

Review Article: Systematic Review, Meta-Analysis, Integrative Review, Scoping Review

THE KIND OF MINDFULNESS INTERVENTION FOR ANXIETY IN UNDERGRADUATE NURSING STUDENTS: A LITERATURE REVIEW

Rikhan Luhur Prasetya^{1*}, Meidiana Dwidiyanti², Nur Setiawati Dewi²

¹ Master of Nursing Science Program, Department of Nursing, Faculty of Medicine, Diponegoro University, Indonesia

² Department of Psychiatric and Community Nursing, Faculty of Medicine, Diponegoro University, Indonesia

***Correspondence:**

Rikhan Luhur Prasetya

Master of Nursing Science Program, Department of Nursing, Faculty of Medicine, Diponegoro University, Indonesia
Jl. Prof. Soedarto, Tembalang, Kec. Tembalang, Kota Semarang, Jawa Tengah 50275
Email: rikhanlp@gmail.com

Article Info:

Received: December 9, 2021

Revised: June 16, 2022

Accepted: June 25, 2022

DOI:

<https://doi.org/10.36720/nhjk.v11i1.352>

Abstract

Background: Undergraduate nursing students have experience high levels of anxiety caused by academic, clinical practice and final assignments. This anxiety results in a decrease in students' intellectual abilities and the risk of experiencing academic failures. Mindfulness is an effective intervention for reducing anxiety.

Objectives: This scoping review aims to determine the kind of mindfulness interventions to reduce anxiety in undergraduate nursing students.

Design: This study used a scoping review through a review of articles the kind of mindfulness interventions to reduce anxiety in undergraduate nursing students.

Data Sources: Search for articles accessed through a database, including: Science Direct, Scopus, Semantic Scholar, ProQuest and SpringerLink with a range of search years 2017 to 2021. The search for articles uses the boolean method of the "OR/AND" operator. The keywords used in the article search were "Mindfulness" AND "Anxiety" AND "Undergraduate", AND "Nursing" OR "Mindfulness Based Cognitive Therapy" OR "Mindfulness Based Stress Reduction" OR "Mindfulness Based".

Review Methods: This article uses Arksey and O'Melley's model in the analysis. Identification and analysis using Preferred Reporting Items for Systematic Reviews and Meta-Analysis for Scoping Review (PRISMA-SR).

Results: The result of this literature review show contains 5 quantitative articles. This article summarizes the kind of mindfulness interventions used to reduce anxiety in nursing students are mindfulness based cognitive therapy, mindfulness meditation, virtual community mindfulness, mindfulness through smartphones, and spiritual mindfulness. Mindfulness intervention provides serenity, focus on the situation with full awareness, acceptance, improvement in physical health, psychological, empathy, and well-being. The mindfulness was carried out 6 times in a series of interventions. The stages of mindfulness interventions vary widely, but the point is to focus attention and acceptance with awareness.

Conclusion: The kind of mindfulness interventions used to reduce anxiety in nursing students including: mindfulness based cognitive therapy, mindfulness meditation, virtual community mindfulness, mindfulness spiritual Islam and acceptance, and spiritual mindfulness.

Keywords: *Mindfulness, Anxiety, Undergraduate, Nursing.*

INTRODUCTION

Most undergraduate nursing students have experienced academic and clinical anxiety (Labrague, McEnroe-Petitte, De Los Santos, & Edet, 2018). Anxiety that occurs due to the transition process from the previous level of education. The process of transitioning from adolescence to adulthood is a phase that nursing undergraduate students go through. This transition process affects academic life from student status to student status is a complex process, which will go through a process of dealing with various stressors that arise and must be able to adapt to the new environment (Floyd, 2015).

Study focusing on anxiety of nursing students in Belgium 34.9% of first-year students experience anxiety mental health problems due to the transition process and lead to decreased academic achievement (Bruffaerts et al., 2018). While in Portugal 14.5% of students experience anxiety disorders this has an impact on academic learning outcomes result (Sarmiento, 2015). Research in Indonesia revealed that 27.6% experienced anxiety and 13% experienced severe anxiety in nursing students when facing exams (Anissa, Suryani, & Mirwanti, 2018). Other data revealing the anxiety of nursing students conducted by Wiguna et al (Wiguna, Dwidiyanti, & Sari, 2019) revealed that 50% of final year nursing students experience anxiety due to their final project.

Based on the data mentioned above, nursing student anxiety has a more negative impact on academic achievement (Bamber & Schneider, 2016). Mild level of anxiety can have a positive effect on students increasing efficiency and intellectual function. However, when the level of anxiety is moderate to panic, it will cause negative things, namely a decrease in the ability to study skills and poor academic results that are at risk of failure (Bamber &

Schneider, 2016). High levels of anxiety and emotion were identified as impeding memory, concentration and problem-solving abilities, this could impede academic performance and learning. So it is necessary to deal with anxiety problems in early-level students so as not to cause a decrease in academic achievement.

Students need to know the management of anxiety, stress, and emotions. When students control anxiety well, it will improve the management of adaptive intrapersonal skills in the academic learning process (Aydn & Yucel, 2014). This will have an impact on increasing academic achievement. Innovative approaches with appropriate intervention strategies in nursing student groups can control anxiety problems.

Intervention strategies for student anxiety that have been carried out previously include mindfulness meditation training, basic clinical skill refresher course, guide reflection, structured learning program, mindfulness meditation intermixed with humour, progressive muscle relaxation and muscle relaxation program. Based on the existing intervention strategy, the intervention that is considered to overcome anxiety is mindfulness which gives significant results on student anxiety (Aloufi, Jarden, Gerdtz, & Kapp, 2021).

Mindfulness provides serenity, focus on the situation with full awareness and acceptance. (Asiah, Dwidiyanti, Wijayanti, & Yuli, 2019) Nursing students who have been doing mindfulness intervention techniques have shown subjective improvements in physical health, psychological, empathy, and well-being (Bamber & Schneider, 2016; Chen, Yang, Wang, & Zhang, 2013; McConville, McAleer, & Hahne, 2017). Anxiety can be decreased by widening the field of view and thoughts of the stressor that occurs. This happens to nursing students who experience anxiety due to stressors such as academic

pressure and the campus environment can adapt with full awareness and acceptance with mindfulness.

Several previous studies have shown that there are many intervention strategies to reduce anxiety (Aloufi et al., 2021). However, it does not focus on nursing students as the object of intervention. Therefore, it is very necessary to conduct an in-depth exploration of the types of mindfulness interventions to reduce nursing student anxiety through scoping reviews. This scoping review aims to obtain various types of mindfulness interventions and explanations of mindfulness interventions that can be used to reduce nursing student anxiety.

METHODS

Design

This review article uses the Arksey and O'Malley method. MethodArksey & O'Malley (Arksey & O'Malley, 2005), in conducting a scoping review analysis must go through five stages. The five stages consist of identifying research questions according to the topic, identifying research that is relevant to the topic taken, selecting research related to the topic, conducting analysis using a data matrix, and interpreting the findings. This article contains a review question, namely "*What are the types of mindfulness interventions to overcome anxiety problems in undergraduate nursing students?*".

Search Methods

Articles were collected through the online databases of Scencedirect, Scopus, Semantic Scholar, ProQuest and SpringerLink. The articles used are published in the range of 2017 to 2021. The search for articles uses the boolean method of the "OR/AND" operator. The keywords used in the article search were "Mindfulness" AND "Anxiety" AND "Undergraduate", AND "Nursing" OR "Mindfulness Based Cognitive Therapy" OR "Mindfulness Based Stress Reduction" OR "Mindfulness Based.

Search Outcome

The inclusion and exclusion criteria were as follows:

Table 1. Literature criteria

Research Characteristic	Inclusion Criteria	Exclusion Criteria
Design	Randomized control trial design, and quasi experimental	Descriptive study, case study, prevalence, diagnostic
Respondents	Undergraduate nursing students	Not undergraduate nursing students
Intervention	Mindfulness therapy interventions	Not mindfulness therapy interventions
Measurement result	There is a measure of anxiety in undergraduate nursing students	There are no reports of anxiety of undergraduate nursing students

Data was selected by deleting duplicates, articles below from the last 5 years, and articles that were not full text. The most important part of research selection is to use mindfulness intervention and explain the outcome for anxiety undergraduate nursing students (Arksey & O'Malley, 2005).

Quality Appraisal

In this scoping review, the search for independent literature uses reliable data based. The articles obtained were then analyzed to find the required data, analyzed for similarities and differences. Titles, abstracts, and articles were reviewed according to the inclusion and exclusion criterions. The data used in each article found are full text, year of study, type of intervention, population and results. Figure 1 describes the process of searching and selecting articles used by using Preferred Reporting Items for Systematic Review and Meta-analysis for Scoping Review (PRISMA-SR) (Selcuk, 2019).

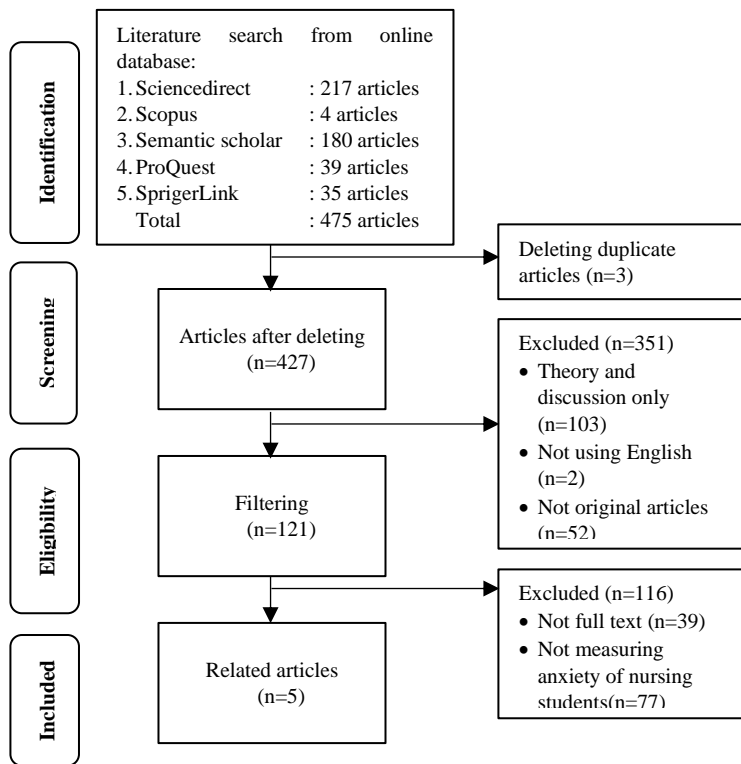


Figure 1. The PRISMA Flow Diagram of the Literature Review

Data Abstraction

Two authors independently analyzed study citations extracted from the database. Find and read the full text of potentially relevant articles. For studies that met the inclusion criteria, data extraction was performed independently by two investigators using a standard data extraction template. Extraction discrepancy resolved by third investigator.

Table 3. Summary of Included Article kind of Mindfulness Interventions to Reduce Nursing Student Anxiety.

No.	Authors, year, country	Title	Research and sample design	Findings
1.	Yüksel, 2020, Turkey (Yüksel & Bahadır Yılmaz, 2020)	The effects group mindfulness-based cognitive therapy in nursing students: a quasy-experimental study.	Quasy-experimental study with non-randomized control intervention group pre-test and post-test methods.	There was a decrease in anxiety scores in the intervention group after being given mindfulness-based cognitive therapy

Data Analysis/ Synthesis

A total of 475 articles were obtained as literature sources from Scimedirect (217 articles), Scopus (4 articles), Semantic scholar (180 articles), Proquest (39 articles), Springerlink (35 articles). There are 3 similar articles based on data to be excluded and the remaining 473 articles. Furthermore, from 473 articles, 351 articles were excluded because they only contained theories and discussions, were not in English, the articles were not related to the topic and were not original articles. The results of the article screening obtained 121 articles and an exception was made regarding articles that did not examine student anxiety and the completeness of the articles obtained 5 articles that would be analysed discussing the types of mindfulness interventions to reduce nursing student anxiety.

RESULTS

There are 5 articles obtained from different countries, including Turkey, Texas, Canada, Indonesia, and Iran. Research design with quasi-experimental 4 articles and 1 article with randomized control trial.

The results show a summary of the types of mindfulness interventions used to reduce anxiety in nursing students, including: mindfulness-based cognitive therapy, mindfulness meditation, virtual mindfulness communities, mindfulness spiritual Islam and acceptance, and spiritual mindfulness.

No.	Authors, year, country	Title	Research and sample design	Findings
				There were 82 second year nursing student respondents with a decrease in anxiety scores from 9.87 to 8.75.
2.	Stinson, 2020, Texas (Stinson et al., 2020)	Mindfulness meditation and anxiety in nursing students.	Quasy-experimental study with convenience sample. There are 166 nursing student respondents in the first and second years.	There was a statistically significant reduction in anxiety traits found in the intervention group with a change in anxiety scores from 44.74 to 39.53.
3.	Ahmad, 2020, Canada (Ahmad et al., 2020)	An eight-week, web-based mindfulness virtual community intervention for students' mental health: Randomized controlled trial.	Randomized control trial conducted with 4 parallels. There are 113 nursing student respondents.	There was a significant reduction in reducing anxiety symptoms with internet-based student mindfulness interventions with a change in value (7.35; p=0.01).
4.	Wiguna, 2019, Indonesia (Wiguna et al., 2019)	The effect of mindfulness through smartphone applications on the anxiety of final-level nursing.	Quasy-experimental study with non-equivalent control group. There are 77 respondents of final year nursing students.	There is a decrease in average value of anxiety after mindfulness is done from 43.55 to 36.50.
5.	Jenaabadi, 2018, Iran (Jenaabadi, 2018)	The role of spiritual intelligence and mindfulness in predicting death anxiety among students at zahedan faculty of nursing.	Descriptive-correlation with stratified random sampling. There are 260 nursing student respondents.	There is a decrease in anxiety in nursing students with a significant correlation of spiritual intelligence and mindfulness (p = 0.001).

Mindfulness Based Cognitive Therapy

Mindfulness based cognitive therapy is an exercise that focuses on dysfunctional and negative thoughts from common sense, testing and challenging dysfunctional beliefs and creating new interpretations, and reinforcing more adaptive responses. (Yüksel & Bahadır Yılmaz, 2020). Existing research shows that the results of mindfulness-based cognitive therapy interventions in the anxiety intervention group of nursing students decreased the average anxiety score from 9.87 to 8.75, while the control group experienced an increase in the

average anxiety score from 8.1 to 8.66 (Yüksel & Bahadır Yılmaz, 2020).

Sessions on mindfulness based cognitive therapy are as follows:

Session 1: Meeting, information given about how the group will be conducted, expressing expectations and providing information about the concept of mindfulness and giving pre-test.

Session 2: Understanding the relationship between cognitive models and cognitive distortions, thinking emotions and behaviour, and achieving the skills to recognize cognitive errors.

Session 3: Mindfulness, being in the here and now, living in the moment, mindful breathing exercises, awareness of daily activities.

Session 4: Automated thinking, questioning its own automatic thoughts, asking the right questions to achieve correct judgment, autopilot introduction.

Session 5: Stress coping methods: What is stress?, What are the effects of stress?, How to deal with stress?

Session 6: Methods for dealing with stress: explaining the concept of non-functional thinking during stressful experiences, dealing with non-functional negative automatic thinking, recognizing evidence for and against negative automatic thinking.

Session 7: Coping with adversity, accepting painful emotions, becoming aware during breathing exercises, body scanning meditation, sound and mind meditation.

Session 8: Evaluate, summarize, get feedback from group members, and give post-test.

Mindfulness Virtual Community

Mindfulness virtual community is an exercise to raise awareness through intentional, present, and non-judgmental attention to previous experiences packaged in web-based or virtual services (Ahmad et al., 2020). The virtual community mindfulness program has a significant reduction effect in reducing anxiety symptoms in nursing students by providing website-based or virtual mindfulness interventions that result in changes in value (7.35; $p=0.01$) (Ahmad et al., 2020).

The practice sessions contained in the virtual community mindfulness program are as follows:

Session 1: A module on mental health education and youth special attention practices, delivered via video recording for participants to watch and listen to on personal computers, mobile phones and tablets at the right time.

Session 2: Anonymous and asynchronous peer-to-peer discussion boards relating to mental health and mindfulness practices.

Session 3: 20-minute anonymous live videoconference (group-based) on module topics guided by a mental health professional.

Mindfulness Meditation

Mindfulness meditation defined as cultivating the habit of experiencing life consciously and mindfully in the present which focuses on the process meditatively (Stinson et al., 2020). Research conducted by Stinson et al, reported that there was a statistically significant decrease in the anxiety traits of nursing students with the mindfulness meditation intervention with a change in anxiety scores from 44.74 to 39.53.

The program includes eight mindfulness meditation sessions. The meditation practice is led by a person who already has a license to do meditation. This meditation is carried out in a room provided and the atmosphere is set so that it is far from noise and distractions, participants are not allowed to bring personal technology devices during meditation. So as to create a comfortable and calm atmosphere. In the next session, participants were trained to relax by sitting and breathing with their diaphragm. Train the ability in breathing awareness. In the next session, participants were taught the concept of mindfulness, for example, self-compassion, mindful eating, walking meditation and encouraged to practice mindfulness in everyday life.

Mindfulness Spiritual Islam and Acceptance

Mindfulness spiritual Islam and acceptance is a development of mindfulness practice in paying attention in a certain way intentionally, in the present moment and without judging the experiences that are experienced every day (Wiguna et al., 2019). Nursing students who practice mindfulness provide subjective improvements in physical health, psychological well-being, empathy, and well-being. Research conducted by Wiguna et al, shows that mindfulness training using smartphone technology through an android application can reduce anxiety in nursing

students by decreasing the average anxiety score from 43.55 to 36.50 (Wiguna et al., 2019).

Mindfulness training activities for intervention group respondents were carried out for 6 meetings, each meeting took about 120 minutes. Mindfulness training in this study was conducted by experts who have experience in researching and developing mindfulness interventions. In this study, the intervention group performed mindfulness exercises consisting of 5 stages of activity. The stages of activities carried out include: getting to know mindfulness, mindfulness exercises: thesis as a final project for students, focusing on problems reducing anxiety symptoms, and finally enjoying less time. At the end of the training activity, the researcher again measured the respondents' anxiety scores in both groups.

Mindfulness Spiritual Intelligence

Mindfulness spiritual intelligence is the ability of conscious reflection based on experience that allows a person to gain more knowledge, understanding and provide the basis for achieving perfection and progress in life. (Jenaabadi, 2018). Research conducted by Jenaabadi stated that there was a significant decrease in anxiety in nursing students with a significant correlation of spiritual intelligence and mindfulness ($p=0.001$).

The spiritual intelligence mindfulness program focuses on specific cognitive and metacognitive behavioural strategies to accentuate the attention process, which ultimately leads to the prevention of negative thinking spirals, negative moods, worry tendencies, and the growth of new perspectives and the emergence of pleasant thoughts and joys (Alzahrani et al., 2020).

DISCUSSION

This scoping review collects types of mindfulness interventions to reduce anxiety in nursing students. The types of interventions that were obtained in the 5 articles analysed were mindfulness based cognitive therapy, mindfulness meditation, mindfulness virtual

community, mindfulness through smartphones, and spiritual mindfulness.

The main sources of anxiety in early-level students are internal and external sources (Ramadhan, Sukohar, & Saftarina, 2019). Internal resources are personal and social resources which include time management for study and finance. While external sources are from academic and clinical (Alzayyat & Al, 2014). Academic demands from coursework, course loads and as well as parental demands on lecture results. Clinical external sources themselves are more clinical practice placements, adaptation to the lecture environment and interactions with environmental components. Research results by Stunden et al., (2015) Nursing student anxiety affects learning outcomes both clinically and academically.

Early-level students who experience anxiety experience both positive and negative impacts. The positive impact of anxiety increases efficiency and intellectual function (Wiguna, Dwidiyanti, & Sari, 2018). While the negative impact of anxiety makes individuals experience a decrease in ability in learning skills and is at risk of decreasing academic results (Bamber & Schneider, 2016). Positive and negative impacts that occur according to the level of anxiety experienced. according to Brown et al., (2020) the impact of anxiety on students in the academic realm contributed to the unsatisfactory results achieved by students.

Mindfulness Intervention become one of the most effective interventions in reducing anxiety in nursing students (Aloufi et al., 2021). From the results of a study by Lamarre & Marcotte (2021) showed that mindfulness acts as a mediating variable in the relationship between maladaptive perfectionism and anxiety in college students. Mindfulness interventions for nursing students can increase the capacity for mindfulness and reduce stress, anxiety, and depression. This will improve students' academic skills, quality of life, well-being, empathy, and emotional control (Kinsella et al., 2020).

Mindfulness which is an exercise that is done by focusing on what is being done and realizing, accepting gracefully the problems at hand without giving bad judgments and not overreacting so as to be able to make goals and focus on solving problems encountered through behaviour change. to increase capacity in dealing with problems (Dwidiyanti, Fahmi, Wahyu, Wiguna, & Munif, 2019). This exercise will have an impact on the coping mechanisms of nursing students in dealing with stressors that occur during academic learning (Shapiro, Schwartz, & Bonner, 1998) Nursing students who have been taught mindfulness techniques have shown subjective improvements in physical and mental health, empathy, and well-being (Beddoe & Murphy, 2004)

The type of mindfulness explored from the analysis results obtained as an intervention that can reduce anxiety in nursing students, the first is mindfulness based cognitive therapy. Several study results state that mindfulness-based cognitive therapy interventions have effective results in reducing anxiety in students (Assumpção, Pena, Neufeld, & Teodoro, 2019; LaGue, Eakin, & Dykeman, 2019; Shabani & Masdari, 2016). The method used in reducing anxiety involves a person's decentralization in observing, evaluating cognitions, emotions and sensations that are felt in the physical and non-judgmental of events that have occurred (LaGue et al., 2019). The theoretical basis is mindfulness-based and integrates cognitive strategies to help a person achieve affective self-regulation through the development of mindful attention.

The second intervention is mindfulness virtual community. This intervention is essentially the same as mindfulness-based cognitive therapy, but focuses on conscious awareness without judging the experiences that have been experienced and related to physical and psychological conditions that are packaged virtually for the purpose of reducing anxiety in the student community (Ahmad et al., 2020). Using the module as a virtual medium given to the student community. Modules in the form of

videos that lead to practice to focus on eliminating sources of student stress.

Similar to virtual community mindfulness, there is the development of smartphone-based mindfulness interventions, namely mindfulness through smartphones. This therapy utilizes smartphone media to provide intervention to students. Interventions will be easier to do, if you use supporting devices such as smartphone applications. This can provide an independent learning environment for students to access information and skills such as mindfulness training (Radovic et al., 2016). The use of smartphone mobile devices today, in nursing services has become a growing trend in health services.

Next up is the mindfulness meditation intervention, teaching methods that increase awareness of the present moment and increase awareness of thoughts, emotions, and bodily sensations by calming oneself through meditation (Hoge et al., 2013). Mindfulness meditation teaches you to let your thoughts pass you by without judgment. Meditation is a tool for developing awareness. Mindfulness refers to engagement or curiosity about the present moment, which encourages a non-judgmental attitude of openness and acceptance, thereby fostering balance and stillness (van der Riet, Levett-Jones, & Aquino-Russell, 2018). Several studies suggest that mindfulness meditation is an effective strategy for preventing and managing stress and burnout in the workplace, which often annoy nursing staff and practice students (Hoge et al., 2013; Hölzel et al., 2011; Stinson et al., 2020; Tang, Tang, & Posner, 2016; Zollars, Poirier, & Pailden, 2019).

The last type of intervention explored in the findings is mindfulness spiritual intelligence. Humans in the ups and downs of history have always suffered a great deal of pain and social trauma, and they have sought actions and motives to find ways and means to get rid of them; such a set of knowledge and experience extends certain foundations for human spirituality and religiosity. Spiritual intelligence is an experienced ability that

allows people to gain more knowledge and understanding, and provides the basis for achieving perfection and progress in life (Khosravi & Nikmanesh, 2014). The results of several studies that have been conducted show that increasing spiritual intelligence and spiritual health can reduce anxiety levels (Dadfar, Bahrami, Noghabi, & Askari, 2016; Majidi & Moradi, 2018; Nia et al., 2017). Simply put, a person tends to involve God in times of difficulty and mindfulness spiritual intelligence as a very effective non-pharmacological tool to reduce stress and anxiety (Jenaabadi, 2018).

CONCLUSION

The results of this review can answer the type of mindfulness intervention used to reduce the level of anxiety experienced by nursing students. Mindfulness interventions focus on accepting mindfulness that can change the mindset of students experiencing anxiety to adapt. This intervention was carried out 6 times in one implementation program. The findings obtained from the scoping review process found that there were 5 types of mindfulness that were used effectively to reduce anxiety significantly. There are mindfulness-based cognitive therapy, mindfulness meditation, virtual mindfulness communities, mindfulness spiritual Islam and acceptance, and spiritual mindfulness.

ACKNOWLEDGMENT

Thank you to our parents, colleague and lecturer who supported the completion of this manuscript.

DECLARATION OF CONFLICTING INTEREST

There is no conflict of interest in this study.

FUNDING

This study was funded by own researcher, not sponsored.

AUTHOR CONTRIBUTION

Rikhan Luhur Prasetya: Contribution in the finding idea, preparation, collecting articles and analyzing literature.

Meidiana Dwidiyanti: Contribution to engage in planning and monitoring of scoping literature review work.

Nur Setiawati Dewi: Contribute to discuss the results and contribute to the correction of the final manuscript.

ORCID

Rikhan Luhur Prasetya

<https://orcid.org/0000-0003-1561-2109>

Meidiana Dwidiyanti

<https://orcid.org/0000-0001-9996-566X>

Nur Setiawati Dewi

<https://orcid.org/0000-0001-6425-5801>

REFERENCES

- Ahmad, F., El Morr, C., Ritvo, P., Othman, N., Moineddin, R., Ashfaq, I., ... Williams, S. (2020). An eight-week, web-based mindfulness virtual community intervention for students' mental health: Randomized controlled trial. *JMIR Mental Health*, 7(2). <https://doi.org/10.2196/15520>
- Aloufi, M. A., Jarden, R. J., Gerdtz, M., & Kapp, S. (2021). Reducing stress, anxiety and depression in undergraduate nursing students: Systematic review. *Nurse Education Today*, 102(April 2020), 104877. <https://doi.org/10.1016/j.nedt.2021.104877>
- Alzahrani, A. M., Hakami, A., AlHadi, A., Batais, M. A., Alrasheed, A. A., & Almigbal, T. H. (2020). The interplay between mindfulness, depression, stress and academic performance in medical students: A Saudi perspective. *PLoS ONE*, 15(4), 1–11. <https://doi.org/10.1371/journal.pone.023>

1088

- Alzayyat, A., & Al, E. (2014). *A review of the literature regarding stress among nursing students during their clinical education.* (1976), 406–415.
- Anissa, L. M., Suryani, S., & Mirwanti, R. (2018). Tingkat kecemasan mahasiswa keperawatan dalam menghadapi ujian berbasis computer based test. *Medisains*, 16(2), 67. <https://doi.org/10.30595/medisains.v16i2.2522>
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology: Theory and Practice*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- Asiah, A., Dwidiyanti, M., Wijayanti, D. Y., & Yuli, D. (2019). Pengaruh intervensi mindfulness spiritual islam terhadap tingkat depresi pada pasien di rsj dr. amino gondohutomo provinsi jawa tengah (Universitas Diponegoro; Vol. 7). Universitas Diponegoro. <https://doi.org/10.26714/jkj.7.3.2019.267-274>
- Assumpção, A. A., Pena, C. S., Neufeld, C. B., & Teodoro, M. M. (2019). Mindfulness-based cognitive therapy for University students with depression , anxiety , and stress symptoms : a randomized controlled trial. *Asia Pacific Journal of Clinical Trials: Nervous System Diseases*, 4(2014), 51. <https://doi.org/10.4103/2542-3932.263668>
- Aydm, L., & Yucel, S. C. (2014). Anxiety and comfort levels of nursing students. *Journal of Nursing Education and Practice*, 4(8), 179–187. <https://doi.org/10.5430/jnep.v4n8p179>
- Bamber, M. D., & Schneider, J. K. (2016). Mindfulness-based meditation to decrease stress and anxiety in college students : A narrative synthesis of the research. *Educational Research Review*, 18, 1–32. <https://doi.org/10.1016/j.edurev.2015.12.004>
- Beddoe, A. E., & Murphy, S. O. (2004). Does mindfulness decrease stress and foster empathy among nursing students? *He Journal of Nursing Education*, 43(7), 305–312.
- Brown, J., McDonald, M., Besse, C., Manson, P., McDonald, R., Rohatinsky, N., & Singh, M. (2020). Anxiety, mental illness, learning disabilities, and learning accommodation use: A cross-sectional study. *Journal of Professional Nursing*, 36(6), 579–586. <https://doi.org/10.1016/j.profnurs.2020.08.007>
- Bruffaerts, R., Mortier, P., Kiekens, G., Auerbach, R. P., Cuijpers, P., Demyttenaere, K., ... Kessler, R. C. (2018). Mental health problems in college freshmen: Prevalence and academic functioning. *Journal of Affective Disorders*, 225, 97–103. <https://doi.org/10.1016/j.jad.2017.07.044>
- Chen, Y., Yang, X., Wang, L., & Zhang, X. (2013). A randomized controlled trial of the effects of brief mindfulness meditation on anxiety symptoms and systolic blood pressure in Chinese nursing students. *Nurse Education Today*, 33(10), 1166–1172. <https://doi.org/10.1016/j.nedt.2012.11.014>
- Dadfar, M., Bahrami, F., Noghabi, F. S., & Askari, M. (2016). Relationship Between Religious Spiritual Well-Being and Death Anxiety in Iranian Elders PhD in clinical psychology , School of Behavioral Sciences & Mental Health-Tehran Institute of PhD student in clinical psychology , School of Behavioral Sciences & Men. *International Journal of Medical Research & Health Sciences*, 5(6), 283–287.
- Dwidiyanti, M., Fahmi, A. Y., Wahyu, H. E., Wiguna, R. I., & Munif, B. (2019). *The Art Of Mindfulness Spiritual Islam*. Semarang: Undip Press.

- Floyd, J. (2015). *Depression, Anxiety, and Stress Among Nursing Students and the Relationship to Grade Point Average* (Union University). Union University. Retrieved from <https://www.coursehero.com/file/52955496/Depression-Anxiety-and-Strespdf/>
- Hoge, E., Bui, E., Marques, L., Metcalf, C., Morris, L., Robinaugh, D., ... Simon, N. (2013). Randomized Controlled Trial of Mindfulness Meditation for Generalized Anxiety Disorder: Effects on Anxiety and stress Reactivity. *Journal of Clinical Psychiatry* [revista en Internet] 2013 [acceso 12 de febrero de 2019]; 74(8): 786-792. *J Clin Psychiatry*, 74(8), 786–792. <https://doi.org/10.4088/JCP.12m08083.Randomized>
- Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on Psychological Science*, 6(6), 537–559. <https://doi.org/10.1177/17456916111419671>
- Jenaabadi, H. (2018). The role of spiritual intelligence and mindfulness in predicting death anxiety among students at zahedan faculty of nursing. *Health, Spirituality and Medical Ethics*, 5(2), 2–8. Retrieved from http://kiss.kstudy.com/journal/thesis_name.asp?tname=kiss2002&key=3183676
- Khosravi, M., & Nikmanesh, Z. (2014). *Relationship of Spiritual Intelligence with Resilience and Perceived Stress*. 8(4), 52–56.
- Kinsella, E. A., Smith, K., Bhanji, S., Shepley, R., Modor, A., & Bertrim, A. (2020). Mindfulness in allied health and social care professional education: a scoping review. *Disability and Rehabilitation*, 42(2), 283–295. <https://doi.org/10.1080/09638288.2018.1496150>
- Labrague, L. J., McEnroe-Petitte, D. M., De Los Santos, J. A. A., & Edet, O. B. (2018). Examining stress perceptions and coping strategies among Saudi nursing students: A systematic review. *Nurse Education Today*, 65(March), 192–200. <https://doi.org/10.1016/j.nedt.2018.03.012>
- LaGue, A., Eakin, G., & Dykeman, C. (2019). The impact of mindfulness-based cognitive therapy on math anxiety in adolescents. *Preventing School Failure*, 63(2), 142–148. <https://doi.org/10.1080/1045988X.2018.1528966>
- Lamarre, C., & Marcotte, D. (2021). Anxiety and dimensions of perfectionism in first year college students: The mediating role of mindfulness. *Revue Europeenne de Psychologie Appliquee*, 71(6), 100633. <https://doi.org/10.1016/j.erap.2021.100633>
- Majidi, A., & Moradi, O. (2018). Effect of teaching the components of spiritual intelligence on death anxiety in the elderly. *Iranian Journal of Ageing*, 13(1), 110–123. <https://doi.org/10.21859/sija.13.1.110>
- McConville, J., McAleer, R., & Hahne, A. (2017). Mindfulness Training for Health Profession Students—The Effect of Mindfulness Training on Psychological Well-Being, Learning and Clinical Performance of Health Professional Students: A Systematic Review of Randomized and Non-randomized Controlled Trials. *Explore: The Journal of Science and Healing*, 13(1), 26–45. <https://doi.org/10.1016/j.explore.2016.10.002>
- Nia, H. S., Soleimani, M. A., Ebadi, A., Taghipour, B., Zera'Tgar, L., & Shahidifar, S. (2017). The relationship between spiritual intelligence, spiritual well-being and death anxiety among iranian's veterans. *Journal of Military Medicine*, 19(4), 336–343.
- Radovic, A., Vona, P. L., Santostefano, A. M.,

- Ciaravino, S., Miller, E., & Stein, B. D. (2016). Smartphone Applications for Mental Health. *Cyberpsychology, Behavior, and Social Networking*, *19*(7), 465–470. <https://doi.org/10.1089/cyber.2015.0619>
- Ramadhan, A. F., Sukohar, A., & Saftarina, F. (2019). Perbedaan Derajat Kecemasan Antara Mahasiswa Tahap Akademik Tingkat Awal dengan Tingkat Akhir di Fakultas Kedokteran Universitas Lampung. *Medula*, *9*(1), 78–82. Retrieved from <https://juke.kedokteran.unila.ac.id/index.php/medula/article/view/2355>
- Sarmento, M. (2015). A “Mental Health Profile” of Higher Education Students. *Procedia - Social and Behavioral Sciences*, *191*, 12–20. <https://doi.org/10.1016/j.sbspro.2015.04.606>
- Selcuk, A. A. (2019). A Guide for Systematic Reviews: PRISMA. *Turkish Archives of Otorhinolaryngology*, *57*(1), 57–58. <https://doi.org/10.5152/tao.2019.4058>
- Shabani, J., & Masdari, M. (2016). The effectiveness of mindfulness-based cognitive therapy on social anxiety of students. *Journal of School Psychology*, *4*(4), 94–110. Retrieved from http://jisp.uma.ac.ir/article_402.html
- Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, *21*(6), 581–599. <https://doi.org/10.1023/A:1018700829825>
- Stinson, C., Curl, E. D., Hale, G., Knight, S., Pipkins, C., Hall, I., ... Wright, C. (2020). Mindfulness meditation and anxiety in nursing students. *National League for Nursing*. <https://doi.org/10.1037/a0028168>
- Stunden, A., Halcomb, E., & Jefferies, D. (2015). Tools to reduce first year nursing students’ anxiety levels prior to undergoing objective structured clinical assessment (OSCA) and how this impacts on the student’s experience of their first clinical placement. *Nurse Education Today*, *35*(9), 987–991. <https://doi.org/10.1016/j.nedt.2015.04.014>
- Tang, Y. Y., Tang, R., & Posner, M. I. (2016). Mindfulness meditation improves emotion regulation and reduces drug abuse. *Drug and Alcohol Dependence*, *163*, S13–S18. <https://doi.org/10.1016/j.drugalcdep.2015.11.041>
- van der Riet, P., Levett-Jones, T., & Aquino-Russell, C. (2018). The effectiveness of mindfulness meditation for nurses and nursing students: An integrated literature review. *Nurse Education Today*, *65*, 201–211. <https://doi.org/10.1016/j.nedt.2018.03.018>
- Wiguna, R. I., Dwidiyanti, M., & Sari, S. P. (2018). *The Influence of Mindfulness on the Decreasing Anxiety in Nursing Students to Support Academic Learning : A Literature Review*. (1).
- Wiguna, R. I., Dwidiyanti, M., & Sari, S. P. (2019). The effect of mindfulness through smartphone applications on the anxiety of final-level nursing. *International Journal of Nursing and Health Services*, *2*(4), 230–237. <https://doi.org/10.35654/ijnhs.v2i4.290>
- Yüksel, A., & Bahadır Yılmaz, E. (2020). The effects of group mindfulness-based cognitive therapy in nursing students: A quasi-experimental study. *Nurse Education Today*, *85*(November 2019), 104268. <https://doi.org/10.1016/j.nedt.2019.104268>
- Zollars, I., Poirier, T. I., & Pailden, J. (2019). Effects of mindfulness meditation on mindfulness , mental well- being , and perceived stress. *Currents in Pharmacy Teaching and Learning*, *11*(10), 1022–1028. <https://doi.org/10.1016/j.cptl.2019.06.000>

Cite this article as: Prasetya, R.L., Dwidiyanti, M., Dewi, N.S. (2022). The kind of mindfulness intervention for anxiety in undergraduate nursing students: A literature review. *Nurse and Health: Jurnal Keperawatan*, 11 (1), 111-123. <https://doi.org/10.36720/nhjk.v11i1.352>