



INTEGRATIVE REVIEW ARTICLE

EFFECTS OF STRESS MANAGEMENT PROGRAMS IN HEALTH WORKERS: INTEGRATIVE REVIEW

EFEITOS DOS PROGRAMAS DE MANEJO DE ESTRESSE NA SAÚDE DO TRABALHADOR: REVISÃO INTEGRATIVA

EFFECTOS DE LOS PROGRAMAS DE MANEJO DEL ESTRÉS EN LA SALUD DEL TRABAJADOR: REVISIÓN INTEGRATIVA

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ABSTRACT

Objective: to analyze the scientific evidence on the effects of stress management programs on the health of workers. **Method:** an integrative review, held in Lilacs, Medline and Scopus databases between January and February 2013 from the following guiding question << **What are the effects of stress management programs on workers' health?** >> The analysis of the studies was performed using validated instrument and summary table, including level of evidence, objectives, intervention and results. Nine articles were selected. **Results:** 66.67% of the studies showed evidence level three. It is observed the development of individual, organizational and comparison interventions between individual and organizational strategy. The effects of the program were favorable in reducing stressors and promoting the mental health of workers. **Conclusion:** stress management programs can help to minimize the workplace stressors. **Descriptors:** Nursing; Psychological Stress; Review; Worker's Health.

RESUMO

Objetivo: analisar a evidência científica sobre os efeitos dos programas de manejo do estresse na saúde dos trabalhadores. **Método:** revisão integrativa realizada nas bases de dados Lilacs, Medline e Scopus entre janeiro e fevereiro de 2013 a partir da questão norteadora << **Quais são os efeitos dos programas de manejo do estresse na saúde dos trabalhadores?** >> A análise crítica dos estudos foi feita por meio de instrumento validado e quadro sinóptico, incluindo nível de evidência, objetivos, intervenção e seus resultados. Foram selecionados nove artigos. **Resultados:** 66,67% dos estudos apresentaram nível de evidência três. Observa-se o desenvolvimento de intervenções individuais, organizacionais e de comparação entre estratégia individual e organizacional. Os efeitos dos programas foram favoráveis na redução dos estressores e na promoção da saúde mental dos trabalhadores. **Conclusão:** os programas de manejo de estresse podem auxiliar a minimizar os estressores do ambiente de trabalho. **Descritores:** Enfermagem; Estresse Psicológico; Revisão; Saúde do Trabalhador.

RESUMEN

Objetivo: analizar la evidencia científica sobre los efectos de los programas de manejo del estrés en la salud de los trabajadores. **Método:** revisión integradora, realizada en las bases de datos Lilacs, Medline y Scopus entre enero y febrero de 2013 a partir de la pregunta guiadora << **Cuáles son los efectos de los programas de manejo del estrés en la salud de los trabajadores?** >> El análisis crítica de los estudios fue hecha por medio de instrumento validado y cuadro sinóptico, incluyendo nivel de evidencia, objetivos, intervención y sus resultados. Fueron seleccionados nueve artículos. **Resultados:** 66,67% de los estudios presentaron nivel de evidencia tres. Se observó el desarrollo de intervenciones individuales, organizacionales y de comparación entre estrategia individual y organizacional. Los efectos de los programas fueron favorables en la reducción de los estresores y en la promoción de la salud mental de los trabajadores. **Conclusión:** los programas de manejo de estrés pueden auxiliar a minimizar los estresores del ambiente de trabajo. **Descriptor:** Enfermería; Estrés Psicológico; Revisión; Salud del Trabajador.

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INTRODUCTION

Stress, according to the Transaction or Interactionist Model, is defined as any stimulus that requires from the external or internal environment and taxes or exceeds the sources of adaptation of an individual or social system.¹ This phenomenon is studied from different perspectives. In this sense, there are research on the impact of stress on the health of individuals, the occurrence of stress after injury and work-related process.²⁻⁴ In the work perspective, different professionals have been research subjects, including teachers, police and nurses, and researchers have sought to identify the stressors perceived by professionals as well as the level or intensity of stress among them.⁵⁻⁷

In this scenario, nursing has been the subject of studies about stress and it is seen as a stressful profession.⁷⁻¹⁰ In this way, the reflection about the nursing work process, working conditions, overloading and wear lead researchers to understand the stress among these professionals.

It is known that stress can improve individual performance and provide satisfaction when the objectives to be achieved become a challenge. However, when the demands and tensions are excessive, worker wear can occurred, with physical and mental repercussions¹¹, such as the Burnout Syndrome (BS).

This Syndrome is understood as a process that occurs in response to the chronicity of stress. Not using Coping strategies or the use of non-effective strategies to address the stressors can lead to chronicity of stress, and in long-term to Burnout.

Stress management programs are strategies to minimize the effects of stress on workers' health and, therefore, their effects on the organizations. This phenomenon is associated with low individual's performance in their activities, to increase the costs of worker's health, the licensing for health care and Burnout.¹² Such programs can be developed through individual interventions, focusing on the worker; interface interventions aimed at improving the person's relationship with the work environment; or organizational interventions seeking to provide changes in the workplace¹⁴.

In reviews about stress¹³, it was found that in the science of nursing, the research began in the 1990s. It was also shown¹² that studies about stress produced by nurses, were in the initial phase, that is, identifying stressors and in their causal relationship to stress. Thus, it is necessary to move forward and develop

intervention research and evaluation of the results of programs for the management of stress at work.

Thus, for intervention studies being proposed about stress among nursing professionals, it is necessary to identify the effects of stress management programs developed with workers according to scientific literature. Therefore, this study aims to analyze the evidence of scientific literature regarding the effects of stress management programs on workers' health.

METHOD

Integrative review, being a method that seeks evidence in the scientific literature about a particular topic or issue. The integrative research allows the review of multiple studies published and their synthesis to provide general conclusions about a subject under study.¹⁵

The steps followed in this study were: thematic identification and definition of the research question, definition of keywords; establishment of inclusion and exclusion criteria of the publications, definition of databases and selection of studies; extraction, organization and summarization of information from the formation of a database; assessment of studies included in the review; interpretation of results and synthesis of knowledge.¹⁵ The thematic defined was "Stress management programs and their relationship to workers' health." Thus, the following question was elaborated: What are the effects of the stress management programs on workers' health?

The search was conducted in Lilacs, Medline and Scopus databases between January and February 2013. The keywords "worker's health" and "psychological stress" and "intervention studies" were used in the advanced form of these bases.

The inclusion criteria were: articles, available online, with *resumos*, abstracts or *resumen* available, published in English, Spanish or Portuguese, with research results and conducted among workers. Articles in disagreement with the thematic and with patients or family members as research subjects were excluded. The first selection was performed by analyzing the titles and abstracts. Later, the included studies were analyzed in full according to the inclusion and exclusion criteria.

For the collection and organization of the final sample, an instrument¹⁶ validated for the integrative research with information of production was used: identification of the original article, methodological characteristics

of the study, assessment of methodological rigor, evaluation of interventions and measured results found. Selected articles were identified by the letter A followed by Arabic numerals in ascending order according to the order in which they were cited.

The analysis and synthesis of the articles were selected from the construction and observation of a summary table with the following information: publication of the reference, year, journal, objective, methodology design, intervention performed, research subjects, results and conclusions. To analyze the evidence of the studies, the proposed classification was used in 2005 by Melnyk and Fineout-Overholt.¹⁷ The presentation of the results and discussion of data were made descriptively. Furthermore, the absolute frequency was calculated (n) for categorical data.

RESULTS

In Lilacs database, an article that was excluded not fitting the thematic was found. In Medline, 10 productions were identified. Of these, two were selected (n=2), because one (n=1) was not available in full, five (n=5) had no search results and two (n=2) did not fit the thematic. In Scopus, 41 products were found. However, two (n=2) were unavailable in full, 10 did not present research results, 20 were not in line with the thematic and two (n=2) were repeated in search of the base before.

Thus, seven (n=7) studies were selected on this base. In total nine (=9) articles were the study sample.

In the level of evidence, 33.33% (n=3) of the articles showed evidence level two (randomized controlled trial) and 66.67% (n=6) showed evidence level three (non-randomized clinical trial). All studies used a control group. As to the objectives of the studies analyzed, all sought to evaluate the effects of stress management programs on the worker's health.

It is noted that the studies were developed in China²¹⁻²² (n=2), England^{19,25} (n=2), Japan¹⁸ (n=1), Denmark²⁰ (n=1), in Finland ²³ (n=1) in the United States²⁴ (n=1) and the Netherlands (n=1).²⁶

As research subjects in the studies were identified: factory workers¹⁸, civil servants,¹⁹ elderly caregivers and people with mental disabilities²⁰, professors²¹, military²², school kitchens workers, kindergartens and elderly homes²³, university students who perform different work activities in companies²⁴, real estate office workers²⁵ and police.²⁶

In Figure 1, there are the articles on the effects of stress management programs for worker's health.

Reference	Level of evidence	Intervention	Instrument	Results
A1 ¹⁸	3	Mental Health Action Checklist for a better environment in the workplace (MHACL), with workers in a manufacturing company .	Brief Job Stress Questionnaire (BJSQ) Job Stress Assessment Diagram (JSAD)	Among the women participating in the research, the program effects were favorable to change the psychological stress and job satisfaction. Among the men who participated, a satisfactory effect was not observed.
A2 ¹⁹	3	One group received intervention type of Brief Advise to identify the target problem and find strategies to solve the problem. Another group received the intervention Organizational Change to increase the opportunity and the level of participation and control of all employees in the day-to-day decisions within their teams; one group did not receive any intervention.	General Health Questionnaire (GHQ-12)	The advice has benefits for the psychological well-being of employees and organizational intervention did not show favorable results.
A3 ²⁰	3	Group A = auto programming of their working hours through computer; Group B = group formation that developed a	General questionnaire about work and specific questionnaire	The group A employees have become increasingly involved in the planning of their own work schedule. However, there were not effects about health and well-being of

		questionnaire on preferences for working hours and participated in a class on flexible working hours; Group C = Discussion about how the influence of employees' working time can be increased when compared to control group.	about working hours. Self-reported of stress through Stress Scale and Power Scale.	workers attributable to the intervention. There were no statistically significant results between the groups regarding the influence of working time: stress and energy, family and work conflicts, lifestyle and risk biomarkers for cardiovascular disease.
A4 ²¹	3	Brief cognitive behavioral program	Depression Anxiety Stress Scale (DASS-21); Health Promoting Lifestyle Profile II (HPLP-II); Dysfunctional Attitude Scales - Form A (DAS-A); After the intervention, Occupational Stress Inventory Revised Edition (OSI-R) was performed.	After the intervention of workers, they showed a significant reduction of work-related stress and personal tension.
A5 ²²	2	Coping training	The Coping Styles Questionnaire; Social Support Rating Scale; Self Consistency and Congruence Scale.	Compared with the scores of pre-intervention coping, workers had positive changes in post intervention results.
A6 ²³	2	Participatory process: ergonomic intervention in psychosocial factors related to work.	Questionnaire Adapted from a validated instrument about psychosocial factors at work	At the conclusion of researchers at the end of the intervention there was dissatisfaction with the results presented by the group that had the intervention compared to the control group in the measured variables: mental stress, job satisfaction, control, stealth ability, coworker and supervisor relationships.
A7 ²⁴	3	Planned behavior theory	<i>Job Stress Survey (JSS)</i>	Did not show significant results, so that participants do not form an intention have a more significant implementation of the participants forming the intention.
A8 ²⁵	2	Brief advice	General Health Questionnaire (GHQ) and the Occupational Stress Indicator (OSI).	No effects were observed between study and control advice. Questionnaire results were not significantly different before and after advice, showing no effects of treatment on symptoms of stress.
A9 ²⁶	3	Occupational Information	Stait -Trait Anxiety Inventory (STAI); Self-Rating Scale for PTSD (SRS-PTSD); Impact of Events scale (IES); Peritraumtic Dissociative Experiences Questionnaire (PDEQ-R); Structure Interview for PTDS (SI-PTSD); Structured	There was no significant difference between groups in the pre-test. Regarding the criticism police reports there was little significant difference among the groups. A week after the event, the experimental group had a higher rate of re-experience than the other groups, also reporting to avoid symptom of memory loss. 24 hours after the traumatic event there was no significant difference among the groups regarding the symptoms of post-traumatic stress. After 6 months, there was no significant difference among the groups regarding the symptoms of post- traumatic stress.

Clinic Interview
for DSM -;
Anxiety
Disorders
Schedule
Revised (ADIS-R)

Figure 1 Articles selected for integrative review: effect of stress management programs for workers’ health, Santa Maria, RS, 2013.

It is identified that 77.77% (n=7) of the studies used previously validated instruments to identify the level or stress intensity, in which stress shows the conditions and working characteristics, anxiety, lifestyle, attitudes, coping, social support and trauma. In a study²⁰ with the use of questionnaires was associated to measures of serum total cholesterol, HDL, apolipoprotein A1 and B, glicadahemoglobina (HbA1c), testosterone, and waist and hip measures of the participants. There were also other constructs analyzed in addition to assessments of stress and worker’s health, such as: anxiety, behavioral disorders, cognitive inconsistency, depression, risk of cardiac disease, job satisfaction, interpersonal relationships and influence of stress on personal and family life.

As interventions, there is the development of individual^{20-22,25-26}, organizational^{18,23-24} and of comparison interventions between individual and organizational strategy.¹⁹ Individual interventions identified were time management, brief advice and development of advisory actions. Studies show that time management interventions have not influence on cardiovascular disease, energy and family conflicts.²⁰ In brief advice intervention type, the researchers have not shown significant results in reducing stressors and consequently worker’s health.²⁵

The studies showed that interventions to reduce the stressors using a cognitive behavioral program²¹ and a program to help workers to choose more effective strategies for coping with stressors²² were effective. Moreover, there was no significant difference between the group that received intervention and the control group about symptoms of post-traumatic stress.

With regard to organizational actions, interventions in workers’ ergonomics have not favorable effects on the reduction of stressors.²³ The Planned Behavior Theory for practice of exercise by workers and thus to help stress reduction showed no favorable health effects²⁴. The actions discussed in group for decision making helped in reducing stressors and in promoting the mental health of workers.¹⁸

In the study comparing¹⁹ the effects of an individual intervention with the effects of an organizational intervention, it was found that

individual advice has beneficial effects in psychological well-being of workers and the organizational intervention did not show favorable results.

DISCUSSION

Preventing and minimizing stress at work can benefit the physical and mental health of workers and their quality of life at work. In addition, benefits to organizations are expected as the prevention and minimization of stress can decrease absenteeism, favoring a less stressful work environment, impacting productivity and quality of work.

Stress management programs analyzed in this integrative review aimed to assess the effects of interventions on worker’s health. There was strong evidence level in accordance with the methodology adopted designs, that is level two and three. It is also considered that the methodological option was appropriate for achieving the objectives of the studies. It was found that 44.44% of the studies were able to identify positive effects in worker’s health after performing intervention.

Considering the scope of this investigation and the databases searched, nurses were not identified as research subjects, a fact that points the need to develop intervention studies on the stress management in this population.

The evaluation of other psychological constructs in addition to stress evaluations and worker’s health were also identified. This shows the stress related to the different aspects of life of workers (working conditions and characteristics, anxiety, lifestyle, attitudes, coping, social support and trauma).

The results show that programs promoting development activities and promoting behavior change of workers with stressors are more effective than advice programs. This is because, as the individual has advanced information on how to deal with stressors, he can enhance his coping strategies. The greater the understanding and control of pressures and situations that influence the individual, the better the adaptation and the answers he (the individual) will produce.²⁷ Thus, it is believed that such programs can be developed among nurses to minimize occupational stressors.

Thus, stress management programs can promote awareness of stressors by workers and the choice of effective coping strategies for a given stressor. Thus, it is possible to avoid chronic stress and therefore Burnout Syndrome.

There were positive and statistically significant effects of management programs on psychological stress, psychological well-being, occupational stress, personal stress and selection of coping strategies. As for the other phenomenon used to check the effects of management programs, there was no statistically significant difference before and after the interventions between the groups analyzed by the researchers.

CONCLUSION

At the end of this integrative review, searching for the best available evidence on the effects of stress management programs on workers' health, it is considered that stress management programs can help to minimize the stressors of workers. With this study, it is expected to help researchers identify the most appropriate strategies to be used in intervention studies about stress in nursing. It was also shown that programs that enable behavior change and promote behavioral actions are more effective than advice programs. Thus, it is considered that the cognitive-behavioral interventions have positive effects on workers' health.

As a gap in scientific production, research on nursing staff were not found in this review, reinforcing the need to develop intervention studies about stress in this population.

It was not possible with this study to make conclusions about the most appropriate choice between individual and organizational interventions, since the analyzed studies did not allow such evaluation. It is believed that, from these results, it is possible to deepen the discussions about stress interventions in nursing and in the future, develop them along to nursing professionals in order to minimize stress among them.

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