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ORIGINAL ARTICLE

DOI: 10.30989/mik.v12i1.883
Page: 80-86
Article accepted: 27th March 2023
Revised article: 27th March 2023
Article approved: 30th March 2023
Media Ilmu Kesehatan published by Universitas Jenderal Achmad Yani Yogyakarta, Indonesia.
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Keywords:

Nurse
Anxiety
COVID-19
Relaxation

Kata kunci:

Perawat
Kecemasan
COVID-19
Relaksasi

The use of relaxation techniques to reduce nurses' Anxiety levels during Covid-19 pandemic

Penggunaan teknik relaksasi untuk menurunkan tingkat kecemasan perawat di yogyakarta selama pandemi Covid -19

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ABSTRACT

Background: As a result of the increased number of Corona Virus Disease 2019 (COVID-19) cases in Indonesia in 2021, nurses as one of the front-liners have experienced extreme workload and stress. This has caused increased numbers of mental health problems in nurses. One of the most common problems is anxiety. **Objective:** This study aimed to measure the effectiveness of relaxation techniques to reduce nurses' anxiety levels during COVID-19 pandemic. **Methods:** This is a quantitative study, using pre- and post- test design. Nurses' anxiety levels were measured before and after the application of relaxation techniques, namely breathing, progressive muscle relaxation and guided imagery. A training was provided for the participants, along with module and a music video to guide their practices. **Results:** The score of anxiety levels has significantly decreased from pre- (M= 56.51, SD= 15.80) to (M= 48.30, SD= 13.70) post- training and application, $t(201) = 5.82, p < .001$ (two-tailed). **Conclusion:** It is important to provide nurses with support that they need during pandemic or any other catastrophic events, in order to maintain their safety and well-being.

ABSTRAK

Latar Belakang: Perawat merupakan pemberi pelayanan kesehatan di garda terdepan selama pandemi COVID-19. Selain peningkatan risiko paparan virus, tingginya kasus COVID-19 juga menyebabkan peningkatan tekanan kerja, yang menambah stresor bagi perawat. Kondisi ini menyebabkan peningkatan kewaspadaan dan kecemasan pada perawat. **Tujuan:** Penelitian ini bertujuan untuk mengetahui penurunan tingkat kecemasan pada perawat setelah melakukan praktik teknik relaksasi. **Metode:** Penelitian ini merupakan penelitian kuantitatif dengan desain *pre- dan post-test*. Partisipan dalam penelitian ini adalah 202 perawat yang bekerja di rumah sakit rujukan COVID-19 di Yogyakarta. Uji t sampel berpasangan dilakukan untuk mengevaluasi penurunan skor tingkat kecemasan pada perawat setelah mempraktikkan teknik relaksasi. **Hasil:** Terdapat penurunan skor tingkat kecemasan yang signifikan, dari sebelum (M= 56.51, SD= 15.80) menjadi (M= 48.30, SD= 13.70), setelah melakukan latihan teknik relaksasi $t(201) = 5.82, p < .001$ (*two-tailed*). Rata-rata penurunan skor tingkat kecemasan adalah 8.21, dengan tingkat kepercayaan 95% rentang interval dari 5.43 sampai dengan 10.99. **Kesimpulan:** Penyediaan dukungan kepada perawat selama masa pandemi atau situasi bencana dan kejadian luar biasa lainnya merupakan hal yang penting untuk peningkatan kesejahteraan dan keselamatan perawat.

INTRODUCTION

There had been an increased number of Corona Virus Disease 2019 (COVID-19) cases in Indonesia in the period of June to August 2021¹. This subsequently had caused incredible workloads for healthcare providers in healthcare facilities. Previous studies have showed that working in pandemic situation has caused decreased wellbeing and increased mental health issues in nurses. Anxiety is the most common symptoms reported by the studies²⁻⁶, followed by depression²⁻⁵, stress³⁻⁷, insomnia^{2,3}, and Post Traumatic Stress Disorder⁵. Furthermore, decreased wellbeing and problems with mental health have impacted on nurses' personal performance at work⁸.

Relaxation techniques are effective to reduce stress⁹. Relaxation techniques may include breathing exercise, progressive muscle relaxation, and guided imagery¹⁰. There have been studies conducted on the effect of relaxation techniques to reduce anxiety. The studies involved several conditions, such as anxiety¹¹⁻¹⁶, depression^{12,14,16}, sleep difficulty¹¹, and perioperative pain^{17,18}. Studies on relaxation techniques have also been conducted in different populations such as in patients with COVID-19¹¹, patients with COPD¹³, hemodialysis patients^{14,16}, caregivers¹², and children^{15,17,18}.

This study aimed to investigate the effectiveness of relaxation techniques (breathing, progressive muscle relaxation and

guided imagery) to reduce nurses' levels of anxiety during COVID-19 pandemic. This study involved nurses who worked at COVID-19 referral hospitals in Yogyakarta, Indonesia.

METHODS

This is a quantitative study, with a pre-and post-test design. Participants in this study were nurses who worked at COVID-19 referral hospitals in Yogyakarta, Indonesia. A poster was distributed online through social medias such as Instagram and WhatsApp to recruit participants. Nurses who were interested then filled out the online form and consented.

An online training was provided for the participants to increase their skills in practicing the relaxation techniques: breathing, muscle relaxation and guided imagery, also to give them basic knowledge on COVID-19 and mental health. The training was delivered by a clinical psychologist and guided by a video, with the steps of doing the relaxation techniques and a relaxation music as a background sound. The duration of relaxation techniques practice was approximately 30 minutes.

Before the training, a pre-test to measure participants' level of anxiety was conducted. After attending the online training, participants were given the module and the relaxation video to guide them. It was expected that the participants would use the relaxation techniques three times at the least, or as they felt anxious or uneasy. An online form was used to monitor the frequency of the

relaxation practice. The pos-test was conducted approximately two weeks after the training, to allow participants applying the relaxation techniques.

SIKEVID, a 30-items questionnaire¹⁹ was used to measure nurses' anxiety levels before and after the application of the relaxation techniques. The self-rated questionnaire consists of 30 symptoms of anxiety related to COVID-19 pandemic. This questionnaire had been validated with Cronbach's Alpha score .945.

RESULTS AND DISCUSSION

There were 234 participants who consented, filled out the pre-test and attended the relaxation training. However, only 202 participants filled out the monitoring form and the post-test. For the purpose of data analysis, the later number was used.

Out of 202 participants, the majority was female (80.20%), aged between 22-40 years old.

Table 1. Participants' Gender and Age (n= 202)

Characteristics of Participants	Frequency	Percentage (%)
Age		
22-40	122	60.40
41-55	80	39.60
Gender		
Male	40	19.80
Female	162	80.20

Source: Primary Data 2022

After the training, most participants applied breathing relaxation for at least once in a week, in 15-30 minutes duration. The paired samples t-test showed that there was a

significant difference in the anxiety levels before and after the application of relaxation techniques.

Table 2. Paired samples t-test result for pre- and post- test anxiety levels

	Mean	Std Dev	S.E. Mean	Paired t test		
				t value	df	Sig. (two tailed)
Anxiety levels	8.21	20.05	1.41	5.82	201	.000

The application of relaxation techniques by nurses for approximately two weeks after the training has significantly reduced the anxiety levels. The score of anxiety levels has significantly decreased from pre- (M= 56.51, SD= 15.80) to (M= 48.30, SD= 13.70) post- training and application, $t(201) = 5.82$, $p < .001$ (two-tailed). The average reduction of the anxiety levels was 8.21, with 95% confidence of interval from 5.43 to 10.99.

Consistent with previous studies²⁰⁻²⁵, this study showed that participants (nurses) who worked during COVID-19 pandemic experienced anxiety. A study in UK showed that 21% (40 out of 191) nurses who worked in respiratory unit experienced moderate to high anxiety²⁶. This current study, however, did not categorize the levels of anxiety that were experienced by the participants. In addition, this study did not only involve nurses who worked in respiratory unit. Nonetheless, a study in Nepal reported that during the pandemic, anxiety was common in nurses, whether they worked in COVID or non-COVID ICUs²⁷.

This study showed that the application of relaxation techniques (breathing, progressive muscle relaxation and guided imagery) significantly reduced nurses' anxiety levels. This result is supported by a previous study²⁸ that reported the effectiveness of diaphragm breathing relaxation to increase sleep and reduce anxiety in Chinese nurses during the pandemic. A randomized control trial conducted in nurses who took care of patients with COVID-19 in Iran showed that progressive muscle relaxation technique could significantly decrease stress and anxiety in the intervention group²⁹.

The current study employed an approximately 30 minutes video with relaxing music background to help the participants to practice with the techniques. It was expected that the music in the video would help the participants to relax. Music has been long studied, and proven to lower psychological responses to stress, hence, provides benefits in reducing stress and anxiety³⁰. A study suggested that both music and muscle relaxation could significantly help improving the symptoms of anxiety³¹.

Management of anxiety in nurses during pandemic is vital. Previous study showed that anxiety was negatively correlated with self-efficacy²¹. Furthermore, increased fear of COVID-19 was correlated with decreased work satisfaction, increased psychological distress, and increased intention to quit from the job/profession³². It is important that healthcare services raise the

awareness on nurses' needs of supports during pandemic. As a study showed that nurses who perceived higher organisational and social support were more likely to report lower anxiety related to COVID-19²².

Apart from providing evidence of the effectiveness of relaxation techniques to reduce anxiety levels in nurses who work in COVID-19 referral hospitals during the pandemic, this study certainly has some limitations. First of all, this study involved relatively small numbers of participants, compared to the total number of nurses in Yogyakarta or Indonesia. Secondly, there might have been a selection bias, where nurses who experienced more severe or high levels of anxiety did not want to participate in the study due to the overwhelming feelings that had caused lack of energy and interest to be involved in research activity. Lastly, participants in this study did not mention the unit they were working at. This could mean that the ones who were actually busy working with COVID-19 cases (hence, had more exposures and workloads) did not participate in this study, thus might have impacted the results of the study.

CONCLUSION

This study has added available evidence that relaxation techniques are beneficial to reduce anxiety levels. During pandemics, disasters, or other catastrophes, it is imperative that nurses, as front-liners are provided with the supports that they need. It is

important that policy makers and health services in Indonesia develop standards on supporting and managing health care providers' mental health during the difficult times. More importantly, the result of this study provided a reminder for all nurses and other healthcare providers to allow time for themselves to practice self-care (e.g., relaxation).

ACKNOWLEDGMENTS

1. Australia Awards Indonesia, for providing the funds for this study.
2. Muhammadiyah COVID-19 Command Centre (MCCC) for providing the measurement tool (SIKEVID).
3. Gus Teja for providing the instrumental music for the relaxation techniques video.

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