *(78, 84)* (web Annex).

For **manager training for mental health**, a moderate beneficial effect from low-certainty evidence was observed on managers' knowledge for mental health. As a result of the training, managers' skills/behaviours for supporting at-risk workers improved (small effect, moderate certainty of evidence) as did their stigmatizing attitudes for mental health (moderate effects, high certainty of evidence). Small effects from moderate-certainty evidence for one trial *(85)* suggested that manager training did contribute to the reduction of work-related absence time (but not to non-work-related absence) over 6 months in at-risk workers.

There was little very low-certainty evidence to suggest any superiority between **mental health awareness training for managers** compared to **peer-led manager training** for mental health knowledge or stigmatizing attitudes (i.e. both types of training were equally beneficial on these outcomes). For **leadership-oriented training**, very low-certainty evidence indicated mixed effects from individual trials on at-risk workers' mental health symptoms, with one trial suggesting small effects favouring training and another indicating no effect. For work-related outcomes, low-certainty evidence pointed towards small positive effects on job satisfaction or turnover.

Overall, no outcomes were reported for adverse effects, at-risk workers' help-seeking behaviours, change in leadership style, positive mental health, quality of life, substance use or suicidal behaviours. No direct evidence was available on the harms of implementing manager training in at-risk sectors.

[15] Components of training for 1) manager training for mental health and 3) leadership-oriented training are described under Recommendation 4.
[16] Mental health awareness training for managers included manualised training taught by trained facilitators focusing on awareness of the signs and symptoms of mental health conditions and how to support an individual experiencing difficulty with their mental health.

Evidence-to-decision considerations

Evidence-to-decision considerations were largely similar to those for Recommendation 4 with the following considerations highlighted as relevant for the at-risk sector of health, humanitarian and emergency workers and those who manage them. Manager training was considered especially pertinent for the selective at-risk areas that operate with strong team-oriented work and where seniority is typically based on technical speciality over management skills.

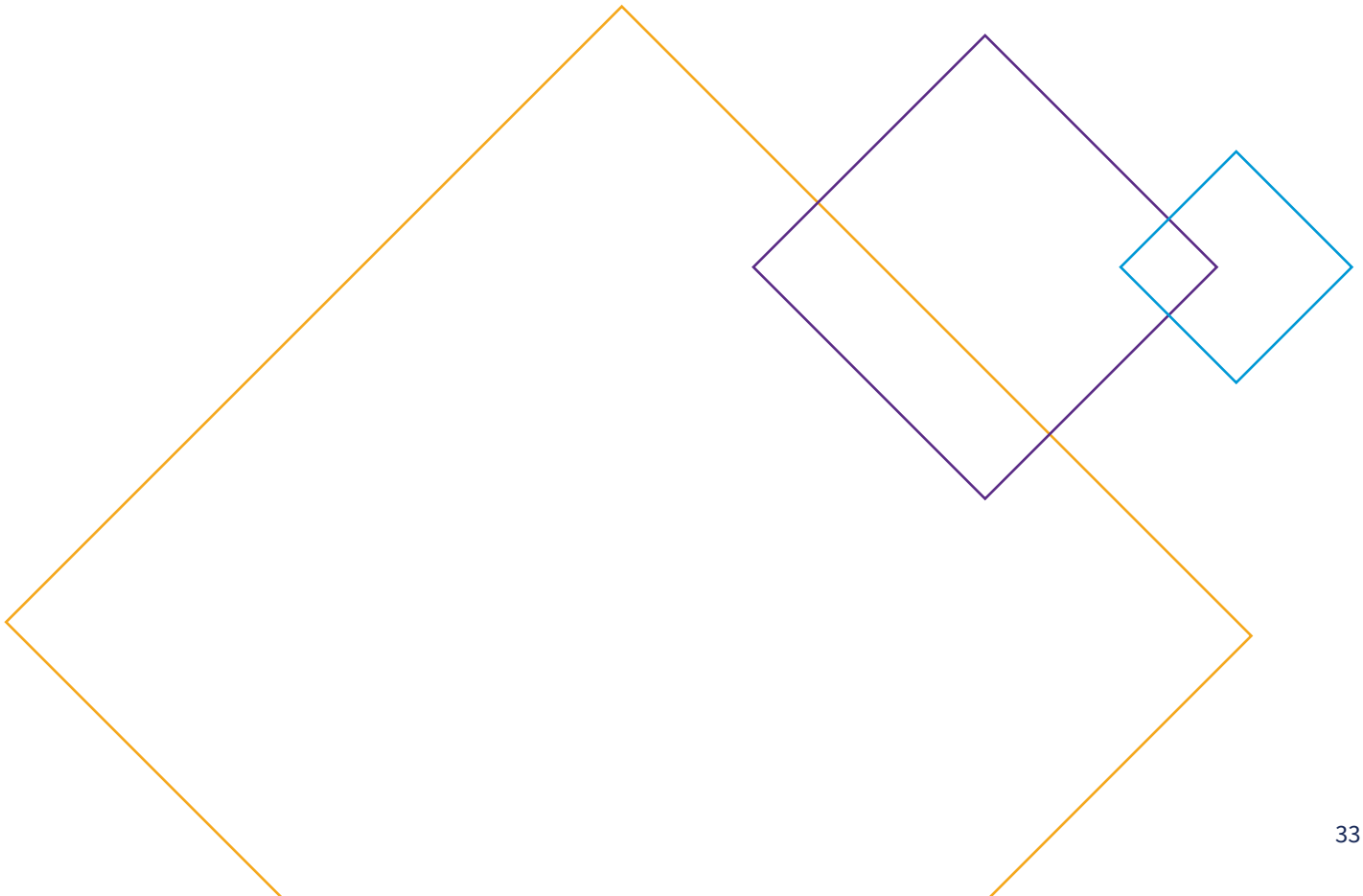
Both managers and workers **value** the outcomes that manager training for mental health seeks to address, and managers express a preference for receiving further information about mental health and how to support their workers through training. Minimal concerns regarding this type of intervention were expressed by at-risk workers. **Resource requirements** are similar to those for Recommendation 4 on manager training for mental health *(77)* and repetition of training at least twice a year may be indicated by positive outcomes persisting over time with significant effects observed between 2- and 6-month follow-up *(86)*. No reviews directly examined **cost-effectiveness**, yet a single trial which investigated the impact of manager training for mental health in emergency services demonstrated a return on investment of UK£ 9.98 for every UK£ 1 spent on training *(85)*.

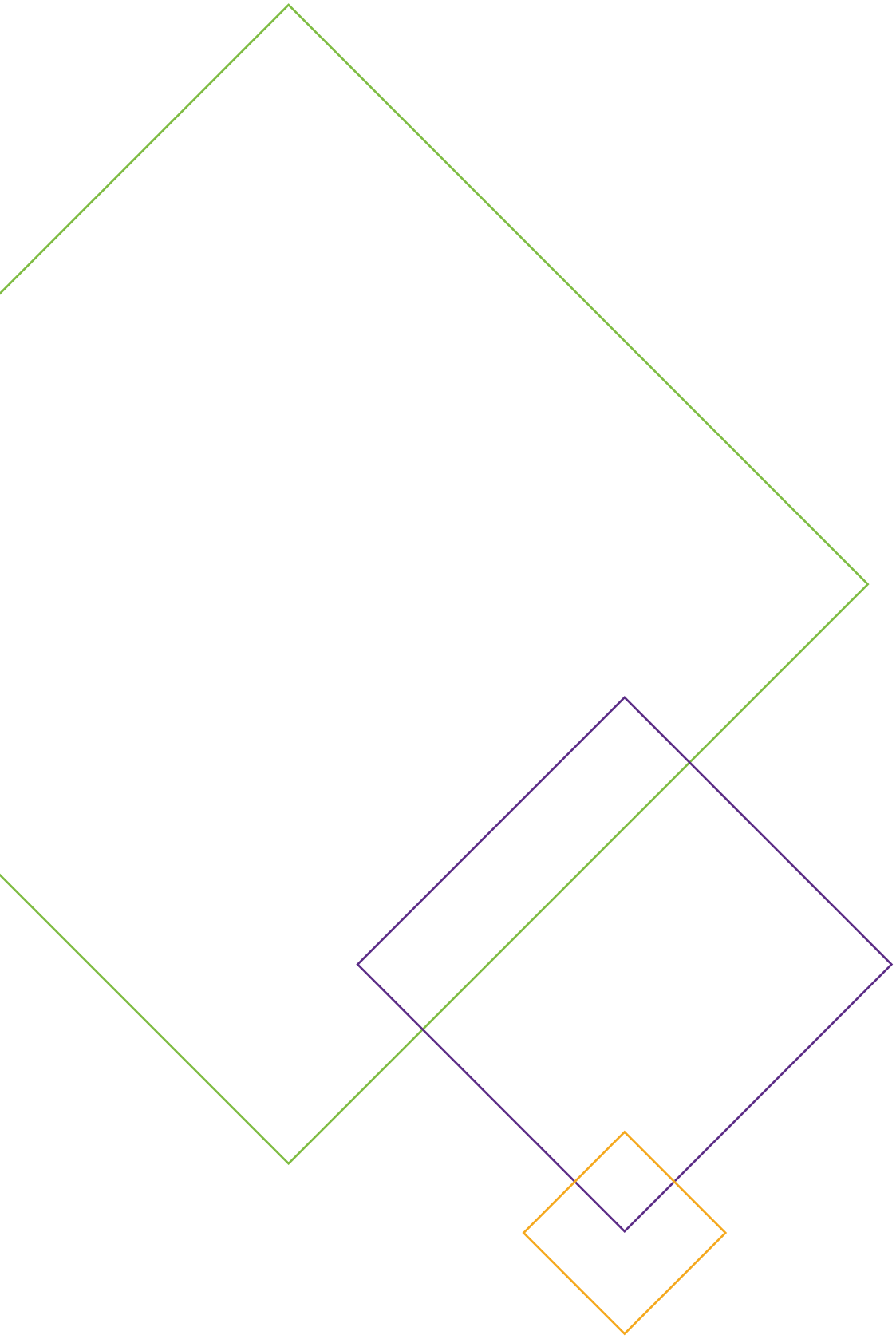
For **health equity, equality and discrimination**, there were no identified analyses of the health, humanitarian and emergency sectors that investigated differential benefits between sociodemographic subgroups such as gender or race. This is a notable gap for these sectors where the "delivered by women, led by men" practice prevails *(87)*. All identified studies within the reviews were carried out in high-income countries and included health or emergency workers who were primarily client-facing. There were no studies including the humanitarian sector. There is wider qualitative evidence which indicates that humanitarian workers express a desire for improved leadership and better communication as a pathway to better mental health *(65)*.

The **feasibility** of manager training for mental health in occupations which are subject to long working hours and shift work is a concern, especially in overburdened health systems or in countries facing active humanitarian emergencies. Brevity and accessibility will be relevant to promote the feasibility of training. When incorporated into other mandatory training for at-risk workers, training may facilitate enrolment when compared with low enrolment rates in voluntary training as observed in police personnel (web Annex: Implementation review). However, managers who receive training can have a further positive effect by increasing the likelihood that their workers will access other support for mental health, particularly in sectors and work environments where concerns about confidentiality and stigma are high (web Annex: Implementation review). Another opportunity for these sectors is to integrate manager mental health training into pre-service training (i.e. during vocational training, as part of vocational study) or before deployment or on-the-job continual training, although this was not examined by the reviews per se *(84)*.

The desirable effects of manager training for mental health are aligned with universal **human rights principles**. For **sociocultural acceptability**, cultures of machoism or patriarchal-normed cultures may influence the likelihood of uptake and enactment of such training, which underscores the need for such training to exist alongside efforts to improve representative leadership policies.

The GDG made a strong recommendation for manager training for mental health in the identified at-risk sectors in view of the evidence-to-decision considerations and taking account of the strong recommendation for manager training. The overall certainty of evidence was considered moderate, and the benefits of receiving training on knowledge, attitudes and skills/behaviours outweighed the possible harms. Since evidence for the subsequent impact on workers' mental health and work-related outcomes was mixed, or data were not available on the other key outcomes (e.g. help-seeking behaviour), these outcomes were not included in the recommendation. As with Recommendation 4 on manager training for mental health, the GDG acknowledged the limitations of evidence for leadership-oriented training.





Recommendations for training workers

RECOMMENDATION 6

Training for workers in mental health literacy and awareness

Training workers in mental health literacy and awareness may be delivered to improve trainees' mental health-related knowledge and attitudes at work, including stigmatizing attitudes.

Conditional recommendation, very low-certainty of evidence

Key remarks:

- Training of workers in mental health literacy and awareness is designed to improve knowledge about mental health, reduce stigmatizing attitudes in recipients of the training, and enable workers to support themselves or colleagues appropriately (e.g. through identifying the signs of emotional distress and taking appropriate action such as seeking or facilitating help from formal or informal sources). The training is not designed for workers to become mental health-care providers or to diagnose or treat mental disorders. The limited evidence that is available suggests that such training may not have an impact on the (self-reported) likelihood of providing help to others; more quality research is needed to address this. There was no evidence available for whether such training benefits colleagues' outcomes.

Common implementation remarks for workers training for mental health literacy and awareness:

- The target audience of the guidelines should be aware that training for workers in mental health literacy and awareness should be checked for its evidence base (i.e. quality and effectiveness) prior to delivery to workers.
- Assessment of training transfer – i.e. the extent to which participants in the training have been able to apply the knowledge and skills (i.e. the extent of competency) to their work outside of the training – should be conducted alongside training implementation.
- Training should be offered preferably during normal paid working hours.
- Senior leadership commitment is required to encourage workers to utilize the training, and to culturally sustain the effects of training.
- Such training benefits individual workers themselves and should be delivered with this aim in mind. There is not yet substantial evidence to indicate that such training should be used to appoint workers as informal helpers for their colleagues. If workers are to be trained to initially respond to co-workers in distress, they should preferably be provided with mental health supervision or support to manage boundaries with colleagues, identify needs and channels for referral, confidentiality and the impact on their own mental health.
- Training can be periodically repeated or refreshed. However frequency of repetition should be informed by improved research on the duration of effects.
- Training could also include administrative information alerting workers as to where they can find relevant resources and policies in their work or local community settings.
- Such training may be beneficial in contexts where there is reduced incentive to address mental health over and above physical health and safety concerns at work, such as in some informal work sectors. However, raising awareness of mental health should be conducted only when there are options for mental health referral support available to workers.

Evidence and rationale

Key question 6 investigated whether training of workers has a beneficial impact on outcomes for those who receive training and for their colleagues (Annex 3). Such training is designed to increase workers' mental health literacy (knowledge and awareness) and attitudes (e.g. anti-stigma), it includes early identification and response to emotional distress in the trainee and/or colleagues, and how to provide initial support through appropriate actions, including referral information. One systematic review informed the evidence for the comparison of worker mental health training compared to wait list control *(88)* (web Annex).

For training participants, low-certainty evidence suggested small-to-moderate beneficial effects on workers' knowledge for mental health. Very low-certainty evidence indicated that there was a small effect of training on improving stigmatizing attitudes for mental health. However, low-certainty evidence indicated that mental health literacy and awareness training did not change the (self-reported) provision of help by trainees to others. There was very low certainty of evidence from individual studies which pointed towards mixed effects (no effect and positive effect) on training recipients' mental health.

No outcomes were reported for adverse effects, change in help-seeking behaviours by colleagues who had been supported by a training recipient, positive mental health, quality of life, substance use, suicidal behaviours or work-related outcomes. No direct evidence was available on the harms of implementing mental health literacy and awareness training for workers.

Additional evidence, not suitable for GRADE, indicated that such training – often called "gatekeeper training" – is described in published and unpublished studies for the prevention of suicide in workplaces *(89)*. A few studies of such training for the purposes of suicide prevention at work, indicated beneficial effects on knowledge, stigma and help-seeking behaviour.

Evidence-to-decision considerations

Workers **value** highly the outcomes that worker training for mental health seeks to address. Such interventions are popular in work settings, particularly as there is great emphasis on reducing stigma for mental health in work settings. Yet, there is also high value on "change in help-seeking behaviours of colleague" which was an outcome that was not available within the included evidence.

Resource requirements may vary according to the mode of delivery (group, digital, face to face) and length of training, with durations in the evidence review ranging from 1 hour to 2 days. The licensure status of available programmes has an impact on resource requirements: while some training is relatively inexpensive, some can cost considerable time and money when delivered to whole workforces. No reviews directly examined **cost-effectiveness**; however, narrative evidence from Hanisch et al. *(88)* indicated that one study had evaluated its anti-stigma training as cost-effective.

For **health equity, equality and discrimination**, all identified studies within the reviews were carried out in high-income countries, usually in medium-to-large organizations. No identified analyses investigated differential benefits or harms between sociodemographic subgroups (e.g. gender or race). However, there is evidence that such training could be adapted to LMICs and to non-anglophone/non-European cultures *(92)* and there are indications that such training may be welcome among the organized informal sector (web Annex).

For **feasibility**, smaller enterprises may lack resources to participate in such training and may benefit from group occupational services between multiple enterprises to conduct the training. In additional evidence, the long-term training effect at 12 months was mixed, with 6 months of follow-up being common in studies.

The ability of mental health literacy and awareness training to reduce stigma against people living with mental health conditions is in line with universal **human rights principles.** For **sociocultural acceptability**, there are emerging concerns as to whether trainees understand their role following training, and whether they are provided with formal or informal supervisory support (i.e. for those persons then designated as informal peer support providers in workplaces). Trained workers who may overextend their role may lack the necessary skills to manage the situations they face without supportive (non-managerial) supervision to manage cases, such as from a mental health professional. This is in contrast to manager training, where managers are in a direct position of power which places their workers under their responsibility.

The GDG provided a conditional recommendation for worker training for mental health. The overall certainty of evidence was considered very low, and the benefits on knowledge and attitudes outweighed the possible harms. It is to be noted that that the effects on "providing help to others" may not have been captured due to the limitations of study follow-up periods. Additional evidence in Morgan et al. *(90)* indicates moderate improvements in trainees' confidence/intention to support a colleague prospectively, where confidence alone may not translate into behaviour (although it is a proxy) *(91)*. Currently such training is suitable for addressing stigmatizing knowledge/attitudes at the workplace – a necessary barrier to overcome for the successful implementation of other interventions for mental health at work. The GDG noted that further evidence is needed to investigate the effectiveness of this training in relation to other outcomes such as influencing help-seeking behaviours.

Training for health, humanitarian and emergency workers in mental health literacy and awareness

Training health, humanitarian and emergency workers in mental health literacy and awareness may be delivered to improve trainees' mental health-related knowledge and attitudes at work, including stigmatizing attitudes.

Conditional recommendation, very low-certainty of evidence

Key remarks:

- Training at-risk workers in mental health literacy and awareness is designed to reduce stigma in workers, and to enable workers to support themselves or colleagues appropriately (through identifying the signs of emotional distress and taking appropriate action such as seeking or facilitating help from formal or informal sources). It is not designed for workers to become mental health-care providers or to diagnose or treat mental disorders. The limited evidence that is available suggests that such training benefits positive attitudes towards seeking help but may not have an impact on the actual (self-reported) seeking of help for oneself or providing help to others, and more quality research is needed to address this.
- However, training health, humanitarian and emergency workers in mental health knowledge, attitudes and skills may benefit their daily client-facing work, as the objectives of the training may be transferable to members of the public in distress.

Implementation remarks:

- All common implementation remarks, as indicated under Recommendation 6, apply.
- Training could be delivered as part of pre-service training, on-the-job training/study, pre-deployment training or post-deployment follow-up.

Evidence and rationale

Key question 7 investigated whether mental health literacy and awareness training for at-risk workers had a beneficial impact on outcomes (Annex 3). No systematic reviews were available that explored the effect of interventions on civilian health, emergency and humanitarian workers' knowledge, attitudes and skills/behaviours that improve their own or their colleagues' mental health. Two RCTs evaluating these outcomes were identified through systematic searches to inform the evidence comparing **contact-based workplace education**[17] versus **mental health literacy and awareness training** *(93)* and **workplace mental health awareness training**[18] versus **training as usual** *(94)* (web Annex).

For **contact-based workplace education compared to mental health literacy and awareness training**, very low-certainty evidence indicated that the interventions were similar with regard to their small positive effects for improving mental health knowledge. Likewise, the beneficial impact on stigmatizing attitudes for mental health was small at both 3- and 6- month follow-up and, while the interventions were comparable, contact-based workplace education had marginally better effects on attitudes at 6- month follow-up. No effects were observed on skills/behaviours in providing help to others, for either training approach (very low certainty of evidence).

For **workplace mental health awareness training** versus **training as usual**, low-certainty evidence demonstrated a small effect in favour of workplace mental health awareness training on training recipients' attitudes to seek help for themselves. This effect was no longer observed at 3-year follow-up. No effects were observed on changing training recipients' actual help-seeking behaviours (very low certainty of evidence). In addition, very low-certainty evidence found there was no effect on reducing mental health symptoms in training recipients at 6-month or 3-year follow-up.

Overall, no outcomes were reported for adverse effects, help-seeking behaviours by colleagues, positive mental health, quality of life, substance use, suicidal behaviours or work-related outcomes. No direct evidence was available on the harms of implementing mental health literacy and awareness training in at-risk workers.

[17] Contact-based workplace education involved six face-to-face sessions and five online sessions delivered by peers living with mental health conditions, and included mental health literacy, early identification and help-seeking resources.

[18] Workplace mental health awareness training involved watching three videos – of approximately 30 minutes in total – of people in a similar profession to the end-users discussing personal experiences of work challenges, adverse events and how seeking-help was beneficial.

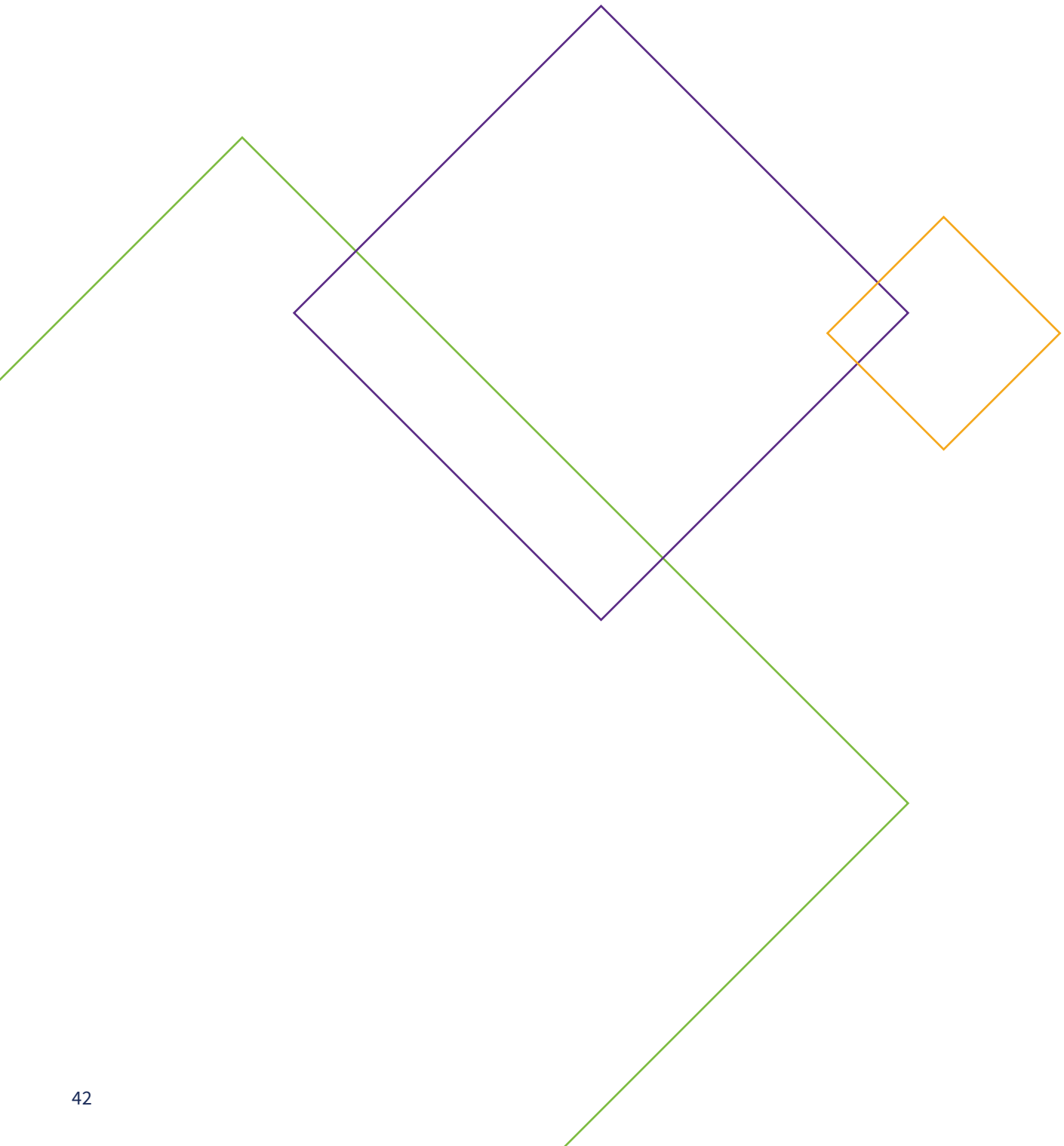
Evidence-to-decision considerations

At-risk workers **value** the outcomes that worker training for mental health seeks to address. Such interventions – for the purposes of addressing stigma – are popular in work settings. **Resource requirements** may vary according to the mode of delivery (group, digital, face to face, blended) and length of training, whether licensure is required, and by the varying durations which were reported in the evidence as ranging from 30 minutes to brief sessions delivered over a 21-month period. No reviews directly examined **cost-effectiveness**, yet indirect evidence from a single uncontrolled study in an at-risk sector sample suggested cost savings of receiving such training *(95)*.

For **health equity, equality and discrimination**, all identified studies within the reviews were carried out in high-income countries. The included studies focused on health and emergency workers. Additional evidence indicated that pre-deployment training benefits humanitarian workers' confidence in coping with disasters *(96)*. No identified analyses investigated differential benefits between sociodemographic subgroups (such as gender or race). There is emerging evidence that such training could be adapted to LMICs and in non-anglophone/non-European cultures *(92)*. Notably, addressing knowledge and attitudes for mental health is included in training that seeks to build the capacity of primary care health workers in LMICs to support people, rather than colleagues, for their mental health – suggesting that such training could be feasible *(97)*. For **feasibility**, the barrier of high workloads and difficulties in leaving work unattended for those in client-facing roles can affect access to training during working hours unless protected time or staff coverage is provided at the organizational level (web Annex: Implementation review).

The ability of mental health literacy and awareness training to reduce stigma for mental health is in line with universal **human rights principles**. For **sociocultural acceptability**, mental health self-stigma is reportedly problematic among health-sector workers *(98)*. However, a dual benefit for this at-risk group may serve to increase willingness to participate in training because the training of health, humanitarian and emergency workers in mental health knowledge, attitudes and skills may additionally benefit their daily front-facing work of service delivery. Peer support programmes in these sectors are also popular. While evidence for the success of peer support programmes remains difficult to evaluate due to the diversity of interventions and outcomes, there appears to be some indication of short-term benefits *(99)*.

The GDG made a conditional recommendation for at-risk worker training for mental health. The overall certainty of evidence was very low, and the benefits on knowledge and attitudes outweighed the possible harms – i.e. that training would support trainees to improve their knowledge in mental health, thus increasing the likelihood of early detection of symptoms, and their knowledge (but not action) on what to do about such symptoms (e.g. the likelihood of seeking help). Since the findings match those found in Recommendation 6, there was consideration of whether there should be a single recommendation. However, the GDG felt it important to highlight specifically the need to have a recommendation for this group.



Recommendations for individual interventions

RECOMMENDATION 8

Universal individual interventions

8A Universally delivered psychosocial interventions that aim to build workers' skills in stress management – such as interventions based on mindfulness or cognitive behavioural approaches – may be considered for workers to promote positive mental health, reduce emotional distress and improve work effectiveness.

Conditional recommendation, low-certainty of evidence

8B Opportunities for leisure-based physical activity – such as resistance training, strength- training, aerobic training, walking or yoga – may be considered for workers to improve mental health and work ability.

Conditional recommendation, very low-certainty of evidence

Key remarks:

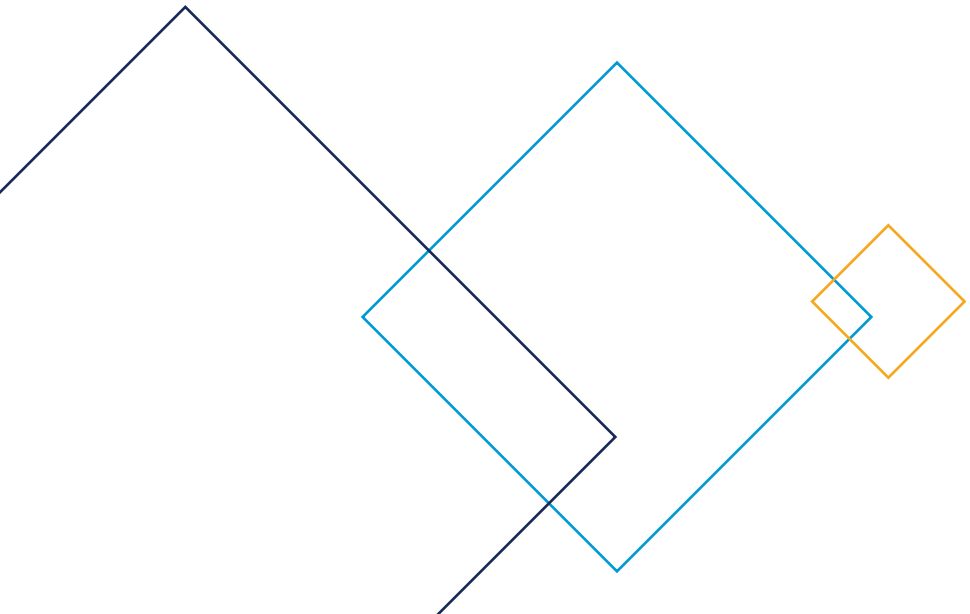
- Universally delivered interventions may help to reach a large proportion of a workforce and may be less likely to cause stigmatization as entry to the programmes is not predetermined by mental health status.
- The target audience of the guidelines should be aware that interventions for workers in building skills in stress management should be checked for their evidence base (quality and effectiveness) prior to delivery to workers.
- *WHO guidelines on physical activity and sedentary behaviour* (2020) includes recommendations for physical activity in working-age persons and notes that the relevant recommendations confer health benefits, including reduction of symptoms of anxiety and depression. Where resources are available, Recommendation 8B applies to activities that can be conducted within work settings or where work facilitates external opportunities to participate in these physical activities.

Common implementation remarks for all individual interventions:

- Duration of effects are heterogenous and unclear. Consequently, workers would require flexible and continuous access to individual interventions as one-time delivery effects may not be sustained.
- Use of electronic prompts (such as mobile telephone or email messaging) can be used to encourage workers to engage in interventions, such as physical exercise.
- Intervention content and delivery requires cultural contextual adaptations prior to implementation and workers should be included in the planning of delivery.
- Individual interventions (psychosocial and physical activity) can be feasibly delivered face to face, electronically (guided or unguided), in a group or individually accessed.
- Providers of face-to-face or guided delivery of psychosocial interventions should be competent to deliver these interventions and should be subject to clinical supervision.
- Digital interventions (e.g. online, applications) may offer feasible access for shift workers, self-employed persons or "off-site" workers.
- Interventions could be integrated within existing workplace health promotion programmes. Where resources are low for implementation in work settings, provision of guidance or interventions may be supported by the public health system, where there is capacity.
- Workers should preferably be allowed time to access individual interventions.

Su-group remarks:

- Equity in delivery or uptake of individual interventions would need to be considered for "low-status workers" versus "high-status workers", for shift workers, informal workers or self-employed persons.
- Informal female workers may have less access to digital resources within family units compared to their male counterparts; face-to-face delivery may be preferable in these and similar circumstances.
- Informal workers may not be able to take time away from work to engage in the interventions; consequently, community-based organizations such as cooperatives or the health system may promote individual interventions in a proactive manner and could themselves be trained to deliver individual interventions that are designed for delivery by non-specialist providers.



Evidence and rationale

Key question 8 investigated whether universally-delivered individual interventions (such as psychosocial interventions, leisure-based physical activity, or healthy lifestyle promotion) had a beneficial impact on outcomes (Annex 3). Evidence was extracted from eight systematic reviews. Compared to control conditions (varying between treatment as usual, wait list control, other interventions, no treatment control), evidence was available for universally-delivered **psychosocial interventions** (such as cognitive behavioural therapy, relaxation, interpersonal soft skills, stress management, role-related skills, and expressive writing) *(100, 101)*, for **mindfulness and contemplative** interventions *(60, 102, 103)* and **cognitive behavioural therapy (CBT)** *(60, 103)*; **e- psychosocial interventions** (such as Internet-based or other digital-based cognitive therapy or CBT, stress and coping, mindfulness, psychoeducation, problem-solving training, positive psychology interventions, and acceptance and commitment therapy) *(104, 105)*; **e-health stress management** *(103)*; **physical activity and lifestyle interventions** (such as general physical exercise, specific resistance training at work) *(106)*; **physical activity interventions** (such as walking, yoga, resistance training, aerobic and weight-training exercise) *(60)* and **combined psychosocial and/or physical activity and/or lifestyle** interventions *(60)* (web Annex).

For universally-delivered psychosocial interventions, very low-certainty evidence showed that there were small effects on burnout exhaustion and improvement in symptoms of insomnia. **For universally-delivered mindfulness and other contemplative interventions**, there was low-certainty evidence for moderate improvements in symptoms of general distress, overall mental health symptoms (i.e. depression, anxiety and stress) and very low-certainty evidence for a strong improvement in subjective well-being. **For universally delivered CBT**, mainly very low- to low-certainty evidence showed a small effect of CBT on overall mental health symptoms (i.e. depression, anxiety and stress) and subjective well-being (very low certainty of evidence).

For e-psychosocial interventions, evidence ranging from very low to moderate certainty demonstrated small effects on mental health (symptoms of stress, depression, burnout). There was low-certainty evidence for small-to-moderate benefits to positive mental health (well-being and mindfulness) and high certainty of small effects on work-related effectiveness. Additional evidence within the included reviews indicated no difference between CBT-based approaches and other psychological approaches on psychological health and work effectiveness outcomes *(104)*. Likewise, CBT showed a very small, significant positive effect, and mindfulness-based interventions showed a moderate-to-large positive effect *(103)*. No desirable outcomes were identified for **e-health stress management**.

For combined psychosocial and/or physical activity and/or lifestyle interventions, very low-certainty evidence demonstrated a moderate effect on improving positive mental health and a strong effect on improving quality of life. **For physical activity and/or lifestyle interventions**, moderate-certainty evidence indicated a small effect on work ability.

Overall, no outcomes were reported for adverse effects, substance use or suicidal behaviours. No direct evidence was identified on the harms for implementation of universally-delivered psychosocial, physical activity or lifestyle interventions.

Evidence-to-decision considerations

Workers **value** access to universally-delivered individual interventions. However, they are less likely to value these interventions if they are not provided alongside organizational or managerial interventions (web Annex: Values and preferences survey). This is due to concerns that receiving individual interventions only is indicative that workers may be to blame for their own mental health status. These interventions form one part of self-care or self-management options, but alone they would not constitute comprehensive delivery.

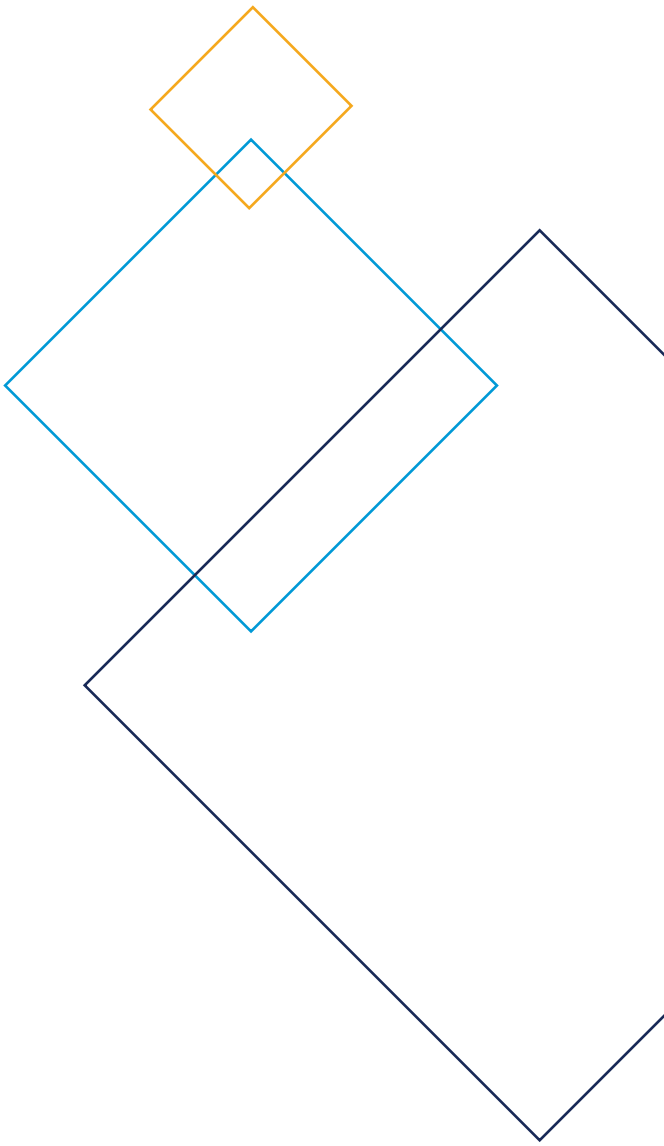
Resources vary according to delivery method (face-to-face, self-administered, digital, provider expertise), whether equipment is required (e.g. for physical activity) and by duration – one review indicated a mean duration of 10 weeks for e-psychosocial interventions *(104)* and 4–6 months for physical activity programmes *(60)*. Follow-up periods were short and the duration of effects was heterogeneous and unclear, suggesting that interventions should be available as and when people need them. No direct evidence was available for **cost-effectiveness**. Wider sources suggested for workplace stress management (single or multicomponent which covers but is not exclusive to universal delivery), an estimated return on investment of UK£ 2 for every UK£ 1 invested in England *(108)* and a 138% return on investment in a review of over 250 000 workers across 12 countries *(109)*.

For **health equity, equality and discrimination**, only one included review conducted a subgroup analysis solely for gender *(105)*, showing that gender had no significant moderating effects on outcomes for e-health psychosocial interventions. Although the majority of the work was obtained in high-income settings, and one review indicated that 40% of providers were specialists *(100)*, wider literature indicates that brief psychosocial interventions can be feasibly implemented in lower-resource settings through non-specialist providers *(110)*. Digitally-provided interventions may extend reach to workers based in rural settings or home-offices. Equity in delivery or uptake of individual interventions would need to be considered for "low-status workers" versus "high-status workers", and for shift workers, informal workers or the self-employed. For example, face-to-face delivery for shift workers may result in less uptake compared to self-accessed digital delivery, whereas the former it may be preferable for workers with lower digital literacy. Informal female workers may have less access to digital resources within family units, compared to male counterparts; therefore face-to-face delivery – such as through workers cooperatives or community-based organizations – may be preferable in these and related circumstances (web Annex). Self-access or referral to such interventions may in general reduce stigma-based barriers for accessing support for mental health. For employers or workers with limited resources, provision of guidance or interventions could be supported by the public health sector, where there is capacity. Finally on **feasibility**, one included review indicated 45% completion of e-psychosocial interventions, which was in line with engagement rates seen in digital health interventions *(104)*. Emerging evidence indicates that brief individual interventions (self-administered or guided support) are feasible in SMEs *(111)*.

Access to evidence-based interventions to prevent distress is in line with universal **human rights principles**, and universal delivery removes barriers of stigma for mental health or for help-seeking. For s**ociocultural acceptability**, the content and delivery of brief psychosocial interventions

can be adapted to local population cultures and needs *(110)*. The adaptability of the content and delivery of such interventions specific to the work sector or design is important for uptake (web Annex: implementation review). For physical activity interventions, there is less evidence from LMICs, economically disadvantaged workers and workers with disabilities on the effectiveness of implementation requirements needed to serve these communities *(112)*.

The GDG concluded that a conditional recommendation for universally-delivered psychosocial interventions was warranted. The overall certainty of evidence was considered low, and the benefits on mental health outcomes and work-related outcomes outweighed the harms. The GDG also concluded, in the absence of identification of any direct harms, to conditionally recommend leisure-based physical activity for the benefits on work-related outcomes. Although findings were not as expected in terms of mental health outcomes, this decision was in balance with existing recommendations in the *WHO guidelines on physical activity and sedentary behaviour (112)*. Although the majority of effects were small, the conclusion remains in line with the wider field of universal prevention and promotion in mental health *(107)*. Despite the small effects, universal individual interventions were also considered beneficial since they minimize the stigma of access to the interventions (since mental health status does not determine entry or access to the interventions).



RECOMMENDATION 9

Individual interventions for health, humanitarian and emergency workers

9A Universally delivered psychosocial interventions that aim to build workers' skills in stress management – such as interventions based on mindfulness or cognitive behavioural approaches – may be considered for health, humanitarian and emergency workers to promote positive mental health and reduce emotional distress.

Conditional recommendation, low-certainty of evidence

9B Psychosocial interventions – such as stress management and self-care training, or communication skills training – may be made available for health, humanitarian and emergency workers who are experiencing emotional distress.

Conditional recommendation, low-certainty of evidence

Key remarks:

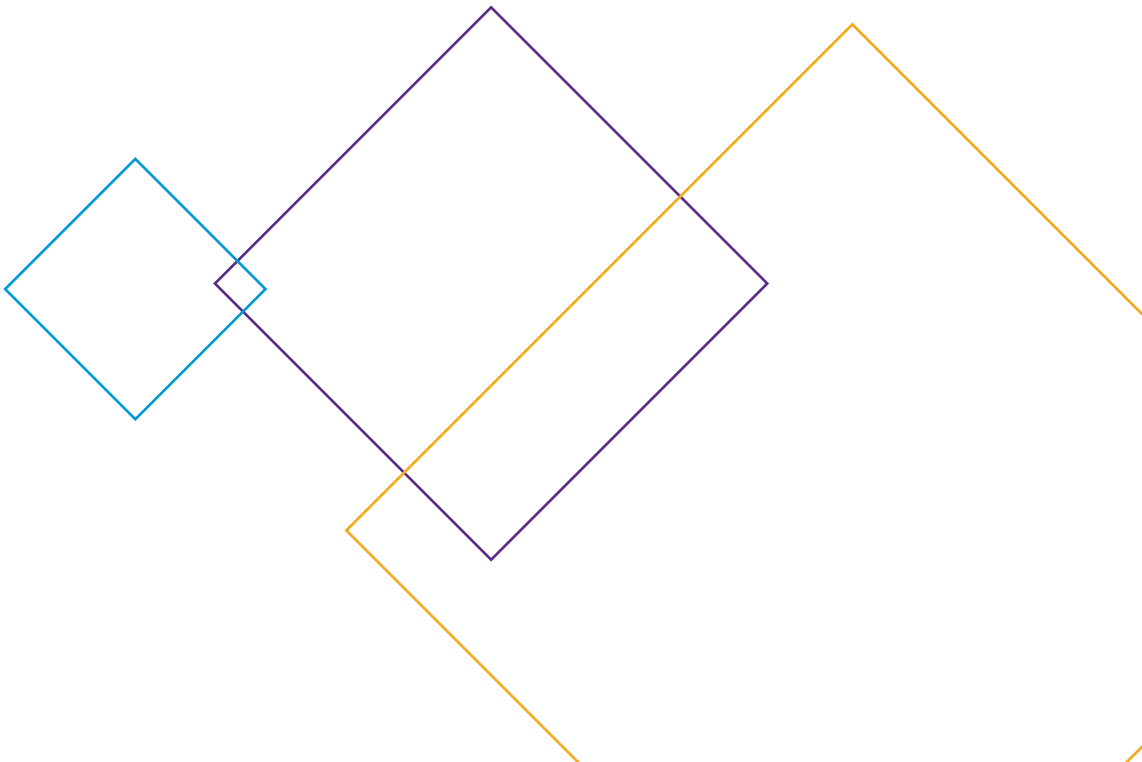
- There is evidence for the sustainability of improvements in outcomes at short-term and medium-term follow-up time points (≤ 6 months) but there is limited evidence for long-term lasting effects.
- Recommendation 10 for indicated interventions would also apply to Recommendation 9B. In addition, WHO guidelines on conditions specifically related to stress *(113)* recommends against the use of psychological debriefing following potentially traumatic events: *Psychological debriefing should not be used as an intervention to reduce the risk of post-traumatic stress, anxiety or depressive symptoms in people recently exposed to a traumatic event (strong recommendation, very low certainty of evidence).*

Implementation remarks:

- All common implementation remarks, as indicated under Recommendation 8, apply.
- There is considerable stigma in these sectors for seeking support for mental health conditions or disclosing to employers. Universal delivery of psychosocial interventions may benefit workers in such high-stigma working environments. Likewise, self-referral options or digital interventions may ameliorate perceived stigma and barriers to accessing face-to-face support (e.g. where there may be concerns about confidentiality and privacy).
- Inflexible face-to-face delivery may be difficult for this population who are largely shift workers and client-facing. Flexible, brief or digital delivery may improve uptake.
- Proactive approaches are also needed to minimize stigma and increase mental health knowledge in these work settings.
- Funding or coverage for this population may need to be coordinated to allow for participation in programmes during the working day.
- Universal interventions could be integrated within pre-service or on-the-job training in order to improve stress management skill-building in preparation for work.
- It is unclear whether psychosocial interventions for at-risk workers with emotional distress should be provided within or outside of work settings (e.g. providers internal to or external to the work setting). Where feasible, options should be made available for both.

Subgroup considerations:

- For employers with limited resources – such as local or national humanitarian organizations – access to interventions may be provided by the public health sector or through shared resourcing in group occupational services.



Evidence and rationale

Key question 9 investigated whether individual interventions (such as psychosocial interventions, leisure-based physical activity, or healthy lifestyle promotion) had a beneficial impact on outcomes **for at-risk workers** (Annex 3). Evidence was available for 1) universal delivery of individual interventions for at-risk workers (selective–universal) and 2) individual interventions for at-risk workers with emotional distress (selective–indicated) (web Annex).

Evidence was extracted from eight systematic reviews. Compared to control conditions (varying between treatment as usual, wait list, other control interventions, or no treatment control), evidence was available for: 1) universal-delivery of combined **psychosocial and/or physical activity and/or lifestyle promotion** interventions (such as cognitive behavioural therapy approaches, stress reduction and resilience programmes) *(114)*; 2) **psychosocial interventions** (such as CBT approaches, mindfulness interventions, stress management and self-care, attention and interpretation therapy, and resilience-based training) *(115-117)*; 3) **mindfulness and other contemplative interventions** *(102, 118–120)*; and 4) for indicated at-risk workers, **psychosocial interventions** (such as facilitated small group curricula, stress management and self-care training, communication skills training and a belonging intervention) *(117)*.

For combined psychosocial and/or physical activity and/or lifestyle promotion interventions, low-certainty data indicated small effects on mental health outcomes (anxiety symptoms) and moderate effects for stress. There were very low-certainty data for moderate-to-large effects on positive mental health (resilience and mindfulness, respectively).

For psychosocial interventions, the effects varied for mental health outcomes where there was a very low certainty of effect on a small reduction in depression symptoms, and a moderate-sized effect on reducing stress. Low-to-moderate certainty evidence indicated greater reductions on symptoms of burnout (exhaustion). Very low-quality evidence suggested that psychosocial interventions exhibited a small effect on positive mental health (e.g. resilience, optimism, self-efficacy, positive emotions). There was very low certainty in a small effect on reducing suicidal ideation. There was low certainty of no effect on adverse events.

For mindfulness and other contemplative interventions, there was moderate-certainty evidence indicating moderate effects on reducing mental health outcomes (depression, stress) and small effects on general distress and burnout. While there was a moderate effect on anxiety, this evidence was considered very low-certainty. There was low certainty in the moderate improvements in positive mental health (self-compassion).

For psychosocial interventions for indicated at-risk workers, there was moderate certainty of effects on high reductions in levels of burnout (exhaustion).

Overall, no outcomes were reported for substance use. Psychosocial interventions for indicated at-risk workers did not demonstrate the desired effect on burnout depersonalization, whereas there was a moderate effect on burnout exhaustion. No other direct harms were identified.

Evidence-to-decision considerations

The evidence-to-decision considerations were largely identical across all individual intervention recommendations (8, 9 and 10). The additional unique considerations for indicated individual interventions (workers with emotional distress) are outlined in Recommendation 10.

In these at-risk sectors there can be a particular stigmatization regarding disclosure of mental health due to concerns about its impact on career progression *(121)*. For this reason, there is a **preference** among workers to self-refer to psychosocial interventions (web Annex: Implementation review). Workers also reported affordability and convenience as benefits of these interventions although most data were from workers in higher-resourced settings. There may be particular barriers (to access individual interventions) faced by smaller organizations or those with fewer **resources**, where "group occupational health services" could be contracted through pooling resources from multiple organizations or through delivery from the public-health sector. The duration of such interventions – which range from less than 5 hours to over 12 hours – is relevant for these organizations where time during work may be limited due to client-facing roles *(115)*.

For **health equity, equality and discrimination**, although health workers represent a diverse group of professions, most included research is based on those in direct clinical care roles. Most included research was in high-income settings, although additional evidence points to feasibility in middle-income countries *(33)*. Limited evidence was available on the effectiveness for emergency and humanitarian workers of differential benefits based on sociodemographic subgroups (such as gender or race). However, additional evidence points to the **feasibility** of implementation in emergency workers *(122)*. There is evidence for a duration of effects of up to 6 months for individual psychosocial interventions in at-risk workers *(115)*. Group-based delivery of psychosocial interventions may be less feasible in these sectors owing to scheduling difficulties for typical shift work (and if conducted can be universally delivered to minimize stigma in highly stigmatized settings (web Annex: Implementation review).

The GDG concluded that a conditional recommendation was warranted for individual interventions for at-risk workers, both when universally delivered and when delivered to an indicated population (i.e. at-risk workers in distress). The overall certainty of evidence was considered to be low and the benefits on mental health outcomes – and positive mental health outcomes in the case of universally-delivered interventions – were considered to outweigh the harms. The GDG did not consider there to be sufficient substantial evidence to warrant a recommendation on leisure-based physical activity interventions since, despite the combination of psychosocial physical activity and lifestyle promotion interventions, the vast majority were psychosocial. The available literature also did not permit disaggregating the effects by intervention type (e.g. psychosocial versus physical). However, it was noted that Recommendation 8 for universally delivered interventions would also be applicable to this population.

RECOMMENDATION 10

Individual interventions for workers with emotional distress

10A For workers with emotional distress, psychosocial interventions such as those based on mindfulness or cognitive behavioural approaches, or problem-solving training, may be considered in order to reduce these symptoms and improve work effectiveness.

Conditional recommendation, very low certainty of evidence

10B For workers with emotional distress, physical exercise, such as aerobic training and weight-training, may be considered in order to reduce these symptoms.

Conditional recommendation, very low certainty of evidence

Key remarks:

- It is unclear whether indicated psychosocial interventions for workers with emotional distress should be provided within or outside of work settings (i.e. by internal or external providers). However, where feasible, both should be available to suit the preferences of workers.
- WHO mhGAP guideline *(123)* provides recommendations on effective interventions for depression, self-harm/suicide and substance use relevant to the general population (in low-resourced settings).
- *WHO guidelines on physical activity and sedentary behaviour* (2020) includes recommendations for physical activity in working-age persons and notes that the relevant recommendations confer health benefits – including the reduction of symptoms of anxiety and depression.

Evidence and rationale

Key question 10 investigated whether indicated individual-level interventions (such as psychosocial interventions, leisure-based physical activity, or lifestyle promotion) had a beneficial impact on outcomes **for workers with emotional distress** (Annex 3). Evidence was extracted from five systematic reviews. Compared to control conditions (varying between treatment as usual, wait list, other control interventions), evidence was available for **psychosocial interventions** (e.g. mixed CBT interventions, relaxation, interpersonal soft skills, role-related skills, aerobic exercise and behaviour modification, and acceptance and commitment therapy) *(100, 124)*; for **CBT** *(103, 124)*; **e-psychosocial interventions** (e.g. cognitive therapy or CBT, stress and coping, mindfulness, psychoeducation, problem-solving training, positive psychology, and acceptance and commitment therapy) *(104, 105)*; and **e-stress management** *(103)* (web Annex).

For psychosocial interventions, there was low-certainty evidence for small improvement in depression symptoms. **For CBT**, (which was mostly delivered through e-health formats) there was moderate-certainty evidence for moderate improvements in depression. Additional evidence in Nigatu et al. *(124)* indicated that the mode of delivery affected efficacy in post-test measurements. Telephone-delivered psychosocial interventions showed greater reductions in depression symptoms compared to computer-delivered interventions or in-person delivery.

For e-psychosocial interventions, there was very low-certainty evidence for small effects on mental health outcomes (symptoms of depression and anxiety); moderate effects on burnout and a composite measure which combined stress, depression and psychological stress; and strong effects on outcomes of stress and insomnia symptoms. Low-certainty evidence demonstrated a small improvement in work effectiveness (defined as: work engagement, productivity, job effectiveness). For **e-stress management** interventions, there was very low-certainty evidence to indicate a moderate effect on a combined measure of depression, anxiety and stress symptoms.

Overall, no outcomes were reported for positive mental health, quality of life, adverse effects, substance use or suicidal behaviours. No direct harms of indicated individual interventions were identified, although psychosocial interventions did not demonstrate the expected effect on improving “lack of personal accomplishment”, a sub-criterion of burnout.

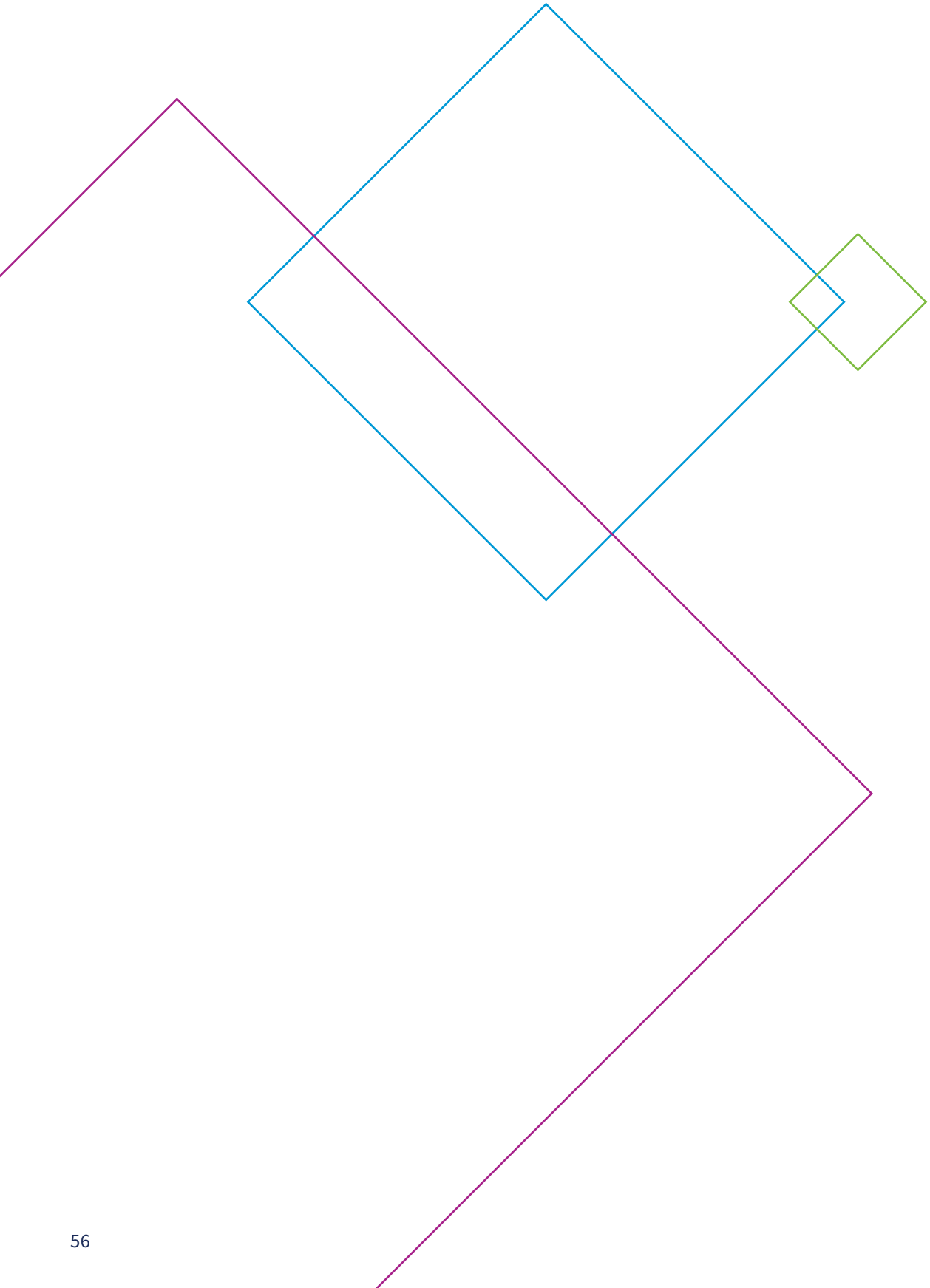
Evidence-to-decision considerations

The evidence-to-decision considerations were largely identical across all individual intervention recommendations (8, 9 and 10). Additional considerations for indicated individual interventions are outlined here.

Consideration is given to the fact that entry into such programmes is by meeting criteria for emotional distress which may be stigmatizing if care is delivered in the work setting. Therefore, in terms of **sociocultural acceptability**, it is unclear whether such interventions are considered acceptable at work – despite well-designed RCTs for workers with emotional distress being conducted in workplaces with no known reports of harms (such as perceptions or fears of stigma or discrimination).

No direct evidence was available on **cost-effectiveness**. However, additional sources indicate that workplace psychosocial interventions which include CBT are cost-saving, and in some cases are cost-effective for depression *(126)*. For **health equity, equality and discrimination**, while supervised (rather than unstructured, unsupervised) exercise was included in indirect evidence as being effective on symptoms of depression, such supervised approaches may not be accessible for informal workers, or in lower-resourced work settings, unless provided within public health systems or through dedicated community-based activities. There was no evidence available on the differential benefits based on sociodemographic subgroups (such as gender or race).

The GDG concluded that a conditional recommendation for indicated psychosocial interventions – i.e. individual psychosocial interventions delivered to workers with emotional distress – was warranted. The overall certainty of evidence was considered very low. Yet benefits on mental health outcomes and work-related outcomes were considered to outweigh the harms. On the basis of indirect additional evidence, the GDG also concluded conditionally to recommend leisure-based physical activity for the benefit of reducing symptoms of emotional distress. Evidence was available from Nigatu et al. *(124)* of two included trials that investigated the treatment effects of supervised workplace physical exercise – high-intensity aerobic exercise of at least 20 minutes duration over 3 days, and strength-based exercise that was group-delivered twice a week for 10 weeks – where small and large effects were found on symptoms of depression. The findings are in accordance with wider literature on physical activity and reducing the severity of mental health symptoms in adults with mental health conditions *(112, 125)*.



Recommendations for returning to work after absence associated with mental health conditions

Returning to work after absence associated with mental health conditions

For people on absence associated with mental health conditions, (a) work-directed care plus evidence-based mental health clinical care or (b) evidence-based mental health clinical care alone should be considered for the reduction of mental health symptoms and reduction in days of absence.

Conditional recommendation, low certainty of evidence

Key remarks:

- The evidence for this recommendation comes primarily from reviews on depression and adjustment disorders. The WHO mhGAP guideline (2015) provides recommendations for evidence-based clinical care in the general population in low-resourced settings.

Implementation remarks:

- Multi-stakeholder coordination between the health provider, employer and worker, and worker representatives or employment/vocational specialists, where feasible, may facilitate effective implementation of return-to-work measures. The decision as to which stakeholders to include and which interventions to participate in should be based on the worker's preference.
- Such coordination may present a feasibility challenge for many lower-resourced settings in LMICs and globally for SMEs.
- Work-directed care, clinical care and psychological interventions can be delivered face to face, by telephone or online. Evidence-based clinical care, such as psychological interventions, can be guided by a provider or can be unguided self-help, where resources are available.
- Interventions may be delivered during the period of absence and/or as part of early re-entry to work.
- Interventions should not be mandated for completion as a prerequisite for re-entering work.

Evidence and rationale

Key question 11 investigated whether supporting people to return to work, following absence associated with mental health conditions, has a beneficial impact on outcomes (Annex 3). Evidence was extracted from two systematic reviews comparing return-to-work interventions for workers with depression *(127)* or adjustment disorders *(128)* (web Annex). Identified interventions could be broadly categorized as:

- work-directed care (such as improving working conditions, reducing working hours, changing of tasks or a lighter load of tasks, graded reintroduction to work etc., delivered or coordinated by various methods such as multiple meetings with care providers, employer and the worker- together or separately, depending on the needs);
- evidence-based clinical care (such as evidence-based psychological interventions);
- improved health care (such as the introduction of care management for depression in primary care);
- leisure-based physical activities (such as strength-training or aerobic exercises); or
- any combination of these, with comparators being care as usual or any one of the intervention categories.

For **work-directed interventions alone, compared to care as usual**, low-to-moderate certainty results were not favourable for workers with depression with regard to mental health outcomes (at medium [3–12 months] and long-term follow-up [12 months and over]), risk of being on absence, the number of days on absence, and work functioning.

For **work-directed care plus clinical care,** compared with care as usual for workers with depression, there was a low certainty in small (medium-term follow-up) to moderate (long-term follow-up) reductions in depressive symptoms. There was a small effect in reducing the days on absence at medium-term (moderate-certainty) and long-term (low-certainty). However, there was moderate certainty of no difference in the likelihood of being absent, versus not being absent. There was very low to low certainty of evidence for small effects on improving work functioning (at medium term (not significant) and long term, respectively). There was very low certainty that work-directed care plus clinical intervention was no more superior (i.e. equally comparable or beneficial) than work-directed care alone or psychological interventions alone for mental health and work-related outcomes. This anomaly (given the lack of impact on outcomes of work-directed care alone) may be accounted for by the heterogeneity of the interventions that are included under “work-directed care”.

For **evidence-based clinical interventions**, outcomes were available for workers with depression or with adjustment disorders. Compared to care as usual in workers with depression, low-certainty evidence indicated small effects in reducing depression symptoms, and small effects in reducing days on absence (at medium-term follow-up). However, this was not observed at short-term follow-up (up to 2 months). Multiple comparisons for individual psychological interventions were available and are described in web Annex with several psychological interventions demonstrating positive effects on mental health and work-related outcomes at short-, medium- or long-term follow-up.

For **improved healthcare**, compared to care as usual for workers with depression, moderate-certainty evidence indicated small effects at medium-term follow-up on depressive symptoms. However, there was moderate certainty of a moderate effect on worsening work functioning. No benefits in terms of absence days or the likelihood of being absent were observed for improved health care. Therefore, improved health care alone in the absence of a work-focused intervention benefitted health outcomes only but did not benefit functioning outcomes specific to work. There were mixed results for **leisure-based physical activities**. For CBT combined with physical relaxation, compared to physical relaxation alone, for workers with adjustment disorders, low-certainty evidence indicated that there were effects on burnout. For supervised strength-training compared with relaxation for workers with depression, there was low-certainty evidence of large effects in favour of the benefit of strength-training on reduced absence days.

Evidence-to-decision considerations

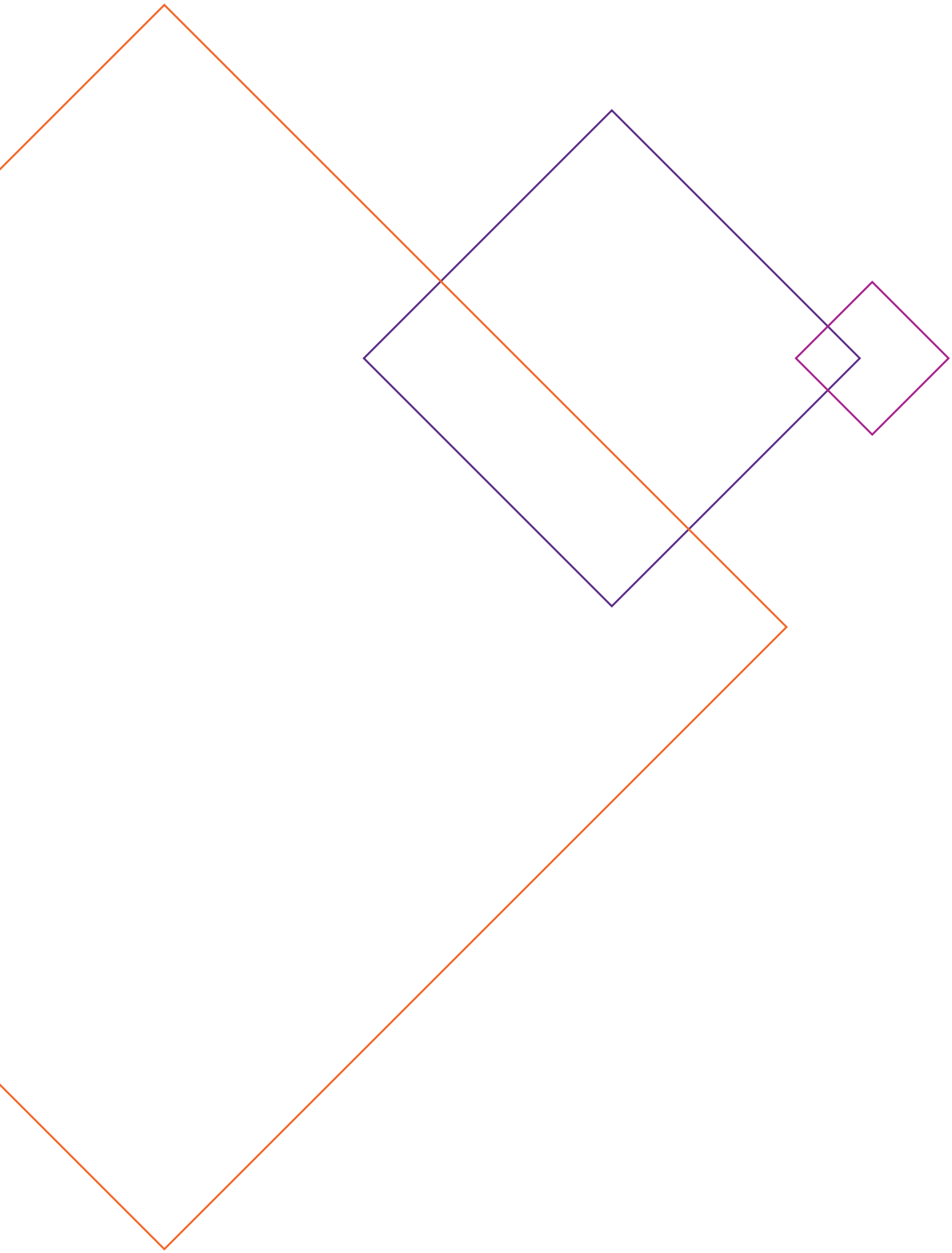
Mental health conditions are considered to be a leading cause of absence for workers *(129, 130)*. Workers **value** the availability of return-to-work programmes and sustainable return-to-work, with the majority considering these to be extremely important (web Annex: Values and preferences survey). No direct examination of **resource requirements** was available. Providers of work-directed care or evidence-based clinical care in the included reviews were specialists in mental or occupational health, medical generalists, and labour and employment specialists. Work-directed care involved multiple meetings over variable periods of time (e.g. nine meetings over a period of 3 months). For clinical care, the number of sessions (e.g. 6–12) was dependent on the structured intervention offered. Psychological interventions can take place face to face, online or through telephone support. A wide variety of potential stakeholders are available to support the return to work. Ultimately the coordination of stakeholders is needed (by workplace or national health protocols) to ensure a smooth return that respects the wishes of the worker and is in line with available resources and coordination, depending on the country's capacity *(131)*.

For **cost-effectiveness**, additional evidence included an economic analysis *(126)*. Active involvement of occupational health specialists in return to work was deemed as cost-saving and cost-effective on the basis of the benefits of reducing absence: in the Netherlands, a return of US$ 0.87 to US$ 10.63 for every US$ 1 invested *(132, 133)*, and in Finland, a cost-saving of US$ 17 to US$ 43 per avoided absence day *(134)*.

For **health equity, equality and discrimination**, no sociodemographic subgroup analyses (such as for gender or race) were available. **Feasibility** of delivering return-to-work programmes for mental health may be especially challenging for lower-resourced settings in LMICs and globally for SMEs. All included studies (and additional evidence) related to high-income countries across the Americas, Asia, Europe and Oceania. Coordination between the health sector, social care (labour/employment), employers, workers and their representatives is needed to support return-to-work measures. However, the current lack of coordination in many contexts impedes implementation (web Annex: Implementation review).

Supporting the right to participate in employment and associated care for persons with, or recovering from, mental health conditions, is in accordance with universal **human rights principles**. Article 27 of the UNCRPD recognizes the promotion of "*vocational and professional rehabilitation, job retention and return-to-work programmes for persons with disabilities*". Application of UNCRPD and national disability laws was noted as a necessary prerequisite to prevent fears of seeking support for mental health in professions where there is a concern that the licence to practise may be lost. **Sociocultural acceptability** of return-to-work programmes may be affected by similar fears of stigma or discrimination, as revealed in Recommendation 3. Workers may have a preference not to include their employers in discussions with their health providers, and such preferences should be prioritized by the persons responsible for coordinating the return to work.

Overall, no data were available for quality of life, substance use, suicidal behaviours, adverse effects or positive mental health (web Annex). The GDG concluded that, despite low certainty of evidence, the benefits on mental health and work-related outcomes from work-directed interventions combined with clinical care, and clinical care alone, outweighed the possible harms. Work-directed interventions alone were not included in the recommendation as there were no favourable effects benefiting workers returning to work (when not delivered in combination with evidence-based clinical care). Improved health care was not specified in the recommendation due to the moderate certainty in worsening work functioning. Leisure-based physical activity was not recommended due to uncertainty for its singular effect on key outcomes since the control conditions included physical activity.



Recommendations for gaining employment for people living with mental health conditions

RECOMMENDATION 12

Gaining employment for people living with mental health conditions

Recovery-oriented strategies enhancing vocational and economic inclusion – such as (augmented) supported employment – should be made available for people with severe mental health conditions, including psychosocial disabilities, to obtain and maintain employment.

Strong recommendation, low-certainty of evidence

Key remarks:

- The majority of the evidence concerned people living with severe mental health conditions.

Implementation remarks:

- Multi-stakeholder coordination (person, family/community, workplace, representative) is required to mobilize resources and strategies which enhance vocational and economic inclusion. Involvement of these stakeholders and selection of the intervention should be based on the prospective worker's preferences.
- It is important to include people with lived experience of mental health conditions in the design and delivery of these programmes in order to optimize person-centred approaches and to empower people in making decisions for their own well-being.
- When people start their employment, support can continue, in order to support maintaining employment.
- Such strategies should be contextualized to people's social and cultural environment, using formal and non-formal recovery-oriented interventions that may be available.

Additional remarks:

- In 2015, the WHO mhGAP guideline recommended: *Recovery-oriented strategies enhancing vocational and economic inclusion (e.g. supported employment) can be offered for people with psychosis (including schizophrenia and bipolar disorder). Such strategies should be contextualized to their social and cultural environment, using formal and non-formal recovery-oriented interventions that may be available, and using a multisectoral approach (Conditional recommendation, low certainty evidence).*

Evidence and rationale

Key question 12 investigated whether recovery-oriented strategies focusing on vocational and economic inclusion have a beneficial impact on outcomes (Annex 3). Evidence was extracted from four systematic reviews, including one network meta-analysis *(135-138)*. The interventions were comparisons between **supported employment** (e.g. programmes which support people to obtain paid employment quickly, and ongoing health or vocational support is provided to maintain employment); **augmented supported employment** (e.g. supported employment with the addition of interventions such as social skills training or CBT); **pre-vocational training** (e.g. training is received to up-skill prospective employees on social, emotional and functioning skills before they are placed in employment); **transitional employment** (e.g. stepped employment programmes whereby people are first placed in temporary work before next moving to employment); **psychiatric care** (e.g. usual psychiatric care, without any vocational component); supported employment versus **other vocational support** (a mix of interventions such as pre-vocational training, job counselling); **re-employment** versus care as usual and **vocational interventions** (the latter two were majority-supported employment programmes which focus on rapidly gaining paid and preferred employment, while provided with support by vocational and health-care systems) versus no care. Certainty of evidence varied from very low to moderate, with the majority being of low certainty (web Annex).

For obtaining employment, **augmented supported employment** (moderate certainty) and s**upported employment** (low certainty) had higher relative effects compared to **psychiatric care and pre-vocational training**. Augmented supported employment and supported employment were comparable in increasing the number of people who obtained employment. Recipients of **vocational interventions** compared to no care were more likely to gain employment. There were no substantial benefits of **pre-vocational training** or **transitional employment** on obtaining employment.

For maintaining employment, **augmented supported employment** was more effective compared to **pre-vocational training** and **supported employment**. **Supported employment** was more effective than **transitional employment** or **pre-vocational training**. Compared to other vocational approaches, **supported employment** resulted in more substantial increases in any levels of employment obtained and in the length of job tenure.

For mental health outcomes, **supported employment** had a more beneficial effect than **psychiatric care** but was not superior in reducing mental health symptoms compared to **transitional employment** or **pre-vocational training**. **Pre-vocational training** was superior to **psychiatric care** only in improving mental health symptoms. No mental health outcomes were available for augmented supported employment.

For quality of life, **augmented supported employment** resulted in better improvements in quality of life compared to **psychiatric care**, but **pre-vocational training** was better than **augmented supported employment** for improving quality of life. **Re-employment** witnessed a small effect in improving quality of life compared to care as usual. There were no substantial impacts of supported employment compared **to pre-vocational training, transitional employment or augmented supported employment**; however, supported employment had a more beneficial effect on quality of life than psychiatric care alone.

For adverse effects (operationalized as drop-out), no differences between the interventions which included this outcome were observed (web Annex). **Pre-vocational training** resulted in lower numbers of hospital admissions compared to **psychiatric care**, but there were no other differences in hospitalization between interventions.

Evidence-to-decision considerations

For **values**, most individuals living with severe mental health conditions consistently report a desire to pursue integrated, gainful employment. Strategies that enhance vocational and economic inclusion support recovery by targeting key recovery processes, as well as enhancing social and economic inclusion in the community. However, there are likely to be individual preferences for the different intervention options available. Providers of mental health prevention or care for workers, indicated vocational support as the intervention for which they needed the most information and training (web Annex: Values and preferences survey). There was no direct examination of **resource requirements** or **cost-effectiveness**. Augmented and supported employment may be resource-intensive approaches, which may not be feasible in low-income settings since there is a need for available vocational and mental health services to take an active role in delivering these programmes.

For health equity, equality and discrimination, it was noted that the majority of the evidence relates to severe mental health conditions. For example, in one review *(135)*, the majority of included diagnoses were psychotic disorders and, in van Rijn *(137)* the majority were schizophrenia, followed by affective disorders and major depression. Fadyl *(138)* included studies with people living with mild-to-moderate mental health conditions, the majority of which were depression and anxiety, and found positive effects of vocational interventions on gaining employment. However, retaining specification of the recommendation to severe

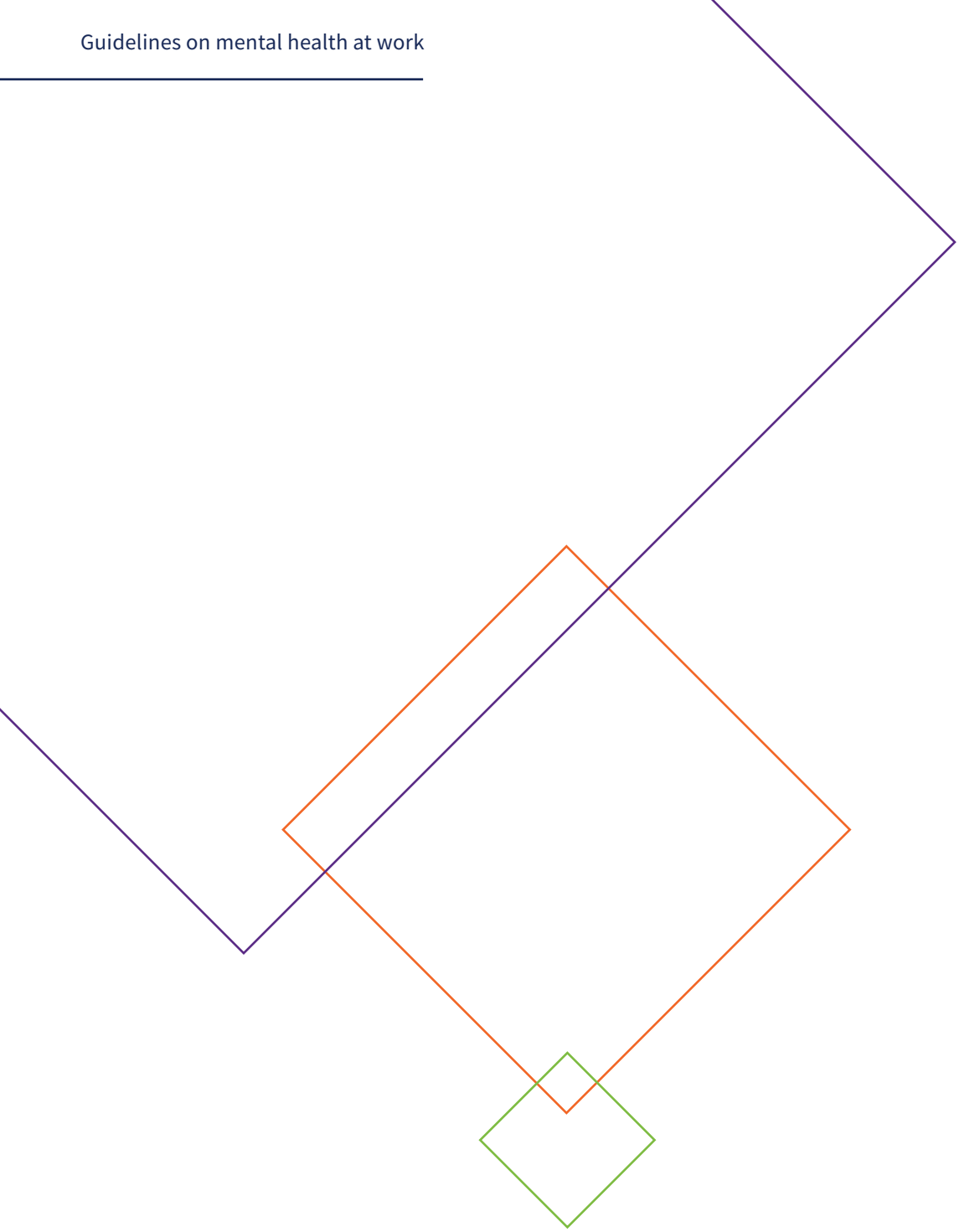
mental health conditions only, was decided because: 1) it is in line with the majority of the evidence; and 2) the GDG expressed concern that lower-income countries may not feasibly be able to provide these programmes for the volume of persons meeting criteria for more commonly occurring mental health conditions. No other subgroup analyses (such as by gender or race) were included.

Feasibility depends on the available infrastructure of communities offering recovery-oriented strategies. For instance, supported employment may depend on the wider economic context or on the availability of a workforce (labour or health) to deliver support.

Most included studies were performed in high-income countries in Europe and North America and a minority were conducted in an upper-middle-income country in Asia. An intersectoral approach is required to mobilize resources and strategies which enhance vocational and economic inclusion. Involvement of the family and the community in recovery-oriented psychosocial intervention programmes can be important to their sustainability. Feasibility may also be influenced by employers' infrastructure for participating in such programmes.

Supporting the right of persons living with psychosocial disabilities to gain employment and stay in it is in line with universal **human rights principles** (e.g. Article 23 of the Universal Declaration of Human Rights). Article 27 on Work and Employment of the UNCRPD recognizes *"the right of persons with disabilities to work, on an equal basis with others; this includes the right to the opportunity to gain a living by work freely chosen or accepted in a labour market and work environment that is open, inclusive and accessible to persons with disabilities."* **Sociocultural acceptability** may be affected by employers not being aware of the option of – or their potential role in – recovery-oriented strategies. It may also be influenced by prospective colleagues or supervisors who are not sensitized to the need to reduce stigma regarding mental health at work.

The GDG concluded that the benefits of recovery-oriented strategies on enhancing vocational and economic inclusion on obtaining and maintaining employment outweigh the harms (of potential drop-out). While it would have been preferable to indicate that the recommendation applies across the spectrum of mental health conditions, most of the evidence was in support of the benefits for people living with severe mental health conditions. Both augmented supported employment and supported employment demonstrated particular promise on the key outcomes. However, for mental health and quality-of-life-outcomes, while benefits were observed, the results did not clearly indicate superiority for any one intervention (i.e. where reported, the interventions were equally comparable), though it was noted that recovery-oriented strategies were on the whole better than psychiatric care only with regard to these outcomes.



Screening programmes

KEY QUESTION 13

Screening programmes

As it is unclear whether the potential benefits of screening programmes outweigh potential harms, **the GDG did not make a recommendation for or against** screening programmes during employment.

Key remarks:

- This statement does not apply to screening which may be required by necessity of regulation in some occupations, or screening when workers have been exposed to potential hazards to (mental) health.

Evidence and rationale

Key question 13 investigated whether the use of screening programmes – i.e. programmes that are designed to identify workers with mental health problems and which are then followed by providing them with, or directing them towards, the necessary support during employment[19] – were beneficial (Annex 3). A systematic review of primary studies was conducted. Thirteen studies were identified, with seven eligible for GRADE, for **screening programmes** versus screening followed by care as usual, wait list control or no intervention (web Annex).

Low-certainty data indicated no impact of screening programmes on reducing mental health symptoms or improving positive mental health. Very low-certainty data found small not significant improvements in work functioning, positive effects on productivity at 5 months which were not sustained at 12-month follow-up, and no effects on job satisfaction. There was a negligible improvement in absence which was not significant, although there was evidence for a small positive effect, albeit of very low certainty, at longer-term 5-year follow-up. One trial indicated greater likelihood of absence and lower likelihood of improvement in productivity for workers in receipt of screening programmes. Small improvements from low-certainty data suggested that screening programmes were beneficial with regard to immediate help-seeking behaviours but this was not sustained at follow-up assessments. Adherence to the supports following positive screening was low in one trial. No other direct harms were reported.

The GDG concluded that there is a lack of clear evidence that the desirable effects of screening programmes during employment outweigh the undesirable effects (negligible or mixed change in key outcomes such as mental health symptoms and absence). Additional concerns were raised – including confidentiality and the risk of the likelihoods of false positives and false negatives when screening for mental health symptoms – such that one-time-screening results, if inaccurate and if misinterpreted, could lead to harms. Reporting bias is also a concern in screening programmes where workers are likely to under-report their symptoms for fear of confidentiality breaches *(139)*. On balance, the GDG concluded that it was not possible to provide a recommendation for or against screening programmes; therefore no recommendation was made.

The GDG highlighted that the "no recommendation" decision pertains to screening programmes conducted during employment, rather than pre-employment screening. The GDG noted that if screening takes place at work (e.g. by necessity of regulations), then the screening programmes should at least include:

- ensured follow-up to access evidence-based treatment or care for people who screen positive (see Recommendations 3 and 10 for relevant interventions for people with emotional distress);
- involvement of qualified, professionally impartial health providers to deliver and interpret screening results and to manage referral to follow-up care;
- ensured privacy and confidentiality;
- adherence to human rights principles and ethical considerations in order to prevent discriminatory treatment of persons screening positive.

The Technical and ethical guidelines on workers surveillance (140) and ILO Occupational Health Services Recommendation No. 171 *(141)* provide additional non-binding considerations for the surveillance of workers health and indicate that, preferably, workers' health surveillance should be linked to the surveillance of occupational hazards present in the workplace.

[19] Evidence for pre-employment screening was not considered as it falls outside the scope of the guidelines.

Evidence-to-decision considerations

Improvement of mental health and work-related outcomes is **valued** by all stakeholders. While two included studies indicated that user satisfaction was positive, additional data indicate that workers are concerned about stigma and discrimination if they screen positive, as well as the confidentiality of their data to employers. Indeed, the lowest preference was given to screening programmes (web Annex: Values and preferences survey). This is also reflected in wider literature where such concerns generate under-reporting of mental ill-health by workers, even if their symptoms would indicate a need for further support *(139)*.

Resource requirements for screening alone may be small and limited to the mode of delivery (digital, paper) and to the automation or not of the interpretation of results. Whereas follow-up when screening positively will vary substantially in resources pending options available (from self-help to physician appointment). A **cost-effectiveness** analysis in one included study from the Netherlands identified net benefits of € 651 per staff member, or for every euro invested a return of between € 5 and € 11 for employers.

For health equity, equality and discrimination, all identified studies were conducted in medium-to-large workplaces in high-income countries. No sociodemographic subgroup analyses were identified. There remains a perception of a considerable risk of discrimination against those screening positive for mental health symptoms, including fears of impact on employment status, career progression or other work task opportunities. It was noted that screening without effective follow-up can be harmful *(142)*. This may render the **feasibility** of large-scale screening programmes unethical in many contexts since access to quality mental health services remains limited. While screening and identification of individuals in need of support/care with the goal of reducing the burden of mental ill-health is in accordance with universal **human rights principles**, the screening of individuals at work elicits concerns about privacy, confidentiality and informed consent. In this situation, screening may appear to be involuntary and have a risk of discrimination with few observable benefits on key outcomes. The **sociocultural acceptability** of screening programmes for mental health at work remains unclear.

Research gaps

The GDG identified several gaps in the evidence included within the scope of these guidelines.

Overall research gaps

- Across all intervention types, there is a critical need, where applicable, to increase the volume and quality of evidence for effectiveness and feasibility in under-researched populations – i.e. the informal sector, SMEs and LMICs – and for the selective at-risk workforce, such as international and national humanitarian workers, health workers not responsible for direct clinical care (e.g. workers in health administration), community health workers and other occupations at risk of negative mental health outcomes.
- Across all intervention types, there is a need for sociodemographic subgroup analyses to determine whether there are differential benefits or harms associated with intervention recipients' sociodemographic (e.g. gender, age, race) or occupational status (e.g. occupational sector, contract status (formal, informal, self-employed, size of workplace). This includes clear reporting of these characteristics under study or review, and clear reporting of the mental health status of participants at baseline.
- Overall, there is a need for implementation research to study the acceptability, accessibility and uptake of interventions in order to better inform implementation guidance.
- Overall, there is a need for quality investigation to study the effectiveness and feasibility of delivering preventive interventions which are combined at multiple levels of delivery (e.g. combinations of organizational, managers, workers and individual interventions).
- There is a need to increase the availability of high-quality research on organizational interventions (including policies), and their impact on mental health and work-related outcomes, regarding salient risk and protective factors at work (which were not encountered by the evidence reviews of these guidelines) such as bullying, parental leave etc.
- There is also a need to increase high-quality research in the cost-effectiveness of interventions for mental health at work.

Research gaps for organizational interventions

Across organizational interventions

- An increase is required in better-quality evidence – utilizing validated and culturally suitable measures of mental health outcomes, psychosocial risks, and work-related outcomes – which assesses organizational interventions that mitigate the known risk factors to workers' mental health. This includes clear specification of the risk factors addressed by the intervention, and designs which allow for establishing which components of the intervention have had an impact on the outcomes.
- Cluster-randomized designs, which include process evaluations, can be used to assess the effectiveness of complex interventions in work settings, and the feasibility and acceptability to stakeholders.
- The common components for effective implementation of organizational interventions need to be identified to allow for better synthesis and comparison of research.
- There is a need for an increase in better-quality investigation of emerging risk factors for the future of work and how these can be mitigated. The evidence base should also be strengthened, taking account of ongoing changes to the working environment for policy-making and implementation.

For selective at-risk workers

- An increase is needed in better-quality studies which assess organizational interventions that mitigate the known risk factors for the mental health of health, emergency and humanitarian workers. Studies should utilize validated and culturally suitable measures of mental health outcomes, including disaggregation by sociodemographic status, occupation and setting.
- More research is required on comparative effectiveness and cost-effectiveness of organizational interventions compared to other intervention levels for health, emergency and humanitarian workers.

For workers with mental health conditions

- An increase is needed in better-quality studies which investigate the effectiveness, cost-effectiveness and implementation of organizational interventions (such as reasonable accommodations) delivered to workers with symptoms of emotional distress or meeting criteria for mental health conditions, in order to improve positive mental health and reduce symptoms of mental health conditions, suicidal behaviours and substance use. While there is a relatively better body of work in the field of return-to-work interventions, there remains a gap in evidence for workplace accommodations for workers with mental health conditions – i.e. those who are in work either following a return to work or never having taken absence due to a mental health condition.
- Increased evidence on the factors for feasible, non-stigmatizing implementation of accommodations for workers with mental health conditions.

Research priorities for manager training

Common to all manager training for mental health

- Research on manager training for mental health should include measurement of supervisees' work-related outcomes such as absenteeism, presenteeism, productivity and performance.
- Increase evidence of the effectiveness of manager training for mental health on priority outcomes (e.g. workers' suicidal behaviours and substance use, managers' leadership style).
- Include a longer duration of follow-up (greater than 6 months) for key outcomes such as supervisees' mental health.
- An increase in studies that identify effective components of manager training for mental health, including delivery components (e.g. duration) and content components.
- An increase in better-quality studies and/or trials of leadership-oriented manager training and its impact on health outcomes.
- An increase in better-quality studies on interventions that address help-seeking outcomes effectively (e.g. by mitigating stigma in the workplace).

For selective at-risk sectors

- More studies to investigate the effectiveness and feasibility of manager training for mental health in health, emergency and humanitarian work settings.

Research priorities for worker training

Common across workers' training

- An increase in better-quality evidence for mental health literacy and awareness training and its effects on provision of help to colleagues in distress and on increasing help-seeking behaviours (including for the prevention of suicide).
- An increase in studies which identify effective components of workers' training for mental health, including delivery components (e.g. duration) and content components.

For selective at-risk workers

- An increase in higher-quality and sufficiently powered research to determine the effectiveness of training health, humanitarian and emergency personnel in knowledge, attitudes and skills for mental health.
- An increase in evidence which identifies medium- to long-term follow-up duration effects to inform decisions as to how frequently training should be delivered.

Research gaps for individual interventions

Common across individual interventions

- An increase in better-quality studies which ascertain the incidence of workers meeting the criteria for mental health diagnosis through use of diagnostic assessments at baseline and follow-up to determine the extent of prevention of mental ill-health.
- An increase in better-quality studies which assess the comparative efficacy and cost-effectiveness of specific individual interventions, which include medium- to long-term follow-up to assess sustainability of effects.
- An increase in better-quality studies which include validated work-related outcomes when assessing the effects of individual interventions, including longer-term durations of follow-up.
- An increase in studies which identify effective components of (work-focused) psychosocial interventions for mental health and work-related outcomes, such as delivery components (e.g. duration) and content components (e.g. mode of psychosocial intervention).
- An increase in studies of individual interventions which include suicidal behaviours and substance use outcomes.
- Increased use of cluster randomized controlled designs in this field.
- An increase in effectiveness and implementation research which delineates additive or comparative effects of multimodal programmes (e.g. combining individual and organizational interventions) compared to single-intervention types (e.g. individual interventions alone).

Research gaps for absence due to mental health conditions

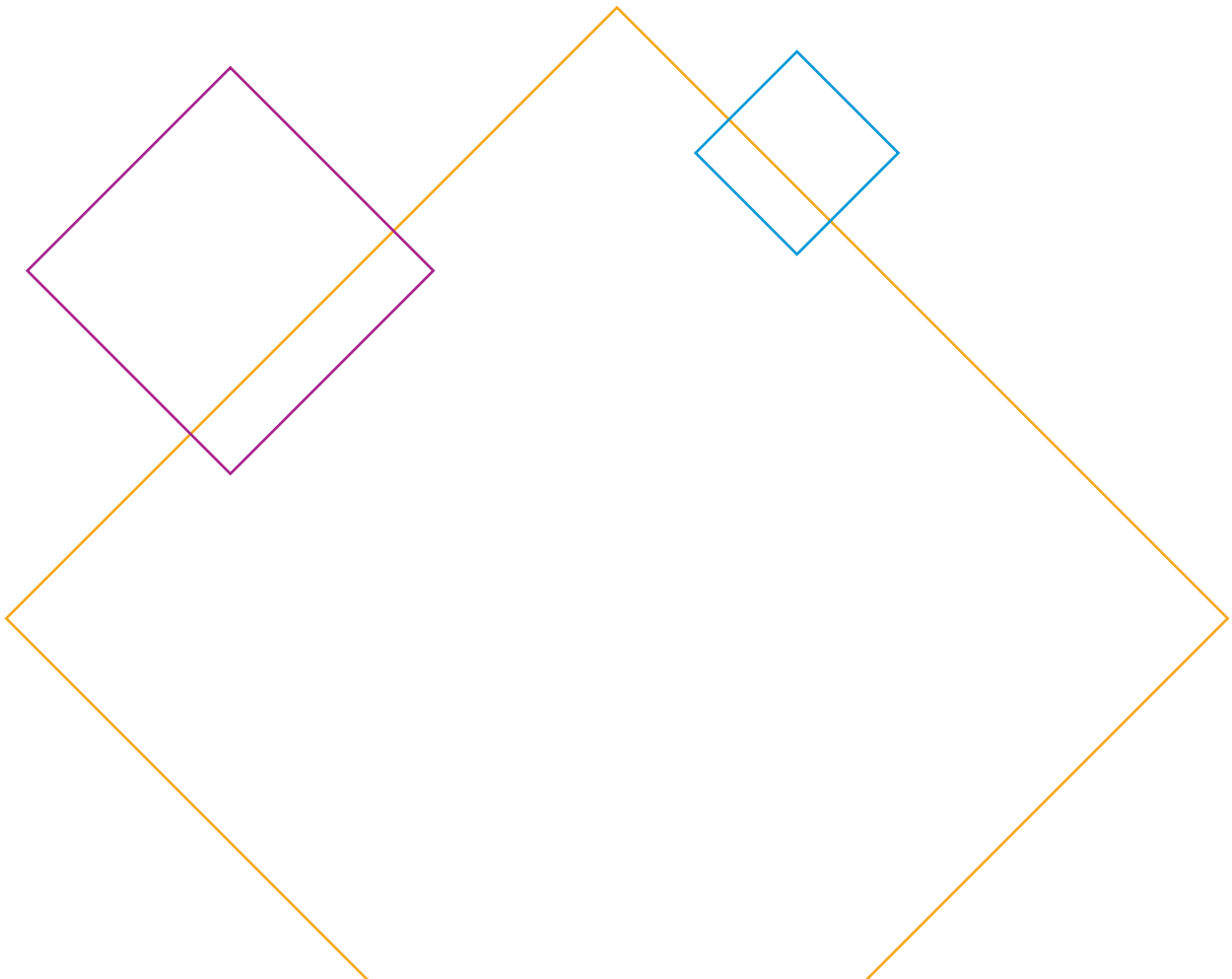
- An increase in better-quality studies which focus on sustainable return to work (e.g. by increasing the duration of follow-up to a minimum of 12 months).
- Greater inclusion of outcomes that indicate the benefit of the intervention – such as duration of time returned to work, duration of time from partial return to work until full return to work, productivity and ability to work (rather than only outcomes on reduction in absence days due to mental health conditions).
- An increase in studies that investigate cost-effectiveness of the intervention options for return to work following absence due to mental health conditions.
- An increase in better-quality research to assess which combination of work-directed and clinical interventions are most effective and feasible.

Research gaps for gaining employment for people living with mental health conditions

- An increase in studies which investigate the effectiveness of recovery-oriented strategies that enhance vocational and economic inclusion and that consistently include outcomes on recovery for mental health conditions and work-related outcomes of interest to employers.
- An increase in better-quality studies which investigate the cost-effectiveness of options for recovery-oriented strategies that enhance vocational and economic inclusion.
- An increase in studies which investigate the effectiveness and feasibility of implementing recovery-oriented strategies for people living with mild-to-moderate mental health conditions.

Research gaps for screening programmes

- In order to be able to make a recommendation, high-quality and sufficiently powered research is needed to evaluate the benefits and harms of screening programmes at work and their efficacy in reducing the symptoms of mental health conditions.



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Dissemination and update of the guidelines

Dissemination

The guidelines are available on the WHO website in English, with the executive summary available in all six United Nations languages. National ministries responsible for mental health and occupational health will be notified of the guidelines through WHO's regional and country offices. Ministries for labour and employment, and representative bodies for workers and employers, will be notified of the guidelines through the ILO. The guidelines will be shared with a broad network of international partners, including representative organizations for persons responsible for or committed to the health, safety and well-being of workers, as well as WHO collaborating centres, universities, nongovernmental organizations and UN agencies.

Implementation

To facilitate implementation of the recommendations, a policy brief will accompany the guidelines, developed jointly by WHO and ILO. The policy brief will be made available in the six United Nations languages to facilitate wide dissemination and will present policy and implementation options which will be derived from the guidelines. WHO regional and country offices will encourage implementation at country level. The implementation may also be supported locally through the adoption and implementation of the WHO Comprehensive Mental Health Action Plan (2013–2030) and the WHO global strategy for health, environment and climate change, both of which have been adopted by the World Health Assembly. Additionally, WHO will disseminate the guidelines and the joint policy brief through a broad network of international partners, including national ministries of health, WHO collaborating centres, key stakeholder groups (which represent the target audience of these guidelines), universities, nongovernmental organizations and United Nations agencies. The ILO will promote the dissemination of the policy brief among its tripartite constituents, including ministries of labour, in addition to employer and worker organizations. This will provide policy guidance on the roles and responsibilities of actors in the world of work in preventing, protecting and promoting, and supporting mental health at work.

Monitoring and evaluation of the uptake and implementation of the guidelines

WHO will seek to monitor uptake and implementation of the guidelines in national policies and programmes by reviewing the number of countries that have adapted or endorsed the guidelines. WHO will use the *WHO atlas* [17] and other routine approaches (e.g. the WHO MiNDbank database[20]) to assess how national policies and service delivery for workers have been adapted to integrate the recommendations. WHO will seek to continue to collect regular feedback from implementation activities and key stakeholders in order to evaluate the usefulness and impact of the guidelines.

Future updating of the guidelines

The guidelines are expected to be valid for a period of five years. The WHO Secretariat, in consultation with technical experts, will continue to follow research development in mental health promotion, prevention and interventions for workers – particularly for questions in which the certainty of evidence was found to be of low or very low certainty. If new evidence emerges or other important considerations arise which may have an impact on the current recommendations, WHO will coordinate an update of the guidelines, following the procedures outlined in the *WHO handbook for guideline development, second edition* [26].

[20] See: https://www.mindbank.info (accessed 29 May 2022).

References

1. Suicide worldwide in 2019: Global health estimates. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/ handle/10665/341728, accessed 26 August 2022).
2. Chisholm D, Sweeny K, Sheehan P, Rasmussen B, Smit F, Cuijpers P et al. Scaling-up treatment of depression and anxiety: a global return on investment analysis. Lancet Psychiatry. 2016;3(5):415–24.
3. Psychosocial factors at work: recognition and control. Report of the Joint ILO/WHO Committee on Occupational Health, ninth session, Geneva, 18–24 September 1984. Geneva: International Labour Organization; 1986.
4. The effects of non-standard forms of employment on worker health and safety. Geneva: International Labour Organization; 2016 (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_443266.pdf, accessed 26 August 2022).
5. Violence and Harassment Convention, 2019 (No. 190). Geneva: International Labour Organization; 2019 (https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C190, accessed 26 August 2022).
6. León-Pérez JM, Escartín J, Giorgi G. The presence of workplace bullying and harassment worldwide. In: D'Cruz P, Noronha E, Notelaers G, Rayner C, editors. Concepts, approaches and methods. Handbooks of workplace bullying: emotional abuse and harassment, volume 1. Singapore: Springer; 2021: 55–86.
7. Toth KE, Yvon F, Villotti P, Lecomte T, Lachance J-P, Kirsh B et al. Disclosure dilemmas: how people with a mental health condition perceive and manage disclosure at work. Disabil Rehab. 2021;11:1–11.
8. Women and men in the informal economy: a statistical picture. Geneva: International Labour Organization; 2018 (https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf, accessed 26 August 2022).
9. López-Ruiz M, Artazcoz L, Martínez JM, Rojas M, Benavides FG. Informal employment and health status in Central America. BMC Public Health. 2015;15:698.
10. Ludermir AB, Lewis G. Informal work and common mental disorders. Soc Psychiatry Psychiatr Epidemiol. 2003;38(9):485–9.
11. Makhubele M, Ravhuhali K, Kuonza L, Mathee A, Kgalamono S, Made F et al. Common mental health disorders among informal waste pickers in Johannesburg, South Africa 2018 – a cross-sectional study. Int J Environ Res Public Health. 2019;16(14):2618.
12. Working time and the future of work. Geneva: International Labour Organization; 2018 (https://labordoc.ilo.org/discovery/delivery/41ILO_INST:41ILO_V1/1258409590002676, accessed 26 August 2022).
13. Healthy and safe telework: technical brief. Geneva: World Health Organization and International Labour Organization; 2021 (https://apps.who.int/iris/bitstream/handle/10665/341505/9789240015579-eng.pdf?sequence=2&isAllowed=y, accessed 26 August 2022).
14. Cox T, Griffiths A. The nature and measurement of work-related stress: theory and practice. In: Wilson JR, Corlett N, editors. Evaluation of human work. London: CRS Press; 2005.
15. Workplace stress – a collective challenge. Geneva: International Labour Organization; 2016 (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_466547.pdf, accessed 26 August 2022).
16. Occupational Safety and Health Convention, 1981 (No.155) and Recommendation (No.164). Geneva: International Labour Organization; 1981 (https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:REC,en,R164,/Document, accessed 26 August 2022).
17. Mental health atlas 2020. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/345946, accessed 26 August 2022).

18. Comprehensive mental health action plan 2013–2030. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/345301, accessed 26 August 2022).
19. WHO global strategy on health, environment and climate change: the transformation needed to improve lives and wellbeing sustainably through healthy environments. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/handle/10665/331959, accessed 26 August 2022).
20. Occupational health and safety management – psychological health and safety at work – guidelines for managing psychosocial risks. Geneva: International Organization for Standardization; 2021.
21. Labor force participation rate, total (% of total population ages 15+) (modeled ILO estimate). Washington (DC): The World Bank (https://data.worldbank.org/indicator/SL.TLF.CACT.ZS, accessed 27 May 2022).
22. The mhGAP community toolkit: field test version. Geneva: World Health Organization, 2019 (https://apps.who.int/iris/handle/10665/328742, accessed 26 August 2022).
23. Petrie K, Milligan-Saville J, Gayed A, Deady M, Phelps A, Dell L et al. Prevalence of PTSD and common mental disorders amongst ambulance personnel: a systematic review and meta-analysis. Soc Psychiatry Psychiatr Epidemiol. 2018;53(9):897–909.
24. Strohmeier H, Scholte WF. Trauma-related mental health problems among national humanitarian staff: a systematic review of the literature. Eur J Psychotraumatol. 2015;6:28541.
25. WHO handbook for guideline development. Geneva: World Health Organization; 2014 (https://apps.who.int/iris/handle/10665/145714, accessed 26 August 2022).
26. WHO handbook for guideline development. Geneva: World Health Organization; 2014.
27. Kröll C, Doebler P, Nüesch S. Meta-analytic evidence of the effectiveness of stress management at work. Eur J Work Organ Psychol. 2017;26(5):677–93.
28. Daniels K, Gedikli C, Watson D, Semkina A, Vaughn O. Job design, employment practices and well-being: a systematic review of intervention studies. Ergonomics. 2017;60(9):1177–96.
29. Verbeek J, Ruotsalainen J, Laitinen J, Korkiakangas E, Lusa S, Mänttäri S et al. Interventions to enhance recovery in healthy workers; a scoping review. Occup Med (Lond). 2019;69(1):54–63.
30. Shrestha N, Kukkonen-Harjula K T, Verbeek J H, Ijaz S, Hermans V, Pedisic Z. Workplace interventions for reducing sitting at work. Cochrane Database Syst Rev. 2018;(6):CD010912.
31. Naghieh A, Montgomery P, Bonell CP, Thompson M, Aber JL. Organisational interventions for improving wellbeing and reducing work-related stress in teachers. Cochrane Database Syst Rev. 2015;(4):CD010306.
32. Joyce K, Pabayo R, Critchley JA, Bambra C. Flexible working conditions and their effects on employee health and wellbeing. Cochrane Database Syst Rev. 2010;(2):CD008009.
33. Lau RWM, Mak WH. Effectiveness of workplace interventions for depression in Asia: a meta-analysis. SAGE Open. 2017;(7)2. doi:10.1177/2158244017710293.
34. Mlekus L, Maier GW. More hype than substance? A meta-analysis on job and task rotation. Front Psychol. 2021;12:633530.
35. Aronsson G, Theorell T, Grape T, Hammarström A, Hogstedt C, Marteinsdottir I et al. A systematic review including meta-analysis of work environment and burnout symptoms. BMC Public Health. 2017;17(1):1–13.
36. van der Molen HF, Nieuwenhuijsen K, Frings-Dresen MH, de Groene G. Work-related psychosocial risk factors for stress-related mental disorders: an updated systematic review and meta-analysis. BMJ Open. 2020;10(7):e034849.
37. Rugulies R, Sørensen K, Di Tecco C, Bonafede M, Rondinone BM, Ahn S et al. The effect of exposure to long working hours on depression: a systematic review and meta-analysis from the WHO/ILO Joint Estimates of the Work-related Burden of Disease and Injury. Environ Int. 2021;155:106629.
38. Virtanen M, Jokela M, Madsen IE, Hanson LLM, Lallukka T, Nyberg ST et al. Long working hours and depressive symptoms: systematic review and meta-analysis of published studies and unpublished individual participant data. Scand J Work Environ Health. 2018;44(3):239–50.

39. Virtanen M, Jokela M, Nyberg ST, Madsen IE, Lallukka T, Ahola K et al. Long working hours and alcohol use: systematic review and meta-analysis of published studies and unpublished individual participant data. BMJ. 2015;350:g7772.
40. Richter K, Peter L, Rodenbeck A, Weess HG, Riedel-Heller SG, Hillemacher T. Shiftwork and alcohol consumption: a systematic review of the literature. Eur Addict Res. 2021;27(1):9–15.
41. Milner A, Witt K, LaMontagne AD, Niedhammer I. Psychosocial job stressors and suicidality: a meta-analysis and systematic review. Occup Environ Med. 2018;75(4):245–53.
42. Theorell T, Hammarström A, Aronsson G, Bendz LT, Grape T, Hogstedt C et al. A systematic review including meta-analysis of work environment and depressive symptoms. BMC Public Health. 2015;15(1):1–14.
43. Duchaine CS, Aubé K, Gilbert-Ouimet M, Vézina M, Ndjaboué R, Massamba V et al. Psychosocial stressors at work and the risk of sickness absence due to a diagnosed mental disorder: a systematic review and meta-analysis. JAMA Psychiatry. 2020;77(8):842–51.
44. Madsen IE, Nyberg ST, Hanson LM, Ferrie JE, Ahola K, Alfredsson L et al. Job strain as a risk factor for clinical depression: systematic review and meta-analysis with additional individual participant data. Psychol Med. 2017;47(8):1342–56.
45. Verkuil B, Atasayi S, Molendijk ML. Workplace bullying and mental health: a meta-analysis on cross-sectional and longitudinal data. PLoS One. 2015;10(8):e0135225.
46. Rudkjoebing LA, Bungum AB, Flachs EM, Eller NH, Borritz M, Aust B et al. Work-related exposure to violence or threats and risk of mental disorders and symptoms: a systematic review and meta-analysis. Scand J Work Environ Health. 2020;46(4):339–49.
47. Schmidt S, Roesler U, Kusserow T, Rau R. Uncertainty in the workplace: examining role ambiguity and role conflict, and their link to depression – a meta-analysis. Eur J Work Organ Psychol. 2014;23(1):91–106.
48. Kim TJ, von dem Knesebeck O. Perceived job insecurity, unemployment and depressive symptoms: a systematic review and meta-analysis of prospective observational studies. Int Arch Occup Environ Health. 2016;89(4):561–73.
49. Milner A, Scovelle AJ, King TL, Madsen I. Exposure to work stress and use of psychotropic medications: a systematic review and meta-analysis. J Epidemiol Community Health. 2019;73(6):569–76.
50. Rugulies R, Aust B, Madsen IE. Effort-reward imbalance at work and risk of depressive disorders. A systematic review and meta-analysis of prospective cohort studies. Scand J Work Environ Health. 2017.43(4):294–306.
51. Yoshimura K, Kawakami N, Tsusumi A, Inoue A, Kobayashi Y, Takeuchi A et al. Cost-benefit analysis of primary prevention programs for mental health at the workplace in Japan. Sangyo Eiseigaku Zasshi. 2013;55(1):11–24.
52. Working conditions in a global perspective. Brussels and Geneva: Publications Office of the European Union and International Labour Organization; 2019 (https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_696174.pdf, accessed 26 August 2022).
53. Houtman I, Jettinghof K, Cedillo L, & World Health Organization. Occupational and Environmental Health Team. Raising awareness of stress at work in developing countries: advice to employers and worker representatives. Geneva: World Health Organization; 2007 (https://apps.who.int/iris/handle/10665/42956, accessed 26 August 2022).
54. International minimum requirements for health protection in the workplace. Geneva: World Health Organization; 2017 (https://apps.who.int/iris/handle/10665/259674, accessed 26 August 2022).
55. Universal Declaration of Human Rights, 10 December 1948. United Nations General Assembly Resolution 217 A(III). New York (NY): United Nations; 1948 (https://www.un.org/en/about-us/universal-declaration-of-human-rights, accessed 26 August 2022).
56. Occupational Safety and Health Convention, 1981 (No.155). Geneva: International Labour Organization; 1981 (https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C155, accessed 26 August 2022).

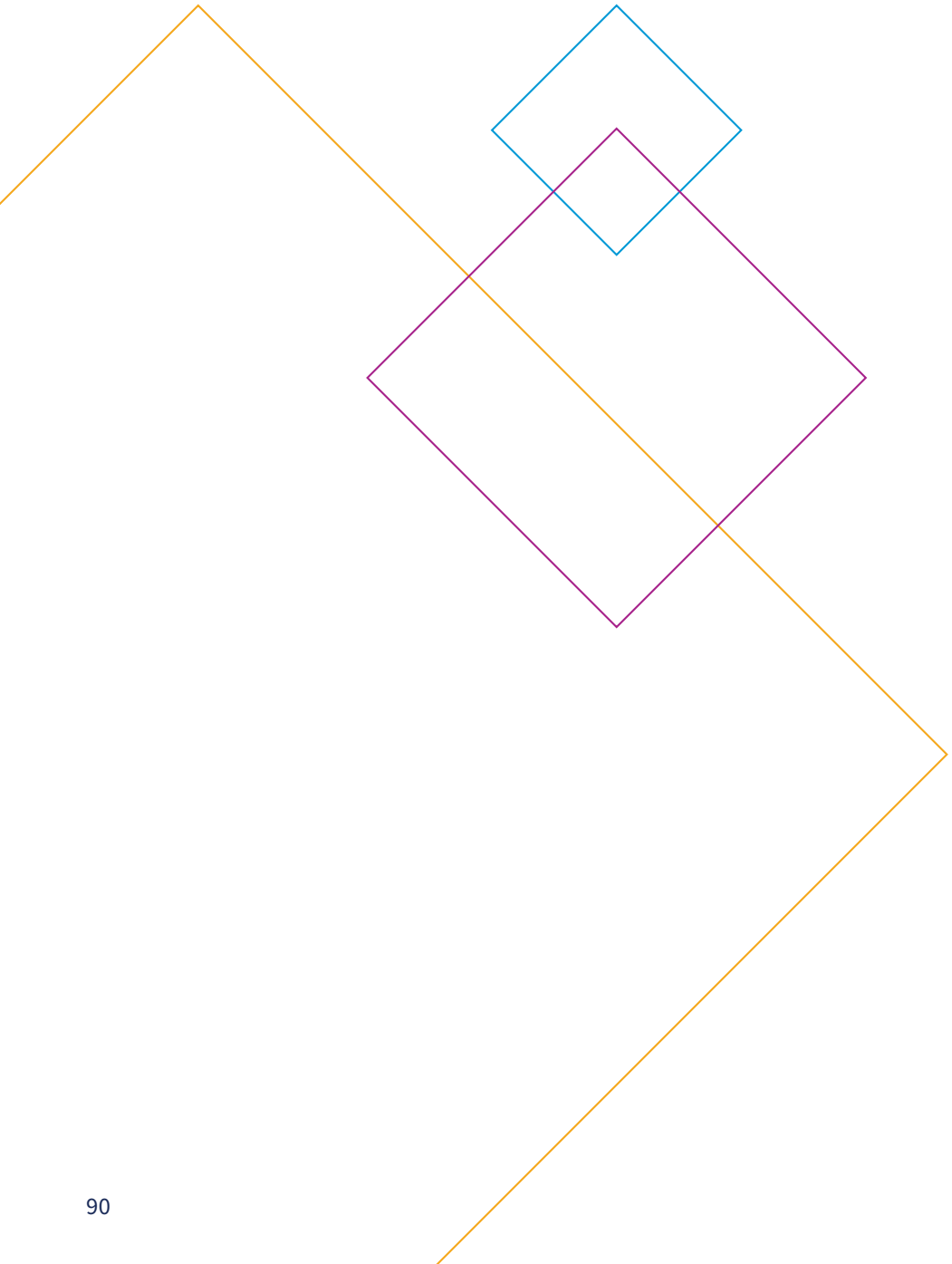
57. WHO global strategy on health, environment and climate change: the transformation needed to improve lives and wellbeing sustainably through healthy environments. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/bitstream/handle/10665/331959/9789240000377-eng.pdf?ua=1, accessed 26 August 2022).
58. McCulloch P, Rathbone J, Catchpole K. Interventions to improve teamwork and communications among healthcare staff. Br J Surg. 2011;98(4):469–79.
59. Romppanen J, Häggman-Laitila A. Interventions for nurses' well-being at work: a quantitative systematic review. J Adv Nurs. 2017;73(7):1555–69.
60. Sakuraya A, Imamura K, Watanabe K, Asai Y, Ando E, Eguchi H et al. What kind of intervention is effective for improving subjective well-being among workers? A systematic review and meta-analysis of randomized controlled trials. Front Psychol. 2020;11:528656.
61. Panagioti M, Panagopoulou E, Bower P, Lewith G, Kontopantelis E, Chew-Graham C et al. Controlled interventions to reduce burnout in physicians: a systematic review and meta-analysis. JAMA Intern Med. 2017;177(2):195–205.
62. Global strategy on human resources for health: workforce 2030. Geneva: World Health Organization; 2016 (https://apps.who.int/iris/handle/10665/250368, accessed 26 August 2022).
63. ILO guidelines on decent work in public emergency services. Geneva: International Labour Organization; 2018 (https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/normativeinstrument/wcms_626551.pdf, accessed 26 August 2022).
64. Alhassan RK, Nketiah-Amponsah E, Spieker N, Kojo Arhinful D, Rinke de Wit TF. Assessing the impact of community engagement interventions on health worker motivation and experiences with clients in primary health facilities in Ghana: a randomized cluster trial. PLoS One. 2016;11(7):e0158541.
65. Strohmeier H, Scholte WF, Ager A. How to improve organisational staff support? Suggestions from humanitarian workers in South Sudan. Intervention. 2019;17(1):40–9.
66. Occupational Health Services Convention (No.161). Seventy-first International Labour Conference. Geneva: International Labour Organization; 1985 (https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0::55:P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:CON,en,C161,/Document, accessed 26 August 2022).
67. Zafar N, Rotenberg M, Rudnick A. A systematic review of work accommodations for people with mental disorders. Work. 2019;64(3):461–75.
68. Bolo C, Sareen J, Patten S, Schmitz N, Currie S, Wang J. Receiving workplace mental health accommodations and the outcome of mental disorders in employees with a depressive and/or anxiety disorder. J Occup Environ Med. 2013;55(11):1293–99.
69. Secker J, Membrey H, Grove B, Seebohm P. The how and why of workplace adjustments: contextualizing the evidence. Psychiatr Rehabil J. 2003;27(1):3.
70. Convention on the Rights of Persons with Disabilities (CRPD). United Nations General Assembly Resolution A/ RES/61/106. New York (NY): United Nations; 2007 (https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/convention-on-the-rights-of-persons-with-disabilities-2.html, accessed 26 August 2022).
71. Chow CM, Cichocki B. Predictors of job accommodations for individuals with psychiatric disabilities. Rehabil Couns Bull. 2016;59(3):172–84.
72. Granger B, Baron R, Robinson S. Findings from a national survey of job coaches and job developers about job accommodations arranged between employers and people with psychiatric disabilities. J Vocat Rehabil. 1997;9(3):235–51.
73. Chow CM, Cichocki B, Croft B. The impact of job accommodations on employment outcomes among individuals with psychiatric disabilities. Psychiatr Serv. 2014;65(9):1126–32.
74. Wang J, Patten S, Currie S, Sareen J, Schmitz N. Perceived needs for and use of workplace accommodations by individuals with a depressive and/or anxiety disorder. J Occup Environ Med. 2011;53(11):1268–72.

75. Vocational Rehabilitation and Employment (Disabled Persons) Convention (No. 159). Geneva: International Labour Organization;1983 (https://www.ilo.org/dyn/normlex/fr/f?p=NORMLEXPUB:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:CON,en,C159,/Document, accessed 26 August 2022).
76. Vocational Rehabilitation and Employment (Disabled Persons) Recommendation (No. 168). Geneva: International Labour Organization; 1983 (https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R168, accessed 26 August 2022).
77. Gayed A, Milligan-Saville JS, Nicholas J, Bryan BT, LaMontagne AD, Milner A et al. Effectiveness of training workplace managers to understand and support the mental health needs of employees: a systematic review and meta-analysis. Occup Environ Med. 2018;75(6):462–70.
78. Kuehnl A, Seubert C, Rehfuess E, von Elm E, Nowak D, Glaser J. Human resource management training of supervisors for improving health and well-being of employees. Cochrane Database Syst Rev. 2019;(9):CD010905.
79. Dimoff JK, Kelloway EK. With a little help from my boss: the impact of workplace mental health training on leader behaviors and employee resource utilization. J Occup Health Psychol. 2019;24(1):4.
80. Workplace health: management practices. NICE Guideline [NG13]. London: National Institute for Health and Care Excellence; 2016.
81. Dawkins S, Martin A, Kilpatrick M, Scott J. Reasons for engagement: SME owner-manager motivations for engaging in a workplace mental health and wellbeing intervention. J Occup Environ Med. 2018;60(10):917–27.
82. Tsutsumi A. Development of an evidence-based guideline for supervisor training in promoting mental health: literature review. J Occup Health. 2011;53(1):1–9.
83. Evans-Lacko S, Brohan E, Mojtabai R, Thornicroft G. Association between public views of mental illness and self-stigma among individuals with mental illness in 14 European countries. Psychol Med. 2012;42(8):1741–52.
84. Stuber F, Seifried-Dübon T, Rieger MA, Gündel H, Ruhle S, Zipfel S et al. The effectiveness of health-oriented leadership interventions for the improvement of mental health of employees in the health care sector: a systematic review. Int Arch Occup Environ Health. 2021;94(2):203–20.
85. Milligan-Saville JS, Tan L, Gayed A, Barnes C, Madan I, Dobson M et al. Workplace mental health training for managers and its effect on sick leave in employees: a cluster randomised controlled trial. Lancet Psychiatry. 2017;4(11):850–8.
86. Akhanemhe R, Wallbank S, Greenberg N. An evaluation of REACTMH mental health training for healthcare supervisors. Occup Med (Lond). 2021;71(3):127–30.
87. Delivered by women, led by men: a gender and equity analysis of the global health and social workforce. Geneva: World Health Organization; 2019 (https://apps.who.int/iris/handle/10665/311322, accessed 26 August 2022).
88. Hanisch SE, Twomey CD, Szeto AC, Birner UW, Nowak D, Sabariego C. The effectiveness of interventions targeting the stigma of mental illness at the workplace: a systematic review. BMC Psychiatry. 2016;16(1):1–11.
89. Milner A, Page K, Spencer-Thomas S, LaMontagne AD. Workplace suicide prevention: a systematic review of published and unpublished activities. Health Promot Int. 2014;30(1):29–37.
90. Morgan AJ, Ross A, Reavley NJ. Systematic review and meta-analysis of mental health First Aid training: effects on knowledge, stigma, and helping behaviour. PLoS One. 2018;13(5):e0197102.
91. Forthal S, Sadowska K, Pike KM, Balachander M, Jacobsson K, Hermosilla S. Mental health first aid: a systematic review of trainee behavior and recipient mental health outcomes. Psychiatr Serv. 2021;appi. ps. 202100027.
92. Lu S, Li W, Oldenburg B, Wang Y, Jorm AF, He Y et al. Cultural adaptation of the mental health first aid guidelines for depression used in English-speaking countries for China: a Delphi expert consensus study. BMC Psychiatry. 2020;20(1):1–12.
93. Moll SE, Patten S, Stuart H, MacDermid JC, Kirsh B. Beyond silence: a randomized, parallel-group trial exploring the impact of workplace mental health literacy training with healthcare employees. Canadian J Psych. 2018;63(12):826–33.
94. Tan L, Harvey SB, Deady M, Dobson M, Donohoe A, Suk C et al. Workplace mental health awareness training: a cluster randomized controlled trial. J Occup Environ Med. 2021;63(4):311–6.

95. Krameddine Y, DeMarco D, Hassel R, Silverstone PH. A novel training program for police officers that improves interactions with mentally ill individuals and is cost-effective. Front Psychiatry. 2013;4:9.
96. Brooks SK, Dunn R, Amlôt R, Greenberg N, Rubin GJ. Training and post-disaster interventions for the psychological impacts on disaster-exposed employees: a systematic review. J Ment Health. 2018;15:1–25.
97. Caulfield A, Vatansever D, Lambert G, Van Bortel T. WHO guidance on mental health training: a systematic review of the progress for non-specialist health workers. BMJ Open. 2019;9(1):e024059.
98. Knaak S, Mantler E, Szeto A. Mental illness-related stigma in healthcare: barriers to access and care and evidence-based solutions. Healthc Manage Forum. 2017;30(2):111–16.
99. Anderson GS, Di Nota PM, Groll D, Carleton RN. Peer support and crisis-focused psychological interventions designed to mitigate post-traumatic stress injuries among public safety and frontline healthcare personnel: a systematic review. Int J Environ Res Public Health. 2020;17(20):7645.
100. Maricuţoiu LP, Sava FA, Butta O. The effectiveness of controlled interventions on employees' burnout: a meta-analysis. J Occup Organ Psychol. 2016;89(1):1–27.
101. Vega-Escaño J, Porcel-Gálvez AM, de Diego-Cordero R, Romero-Sánchez JM, Romero-Saldaña M, Barrientos-Trigo S. Insomnia interventions in the workplace: a systematic review and meta-analysis. Int J Environ Res Public Health. 2020;17(17):6401.
102. Slemp GR, Jach HK, Chia A, Loton DJ, Kern ML. Contemplative interventions and employee distress: a meta-analysis. Stress Health. 2019;35(3):227–55.
103. Stratton E, Lampit A, Choi I, Calvo RA, Harvey SB, Glozier N. Effectiveness of eHealth interventions for reducing mental health conditions in employees: a systematic review and meta-analysis. PLoS One. 2017;12(12):e0189904.
104. Carolan S, Harris PR, Cavanagh K. Improving employee well-being and effectiveness: systematic review and meta-analysis of web-based psychological interventions delivered in the workplace. J Med Internet Res. 2017;19(7):e271.
105. Phillips EA, Gordeev VS, Schreyögg J. Effectiveness of occupational e-mental health interventions: a systematic review and meta-analysis of randomized controlled trials. Scand J Work Environ Health. 2019;45(6):560–76.
106. Oakman J, Neupane S, Proper KI, Kinsman N, Nygård C-H. Workplace interventions to improve work ability: a systematic review and meta-analysis of their effectiveness. Scand J Work Environ Health. 2018;134–46.
107. Cuijpers P, Miguel C, Ciharova M, Aalten P, Batelaan N, Salemink E et al. Prevention and treatment of mental health and psychosocial problems in college students: an umbrella review of meta-analyses. Clin Psychol. 2021;28(3):229.
108. Commissioning cost-effective services for promotion of mental health and wellbeing and prevention of mental ill-health. London: Public Health England; 2017 (https://www.lse.ac.uk/business/consulting/assets/documents/commissioning-cost-effective-services-for-promotion-of-mental-health-and-wellbeing-and-prevention-of-mental-ill-health.pdf, accessed 26 August 2022).
109. Baxter S, Sanderson K, Venn AJ, Blizzard CL, Palmer AJ. The relationship between return on investment and quality of study methodology in workplace health promotion programs. Am J Health Promot. 2014;28(6):347–63.
110. Hamdani SU, Rahman A, Wang D, Chen T, van Ommeren M, Chisholm D et al. Cost-effectiveness of WHO problem management plus for adults with mood and anxiety disorders in a post-conflict area of Pakistan: randomised controlled trial. Br J Psychiatry. 2020;217(5):623–9.
111. Martin A, Kilpatrick M, Scott J, Cocker F, Dawkins S, Brough P et al. Protecting the mental health of small-to-medium enterprise owners: a randomized control trial evaluating a self-administered versus telephone supported intervention. J Occup Environ Med. 2020;62(7):503.
112. WHO guidelines on physical activity and sedentary behaviour. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/handle/10665/336656, accessed 26 August 2022).
113. Guidelines for the management of conditions specifically related to stress. Geneva: World Health Organization; 2013 (https://apps.who.int/iris/bitstream/handle/10665/85119/9789241505406_eng.pdf, accessed 26 August 2022).

114. Melnyk BM, Kelly SA, Stephens J, Dhakal K, McGovern C, Tucker S et al. Interventions to improve mental health, well-being, physical health, and lifestyle behaviors in physicians and nurses: a systematic review. Am J Health Promot. 2020;34(8):929–41.
115. Kunzler AM, Helmreich I, Chmitorz A, König J, Binder H, Wessa M et al. Psychological interventions to foster resilience in healthcare professionals. Cochrane Database Syst Rev. 2020;(7):CD012527.
116. Petrie K, Crawford J, Baker ST, Dean K, Robinson J, Veness BG et al. Interventions to reduce symptoms of common mental disorders and suicidal ideation in physicians: a systematic review and meta-analysis. Lancet Psychiatry. 2019;6(3):225–34.
117. West CP, Dyrbye LN, Erwin PJ, Shanafelt TD. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. Lancet. 2016;388(10057):2272–81.
118. Fendel JC, Bürkle JJ, Göritz AS. Mindfulness-based interventions to reduce burnout and stress in physicians: a systematic review and meta-analysis. Acad Med. 2020;96(5):751–64.
119. Guillaumie L, Boiral O, Champagne J. A mixed-methods systematic review of the effects of mindfulness on nurses. J Adv Nurs. 2017;73(5):1017–34.
120. Wasson RS, Barratt C, O'Brien WH. Effects of mindfulness-based interventions on self-compassion in health care professionals: a meta-analysis. Mindfulness. 2020;11(8):1914–34.
121. Haugen PT, McCrillis AM, Smid GE, Nijdam MJ. Mental health stigma and barriers to mental health care for first responders: a systematic review and meta-analysis. J Psychiatr Res. 2017;94:218–29.
122. Alden L, Matthews L, Wagner S, Fyfe T, Randall C, Regehr C et al. Systematic literature review of psychological interventions for first responders. Work Stress. 2021;35(2):193–215.
123. WHO mhGAP Guideline Update. Geneva: World Health Organization; 2015 (https://apps.who.int/iris/handle/10665/204132, accessed 26 August 2022).
124. Nigatu YT, Huang J, Rao S, Gillis K, Merali Z, Wang J. Indicated prevention interventions in the workplace for depressive symptoms: a systematic review and meta-analysis. Am J Prev Med. 2019;56(1):e23–33.
125. Stubbs B, Vancampfort D, Hallgren M, Firth J, Veronese N, Solmi M et al. EPA guidance on physical activity as a treatment for severe mental illness: a meta-review of the evidence and position statement from the European Psychiatric Association (EPA), supported by the International Organization of Physical Therapists in Mental Health (IOPTMH). Eur Psychiatry. 2018;54:124–44.
126. de Oliveira C, Cho E, Kavelaars R, Jamieson M, Bao B, Rehm J. Economic analyses of mental health and substance use interventions in the workplace: a systematic literature review and narrative synthesis. Lancet Psychiatry. 2020;7(10):893–910.
127. Nieuwenhuijsen K, Verbeek JH, Neumeyer-Gromen A, Verhoeven AC, Bültmann U, Faber B. Interventions to improve return to work in depressed people. Cochrane Database Syst Rev. 2020;(10):CD006237.
128. Arends I, Bruinvels D J, Rebergen D S, Nieuwenhuijsen K, Madan I, Neumeyer-Gromen A et al. Interventions to facilitate return to work in adults with adjustment disorders. Cochrane Database Syst Rev. 2012;(12):CD006389.
129. Sick on the Job? Myths and realities about mental health and work. Paris: Organisation for Economic Co-operation and Development; 2012 (https://www.oecd-ilibrary.org/docserver/9789264124523-enpdf?expires=1663782644&id=id&accname=ocid195767&checksum=9A2DD9B929EF6B5AA3462856A113051E, accessed 26 August 2022).
130. da Silva Junior JS, Fischer FM. Disability due to mental illness: social security benefits in Brazil 2008–2011. Rev Saude Publica. 2014;186–90.
131. Corbière M, Mazaniello-Chézol M, Bastien M-F, Wathieu E, Bouchard R, Panaccio A et al. Stakeholders' role and actions in the return-to-work process of workers on sick-leave due to common mental disorders: a scoping review. J Occup Rehabil. 2020;30(3):381–419.
132. Rebergen D, Bruinvels D, Van Tulder M, Van der Beek A, Van Mechelen W. Cost-effectiveness of guideline-based care for workers with mental health problems. J Occup Environ Med. 2009;313–22.
133. Lokman S, Volker D, Zijlstra-Vlasveld MC, Brouwers EP, Boon B, Beekman AT et al. Return-to-work intervention versus usual care for sick-listed employees: health-economic investment appraisal alongside a cluster randomised trial. BMJ Open. 2017;7(10):e016348.

134. Taimela S, Justen S, Aronen P, Sintonen H, Läärä E, Malmivaara A et al. An occupational health intervention programme for workers at high risk for sickness absence. Cost effectiveness analysis based on a randomised controlled trial. Occup Environ Med. 2008;65(4):242–48.
135. Suijkerbuijk YB, Schaafsma FG, van Mechelen JC, Ojajärvi A, Corbiere M, Anema JR. Interventions for obtaining and maintaining employment in adults with severe mental illness, a network meta-analysis. Cochrane Database Syst Rev. 2017;(9):CD011867.
136. Kinoshita Y, Furukawa TA, Kinoshita K, Honyashiki M, Omori IM, Marshall M et al. Supported employment for adults with severe mental illness. Cochrane Database Syst Rev. 2013;(9):CD008297.
137. van Rijn RM, Carlier BE, Schuring M, Burdorf A. Work as treatment? The effectiveness of re-employment programmes for unemployed persons with severe mental health problems on health and quality of life: a systematic review and meta-analysis. Occup Environ Med. 2016;73(4):275–9.
138. Fadyl JK, Anstiss D, Reed K, Khoronzhevych M, Levack WM. Effectiveness of vocational interventions for gaining paid work for people living with mild to moderate mental health conditions: systematic review and meta-analysis. BMJ Open. 2020;10(10):e039699.
139. Marshall RE, Milligan-Saville J, Petrie K, Bryant RA, Mitchell PB, Harvey SB. Mental health screening amongst police officers: factors associated with under-reporting of symptoms. BMC Psychiatry. 2021;21(1):1–8.
140. Technical and ethical guidelines for workers' health surveillance (OSH No. 72) Geneva: International Labour Office; 1998 (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/normativeinstrument/wcms_177384.pdf, accessed 26 August 2022).
141. Occupational health services recommendation (No. 171). Geneva: International Labour Organization; 1985 (https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0:::55:P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:REC,en,R171,/Document#:~:text=Occupational%20health%20services%20should%20participate%20in%20the%20training%20and%20regular,to%20occupational%20safety%20and%20health, accessed 26 August 2022).
142. Screening programmes: a short guide. Increase effectiveness, maximize benefits and minimize harm. Copenhagen: World Health Organization Regional Office for Europe; 2020 (https://apps.who.int/iris/handle/10665/330829, accessed 26 August 2022).
143. Ethics in the office. Office Directive (Internal Governance Documents System, No. 76). Geneva: International Labour Organization; 2019 (https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---webdev/documents/genericdocument/wcms_713105.pdf, accessed 26 August 2022).
144. Code of ethics and professional conduct. Geneva: World Health Organization; 2020 (https://www.who.int/about/ethics, accessed 22 May 2022).
145. Shea BJ, Reeves BC, Wells G, Thuku M, Hamel C, Moran J et al. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. BMJ. 2017;358:j4008.
146. Guyatt GH, Oxman AD, Vist GE, Kunz R, Falck-Ytter Y, Alonso-Coello P et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ. 2008;336(7650):924–6.
147. Hultcrantz M, Rind D, Akl EA, Treweek S, Mustafa RA, Iorio A et al. The GRADE working group clarifies the construct of certainty of evidence. J Clin Epidemiol. 2017;87:4–13.
148. Rehfuess EA, Stratil JM, Scheel IB, Portela A, Norris SL, Baltussen R. The WHO-INTEGRATE evidence to decision framework version 1.0: integrating WHO norms and values and a complexity perspective. BMJ Glob Health. 2019;4(Suppl 1):e000844.
149. Alonso-Coello P, Schünemann HJ, Moberg J, Brignardello-Petersen R, Akl EA, Davoli M et al. GRADE Evidence to Decision (EtD) frameworks: a systematic and transparent approach to making well informed healthcare choices. 1 Introduction. BMJ. 2016:353:i2016
150. Guyatt GH, Oxman AD, Kunz R, Falck-Ytter Y, Vist GE, Liberati A et al. Going from evidence to recommendations. BMJ. 2008;336(7652):1049–51.



Glossary

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Adverse effects

For the purposes of these guidelines, adverse effects are defined as outcomes of the key questions and could include any untoward occurrence to a study participant caused by the intervention of interest, such as drop-out.

Burnout

Burnout is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It has three dimensions: feelings of energy depletion or exhaustion; increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy.[21] Burnout may be a frequently used idiom for distress in the workplace.

Emotional distress

This constitutes, for instance, sadness, anger, anxiety, irritability, or other negative emotional states. People in emotional distress may or may not meet ICD criteria for a mental disorder.

Evidence-to-decision frameworks

These are tabular displays of relevant considerations which are used to make a decision or to formulate a recommendation.

Formal sector

All workers in incorporated enterprises.

GRADE

The Grading of Recommendations, Assessment, Development and Evaluation is a system for assessing the certainty of a body of evidence and for structuring considerations when formulating recommendations on clinical or public health guidelines.

GRADE evidence profiles

These are tabular displays of summary measures of effect and the GRADE certainty assessments of the body of evidence for a specific question – usually defined by population, intervention, comparator and outcome (PICO) format.

Help-seeking behaviour

For the purposes of these guidelines, help-seeking behaviour is defined as an outcome of the key questions, which includes a person taking actions to seek or access support for a given problem such as a mental health condition.

Informal employment

This includes employees (or persons not classified by status in employment) who are not protected by national labour legislation in that job (i.e. not affiliated to a social security scheme related to the job or not entitled to certain employment benefits); employers, members of producers' cooperatives and own account workers (only if what is produced is for sale) in a unit of production that is considered informal; and contributing family workers.[22]

Informal sector

All workers in unincorporated enterprises that produce at least partly for the market and are not registered.

Manager

For the purposes of these guidelines, a manager is a worker who is responsible for supervising, managing or leading another worker or workers - i.e. managers are employees who plan, direct, coordinate and evaluate the overall activities of enterprises or of organizational units within them.[23]

[21] International Classification of Diseases 11th Revision. Geneva: World Health Organization (https://icd.who.int/en, accessed 25 May 2022).
[22] Indicator description: informality. ILOSTAT. Geneva: International Labour Organization (Indicator description: Informality - ILOSTAT, accessed 25 May 2022).
[23] International Standard Classification of Occupations 2008 (ISCO-08): structure, group definitions and correspondence tables. Geneva: International Labour Organization (https://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_172572/lang--en/index.htm, accessed 25 May 2022).

Managerial, leadership style and communication

For the purposes of these guidelines, managerial, leadership style and communication are outcomes of the key questions which capture the manner of communication, consideration of individual employees, justice in managerial behaviours, social support, provision of clarity, supply of information and feedback, promotion of employee participation and control, or leadership style (e.g. abusive, laissez-faire, authoritarian, participative).

Mental disorder

As defined by the ICD-11, mental disorders are syndromes characterized by clinically significant disturbance in an individual's cognition, emotional regulation, or behaviour that reflects a dysfunction in the psychological, biological or developmental processes that underlie mental and behavioural functioning. These disturbances are usually associated with distress or impairment in personal, family, social, educational, occupational or other important areas of functioning.

Mental health

A state of mental well-being that enables people to cope with the stresses of life, to realize their abilities, to learn well and work well, and to contribute to their communities. Mental health is an integral component of health and well-being and is more than the absence of mental disorder.

Mental health conditions

A broad term covering mental disorders and psychosocial disabilities. It also covers other mental states associated with significant distress, impairment in functioning or risk of self-harm. It thus includes significant emotional distress.

Mental health knowledge and attitudes, skills

For the purposes of these guidelines, mental health knowledge, attitudes and skills are outcomes of the key questions. This term captures the key target variables of interventions to reduce stigma through increasing literacy (knowledge) for mental health, changing stigmatizing attitudes, and actions or behaviours which indicate the provision of appropriate support to others

Positive mental health

For the purposes of these guidelines, positive mental health is an outcome of the key questions. It is intended to capture aspects of mental well-being, life satisfaction, positive self-concept, self-esteem, self-control, self-efficacy resilience (in contrast to mental health conditions).

Psychosocial disability

Aligned with the Convention on the Rights of Persons with Disabilities, it is disability that arises when someone with a long-term mental impairment interacts with various barriers that may hinder the person's full and effective participation in society on an equal basis with others. Examples of such barriers are discrimination, stigma and exclusion.

Psychosocial interventions

Psychosocial interventions involve interpersonal or informational activities, techniques or strategies to improve health functioning and well-being.[24] For mental health, these include psychoeducation, stress management (including relaxation training and mindfulness), emotional or practical social support (including psychological first aid), and various other social and rehabilitative activities, including peer support and supported employment and housing.[25] Psychosocial interventions are an umbrella category which includes psychological treatments such as behavioural activation, problem-solving therapy, cognitive behavioural therapy (CBT) and interpersonal therapy (IPT).

[24] England MJ, Butler AS, Gonzalez ML, editors. Psychosocial interventions for mental and substance use disorders: a framework for establishing evidence-based standards. Washington (DC): National Academies Press; 2015.
[25] Barbui C, Purgato M, Abdulmalik J, Acarturk C, Eaton J, Gastaldon C et al. Efficacy of psychosocial interventions for mental health outcomes in low-income and middle-income countries: an umbrella review. Lancet Psychiatry. 2020;7(2):162–72. doi:10.1016/S2215-0366(19)30511-5.

Quality of life

For the purposes of these guidelines, quality of life is an outcome of the key questions which captures an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.

Functioning

For the purposes of these guidelines, functioning is an outcome of the key questions which describes the ability to conduct activities and to participate in life domains other than work (e.g. cognition, communication, mobility, self-care, relationships, domestic life, community and civic life activities, life participation).

Satisfaction with care

For the purposes of these guidelines, satisfaction with care is an outcome of the key questions and captures users' and families' satisfaction with care, such as their involvement in the decision-making process, quality of information provided, communication about the condition, and care providers' skills and competencies.

Substance use

For the purposes of these guidelines, substance use is an outcome of the key questions, capturing alcohol or illicit drug use measured as alcohol use, frequency of alcohol use, alcohol-related problems, alcohol initiation, drunkenness initiation, binge drinking and alcohol misuse. Drug use refers to the use of cannabis, opioids and/or stimulants/misuse of prescription drugs.

Suicidal behaviours

For the purposes of these guidelines, suicidal behaviours are an outcome of the key questions, capturing self-harm (including suicide attempt), suicidal ideation and suicide mortality.

Worker

For the purposes of these guidelines, a worker is any person above 18 years of age in paid work. Workers (persons in employment) are usually defined as all those of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit.

Work-related outcomes

For the purposes of these guidelines, work-related outcomes are an outcome of the key questions, capturing a broad range of variables which are indicative of a person's functioning at work, such as absenteeism (regular absence from work), presenteeism (being at, or present at, or attending work when not fully functioning and thereby reduced efficiency is assumed), productivity (effectiveness in work tasks), work engagement (perception of a fulfilling connection to work), work ability (functional capacity and competence to participate in work), absence, turnover, resignation, return to work, job retention, job satisfaction, job tenure or length, employment status (employed part-time, full-time, unemployed).

Annex 1
Contributors to the guidelines

The following persons contributed to the development of the guidelines. Their roles are summarized in Table 1.

1. The WHO Steering Group, composed of WHO departments relevant to the guideline topic, was formed to provide overall coordination and technical support during the guideline development process.

Name	Department
Faten Ben Abdelaziz	Health Promotion
Alex Butchart	Social Determinants of Health
Alarcos Cieza	Management of Noncommunicable Diseases
Ivan Ivanov	Health, Environment and Climate Change
Catherine Kane	Health Workforce
Hyo-Jeong Kim	Emergencies Operations
Aiysha Malik*	Mental Health and Substance Use
Mark van Ommeren**	Mental Health and Substance Use
Juana Willumsen	Health Promotion

(*) Responsible Technical Officer

(**) Chair

2. The Guideline Development Group (GDG) included technical, academic, implementation and policy experts. Selection of GDG members took into account their relevant areas of expertise, sex and geographical representation.

Name	Affiliation	WHO Region	Expertise
Mirai Chatterjee	Director, Self-Employed Women's Association, India	South-East Asia Region	Gender, inequality, social protection, social determinants of health, informal economy
Capucine de Fouchier[a]	Mental Health and Psychosocial Support Specialist (Independent)	European Region	Planning and delivery of occupational mental health services for humanitarian workers
Samuel Harvey	Professor, Executive Director and Chief Scientist, Black Dog Institute, University of New South Wales, Australia	Western Pacific Region	Occupational psychiatry, psychiatric epidemiology, workplace mental health research
Hiroto Ito[b]	Professor, Department of Health Policy and Management, Faculty of Medicine, Tohoku Medical and Pharmaceutical University, Japan	Western Pacific Region	Health policy and management for occupational mental health and safety
Norito Kawakami	Professor, Department of Mental Health, Graduate School of Medicine, The University of Tokyo, Japan	Western Pacific Region	Occupational mental health, community mental health, epidemiology
Spo Kgalamono[c]	Executive Director, National Institute for Occupational Health, National Health Laboratory Service, South Africa	African Region	Occupational medicine, implementation of occupational health services in LMICs
Nour Kik	Policy and Advocacy Coordinator, National Mental Health Programme, Ministry of Public Health, Lebanon	Eastern Mediterranean Region	Mental health policy, implementation of national workplace mental health programme
Margaret Kitt	Deputy Director, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, USA; Director, WHO Collaborating Centre for Occupational Health	Region of the Americas	Occupational medicine, psychosocial risks policy
Anthony D. LaMontagne	Professor, Institute for Health Transformation, School of Health & Social Development, Deakin University, Australia	Western Pacific Region	Applied epidemiology, workplace mental health, occupational health and safety interventions, policy interventions for the workplace evaluation
Sapna Mahajan[d]	Director, Genomics and Society, Genome Canada, Canada	Region of the Americas	Development and implementation of national, regional and international workplace mental health standards, public health

Name	Affiliation	WHO Region	Expertise
Seyed Kazem Malakouti	Professor, School of Behavioural Sciences and Mental Health, Teheran Institute of Psychiatry, Iran University of Medical Sciences, Iran; Director, WHO Collaborating Centre for Mental Health	Eastern Mediterranean Region	Integration of mental health services in primary care, suicide prevention, substance use prevention
Jose Luis Ayuso-Mateos	Professor, Department of Psychiatry, Medical School, Autonomous University of Madrid, CIBERSAM, Spain; Director, WHO Collaborating Center for Research and Training in Mental Health Services	European Region	Epidemiology and interventions for mental disorders, chronic health conditions and workplace inclusion
Karina Nielsen	Professor, Institute of Work Psychology, Sheffield University Management School, The University of Sheffield, UK	European Region	Development, implementation and evaluation of organizational interventions for mental wellbeing, organizational psychology, return to work
Christopher Prinz[e]	Organisation for Economic Co-operation and Development, France	European Region	Employment and disability policy
Pratap Sharan	Professor, Department of Psychiatry, All India Institute of Medical Sciences, India	South-East Asia Region	Public mental health, health worker mental health
Katherine Sorsdahl	Professor, Department of Psychiatry, University of Cape Town, South Africa; Co-Director, Alan J. Flisher Centre for Public Mental Health	African Region	Global mental health, health systems strengthening
Graham Thornicroft	Professor Sir, Institute of Psychiatry, Psychology & Neuroscience, King's College London, UK; Director, WHO Collaborating Centre for Research and Training in Mental Health	European Region	Stigma, community psychiatry, global mental health, guideline development

[a] Affiliation from start of guideline development and during recommendations meeting: International Committee of the Red Cross, Switzerland.

[b] Affiliation from start of guideline development and during recommendations meeting: Director, Research Center for Overwork-Related Disorders, Japan Organization of Occupational Health and Safety, Japan

[c] Participated in the GDG up to the recommendations meeting, at which time personal reasons prevented further participation.

[d] Affiliation from start of guideline development; prior to the recommendations meeting was with the Mental Health Commission of Canada, Canada.

[e] Participated in the GDG up to the recommendations meeting. Requested to withdraw from GDG in May 2021, due to personal circumstances.

3. The External Review Group (ERG), composed of technical experts, employers and workers' organizations, and representatives of people with lived experience of mental health conducted a peer review of the draft guidelines to provide technical feedback, identify errors of fact, comment on clarity of language and provide considerations related to implementation, adaptation and contextual issues. Selection of ERG members took into account members' relevant areas of expertise, sex and geographical representation.

Name	Affiliation	WHO Region
Atalay Alem	Addis Ababa University, Ethiopia	African Region
Fabrice Althaus	International Committee of the Red Cross, Switzerland	European Region
Lamia Bouzgarrou	University of Monastir, Tunisia	Eastern Mediterranean Region
Marc Corbière	University of Quebec in Montreal, Canada	Region of the Americas
Premilla D'Cruz	Indian Institute of Management Ahmedabad, India	South-East Asia Region
Carolyn Dewa	University of California- Davis, USA	Region of the Americas
Frida Marina Fischer	University of São Paulo, Brazil	Region of the Americas
Roshan Galvaan	University of Cape Town, South Africa	African Region
Nick Glozier	University of Sydney, Australia	Western Pacific Region
Neil Greenberg	King's College London, UK	European Region
Birgit Greiner	University College Cork, Ireland	European Region
Nadine Harker	South African Medical Research Council, South Africa	African Region
Ehimare Iden	Occupational Health and Safety Managers, Nigeria	African Region
João Silvestre Silva-Junior	São Camilo University Center, Brazil	Region of the Americas
Inah Kim	Hanyang University College of Medicine, Republic of Korea	Western Pacific Region
George Leveridge	Jamaica Constabulary Force, Jamaica	Region of the Americas

Name	Affiliation	WHO Region
Shuang Li	National Institute for Occupational Health and Poison Control, China	Western Pacific Region
Elizabeth Linos	University of California- Berkeley, USA	Region of the Americas
Ed Mantler	Mental Health Commission of Canada	Region of the Americas
Angela Martin	University of Tasmania, Australia	Western Pacific Region
Christina Maslach	University of California- Berkeley, USA	Region of the Americas
Álvaro Roberto Crespo Merlo	Federal University of Rio Grande do Sul, Brazil	Region of the Americas
María Elisa Ansoleaga Moreno	Universidad Diego Portales, Chile	Region of the Americas
Nina Hedegaard Nielsen	Independent psychosocial risks expert, Denmark	European Region
Reiner Rugulies	National Research Centre for the Working Environment, Denmark	European Region
Godfrey Zari Rukundo	Mbara University of Science and Technology, Uganda	African Region
Kamalesh Sarkar	National Institute of Occupational Health, India	South-East Asia Region
Vandad Sharifi	Tehran University of Medical Sciences, Iran	Eastern Mediterranean Region
JianLi Wang	Dalhousie University , Canada	Region of the Americas
Mohammad Taghi Yasami	Shahid Beheshti University of Medical Sciences, Iran	Eastern Mediterranean Region
Dieter Zapf	Goethe University Frankfurt, Germany	European Region

Organization and key stakeholder representatives	
Melissa Pitotti	Core Humanitarian Standard [CHS] Alliance
Sarah Copsey	European Agency for Safety and Health at Work [EU-OSHA]
Julia Flintrop	
Olga Kalina	European Network of (Ex)Users and Survivors of Psychiatry [ENUSP]
Guadalupe Morales Cano	
Claudia Sartor	Global Mental Health Peer Network [GMHPN]
Madeline A, Naegle	International Council of Nurses [ICN]*
Pierre Vincensini	International Organization of Employers [IOE]
Rory O'Neill	International Trade Union Confederation [ITUC]
Victor Ugo	Mentally Aware Nigeria Initiative [MANI]
Miguel R. Jorge	World Medical Association [WMA]*
Rose Boucaut	World Physiotherapy [WP]*
Miguel R. Jorge	
Rose Boucaut	
Salam Alexis Gomez	
Jepkemoi Joanne Kibet	
Norma Elisa Gálvez Olvera	
Claudia Patricia Rojas Silva	

*Health worker bodies who are members of the World Health Professionals Alliance (WHPA).

4. A guideline methodologist, Corrado Barbui, Professor of Psychiatry at the Department of Medicine and Public Health, University of Verona, Italy (WHO Collaborating Centre for Research and Training in Mental Health and Service Evaluation) was appointed. Consultants were also appointed to provide technical support to the evidence teams in the development of their search strategy, development of evidence profiles, and in conducting the supporting evidence work: Aemal Akhtar (Denmark), Gergö Baranyi (United Kingdom), Chiara Gastaldon (Italy), Georgia Michlig (USA), Davide Papola (Italy).

5. Evidence review teams and supporting evidence teams were contracted by the WHO Steering Group to perform evidence reviews for specific key questions, develop GRADE evidence profiles, assess the certainty of the body of evidence, draft evidence-to-decision tables; or were contracted for the supporting evidence work.

Name	Affiliation
Key questions: Organizational interventions (Questions 1, 2, 3)	
Hideaki Arima	The University of Tokyo, Japan
Yumi Asai	
Yui Hidaka	
Mako Iida	
Kotaro Imamura**	
Mai Iwanaga	
Yuka Kobayashi	
Yu Komase	
Natsu Sasaki	
Reiko Inoue	Kitasato University School of Medicine, Japan
Akizumi Tsutsumi **	
Hisashi Eguchi	University of Occupational and Environmental Health, Japan, Japan
Ayako Hino	
Akiomi Inoue	
Yasumasa Otsuka	University of Tsukuba, Japan
Asuka Sakuraya	Tokyo Women's Medical University, Japan
Akihito Shimazu	Keio University, Japan
Kanami Tsuno	Kanagawa University of Human Services, Japan

Name	Affiliation
Key questions: Manager and worker training interventions, screening programmes (Questions 4, 5, 6, 7, 13)	
Taylor Braund	University of New South Wales, Australia
Richard Bryant*	
Jasmine Choi-Christou	
Mark Deady	
Nadine Garland	
Aimee Gayed	
Sam Haffar	
Sophia Mobbs	
Katherine Petrie	
Jessica Strudwick	
Key questions: Individual interventions (Questions 8, 9, 10)	
Arpana Amarnath	Vrije University, WHO Collaborating Centre for Research and Dissemination of Psychological Interventions, The Netherlands
Pim Cuijpers*	
Eirini Karyotaki	
Clara Miguel	
Key questions: Return to work and gaining employment (Questions 11, 12)	
Liam O'Mara	Columbia University, WHO Collaborating Centre for Capacity Building and Training in Global Mental Health, USA
Kathleen Pike*	
Adam Rosenfeld	
Hikari Shumsky	

Name	Affiliation
Supporting evidence: Implementation review	
Rachel Lewis	Affinity Health at Work, United Kingdom
Alice Sinclair	
Jo Yarker*	
Fehmidah Munir	
Supporting evidence: Values and preferences survey	
Promit Ananyo Chakraborty	University of British Columbia, Canada
Vanessa Evans	
Raymond Lam	
Jill Murphy**	
Andrew Greenshaw**	University of Alberta, Canada
Jasmine Noble	
Supporting evidence: Informal sector review	
Georgia Michlig*	Johns Hopkins University, USA

*Lead

** Co-Leads

6. Technical advisors were staff members of the International Labour Organization (ILO) led by Manal Azzi, Team Lead on Occupational Safety and Health, ILO Headquarters, Geneva, Switzerland. The ILO is a tripartite United Nations agency which includes governments, employers' organizations and workers' organizations of its 187 Member States. The international bodies of the workers (International Trade Union Confederation) and employers (International Organisation of Employers) organizations were key stakeholders in the guidelines and were engaged in aspects of the guideline development, such as review of the values and preferences survey, and the review by the External Review Group.

7. Funders: The Wellcome Trust, an independent global charitable foundation with a focus on science and health, provided funding to the WHO Department of Mental Health and Substance Use for the development of the guidelines. A representative of the funder attended the recommendations meeting as an observer. Observers are not permitted to participate in the meeting to develop recommendations.

Table 1. Guideline contributors' role during the development process.

Guideline process	WHO SG	GDG	ERG	Methodologist	Evidence teams	Technical advisors
Identifying guideline contributors	✓	Advised on members of the ERG	×	×	×	Advised on members of the GDG/ ERG
Deciding scope, key questions and outcomes	Technical support & coordination	✓	×	Technical support to WHO SG	×	×
Identifying, appraising and synthesizing evidence	Technical support & coordination	Technical advice on search strategy	×	Technical support to evidence teams	✓	×
Supporting evidence	Technical support & coordination	Members of the GDG advised on imp review and survey design	Selected members of the ERG advised on survey design	Technical support to integrate findings	✓	Technical advice on design of survey
Developing recommendations	Technical support & coordination	✓	×	Technical support to GDG and WHO SG	Technical support to GDG	Invited to provide technical advice during selected discussions
Drafting the guidelines	✓	×	×	×	×	×
Peer review	✓	✓	✓	✓	✓	✓
Approval from WHO GRC	✓	NA	NA	NA	NA	NA
Publishing and disseminating	✓	NA	NA	NA	NA	NA

Abbreviations: NA, not applicable, WHO SG, WHO Steering Group. GRC, WHO Guidelines Review Committee

Annex 2
Managing declarations of interest and conflicts of interest

The WHO Steering Group followed the current WHO Compliance, Risk Management and Ethics (CRE) policy. Prospective members of the GDG, ERG and evidence team were asked to complete the WHO Declaration of Interests (DOI) form and to provide their curriculum vitae. These documents, along with additional information (obtained through the Internet and bibliographic database searches), were reviewed by the WHO Secretariat to identify conflicts of interest related to the guideline topic.

Additionally, the names and brief biographies of potential GDG members were published on the WHO website for more than two weeks, together with a description of the objective of the meeting, for public review and comment. No concerns were received.

Interests were assessed as insignificant or minimal if they were considered unlikely to affect, or unlikely to reasonably be perceived to affect, the individual's judgement when assessing evidence or formulating recommendations. If an interest was deemed to be potentially significant, the following management options were considered: 1) limited participation of the individual in the guideline development process; and 2) full exclusion from the process.

At the beginning of the guideline meetings, the declaration of interests of each GDG member was presented. GDG members and evidence teams attending the meetings were asked to provide updates if their declarations of interests had changed. Where changes had occurred, the WHO Steering Group considered the management options as noted above. The GDG, ERG, evidence teams and meeting observers were required to sign a confidentiality agreement.

ILO staff are subject to declarations of interest and conflict of interest management according to the policies of the ILO (Office Directive on Ethics in the Office *(143)* and, in the same way as WHO staff, are subject to the Standards of Conduct for the International Civil Service. WHO staff are also subject to WHO's Code of Ethics and Professional Conduct *(144)*. Meeting observers and organization representatives were not required to complete a declaration of interests because they did not actively participate in the guideline development discussions.

All contributors declared no interests, with the exception of those listed below. A summary of declared interests and how they were managed is provided:

Name	Declaration of Interest	Conflict of interest and management
GDG Members		
Capucine de Fouchier	Change of employment	No conflict of interest identified
Samuel Harvey	Participation in evidence reviews for key questions (4, 5, 6, 7, 13)	Significant conflict of interest identified. A conditional participation management plan was initiated. Professor Harvey participated as a member of evidence review team on discussions about the PICOs, and not as a member of the GDG; therefore he had no vocal rights or voting right for recommendations 4, 5, 6, 7 and 13
Norito Kawakami	Research funds, paid consultancies and lecture honoraria; President of the Japan Society for Occupational Health (unpaid); travel support to attend non-guideline WHO meeting	No conflict of interest identified
Anthony D. LaMontagne	Employment, research funds, paid consultancies, lecture honoraria	No conflict of interest identified
Sapna Mahajan	Unpaid consultancy; lecture honoraria; change of employment	No conflict of interest identified
Jose Luis Ayuso-Mateos	Research funds	No conflict of interest identified
Karina Nielsen	Employment and research funds	No conflict of interest identified
Graham Thornicroft	Unpaid consultancy; board trustee and chair of key stakeholder organizations (nonprofit)	No conflict of interest identified

Name	Declaration of Interest	Conflict of interest and management
ERG members		
Fabrice Althaus	Employment	No conflict of interest identified
Lamia Bouzgarrou	Paid consultancy and travel costs by WHO (unrelated to guidelines)	No conflict of interest identified
Marc Corbière	Research funds, travel costs by institution, chair of key stakeholder group	No conflict of interest identified
Carolyn Dewa	Paid consultancy	No conflict of interest identified
Nick Glozier	Research funds, paid consultancies, IP in workplace focused interventions & training.	No conflict of interest identified
Neil Greenberg	Paid director of company in topic of guideline; trustee and lead in key stakeholder groups (not for profit)	No conflict of interest identified
Birgit Greiner	Employment, research funds and paid consultancy	No conflict of interest identified
Nadine Harker	Unpaid consultancy	No conflict of interest identified
João Silvestre Silva-Junior	Research funds	No conflict of interest identified
Angela Martin	Employment, paid director of private company in topic of guideline	No conflict of interest identified
Christina Maslach	IP for measurement tool on burnout	No conflict of interest identified
Nina Hedegaard Nielsen	Employment	No conflict of interest identified
Reiner Rugulies	Employment, research funds	No conflict of interest identified
Dieter Zapf	Employment, paid consultancies	No conflict of interest identified

Name	Declaration of Interest	Conflict of interest and management
Evidence and supporting evidence teams		
Taylor Braund	Employment	No conflict of interest identified
Mark Deady	Research funds	No conflict of interest identified
Raymond Lam	Research funds, paid consultancies, lecture honoraria, copyright holder for mental health measurement tool, unpaid executive director, unpaid board of directors for key stakeholder organizations (not for profit)	No conflict of interest identified
Akihito Shimazu	Paid consultancies	No conflict of interest identified
Jo Yarker	Employment and paid consultancy	No conflict of interest identified

Annex 3
Developing the scope, key questions and outcomes

Prior to the development of the guidelines, an initial meeting – the Landscape Forum on Workplace Mental Health was held in Geneva, Switzerland in November 2019. One key objective was to discuss the extent of evidence for interventions addressing mental health at work. Following this meeting, the WHO Steering Group performed preliminary scoping of the available evidence in preparation for a draft scope for the guidelines. With the support of the Steering Group and guideline methodologist, the scope was reviewed by the GDG at its first meeting, held virtually in April 2020, which discussed and agreed on the final scope and PICO (population, intervention, comparison, outcome) questions of the guidelines. Background questions were additionally devised in order to scope the best available evidence sources and to provide relevant contextual information for the prospective main body of the guidelines and for prospective evidence-to-decision considerations – in particular, 1) risk factors at work and their impact on mental health outcomes; and 2) the prevalence of mental health outcomes in general working populations and specific subpopulations (such as those identified as minority groups and humanitarian and health workers).

Members of the WHO Steering Group, in consultation with the GDG and the methodologist, developed a list of outcomes that were most relevant to specific PICO questions. The GDG then rated each outcome on a scale from 1 to 9 and indicated whether it considered each outcome critical (rated 7–9), important (rated 4–6) or not important (rated 1–3) for decision-making.

The final key questions are provided in the following table which includes the critical and important outcomes. Definitions of terms can be found in the glossary. The details of the PICO format for each key question are provided in the relevant section of the web Annex: Evidence profiles.

QUESTION 1. What **universally-delivered organizational** interventions improve positive mental health and reduce symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: mental health symptoms and disorders; positive mental health; quality of life and functioning; work-related outcomes.

Important outcomes are: adverse effects; substance use; suicidal behaviours.

QUESTION 2. What **organizational** interventions delivered to c**ivilian health workers, emergency workers, humanitarian workers**, improve positive mental health and reduce symptoms of mental health conditions, suicidal behaviours, substance use?

OUTCOMES:

Critical outcomes are: MH symptoms and disorders; Positive MH; Quality of life and Functioning; Substance use; Suicidal behaviours; Work-related outcomes;

Important outcomes are: Adverse effects

QUESTION 3. What **organizational interventions delivered to workers with symptoms of emotional distress or meeting criteria for mental health conditions** improve positive mental health and reduce symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: mental health symptoms and disorders; quality of life and functioning; substance use; suicidal behaviours; work-related outcomes.

Important outcomes are: adverse effects; positive mental health.

QUESTION 4. What training for **managers** (a) improves knowledge, attitudes and skills/ behaviours to support the mental health and well-being of workers and/or (b) improves their workers' positive mental health and reduces symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: help-seeking behaviour (supervisees); managerial leadership style and communication (managers); mental health knowledge, attitudes and skills (managers); mental health symptoms and disorders (supervisees); positive mental health (supervisees); work-related outcomes (supervisees).

Important outcomes are: adverse effects (managers); substance use (supervisees); suicidal behaviours (supervisees); quality of life and functioning (supervisees).

QUESTION 5. What training for **managers of civilian health, emergency and humanitarian workers** (a) improves knowledge, attitudes and skills/behaviours to support the mental health and well-being of workers and/or (b) improves their workers' positive mental health and reduces symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: help-seeking behaviour (supervisees); managerial leadership style and communication (managers); mental health knowledge, attitudes and skills (managers); mental health symptoms and disorders (supervisees); positive mental health (supervisees); work-related outcomes (supervisees).

Important outcomes are: adverse effects (managers); substance use (supervisees); suicidal behaviours (supervisees); quality of life and functioning (supervisees).

QUESTION 6. What training for **workers** (a) improves knowledge, attitudes and skills/behaviours to support the mental health and well-being of workers and/or (b) improves their colleagues' positive mental health and reduces symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: help-seeking behaviour (colleagues); mental health knowledge, attitudes, skills (workers); mental health symptoms and disorders (colleagues); positive mental health (colleagues); work-related outcomes (colleagues).

Important outcomes are: adverse effects (workers, colleagues); substance use (colleagues); suicidal behaviours (colleagues); quality of life and functioning (colleagues).

QUESTION 7. What training for **civilian health, emergency and humanitarian workers** (a) improves knowledge, attitudes and skills/behaviours to support the mental health and well-being of workers and/or (b) improves colleagues' positive mental health and reduces symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: help-seeking behaviour (colleagues); mental health knowledge, attitudes and skills (workers); mental health symptoms and disorders (colleagues); positive mental health (colleagues); work-related outcomes (colleagues).

Important outcomes are: adverse effects (workers, colleagues); substance use (colleagues); suicidal behaviours (colleagues); quality of life and functioning (colleagues).

QUESTION 8. What **universally-delivered individual** interventions (1A - psychosocial and/or 1B - physical activity and/or 1C - health promotion [lifestyle] interventions) improve positive mental health, and reduce symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: mental health symptoms and disorders; positive mental health; quality of life and functioning; work-related outcomes.

Important outcomes are: adverse effects; substance use; suicidal behaviours.

QUESTION 9. What **individual interventions** (1A - psychosocial and/or 1B - physical activity and/or 1C - health promotion [lifestyle] interventions) **delivered to civilian health, emergency and humanitarian workers** improve positive mental health and reduce symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: mental health symptoms and disorders; positive mental health; quality of life and functioning; substance use; suicidal behaviours; work-related outcomes.

Important outcomes are: adverse effects.

QUESTION 10. What **individual interventions** (1A - psychosocial and/or 1B - physical activity and/or 1C - health promotion [lifestyle] interventions) delivered **to workers with symptoms of emotional distress or meeting criteria for mental health conditions** improve positive mental health and reduce symptoms of mental health conditions, suicidal behaviours and substance use?

OUTCOMES:

Critical outcomes are: mental health symptoms and disorders; positive mental health; quality of life and functioning; substance use; suicidal behaviours; work-related outcomes.

Important outcomes are: adverse effects.

QUESTION 11. **For people on absence due to mental health conditions**, what interventions improve (a) return to work, (b) absence and (c) positive mental health and reduce mental health symptoms?

OUTCOMES:

Critical outcomes are: mental health symptoms and disorders; quality of life and functioning; substance use; suicidal behaviours; work-related outcomes.

Important outcomes are: adverse effects; positive mental health.

QUESTION 12. **For people with a mental health condition**, are recovery-oriented strategies enhancing vocational and economic inclusion (such as supported employment) feasible and effective?[26]

OUTCOMES:

Critical outcomes are: mental health symptoms and disorders; quality of life and functioning; work-related outcomes.

Important outcomes are: adverse effects; positive mental health; satisfaction with care.

QUESTION 13. Are **screening** programmes for **mental health conditions** at work acceptable and do they reduce symptoms of mental health conditions in workers?

OUTCOMES:

Critical outcomes are: mental health symptoms and disorders; user satisfaction; work-related outcomes.

Important outcomes are: adverse effects; positive mental health; quality of life and functioning.

[26] Update of the Mental Health Gap Action Programme (mhGAP) guideline for mental, neurological and substance use disorders, 2015. Key question. Geneva: World Health Organization; 2015.

Annex 4
Reviewing the evidence and supporting evidence

Evidence reviews for key questions

Details of the selection process, search strategies, included reviews and primary studies for each PICO question are presented in web Annex.

The Cochrane Database of Systematic Reviews, PubMed, EMBASE, PsycINFO and Global Index Medicus were searched to identify existing systematic reviews that answered the key questions. On the advice of GDG members, the methodologist and expert members of the evidence teams, where suitable reviews for specific outcomes were not available within the past 5 years, the time frame was extended to a maximum of 10 years. The reviews that were identified were then evaluated according to the following criteria:

- their methodology as appraised by the AMSTAR II (Assessing the Methodological Quality of Systematic Reviews tool (Shea et al. *(145)*);
- how directly they matched the PICO questions;
- whether they reported sufficient information to allow for an assessment of the certainty of the evidence (e.g. tables with characteristics of included studies, risk-of-bias assessments at the study level, results of meta analyses in forest plots);
- the date of the most recent review to ensure that the most up-to-date evidence was used.

The evidence teams prioritized the most recent and highest-quality (based on AMSTAR II ratings) reviews for each question in relation to the population, intervention, comparison and outcomes. As many reviews as necessary were included to address each question. A search strategy was developed in collaboration with the methodologist and evidence teams to harmonize common search terms and strategy across the reviews. Reviews which included randomized designs were prioritized in all key questions; however, controlled observational designs were also considered because of existing knowledge on the common design of research in occupational settings/populations.

For two key questions (4 and 5) an update of an existing review was pursued in order to capture additional studies to better answer the specific PICO questions. Question 13 was not addressed in an existing systematic review, and a systematic review of primary studies was conducted. The evidence team, in consultation with the methodologist and the WHO Steering Group, devised a new search strategy to identify relevant primary studies (web Annex). A total of 36 systematic reviews and nine additional primary studies were included. The systematic review team also identified one network meta-analysis.

Supporting evidence to supplement evidence-to-decision considerations

In light of global changes in the modes of working as a result of the COVID-19 pandemic, the WHO Steering Group and GDG considered areas of importance to supplement the evidence reviews, namely: the values and preferences of key stakeholders and the implementation barriers and facilitators. Additionally, in light of the dearth of literature reported by the evidence teams in relation to the informal sector, a third piece of supplementary evidence was commissioned. Full reports of all three can be found in web Annex.

A mixed-methods survey was commissioned to capture current values and preferences of key stakeholders – workers, employers, providers of mental health/occupational health services, including union representatives – in relation to the outcomes and interventions in the guidelines scope. Key data from the survey were included in the evidence-to-decision considerations.

A semi-structured interview with experts and providers of care for the informal sector was conducted in order to identify the needs and potential avenues of work and mental health service delivery for this population.

A review of qualitative research was commissioned on the barriers to, and facilitators of, implementing interventions that support workplace mental health. GRADE CerQual (Confidence in the Evidence from Reviews of Qualitative research)[27] was used to assess confidence in the findings of qualitative evidence.

Certainty of evidence

After identifying the best available evidence to answer each key question, another step was taken to determine the certainty of this evidence – in other words, how confident could the GDG be that the evidence (estimate of effect) supported the making of any recommendations on the basis of that evidence. The GRADE system was used to assess the certainty of the body of quantitative evidence (from the evidence reviews) for each critical and important outcome *(146)*.

[27] See: https://www.cerqual.org/, accessed 29 May 2022.

The evidence teams, supported by the methodologist, developed evidence profiles to summarize relative and absolute estimates of effects and an assessment of the certainty of the evidence. The certainty of evidence for each question and each outcome was rated as “high”, “moderate”, “low” or “very low” on the basis of established criteria, namely:

- study design (e.g. randomized designs increase certainty, observational designs reduce certainty);
- risk of bias (e.g. problems with how the studies were designed or conducted reduce certainty);
- inconsistency (e.g. if the studies in the review are very different in their results, this reduces certainty);
- indirectness (e.g. if the studies are not specific to the key PICO question (for instance, the population is slightly different) this reduces certainty);
- imprecision (if there is a smaller number of participants in the studies, or the confidence intervals [CI] are wide, this reduces certainty); and
- publication bias (e.g. if there are factors that would have unfairly enhanced the likelihood of these studies being published, this reduces certainty) *(147)*.

These assessments were presented to the GDG in GRADE evidence profiles for discussion and formulation of recommendations. Evidence profiles for each key question are shown in web Annex.

Certainty	Interpretation
High	We are very confident that the true effect lies close to the estimate. Further research is unlikely to change confidence in the estimate of effect.
Moderate	We are moderately confident in the estimate of effect. The true effect is likely to be close to the estimate of effect, but there is a possibility that it is substantially different. Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.
Low	Our confidence in the estimate of effect is limited. The true effect may be substantially different from the estimate of effect. Further research is very likely to have an important impact on confidence in the estimate of effect and is very likely to change the estimate.
Very low	We have very little confidence in the estimate of effect.

Annex 5
Developing the recommendations

The GDG met virtually for six duplicate sessions in June 2021. Graham Thornicroft and Jose Luis Ayuso-Mateos were chairs of the meetings, which were held in duplicate sessions to accommodate the differences in time zones of GDG members. Corrado Barbui, the methodologist, was selected as vice-chair due to anticipated absences of the two chairs.

Evidence reviews, supplementary evidence and GRADE tables were shared in advance with GDG members and were presented throughout the meetings. Formulation of the recommendations and their strength ratings were facilitated by the chairs and supported by the methodologist.

The GDG benefited from a structured evidence-to-decision (EtD) framework which was developed by the evidence teams, with support from the WHO Steering Group and the methodologist, to guide the development of recommendations. The information which contributed to the EtD framework was informed by the systematic reviews, supplementary evidence, and the expertise of the GDG.

The EtD factors were: the priority of the problem, certainty of the evidence, balance of desirable and undesirable effects, values, resources required, certainty in the resources required, cost-effectiveness, feasibility, health, equity, equality and non-discrimination, human rights and sociocultural acceptability. The latter two factors were adapted from the WHO INTEGRATE EtD *(148)*, replacing the items of equity and acceptability in the GRADE DECIDE EtD *(149)*.

Each recommendation could be for or against a specific intervention, and either strong or conditional *(150)*.

- **A strong recommendation** means the GDG was confident that the desirable effects of adherence to a recommendation outweighed the undesirable effects.
- **A conditional recommendation** means that the GDG concluded that the desirable effects of adherence to a recommendation probably outweighed the undesirable effects.

WHO's guideline recommendations are developed through a process that aims to achieve consensus among the GDG members. Consensus was defined as a two-thirds majority vote. The GDG thus discussed and agreed on the recommendations, including the wording and direction (for or against the intervention) by consensus. The strength of each recommendation (strong or conditional) was agreed on by voting. Because meetings were held each day in duplicate, the progress of the first group of GDG members on a given discussion was then presented to the second group for further discussion and refinement. If the second group had major substantive disagreements with the recommendation, its revision was then presented to the first group in a final meeting. Had there been major disagreement by the end of the final scheduled meeting, there was an agreement to reconvene the GDG if needed. This was not the case.

Annex 6
Drafting the guidelines and external review

Following the formulation of the recommendations by the GDG, the Responsible Technical Officer drafted the guidelines for review by the GDG and ERG. The role of the peer review was not to change the recommendations agreed by the GDG; however, if the peer reviewers had identified major concerns, these would have been brought back to the GDG for consideration. This situation did not occur.

The WHO Steering Group reviewed all peer review comments and, following discussion, revised the guidelines for clarity while making sure that the recommendations remained consistent with the original meaning as formulated by the GDG.

WHO has an internal approval and quality assurance process to ensure that all WHO publications, including guidelines, meet the highest international standards for quality, reporting and presentation. These guidelines were reviewed and approved by the WHO Guidelines Review Committee (GRC). Finally, the guidelines were prepared for publication and dissemination.

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