

Educational Actions and Health Prevention for Managers and Teams: Systematic Review

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Abstract

The high demands of managers' work have made them vulnerable to work-related illness. Interventions in the area of Training, Development, and Education can benefit the mental health of these professionals. This systematic review analyzed articles whose interventions focused on health prevention for managers and teams. The study followed the PRISMA protocol and twenty articles were selected. As a result of the analysis, it was found that managers had a decrease in stress, burnout syndrome, depressive symptoms, and psychological distress after the interventions performed. There was an increase in confidence and self-efficacy to talk about mental illnesses and in the recognition of their role to employ actions to promote the health of the team. Teams whose managers participated in the interventions had better health indicators compared to those who did not. We concluded that educational actions are effective for health prevention for managers and teams. Further longitudinal investigations and the use of multilevel analysis are suggested.

Keywords: interventions, managers, mental health.

Ações Educacionais e Prevenção em Saúde de Gestores e Equipes: Revisão Sistemática

Resumo

As elevadas demandas do trabalho de gestores têm os tornado vulneráveis ao adoecimento relacionado ao trabalho. Intervenções da área de Treinamento, Desenvolvimento e Educação podem beneficiar a saúde mental desses profissionais. Esta revisão sistemática analisou artigos cujas intervenções focaram na prevenção em saúde de gestores e equipes. O estudo seguiu o protocolo PRISMA e vinte artigos foram selecionados. Como resultado da análise, verificou-se que os gestores obtiveram diminuição no estresse, síndrome de burnout, sintomas depressivos e sofrimento psicológico após as intervenções realizadas. Houve aumento na confiança e autoeficácia para conversarem sobre doenças mentais e no reconhecimento de seu papel para empregar ações para promover a saúde da equipe. Equipes cujos gestores participaram das intervenções tiveram melhores indicadores de saúde comparadas àquelas que não participaram. Conclui-se que ações educacionais são efetivas para prevenção em saúde de gestores e equipes. Sugere-se a realização de mais investigações longitudinais e uso de análises multinível.

Palavras-chave: intervenções, gestores, saúde mental.

Acciones Educativas y de Prevención de la Salud para Directivos y Equipos: Revisión Sistemática

Resumen

Las altas exigencias del trabajo de los gerentes los ha hecho vulnerables a enfermedades relacionadas con el trabajo. Las intervenciones en el área de Formación, Desarrollo y Educación pueden beneficiar la salud mental de estos profesionales. Esta revisión sistemática analizó artículos cuyas intervenciones se centraron en la prevención de la salud para directivos y equipos. El estudio siguió el protocolo PRISMA y se seleccionaron veinte artículos. Como resultado del análisis se encontró que los directivos presentaron una disminución del estrés, síndrome de burnout, síntomas depresivos y sufrimiento psicológico después de las intervenciones realizadas. Hubo un aumento en la confianza y autoeficacia para hablar sobre la enfermedad mental y en el reconocimiento de su papel para emplear acciones para promover la salud del equipo. Los equipos cuyos directivos participaron en las intervenciones tenían mejores indicadores de salud en comparación con aquellos que no lo hicieron. Se concluye que las acciones educativas son efectivas para la prevención de la salud de directivos y equipos. Se sugieren la realización de más investigaciones longitudinales y el uso de análisis multinivel.

Palabras clave: intervenciones, gerentes, salud mental.

The work of managers presents high levels of quantitative, cognitive, and emotional demands (Christensen et al., 2008; Demiral et al., 2018), which makes them more vulnerable to work-related illnesses. The present study conducted a systematic literature review to analyze the scientific productions that reported having conducted interventions aimed at the prevention of mental health of managers and their work teams, focusing mainly on their characteristics and effectiveness.

The work environment is currently seen as a source of new and emerging risks to workers' health. Its increased pace and workload, the high levels of attention and concentration required, and the need to work long hours result in higher mental effort, leading to fatigue and professional burnout (Jacinto & Tolfo, 2017). In this scenario, managers are often under intense pressure at work and this may be a triggering factor for stress conditions in these professionals (Braga & Pereira, 2011).

Studies point out that managers' high demands and work intensity lead them to chronic stress, burnout, high prevalence of insomnia, and depression (Persson Asplund et al., 2018). Not coincidentally, these professionals are considered a risk group for the incidence of mental health-related problems and have one of the highest suicide rates (Graf-Vlachy et al., 2020).

Preventive health actions can contribute to reducing the negative effects of work-related risk exposure on managers' health. To prevent means to avoid or prevent the occurrence of damage or harm. Prevention in health requires an early intervention from what is known about a certain disease to prevent its emergence and reduce its incidence in people (Czeresnia, 2003).

Studies have pointed out that educational actions can change the coping strategies to adverse situations used by those involved before and after experiencing them, revealing their importance for the development of effective coping skills, according to the circumstances experienced (Demerouti, 2015). In the world of work, these actions can be practiced by the area of Training, Development, and Education (TD&E). This subsystem identifies who should be trained and which competencies should be developed by the individual. In addition, it develops the content that will compose the action, the strategies by which it will be offered, and how it will be evaluated (Sheeba & Christopher, 2020). Thereby, it enables the learning of the skills necessary to perform complex and dynamic tasks, leading to improved performance of the participants (Bel et al., 2017).

Workplace mental health programs can be an opportunity to alter the risk factors of psychosocial work conditions that are recognized as primary sources of work-related stress (Gayed et al., 2018). The study by Angerer et al. (2011), for example, found decreases in the level of perceived stress of managers after one year of stress management training.

Thus, if well planned and executed, these actions can encourage and establish new competencies in individuals (Meneses et al., 2010), who may have proactive attitudes to face adverse situations in the work context, becoming a way to promote managers' mental health (Fontes et al., 2010).

To achieve the objective proposed by this work, this systematic review was based on the hypothesis that the learning obtained by the contents and strategies used in the educational actions can contribute positively to the mental health prevention of managers and their teams.

Method

The study presented is a systematic literature review. According to Siddaway et al. (2019), systematic reviews are methodical, comprehensive, and replicable because they involve

a detailed search process to locate all relevant work on a given research question and because they systematically present and perform a synthesis of the characteristics and findings of their results.

The article was developed according to the assumptions of the PRISMA protocol (2009), which comprises a checklist of 27 recommended guidelines for systematic review reports, aiming to ensure that the knowledge produced is valuable to the public that will use its information (BMJ, 2021). Among the guidelines indicated by the protocol, some were not met (12, 13, 14, 15, 16, 19, 20, 21, 22, 23, and 27) because they did not apply to the scope of study of this article. The search for the articles was conducted during the months of September and October 2020 to February 2021 using PubMed, Scopus, PsycINFO, and Web Of Science databases, which were chosen for being reference databases in the area of health, administration, and psychology, full access to the texts, and encompassing national and international publications. The terms used in all searches were "manager"; "mental health"; "training"; "intervention" and "work", using Boolean operators to combine the terms. Thus, the final search that comprised the search in all included databases was: *manager** and "mental health" and *intervention or training and work*.

To refine the results retrieved, three filters were also used in all the databases: open access to the article, so that one could read the complete developed material, the year of publication of the article (between 2000 and 2020), the identification of the keywords chosen in the title and/or abstract of the article, and also the keywords themselves. The choice to use these filters is justified because the terms adopted are central to the objective of this study, so their absence in the title, abstract, or keywords would most likely indicate the incompatibility of the articles with the proposal of this systematic review, as it was found in a preliminary search for the selection process of the studies that composed this article.

Two researchers conducted the search and the evaluation of the articles for inclusion in the review, and then an independent judge from the area evaluated the procedures adopted following the inclusion and exclusion criteria determined in the research protocol. The inclusion criteria adopted were (a) articles of an empirical nature, to verify the characteristics and efficacy of the interventions conducted; (b) time frame of articles published in the last 20 years (from 2000 to 2020), due to the volume of studies found in previous searches in the years before 2000 that were not linked to the research scope of this article; (c) articles published in Portuguese, English and Spanish languages and; (d) articles published in peer-reviewed journals. The exclusion criteria used were: (a) articles published before the year 2000; (b) articles that present the keywords but are unrelated to the subject of the review; (c) theoretical articles, and (d) articles whose proposed interventions have not yet been conducted.

The retrieved articles were imported into the State of Art through Systematic Review (Start) software, version 2.3.4.2, developed by the Federal University of São Carlos (UFSCar), through which it was possible to classify the results found between accepted, rejected, or duplicates from the reading of the abstracts of the articles. Figure 1 shows the article selection process.

The articles excluded at the end of the selection were justified by: the absence of an intervention proposal in the study ($n = 14$), studies that were not conducted with the participation of managers aiming at their mental health and/or the mental health of the team based on the managers' actions ($n = 16$), the language of the article ($n = 2$), intervention not conducted until the publication of the article ($n = 15$), articles that contained the

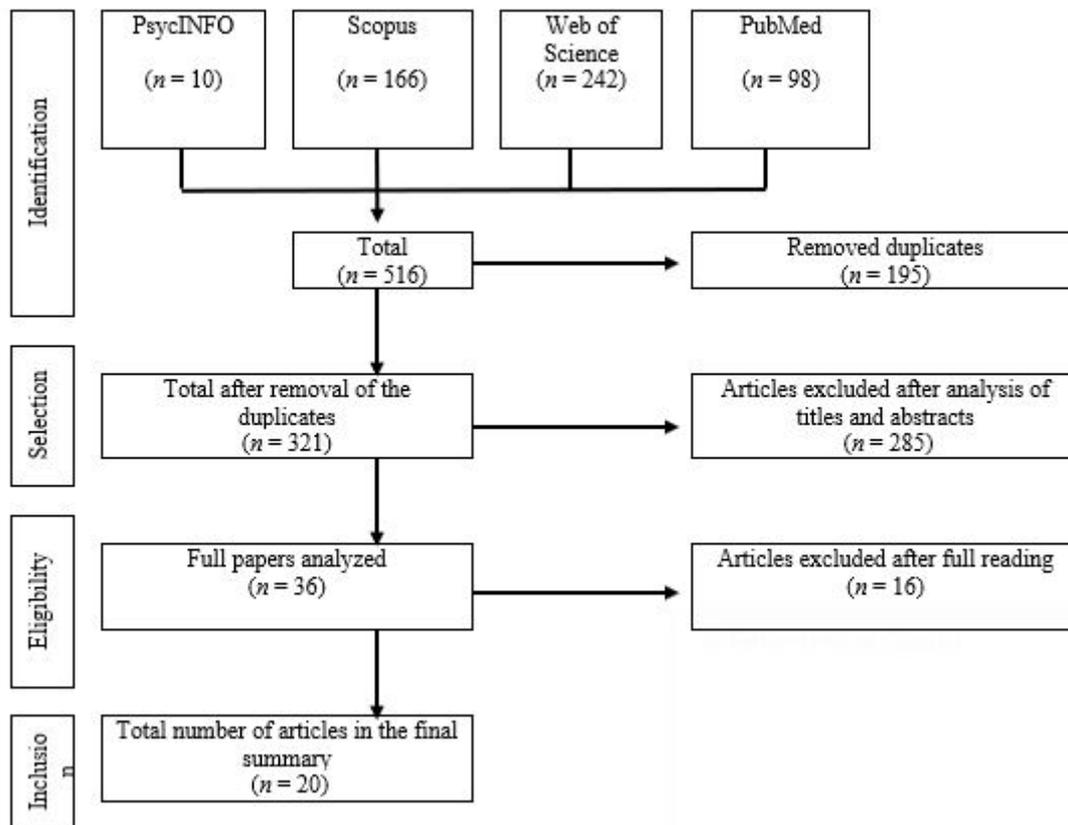


Figure 1. Article selection and exclusion process, according to the Prism Protocol

keywords but were not related to the scope of this study ($n = 274$).

Data Analysis Procedures

After reading the articles in full, the following were extracted from the selected studies: article title, sample profile, intervention duration, measurement instruments, intervention characteristics, follow-up, and main outcomes. Such categories were chosen according to the guidelines of the Cochrane Standards for protocol reporting of new intervention reviews (Lasserson et al., 2021). The characteristics and effects of the interventions were tabulated and the other information was analyzed throughout the text. Subsequently, the discussion of the studies was conducted with the support of the literature in the area.

Results

All the articles analyzed in this paper are international; therefore none is of Brazilian origin. We found two studies conducted with a sample of managers in Germany, four in Japan, four in the United Kingdom, three in Switzerland, one in Sweden, one in the United States, four in Australia, and one in Canada. These numbers reveal a predominantly European production on this theme.

Of the twenty articles analyzed, 19 were published between the years 2015 and 2021. The number of articles published in the last seven years points to a mostly recent production on the subject, which presupposes a growing concern about the mental health of managers and teams within organizations.

Sample Profile

The interventions were delivered to managers and employees in various sectors, including: government ($n = 1$), education ($n = 1$), health ($n = 9$), administration ($n = 1$), construction ($n = 3$),

industry ($n = 5$), transportation ($n = 2$), retail ($n = 1$), services ($n = 4$), finance ($n = 1$), culture ($n = 1$), communication ($n = 1$), global private sector company ($n = 1$), and information technology ($n = 1$). The sample sizes of the studies ranged from 39 to 1,155 participants, and the participation of managers was unanimous in all studies, while that of employees occurred according to the objectives of the intervention. Health care managers appeared most often in the studies.

Intervention Duration

The duration of the interventions was presented in different ways in each of the studies or was not specified, making it difficult to synthesize into a single measure of the duration of the interventions. However, weekly ($n = 5$), daily ($n = 4$), and per-session ($n = 6$) interventions were the most common in the selected studies.

Measurement Instruments Applied

The instruments used and the variables evaluated are shown in Table 1.

Intervention Characteristics

For better organization and visualization of the data from the articles, Tables 2, 3, 4, and 5 below were elaborated according to the focus of the proposed intervention. The articles in Table 2 ($n = 10$) refer to interventions that were proposed with a focus on the mental health of the teams through the action of managers. In Table 3 ($n = 8$), information is presented about interventions that had a focus on the mental health of the managers themselves. Table 4 ($n = 1$), displays articles that focused on the managers' and team's health. Finally, in Table 5, the allocated article ($n = 1$) showed the survey and implementation of actions that aimed at

Table 1
Variables assessed and measurement instruments used in the interventions

Variables assessed	Instruments used
Stress	<ul style="list-style-type: none"> Perceived Stress Scale (PSS-14) Shirom-Melamed Burnout Questionnaire (SMBQ)
Depressive symptoms	<ul style="list-style-type: none"> Montgomery Åsberg Depression Rating Scale (MADRS-S) Hospital Anxiety and Depression Scale (HADS) Depression Scale of the Patient Health Questionnaire (PHQ-D)
Psychological distress	<ul style="list-style-type: none"> General Health Questionnaire (GHQ-12) Brief Job Stress Questionnaire (BJSQ)
Common mental disorders	<ul style="list-style-type: none"> Kessler-6 (K-6) and Kessler-10 (K-10)
Attitudes towards mental health	<ul style="list-style-type: none"> Social Distance Scale (SoDi) Opening Minds Scale for Workplace Attitudes (OMS-WA)
Physical and mental health	<ul style="list-style-type: none"> 12-Item Short Form Health Survey (SF-12)
Mental health knowledge	<ul style="list-style-type: none"> Mental Health Knowledge Schedule (MAKS)
Mental well-being	<ul style="list-style-type: none"> Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) Perceived Wellness Scale
Health related to job satisfaction	<ul style="list-style-type: none"> Work Experience Measurement Scale (WEMS)
Current work situation	<ul style="list-style-type: none"> Effort–Reward Inventory (ERI)
Work-related emotional and cognitive stress	<ul style="list-style-type: none"> Irritation Scale (IS)
Psychosocial work characteristics	<ul style="list-style-type: none"> Karasek’s Job Content Questionnaire
Listening attitude and skills	<ul style="list-style-type: none"> Active Listening Attitude Scale (ALAS)
Severity of insomnia	<ul style="list-style-type: none"> Insomnia Severity Index (ISI)
Alcohol dependence or abuse	<ul style="list-style-type: none"> Alcohol Use Disorders Identification Test (AUDIT)
Absenteeism	<ul style="list-style-type: none"> Health and Work Performance Questionnaires (HPQ)
Psychological capital	<ul style="list-style-type: none"> PsyCap Inventory (PCQ-12)
Self-efficacy for managing staff mental health	<ul style="list-style-type: none"> New General Self-Efficacy Scale
Engagement at work	<ul style="list-style-type: none"> Utrecht Work Engagement Scale (UWES)
Burnout Syndrome	<ul style="list-style-type: none"> Copenhagen Burnout Inventory (CBI)
Acceptance, feasibility, efficiency, usability and effectiveness of training	<ul style="list-style-type: none"> Self-report questionnaires designed by the authors

changes in the characteristics, organization, and execution of the work and not the individual.

As for their format, the interventions were offered online, in face-to-face groups, in a single individual session, and using content recorded on DVD with the support of telephone voice calls. Regarding the content of the interventions, techniques from Cognitive-Behavioral Therapy were used, such as emotion regulation, situation analysis, psychoeducation, goal setting, work recovery methods, and boundary tactics at the work-home interface. One study used mindfulness techniques and others encompassed knowledge and understanding about mental health problems commonly found in the workplace, as well as the signs to recognize the presence of these in employees and how to deal with these aspects. One of the articles focused its health promotion program on the six standard domains of management:

change, control, demands, relationship, function, and support, and another focused on active listening for participants talking about their ideas using role-plays and group discussions. One of the articles resorted to the use of Neurolinguistic Programming, and the last one proposed work redesign actions.

The media and materials with which the strategies of these interventions were developed ranged from digital simulation games, digital activities, texts, exercises, audios, images, videos, group discussions, interactive lectures, and manuals.

Follow-Up Time

Of the twenty studies analyzed, sixteen conducted a longitudinal follow-up of their effects on the participants. The follow-up time ranged from 1, 3, 4, 6, and 12 months after the intervention, and one study followed 9 years after the intervention.

Key Outcomes

The results of the interventions conducted with a focus on work teams showed that there was an increase in managers’ confidence and self-efficacy in communicating with employees about mental illness, as well as in recognizing their role in managing mental health problems and taking action to employ strategies to prevent and reduce stress among staff, such as by the managers’ active listening attitude. A reduction in stigmatizing attitudes related to mental illness and in the length of sick leave following the proposed interventions was also observed.

In some results the variables evaluated remained stable or with few significant changes before and after the interventions, such as the manager’s intentions and actions to promote the mental health of the team; the work beliefs related to attitudes and competencies of people with mental health problems; the psychosocial characteristics of work and psychological distress measured by the GHQ instrument, although the employees whose managers adhered to the intervention showed lower rates compared to the group of workers whose managers did not participate. As for the participants’ evaluations about the training, the results were satisfactory due to the practicality of the information, the format in which it was presented, and the relevance and usefulness of the content offered.

As for the interventions that focused on the individual, represented here by the participation of the managers themselves, the results obtained indicated a decrease in the indicators of stress, burnout syndrome, depressive symptoms, psychological distress, and insomnia severity. Also satisfactory were the results related to greater satisfaction and engagement with work; knowledge about mental health assessed by the MAKS; perception of one’s own mental health condition, and support in the workplace over time. In the Effort-Reward relationship, the results were positive since the effort was reduced and reward increased while levels of over-commitment and depressive symptoms were decreased during the intervention period. Positive changes were also seen in stress levels measured by K-10 in the intervention groups. Such as with the team-focused interventions, those that occurred at the individual level also obtained some stable results or low modifications before and after the interventions. This is the case for levels of physical and mental health measured by the SF-12; social distance measured by the SoDi; levels of psychological capital; numbers of absenteeism and presenteeism; and work situation during the observation period measured by the ERI and IS.

The only study conducted with both individual and team

Table 2
Selected articles focused on the mental health of the team based on the manager's intervention

Article	Intervention Characteristics	Main Results
A Cluster Randomized Controlled Trial to Evaluate HeadCoach: An Online Mental Health Training Program for Workplace Managers	<ul style="list-style-type: none"> - Communication to promote more appropriate responses from managers when mental health problems arise in staff - Improve psychosocial working conditions in the organization by changing managers' behavior to better promote a mentally healthy workplace. Focus on management skills to prevent and reduce stress at work - Online format 	<ul style="list-style-type: none"> (↑) in manager confidence in the intervention group compared with the control group. (↑) in responsive and preventive behavior in the intervention group compared to the control at post-intervention and follow-up.
A New Online Mental Health Training Program for Workplace Managers: Pre-Post Pilot Study Assessing Feasibility, Usability, and Possible Effectiveness	<ul style="list-style-type: none"> - Online Format - Content: 1) mental health problems commonly encountered in the workplace; 2) signs to recognize subordinates at risk for mental health problems and managerial techniques to support employees; and 3) enhancing managers' abilities to alter mental health risk factors in the workplace. 	<ul style="list-style-type: none"> Participants valued the practicality of the information and the format presented. (↑) in confidence in communicating with employees about mental illness and actions to employ managerial strategies to prevent and reduce stress among staff (↑) in managers' knowledge regarding their role in managing mental health problems.
A Study of the Effects of Active Listening Attitudes of Middle Managers	<p>Training method: Inventive Experiential Learning. The method was created by the authors to develop the active listening of the participants. It consists of a role-playing stage and a general discussion. It aims to find the conditions and means necessary for the participants to talk about their ideas.</p>	<ul style="list-style-type: none"> (↑) on the scores of the subscales "Listening Attitude" More than 90% of the participants recognized the training as meaningful and thought they could use Active Listening in the workplace.
Development and Evaluation of Digital Game Based Training for Managers to Promote Employee Mental Health and Reduce Mental Illness Stigma at Work: Quasi Experimental Study of Program Effectiveness	<ul style="list-style-type: none"> - Online format - Simulation game of real work situations for managers to 'test' their leadership skills and see its effects - Intervention focus: (1) understanding mental health and mental illness, (2) detecting warning signs, (3) taking early and appropriate action, and (4) monitoring and self-monitoring participant's performance by instant feedback on their actions after the end of each conversation. 	<ul style="list-style-type: none"> (↑) of knowledge about mental health, mental illness, and self-efficacy to deal with mental health situations at work (↓) of stigmatizing attitudes (avoidance, perceived dangerousness, and responsibility) (=) attitudes related to work beliefs and competence and in helping people with mental health problems (=) managers' intentions to promote staff mental health
A novel approach to early sickness absence management: The EASY (Early Access to Support for You) way	<ol style="list-style-type: none"> 1. Employee contact with manager when missing work due to illness; 2. Early intervention by an occupational physician or nurse; 3. Biopsychosocial case management using CBT principles; 4. Musculoskeletal intervention by a physical therapist; 5. Mental health counseling intervention; 6. Work modification; 7. Return to work in phases; 8. Health promotion actions. 	<ul style="list-style-type: none"> (↓) in sick leave absence from work with the introduction of the service. (↓) in the length of sick leave after the implementation of EASY. - Most accepted counseling: Occupational Health (70%) and musculoskeletal services (66%). - 78% of managers found EASY helpful in getting employees back to work; - 82% found the service "helpful" in helping them deal with sick leave.
Pilot study of a cluster randomized trial of a guided e learning health promotion intervention for managers based on management standards for the improvement of employee well-being and reduction of sickness absence: GEM Study (Guided E-learning for Managers)	<ul style="list-style-type: none"> - Purpose: To help managers identify sources of stress, understand the link to mental and physical illness, and improve their ability to help employees cope with stressful working conditions - Online format - Focus on the six domains of management standards: Change, Control, Demands, Relationship, Role, and Support - Additional activities that could be completed outside the e-learning environment - Guidance from a facilitator and support by phone and e-mail, related to the topics of the scope covered in the intervention. 	<ul style="list-style-type: none"> - Many employees scored above the accepted threshold on the GHQ. - There was no evidence of beneficial outcomes of the intervention on GHQ score, supervisor relationships, or supervisor support. - Employees whose managers did not adhere to the intervention had worse WEMWBS scores at the beginning of the study than adherent managers. (↓) on GHQ among employees whose managers were adherent compared with employees of non-adherent managers
The role of qualitative research in adding value to a randomized controlled trial: lessons from a pilot study of a guided e-learning intervention for managers to improve employee wellbeing and reduce sickness absence	<ul style="list-style-type: none"> - Guided online training based on the Health and Safety Executive's management standards for reducing work stress. - 'GEM' study addressed the public health priority of psychosocial stress at work and mental health at work. 	<ul style="list-style-type: none"> - 'Completing' a module does not mean that managers engaged with the activities, questioning the measure of adherence adopted. - Contrast between the description of competencies suggested by the intervention and those that managers and employees identified when reporting cases of stress and managerial support. - Feeling powerless to manage stress and help their employees due to lack of support from superiors, the volume of work, and the lack of time and control for this.
An individualized mental health education programme for Japanese managers	<ul style="list-style-type: none"> - Single, individualized education session, divided into 5 topics: 1. Brief explanation of the chosen topics 2. Identifying and dealing with employee with mental health problem 3. Guidance to manager to seek industrial health team when faced with difficulties in dealing with such employee 4. Informing the manager of his GHQ-12 scores 5. Discussion of manager's efforts to promote staff mental health 	<ul style="list-style-type: none"> - Educational motivation: 45% rated mental health education as very important and 51% as not very important. - Selected topics: 'Identifying a subordinate with a mental disorder' = 70%; 'Dealing with a subordinate with a mental disorder' = 55%; 'Mental health of managers' = 24%. - 95% of managers approved of individualized instruction - Level of satisfaction or how well managers learned what they wanted: 36% 'very well', 62% 'somewhat well'

Note. Source: Designed by the authors

Table 2 (continued)
Variables assessed and measurement instruments used in the interventions

Article	Intervention Characteristics	Main Results
An evaluation of REACTMH mental health training for healthcare supervisors	<ul style="list-style-type: none"> - Online active listening skills training - Groups of up to 10 managers - 15-minute instructive presentation - 5-minute video demonstration Remote practice in pairs supervised by trainer - Moment for questions 	<ul style="list-style-type: none"> (↑) in the confidence domains from baseline to follow-up for: recognizing symptoms of poor mental health, talking with a colleague, and supporting a colleague - 75% rated the training as highly useful - 75% said they frequently use the skills learned - 78.1% consider the skills important to them
Workplace mental health training for managers and its effect on sick leave in employees: a cluster randomized controlled trial	<ul style="list-style-type: none"> - Face-to-face format - It covered the following topics <ol style="list-style-type: none"> 1. Characteristics and effects of common mental health problems in the workplace; 2. Roles and responsibilities of managers on employee mental health; 3. Development of effective skills to discuss mental health issues with staff; 	<ul style="list-style-type: none"> (↓) of work-related leave in the intervention group and (↑) in the control group (↓) of the chances of the employee taking sick leave (=) incidence of sick leave hours (↑) in managers' mental health knowledge (=) non-stigmatizing attitudes about mental illness (↑) in managers' knowledge of their role and confidence in communicating with employees about mental illness

Note. Source: Designed by the authors

focus simultaneously showed positive results regarding stigma as one of the attitudes related to mental health measured by the WHO-WA, which obtained a reduction in the subscales of avoidance, social distance, work-related beliefs and competencies, and responsibility for illness. Resilience skills and helping behavior were increased from the beginning of the study, and no differences in results were detected related to the participants' work sector, gender, age, education, marital status, or self-rated health, except for the resilience skills variable, where private sector participants scored better compared to public sector participants. In the self-report questionnaire designed by the authors, participants responded that empathy skills learned were used to provide support to colleagues regarding their mental health.

Finally, in the only study whose intervention focus was on the characteristics of the work, the authors suggested as a way to improve working conditions, motivation, health, employee turnover, and absence due to illness, the realization of actions such as lectures and workshops to support employees to improve their lifestyle, to better manage situations and team formations, and to assist in the cooperation among the team at work. After the interventions, the authors found that there was a positive effect for clearness of work demand, and improvements on items about working conditions and motivation, but not on items about their perceived health.

Discussion

From the results of this systematic review of the literature, we observed that the interventions offered in the studies mostly obtained effective results in the variables evaluated for mental health prevention in the target audience. This confirms the hypothesis created for this investigation, which presumed that educational actions could be positive for the mental health prevention of managers and their teams.

Of the studies selected, those that focused on the prevention of mental health in work teams based on the managers' actions were found in greater quantity, corresponding to 50% of the articles ($n = 10$). Studies with this characteristic are called meso-organizational by the literature, because they focus on issues related to the processes of groups and work teams, whose effects cover everybody who act at this level (Ashkanasy & Dorris, 2017). Studies whose focus was on mental health prevention for managers amounted to 40% ($n = 8$) of the total. These are called micro-organizational studies, as they focus on the psychosocial aspects of the individual and the dimensions of their individual performance in the organizational context (Ashkanasy & Dorris,

2017). One article (5%) proposed actions at the organizational level, meaning that it did not focus on strengthening the capabilities of the individual who participated in the intervention, but on aspects of the organization that influence him/her at work. According to Ashkanasy and Dorris (2017), organizations are more than the sum of teams, and aspects such as their structure, climate, and culture directly interfere with people's attitudes and behaviors. Only one study, represented by 5% of the total, directed its objectives to the micro- and meso-organizational levels simultaneously.

Considering the levels of classification of prevention in health, the results of this systematic review indicated that 90% ($n = 18$) of the listed studies are secondary prevention, which according to Moraes et al. (2014) is characterized by the presence of early diagnosis and treatment to minimize the limitations caused by a particular disease. This concept applies to the findings of this study since, with the instruments applied prior to the educational activity, the results of the variables allowed the proposition of an intervention that acted promptly to avoid greater negative effects of exposure to risk factors for participants' health.

Regarding the main characteristics of the educational actions developed, we verified that 46% of the total ($n = 7$) used the online format to convey their content. This number increased to 53% ($n = 8$) considering other technological resources chosen for this transmission, including educational actions that resorted to the use of the telephone for its realization. These results suggest that educational actions offered remotely have gained a considerable ground in the work environment, which can be understood by the benefits pointed out by the literature on interventions conducted online. Gayed et al. (2018) highlighted the reduction in time spent on physical travel to the training venue, which also implies many managers out of organizations simultaneously. Online training also allows for customized training and for participants to schedule it according to their work demands. Also, the material made available can be reviewed whenever necessary, providing a greater opportunity for ownership of the content. Hanisch et al. (2017) complemented the benefits of distance interventions by pointing to the greater reach, engagement, and adherence of participants to treatment, and also highlighted the flexible and individualized learning characteristics of this type of training, as well as the fact that it is more cost-effective.

Also, 46% ($n = 6$) of the studies used the Cognitive-Behavioral Therapy approach to construct content and strategies used in educational activities. The adoption of Cognitive-Behavioral Therapy techniques is indicated in the literature as a positive evidence factor in the health and mental well-being parameters of people who participated in interventions for

Table 3
Selected articles focused on the mental health of managers based on the intervention received

Article	Intervention	Results
Internet-based stress management for distressed managers: results from a randomized controlled trial	<ul style="list-style-type: none"> - Assisting the individual's change in the work environment and the family-work interface - CBT Techniques - Content: texts, exercises, worksheets, pictures, examples, audios, video and homework exercises 	<ul style="list-style-type: none"> ((↓) in the PSS-14 scores of the intervention group (↓) levels of perceived stress, burnout, depression, and insomnia - Intervention group showed higher job satisfaction (=) absenteeism and presenteeism results (=) or (↑) primary and secondary outcomes in both groups after 6 months of follow-up
Long-Term Attitude Change After a Single-Day Manager Training Addressing Mental Health at the Workplace	<ul style="list-style-type: none"> - Psychoeducation, interactive lectures, exercise and discussion about stress symptoms, CBT to analyze situations - Discussion about resilience and employee situations regarding symptoms of stress or mental illness - How to deal with employees with behavioral problems, communication skills and active listening. 	<ul style="list-style-type: none"> (↑) in knowledge about mental illness over time (MAKS) (=) in social distance (SoDi) (↑) in one's own perceived mental health condition over time (↑) in perceived support at the workplace over time (=) in the work situation during the observation period (ERI and IS)
Long-Term Effectiveness of a Stress Management Intervention at Work: A 9-Year Follow-Up Study Based on a Randomized Wait-List Controlled Trial in Male Managers	<ul style="list-style-type: none"> - Approaches: psychodynamic and CBT - Managing work stress based on ERI. - Recall situations of work stress for discussion and coping solutions - How to deal with: negative emotions, impulsivity, interpersonal conflicts, how to improve social competence, reduce feelings of isolation, disconnect from stressful events, and recover from work. 	<ul style="list-style-type: none"> (↓) in the ratio between effort and reward in the intervention group during the intervention period (2006-2008) and (=) at follow-up (2008-2015). (↓) in overcommitment and depressive symptoms during the intervention period and (↑) at follow-up. (↑) in the E-R ratio (lowest effort and highest reward) in the intervention group. (↓) of depressive symptoms in the intervention participants
Preliminary Analyses Showed Short-Term Mental Health Improvements after a Single-Day Manager Training	<ul style="list-style-type: none"> - Discussion of depression and burnout and their relationship to work - Use of CBT strategies, interactive lectures and group discussion. - Objective: to increase managers' awareness about their health and address issues related to subordinates' health. 	<ul style="list-style-type: none"> (↓) in depressive symptoms as measured by the PHQ *A single self-reported psychological health item showed significant improvement between baseline and follow-up (=) on the physical and mental health scales of the SF-12
Protecting the Mental Health of Small-to-Medium Enterprise Owners - A Randomized Control Trial Evaluating a Self-Administered Versus Telephone Supported Intervention	<ul style="list-style-type: none"> - Self-administered intervention - Resource kit: handouts, booklets, and posters on depression and anxiety, assignments and handouts. - Self-administered intervention + telephone - Active control group 	<ul style="list-style-type: none"> (↓) on psychological distress in the Active Control group and self-administered + telephone group - Better results in K10 for the self-administered + telephone group than for the Active Control group (=) in psychological capital at follow-up for both groups - The self-administered + phone group showed more favorable results for making changes and trying out strategies presented.
The Impact of a Mindfulness Intervention for Nurse Managers	<ul style="list-style-type: none"> - Face-to-Face Format - Principles and Exercises of Stress Reduction Based on Mindfulness - Aromatherapy, soft music, singing bowl were used to create a peaceful environment - The sessions were structured with instructive introduction, experiential activities, reflection, and discussion. 	<ul style="list-style-type: none"> (↑) compassion satisfaction; (↓) for burnout risk (↓) in personal burnout and in work-related burnout (↓) not statistically significant in the compassion fatigue subscale (↓) not statistically significant in client-related burnout (↑) not statistically significant on the perceived well-being scale - Follow-up: scores close to those obtained at T2, not statistically significant
Japanese managers' experiences of neurolinguistic programming: a qualitative investigation	<ul style="list-style-type: none"> - NLP Training - Practitioner and Master Practitioner - Aims at personal change by teaching basic concepts and skills of NLP with sessions of theoretical understanding, trainer demonstrations and self-practice and self-reflection - Topics: representational systems, rapport building, anchoring, language patterns, framing results, submodalities, strategies, and trance. 	<ul style="list-style-type: none"> - (↑) of mental and occupational health-related skills in themselves and in the team - (↑) in understanding the human mind, facilitating the application of NLP skills at work - Difficulties in using NLP: long time for application not always applicable to work. Another difficulty is the act of describing feelings, which is not always easy for professionals in organizations.
Effects of a job crafting intervention program on work engagement among Japanese employees: a pretest-posttest study	<ul style="list-style-type: none"> - Face-to-face format - Introduction of the idea of job crafting; sharing personal stories of crafting at work; making your own individual job crafting plans + book with job crafting exercises. - Revision of the plan; sharing reflections; discussion about the plans; replanning of the job crafting 	<ul style="list-style-type: none"> (↑) of work engagement, job crafting, and subscales at follow-up (↓) significant of psychological distress, at follow-up (↑) for the job crafting measures, with small effect sizes post intervention and at follow-up (↑) significant on cognitive elaboration with small effect sizes post intervention and at follow-up. (=) on task crafting/relational crafting, no significant effects, except for task crafting at follow-up

Note. Source: Designed by the authors

stress management (Holman et al., 2018). Beneficial outcomes promoted by Cognitive-Behavioral Therapy were also found for depression after psychotherapy in terms of symptoms, ability to work, personality, and social functioning (Stagl et al., 2015).

As for the samples that comprised the studies, the prevalence of health professionals was verified in 45% ($n = 9$) of the articles. The study by Carlotto et al. (2021) addressed this population and found that variables related to work design predict illness and

that healthcare professionals are more vulnerable to Burnout Syndrome. The authors suggest and point out that actions of work redesign of the activities of these professionals to favor greater autonomy in decision-making and task performance, can improve the mental health indicators of professionals in the area.

Among the variables assessed by the studies, effective results were obtained by increasing managers' confidence and self-efficacy in communicating with employees about mental illness

Table 4
Selected articles focused on the mental health of managers and staff

Article	Intervention	Results
The Working Mind: A Meta-Analysis of a Workplace Mental Health and Stigma Reduction Program	<ul style="list-style-type: none"> - 2 versions of the program: one for workers and one for managers who examine their own mental health, coping resources, and their obligations on the topic with their employees. - Uses trained facilitators, workshop manuals, videos, discussion, and personal goal setting to practice coping skills. 	<ul style="list-style-type: none"> (↓) on WHO-WA on stigma (↑) on resilience skills. (↓) on stigma for avoidance, social distance, beliefs, work-related skills, and disease responsibility. (↓) on the subscales of danger/unpredictability and helping behavior, although they were still better than at the beginning of the study. - Empathy skills were used to support colleagues regarding mental health.

Note. Source: Designed by the authors

Table 5
Selected articles whose focus of the intervention was on working conditions for improvements in mental health

Article	Intervention	Results
Can working conditions and employee's mental health be improved via job stress intervention designed and implemented by line managers and human resources on an operational level?	<ul style="list-style-type: none"> - Assessed the need for improvement in the working environment and requested funds to implement measures for these needs - The measures should affect the employees' working environment and the way it is organized and run, and not on individual employee empowerment. 	<ul style="list-style-type: none"> - Suggestions: lectures and workshops to support employees to improve their lifestyle, manage team situations, change support (↑) in the clarity of work demand (=) at follow-up between the groups, but a greater trend towards one health item in the intervention group (↑) on items about working conditions and motivation, but not on items about their perceived health (=) for employee turnover and sick leave, with no significant effect (↓) on short-term sick leave in the intervention group

Note. Source: Designed by the authors

and recognizing their role in managing mental health problems and taking action to employ strategies to prevent and reduce stress among employees. Resilience skills and helping behavior increased, while stigmatizing attitudes related to mental illness and the length of sick leave following interventions decreased.

Also among the managers, the indicators of stress, burnout syndrome, depressive symptoms, psychological distress, and insomnia severity decreased, while the indicators related to job satisfaction, knowledge about mental health, perception of own mental health condition, and support in the workplace increased. Concerning the teams, employees whose managers participated in the interventions had better indicators of mental well-being and decreased psychological distress and sick leaves when compared to the results of those who did not participate.

One fact to be considered is the fact that no studies were found on interventions conducted with Brazilian samples, which points to a gap to be investigated. The articles found were predominantly European and the context in which management occurs in these countries are not representative of the characteristics of the work of managers in Brazil and other Latin countries, nor of the effects they may have on their mental health, due to the historical, cultural, social, and economic differences between these countries (Lenartowicz & Johnson, 2003). This shows the relevance of the interventions that are being conducted with samples of Brazilian managers.

In addition, the Covid-19 pandemic increased workers' exposure to psychosocial risks, which in this context often took the form of longer working hours and shorter rest periods, blurred boundaries between home and work, isolation, wage cuts, reduced benefits, and even layoffs. All these factors have caused workers to feel insecure about their jobs and futures and made them more vulnerable to the severe impacts that these conditions can have on their mental health (ILO, 2020).

Considering this context, the provision of interventions aimed at the mental health of managers proved to be a beneficial alternative for the health of these professionals, especially those offered remotely. As already pointed out by the literature, remote educational actions have advantages for both individuals and

organizations, mainly for their practicality, reach, and flexibility to the routine and demands of the participants (Hanisch et al., 2017; Gayed et al., 2018). Thus, amid the moment experienced worldwide by the Covid-19 pandemic, in which social isolation measures are still recommended to prevent the transmission and contagion of the disease, online educational actions for the prevention of managers' mental health are timely.

With all the above, the results of this systematic literature review show that educational actions are effective for the prevention and promotion of mental health of managers and teams. The results obtained with this study demonstrate its contribution to the knowledge in the area, since no previous literature reviews were found that have analyzed the scientific productions on this theme, thus suggesting the originality of this production.

The results of the present work corroborate with a previous study in which early interventions proved to be one of the most important factors in treating mental disorders (McGorry et al., 2018). This emphasizes the relevance of these actions, given that common mental disorders are considered high-risk factors for long-term sick leave from work (Knudsen et al., 2013). Thus, interventions aimed at preventing mental health in the workplace, besides contributing at the micro-organizational level, can also have a positive and direct impact at the macro-organizational level, with significant reflections on the economic costs related to work performance, safety in the workplace, absenteeism, and early retirement (Martin & Fisher, 2014).

Limitations of the Study

Regarding the limitations of the present systematic literature review, the first refers to the number and choice of databases, as only four were used. Although the previous search for articles verified the comprehensiveness of the supporting studies and registered more than two hundred duplicate articles, articles that fit the objective of this work may not have been retrieved. The fact that we did not use exclusively Brazilian databases may have restricted the discovery of national studies, and, finally, only

articles published in national and international peer-reviewed journals were considered.

The second limitation refers to the languages selected, because studies published in languages other than English, Portuguese, and Spanish could have been included in this systematic review, had they been included in the selection criteria. The third concerns the time frame used. Although the theme addressed in the study is recent, as it can be seen by the years of publication of the selected studies, the selection of articles published only in the last 20 years suggests that the results obtained have been restricted by this factor.

Practical and Future Research Implications

As for the practical implications, we verified that educational actions are effective in preventing the mental health of managers and teams, which is confirmed by the results of the studies analyzed, showing that individuals who participated in the interventions obtained better mental health indices compared to those who did not participate in the actions. These results reinforce the need to conduct training on mental health prevention in the organizational context. Such actions can also contribute to the recognition and understanding of stress and harassment at work, as well as their negative effects on health by actions such as work redesign (Eurofound & EU-OSHA, 2014).

As for the implications for future research, we suggest the development of interventions with samples of Brazilian managers aimed at the mental health prevention of these professionals. These would be relevant considering that, besides the already known characteristics of managers' work that can lead them to mental illness, the Covid-19 pandemic has caused, in recent years, an increase in the vulnerability and incidence of problems related to their mental health (Graf-Vlachy et al., 2020). As an example, the results found in this study repeatedly highlighted the participation of health care managers in mental health prevention interventions. With the pandemic installed worldwide and the changes that it generated to the role and performance of managers (Kagan et al., 2021), it becomes relevant to perform interventions that aim to contribute to the mental health of managers from other sectors other than health care.

It is also necessary that future studies also evaluate the proposed educational actions. Thus, more longitudinal investigations should be considered, since these allow monitoring the effects of the proposals over time. Moreover, they contribute to the empirical verification of the effectiveness of interventions and provide more robust scientific knowledge on the subject.

In addition, multilevel analysis is also possible because it allows identifying how the interaction between micro- and meso-organizational level data occurs in educational actions, such as the impact of such actions on staff absenteeism. These suggestions may contribute positively to another frequent implication of research in the organizational context, the difficulty of implementing actions in this environment, due to the stigma usually attached to the subject of mental health and the resistance to interventions, especially when these identify the need for changes in the design and organization of work, requiring the involvement and participation of all hierarchical levels of the organizational structure.

Finally, it is worth emphasizing the need and importance that future studies continue to address the prevention and promotion of mental health in managers, since although these already occur, they are still less frequent. Managers have a highly relevant role within organizations; therefore, if the indicators of their health situation are not investigated and actions that can contribute

positively to it are not proposed, this absence will certainly affect their performance, which may directly affect both the team and the organization as a whole.

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