



The Effect of Mindfulness Meditation to Reduce Stress and Burnout Syndrome in Nursing: A Systematic Review

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Abstract

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This study aimed to identify and analyze research evidence in the form of articles relating to the effectiveness of mindfulness-based intervention programs in reducing stress levels and burnout in hospital. A systematic review conducted on September - December 2020 using five electronic databases (Scopus, Science Direct, CINAHL, PubMed, and ProQuest). The study average were quasi-experimental and randomized control and trial design. The Center for Review and Dissemination and the Joanna Briggs Institute Guideline used for assess quality and Prisma checklist for guided this review. Title, abstract, full-text and methodology were assessed for the eligibility of the studies, and result synthesis was analyzed using narrative for every themes. Twenty five studies were found and met inclusion criteria in the review after risk of bias had assessed. The presentation of the results will be determined based on seven major themes, namely: 1) Reducing symptoms of stress, anxiety, depression and burnout; 2) Increase resilience to stress and burnout; 3) Improve mood and satisfaction; 4) Improve performance efficiency; 5) Increase positive perceptions of stress; 6) Increase concentration; and 7) Improve the psychological well-being of nurses. The effectiveness of mindfulness is to reduce symptoms of stress, depression, burnout syndrome, increase concentration, positive thinking, resilience and improve well-being. The implementation of the intervention given also depends on the condition of the client who will receive the intervention.

Keyword:

Burnout syndrome; mindfulness; stress

INTRODUCTION

Nurses are a population that is vulnerable to stress and burnout (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). In a healthcare environment, professional nurses face tremendous stress. Most of the causes of stress come from work related to the nursing profession, including long working hours, dealing with pain, loss and feelings of suffering from patients, caring for dying patients and providing support to the patient's family (Aiken et al., 2001). Nurses also experience increased stress related to other factors such as staff shortages, increasingly complex patient problems, financial constraints, and an increasing need for knowledge that is always up to date with technological developments (Botha, Gwin, & Purpora, 2015). Persistent high stress can have a negative impact, not only on the physical and mental health of nurses, but also have an impact on work activities and performance, causing burnout, compassion fatigue, low job satisfaction, high turnover in the workplace and low quality of nursing services to patients (Aiken et al., 2002). Research on intervention methods to deal with stress problems in general is increasing, but research on effective interventions to reduce stress in clinical settings is still limited (Richardson & Rothstein, 2008).

Burnout in nurses needs more attention due to the high incidence of burnout experienced by nurses (Lee, Lee, & Daly, 2003). In one of the studies conducted by Aiken (2011) on nurses from 9 countries, there were 33% -60% of nurses who experienced high levels of burnout (Aiken et al., 2011). Research in Thailand conducted by Nantsupawat (2011) reported that as many as 41% of nurses experienced high stress levels (Nantsupawat et al., 2017). A study conducted by Zhang (2014) stated that about 20% of 9,698 nurses from 181 hospitals in China experienced burnout at a high rate (Zhang et al., 2014).

Mindfulness-based programs have proven to be promising interventions in reducing stress (Aikens et al., 2014). Mindfulness can provide the act of giving attention (attention) consciously. Researchers have demonstrated that mindfulness-based interventions can effectively reduce stress, anxiety and depression in clinical and non-clinical populations (Botha et al., 2015). Mindfulness techniques can be applied in everyday life as well

as in stressful situations. According to Kabat-Zinn, work-related stress can have a different effect on each person based on their viewpoint and interpretation of the situation (Kabat-Zinn, 2003). Until now, research that focuses specifically on the effectiveness of mindfulness programs to reduce stress experienced by nurses is still limited (Botha et al., 2015). This study aimed to identify and analyze research evidence in the form of articles relating to the effectiveness of mindfulness-based intervention programs in reducing stress levels and burnout in hospital nurses.

METHODS

Study Protocol

This study contains a comprehensive summary in the form of a systematic review regarding the comparison of the effectiveness of several mindfulness-based interventions carried out with the aim of reducing stress levels and burnout in hospital nurses. The protocol in this study uses The Center for Review and Dissemination and the Joanna Briggs Institute Guideline as a guide in assessing and analyzing the quality of the studies to be summarized. An evaluation of the systematic review will use the PRISMA checklist to determine the selection of studies that have been found and adjusted for the purpose of the systematic review.

Table 1. Format of PICOS Systematic Review of effectiveness of mindfulness-based intervention programs in reducing stress and burnout levels in nurses in hospital

PICOS framework	Inclusion Criteria	Exclusion Criteria
<i>Population</i>	Studies that focus on a population of nurses who work in hospitals and experience stress and burnout	Studies conducted on populations other than nurses who work in hospitals
<i>Intervention</i>	A study examining mindfulness-based interventions derived from the Mindfulness-based Stress Reduction (MSBR) program developed by John Kabat-Zinn, either in original or modified form	Studies that do not discuss mindfulness-based interventions
<i>Comparators</i>	The comparison intervention group used was another intervention or a group that was only observed without intervention	No Exclusion
<i>Outcomers</i>	A study explaining the effect of mindfulness-based interventions on stress and	Studies that do not discuss the effect of

	burnout in nurses	mindfulness-based interventions on stress and burnout in nurses
<i>Study design and publication type</i>	<i>Quasi-experimental studies, Randomized controlled trials, non-randomized controlled trials, systematic review</i>	<i>Cross sectional study</i>
<i>Publication years</i>	2015 and above	Sebelum tahun 2015
<i>Language</i>	English and Indonesia	Bahasa lain selain Bahasa Inggris dan Indonesia

<i>Stress Reduction</i>	<i>distress</i>		
<i>OR</i>	<i>OR</i>		
<i>Mindfulness-based Intervention</i>	<i>Job Stress</i>		

Literature Search

Systematic review, which is a comprehensive summary of several research studies that are determined based on a specific theme. The literature search was carried out in August - September 2020. The data used in this study were secondary data obtained not from direct observation, but obtained from the results of research that had been conducted by previous researchers. The secondary data sources obtained were in the form of reputable journal articles both nationally and internationally with predetermined themes. The literature search in this systematic review uses five databases with high and medium criteria, namely Scopus, Proquest, Pubmed, CINAHL and Science direct.

Search for articles or journals using keywords and Boolean operators (AND, OR, OR NOT or AND NOT) which are used to expand or specify a search, making it easier to determine which articles or journals are used. The keywords in this systematic review are adjusted to the Medical Subject Heading (MeSH) and consist of the following:

Table 2. Keywords Systematic Review of effectiveness of mindfulness-based intervention programs in reducing stress and burnout levels in nurses in hospital

<i>Mindfulness</i>	<i>Stres</i>	<i>Burnout</i>	<i>Perawat</i>
<i>Mindful</i>	<i>Stress</i>	<i>Burnout</i>	<i>Nurse</i>
<i>OR</i>	<i>OR</i>	<i>OR</i>	<i>OR</i>
<i>Mindfulness</i>	<i>Perceived stress</i>	<i>Job burnout</i>	<i>Nurses</i>
<i>OR</i>	<i>OR</i>		<i>Or</i>
<i>Mindfulness-based</i>	<i>Psychological</i>		<i>Nursing</i>

Study Selection

The results of literature search through publications in five databases and using keywords that have been adjusted to MeSH, the researchers found 935 articles that match these keywords. The search results that have been obtained are then checked for duplication and found that there are 68 similar articles so that they were excluded and the remaining 867 articles. The researcher then conducted a screening based on the title adjusted to the theme of systematic review, as many as 639 articles were excluded because they were not suitable and the remaining 228 articles. Furthermore, the researchers selected articles based on the study abstract and 115 articles were excluded, leaving 113 articles. Of these 113 articles, the researcher conducted a feasibility assessment based on the overall text and its conformity with the eligibility criteria. There were 25 articles that could be used in this systematic review. The results of the study article selection can be illustrated in the Flow Diagram below:

Risk of Bias

The Joanna Briggs Institute (JBI) Critical Appraisal for several types of Quasi-experimental studies, randomized controlled trial, non-randomized controlled trial, systematic review was used to analyze the quality of the methodology in each study. The JBI Critical Appraisal assessment checklist provided several questions to assess the quality of the study. The scoring criteria were scored as 'yes', 'no', 'unclear' or 'not applicable', and each criterion with a 'yes' score was assigned one point and the other score was zero, each study score was then calculated and added up. Critical Appraisal for assessing eligible studies conducted by researchers. If the research score of at least 50% meets the critical appraisal criteria with the cut-off point value agreed upon by the researcher, the study is included in the inclusion criteria. We excluded low-quality studies to avoid bias in the validity of the results and review recommendations. In the final screening, 25 studies achieved scores higher than 50% and prepared to synthesize data which would then be used in this systematic review.

RESULTS

Study Characteristics

The studies included in the systematic review article in this review were 4 studies conducted in China, namely at universities and research institutes, 3 studies were conducted in Italy, namely in hospitals in Italy. Research and studies are also carried out in Japan, Indonesia, Turkey, Australia, Singapore and Canada. Most of the mindfulness interventions can have a significant impact on reducing stress and burnout syndrome for nurses. The aim of this systematic review study was to determine the effectiveness of mindfulness interventions in reducing stress and burnout syndrome in hospital nurses. Based on the study results, it was found that mindfulness interventions can reduce stress and burnout syndrome in nurses by reducing symptoms of stress, anxiety, depression and burnout, increasing stress and burnout resilience, improving mood and satisfaction, increasing performance efficiency, increasing positive perceptions of stress, improve concentration and improve the psychological well-being of nurses.

Characteristics of Respondent

Respondents in the study were nurses in the hospital who experienced stress and burnout syndrome. The study explains the benefits of mindfulness intervention for nurses in the hospital; with the majority of respondents numbering between 50 - 450 respondents who were divided into control and intervention groups for the type of quasy experiment and randomized control and trial research. Respondents in the study had an average productive age between 20 - 55 years who were in the hospital and were multi-regional. Gender characteristics of respondents Most of them are women and most of the education level is at the senior high school and undergraduate levels. Based on information about the perceived stress and burnout syndrome, more than 50% of respondents experienced this condition, so they need to be given mindfulness interventions to improve the conditions of stress and burnout experienced by nurses.

Study Results

The results of the literature search resulted in 25 articles which were analyzed based on the intervention effectiveness of mindfulness

interventions against stress and burnout syndrome in nurses in the hospital. The study results can be grouped according to the specified theme, namely the effectiveness of mindfulness interventions on reducing stress and burnout syndrome in nurses. The presentation of the results will be determined based on seven major themes, namely: 1) Reducing symptoms of stress, anxiety, depression and burnout; 2) Increase resilience to stress and burnout; 3) Improve mood and satisfaction; 4) Improve performance efficiency; 5) Increase positive perceptions of stress; 6) Increase concentration; and 7) Improve the psychological well-being of nurses. The results of article synthesis can be seen in full in the presentation of the following results:

Reducing symptoms of stress, anxiety, depression and burnout

Mindfulness interventions become interventions that can reduce symptoms of anxiety, stress, depression and burnout syndrome in health workers, especially nurses. This can be indicated by several literature results that support the research findings. There is a difference in the mean score of stress levels between the group that received Islamic-based mindfulness and the group that did not receive this treatment. The experimental group that received Islamic-based mindfulness showed a higher reduction in stress levels than the control group. Based on the research results, nurses are advised to apply Islamic spiritual mindfulness therapy as a psychotherapy intervention to provide treatment when they experience stress conditions.

The intervention had a strong impact on reducing stress and burnout syndrome because this intervention was carried out for 6 months and was given a follow-up of the intervention given. These two design features greatly increase confidence in the conclusions drawn about the effectiveness of the MSCR program. Stress, anxiety, and emotional regulation are well known among HCPs and the literature highlights several approaches to improving HCP quality of life and psychological problems. The interventions provided include the mindfulness approach, counseling and the principles of psychosynthesis, which can be considered a holistic approach, because they protect themselves completely. Through four scheduled meetings, several professionals (nurse, psychologist, neurologist, HCP director) take turns training the operator in emotional observation, relaxation, and other stress-related management skills. ER nurses are

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essential for the improvement of practical interventions in the future. Our results confirm that ER nurses experience high levels of work-related stress and are at risk of fatigue. Overall, our findings suggest that fatigue has a negative relationship with dispositional awareness, emotional regulation abilities, and cognitive empathy attitudes. Since these three factors modulate fatigue levels, they must be systematically assessed among nurses working in emergency departments.

Increase resilience to stress and burnout

Mindfulness interventions have an effective impact on increasing resilience to stress and burnout. At the implementation of the intervention, the intervention group participated in the modified 8-week MBSR program. On the outcome of the study all participants were evaluated with a questionnaire at baseline, immediately after the intervention, and 3 months later. The intervention group showed a decrease in stress and negative effects and an increase in positive influence and resilience after the intervention. No increase in job satisfaction was observed, but the data trend is in the direction of the hypothesis that job satisfaction will increase. The modified MBSR program is an effective approach for nurses to reduce stress and negative influences and increase positive influence and resilience. In addition, the program has the potential to increase job satisfaction.

Practicing mindfulness to reduce stress and fatigue is becoming increasingly common in the literature. This practice can be a powerful tool in promoting a holistic approach to health. This pilot project implements awareness-based interventions that are low cost, quick, easy, and convenient for nurses to use. The results of these trials were mixed. The initial unit intervention nurse showed moderate levels of stress and fatigue, and the Attention Moment intervention did not significantly reduce the stress and fatigue felt by RN as measured by PSS and MBI. However, despite the short duration of the intervention, positive trends were noted in the quantitative data and the qualitative results indicated a favorable perception of the effectiveness of the intervention, which revealed a strong desire to continue with the same benefits and a willingness to study new stressors. management techniques. The potential

for future business success with full attention is promising.

Improve mood and satisfaction

Mindfulness interventions can improve mood and make nurses feel more satisfied in doing nursing care work. Mindfulness interventions based on research results are effective and accessible which can be used by managers and directors to increase job satisfaction, teamwork, and thereby reduce fatigue to create a healthier work environment. Mindfulness is considered a viable and sustainable intervention that nurse leaders can reasonably implement in their units without significant cost. This work shows that this program increases job satisfaction and can reduce fatigue which leads to improved environmental and safety measures. mindfulness creates a culture that encourages patient safety and health promotion measures because nurses' job satisfaction has increased.

Improve performance efficiency

Mindfulness has an effect on increasing motivation, work efficiency and performance of nurses in providing nursing care. In a study comparing brochures with psychoeducational information on managing stress with a brief awareness-based stress management program provided by trained peers, this latter treatment did not lead to additional benefits regarding self-evaluated mental state and work efficiency in the work population. Mindfulness is a potentially effective intervention that can equip nurses with self-care skills to face challenges and manage the demands placed on them when present with their patients and responsive to their patients' needs to ensure quality. in nurse-patient interactions. This study supports the potential for mindfulness interventions to reduce stress among nurses. Research also shows that mindfulness has the potential to maintain the psychological element of nurses, so that they are in good condition and happy.

In a study comparing brochures with psychoeducational information on managing stress with mindfulness-based stress management programs provided by trained peers, this latter treatment did not lead to additional benefits regarding self-evaluated mental state and work efficiency in the work population. We do not recommend this form of psychosocial intervention for people in the general population who wish to maintain their mental health. Mindfulness is potentially effective in equipping nurses with self-care skills to face challenges and

manage the demands placed on them when present with their patients and responsive to their patients' needs to ensure quality. in nurse-patient interactions. This study supports the potential for mindfulness interventions to reduce stress among nurses.

Increase positive perceptions of stress

Mindfulness meditation intervention can have a significant effect on the intervention group which is shown the results of a change in behavior to a positive arah after being given the intervention for 6 weeks. Overall, the results suggest that mindfulness training is associated with increased awareness and compassion, and stress reduction, among this sample of mental health professionals in one health care setting in Singapore. These results expand on existing evidence from the United States (Goodman & Schorling, 2012), Spain (Amutio et al., 2014), and Sweden (Schenström et al., 2006). Our findings also suggest that positive increases in levels of awareness and self-compassion were made after the awareness training program was maintained at three months of follow-up. However, no significant changes were noted in fatigue levels after mindfulness.

The short duration of MBSR and the group format make it a cost-effective intervention that can be provided in work settings. The percentage of nurses in this study who acknowledged manufacturing errors (28.6%) was higher than that reported in the national survey (19%), but this survey only targeted medication errors (Wilkins & Shields, 2008). Among nurses who felt and acknowledged error had been a problem, a subjective assessment of improvement was reported by a third of them when assessed three months after treatment. These improvements are clinically meaningful given the potential adverse consequences associated with errors in the hospital setting. Limitations of this study include reliance on self-report questionnaires and measures of perceived improvement in error making compared to using objectives. The possibility that social desirability may have contributed to an overestimation of the positive impact of MBSR or underestimated the error of making should be considered even though participant responses were not identified. Despite these limitations, MBSR appears to have produced positive mental health

benefits among the majority of nurses with benefits that extend to perceived harm.

Improve concentration

Mindfulness interventions can increase the focus of students so that they can increase concentration in receiving learning or doing activities. Mindfulness cognitive therapy programs conducted with nursing students had an effect on students' attentiveness awareness and stress levels. However, the program did not change the students' levels of anxiety and depression. However, the results of these studies indicate that this program can be used to reduce stress levels in nursing students. Furthermore, this program should be developed and implemented with the aim of improving the psychological well-being of students with anxiety and depression problems.

Improve the psychological well-being of nurses

Recent research has found that mindfulness is associated with work fatigue in a sample of bedside nurses from public hospitals in China, contributing to the literature examining the occupational well-being of nurses from an international perspective. Acting with awareness is the aspect of caring most strongly associated with emotional exhaustion and depersonalization, and describing is the aspect most closely related to personal achievement. Further studies, in particular with rigorous design studies (eg randomized controlled trials) on the effectiveness of awareness-based interventions on work-related outcomes among nurses, are needed. In addition, an intervention component might be specifically defined for the fatigue target domain.

For example, if the target is emotional exhaustion or depersonalization, an intervention that focuses primarily on enhancing conscious acting may be more effective. Despite its limitations, this meta-analysis expanded the research on awareness and HCP and HCP-IT using broad inclusion criteria regarding population outcomes and interventions. This reduced bias in our selection of articles increased the number of studies included and allowed us to perform additional robust analyzes to quantify nuances in our findings. Moreover, we only examined RCTs to increase the methodological accuracy of the included studies and reduce the risk of bias. Given the essential and difficult nature of their work, HCPs and HCP-IT are encouraged to seek such interventions to help maintain their psychological well-being. The types of interventions that employers offer must

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DISCUSSION

Mindfulness interventions become interventions that can reduce symptoms of anxiety, stress, depression and burnout syndrome in health workers, especially nurses. Several studies have supported that mindfulness does have a positive impact on reducing symptoms caused by stress. Mindfulness can control the mind and focus on thinking beautiful things, so there is regulation in the brain which causes the nerves in the body to relax and there is a decrease in tension in a person. The Islamic-based mindfulness showed a reduction in stress levels that was higher than the control group. Increasing the results of mindfulness interventions on stress reduction can be used to maintain the quality of nurse stress control. The results of the study can be used as suggestions for applying Islamic spiritual mindfulness therapy as a psychotherapy intervention to provide treatment when he is experiencing stressful conditions. If the stress experienced by health workers can decrease, it will also reduce the incidence of burnout syndrome.

Mindfulness interventions have an effective impact on increasing resilience to stress and burnout. At the implementation of the intervention, the intervention group participated in the modified 8-week MBSR program. The intervention group showed a decrease in stress and negative effects and an increase in positive influence and resilience after the intervention. Resilience is a process and not a fixed inherent attribute. Resilience is more accurate if it is seen as a part of mental health development in a person that can be improved in a person's life cycle. The basic definition of resilience is the capacity of a person to accept, face and transform problems that have been, are being and will be faced throughout life. Resilience can be used to help someone face and overcome difficult situations and can be used to maintain and improve their quality of life.

Mindfulness is considered a viable and sustainable intervention that nurse leaders can reasonably implement in their units without

significant cost. This work shows that this program increases job satisfaction and can reduce fatigue which leads to improved environmental and safety measures. mindfulness creates a culture that encourages patient safety and health promotion measures because nurses' job satisfaction has increased. This is in accordance with existing conditions, because nurses who have job satisfaction will provide good and professional nursing services, because their enthusiasm is also increasing.

Mindfulness has an effect on increasing motivation, work efficiency and performance of nurses in providing nursing care. In a study comparing brochures with psychoeducational information on managing stress with a brief awareness-based stress management program provided by trained peers, this latter treatment did not lead to additional benefits regarding self-evaluated mental state and work efficiency in the work population. Mindfulness is a potentially effective intervention that can equip nurses with self-care skills to face challenges and manage the demands placed on them when present with their patients and responsive to their patients' needs to ensure quality in nurse-patient interactions. This study supports the potential for mindfulness interventions to reduce stress among nurses. Research also shows that mindfulness has the potential to maintain the psychological element of nurses, so that they are in good condition and happy.

Mindfulness cognitive therapy programs that are conducted with nursing students have an effect on awareness of students' attentiveness, attention and stress levels. However, the program did not change the students' levels of anxiety and depression. However, the results of these studies indicate that this program can be used to reduce stress levels in nursing students. Furthermore, this program should be developed and implemented with the aim of improving the psychological well-being of students with anxiety and depression problems. This is in line with research conducted by researchers which states that mindfulness has a good effect on psychological health, because it can increase the relaxation hormone in a person's body.

The limitations of this systematic review during the literature collection and summarization process are: (1) There are enough mindfulness interventions on nurses with varying intensities, so it is necessary to differentiate in the frequency and duration of interventions given; (2) There are still not many studies or studies that compare between several

interventions, so that the determination of which intervention is more effective cannot be determined; and (3) The application of mindfulness interventions is also influenced by several factors from each individual, so that success and effectiveness also depend on the condition of each individual.

CONCLUSION

Handling the incidence of stress and burnout syndrome is very important in maintaining the work performance of nurses to provide nursing care to patients. One of the ways to handle stress and burnout syndrome can be done with mindfulness action, so that it has a positive effect in improving the work quality of nurses. The effectiveness of mindfulness is to reduce symptoms of stress, depression, burnout syndrome, increase concentration, positive thinking, resilience and improve well-being. The implementation of the intervention given also depends on the condition of the client who will receive the intervention. Comparison of the effectiveness of an intervention cannot be compared if it is not through testing or further research using existing interventions to serve as comparative interventions. Therefore, an intervention cannot be said to be more useful and more effective without prior evidence, because there are several factors that influence the effectiveness of an intervention carried out.

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