



THE IMPACT OF APPLYING RELAXATION TECHNIQUES IN REDUCING STRESS IN MENSTRUATING ADOLESCENTS IN THE COASTAL AND ISLAND AREAS

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ABSTRACT

Menstruation is the periodic and cyclic discharge of blood, mucus, and cell debris from the uterine mucosa, accompanied by the shedding (desquamation) of the endometrium, which starts about 14 days after ovulation. The objective of this study is to examine the effect of applying relaxation techniques in reducing stress among menstruating adolescents at SMA Negeri 1 Waisala, Seram Bagian Barat District in 2023. The research design used is an experimental design with a one-group pretest-posttest approach. The research was conducted at SMA Negeri 1 Waisala in August 2023. The sampling technique used in this study follows Slovin's formula, which represents 30% of the total students, or 30% of 167 students, resulting in a sample of 56 participants. The research instrument used is a questionnaire. There are 56 students who are menstruating at SMA Negeri 1 Waisala. The data analysis was conducted using a dependent t-test (t-paired) if the data followed a normal distribution. The results show a significant effect of applying relaxation techniques in reducing stress among menstruating adolescents at SMA Negeri 1 Waisala, with a p-value of 0.000.

Keywords: adolescents; menstruation; relaxation techniques; stress

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INTRODUCTION

Menstruation is a natural physiological process that is often accompanied by physical and emotional discomfort. Adolescents, particularly young girls experiencing menstruation for the first time, may face increased levels of stress and discomfort due to the hormonal changes associated with the menstrual cycle. Stress, especially when chronic, can significantly affect physical health, emotional well-being, and academic performance (Cohen et al., 2020). Among the various factors contributing to stress in adolescent girls, menstrual symptoms such as dysmenorrhea (painful periods), premenstrual syndrome (PMS), and emotional fluctuations often exacerbate their overall stress levels (Baker et al., 2021). Stress management is crucial for adolescents to ensure that they can navigate the challenges of adolescence effectively. One of the most effective ways to manage stress is through relaxation techniques, which include deep breathing, progressive muscle relaxation, and mindfulness practices. These techniques have been shown to reduce anxiety, lower cortisol levels, and improve overall emotional regulation (González et al., 2018). Relaxation techniques, particularly mindfulness-based interventions, have gained recognition for their ability to address both physical and psychological symptoms, promoting a sense of calm and relaxation (Kabat-Zinn, 2003).

Despite the availability of various stress-relieving techniques, there is limited research on the application of relaxation methods specifically targeting menstruating adolescents, especially in schools. Given the importance of managing stress effectively during adolescence, it is essential to explore how relaxation techniques can help alleviate the stress experienced by young girls during their menstrual periods. This study aims to assess the impact of relaxation

techniques on reducing stress among menstruating adolescents at SMA Negeri 1 Waisala, Seram Bagian Barat District, in 2023. By employing an experimental one-group pretest-posttest design, the study seeks to provide empirical evidence on the effectiveness of relaxation techniques in improving the mental and emotional well-being of adolescent girls during menstruation. Data from the Waisala Health Center in 2023 shows that there are approximately 149 adolescent girls in the Waisala Village, yet only a few regularly visit the health center for checkups due to menstrual-related issues. These issues include excessive bleeding during menstruation, abdominal pain, and delayed menstruation.

Based on a preliminary study conducted by the researcher on July 18, 2023, at SMA Negeri 1 Waisala, 10 students were interviewed, and most of them reported menstrual cycle disturbances, such as irregular menstruation, with some even missing their period for a few months, and having a short duration of menstruation. There were also reports of stress due to excessive bleeding and abdominal pain, which affected their ability to perform daily activities. The total number of female students in SMA Negeri 1 Waisala includes 57 students in grade X, 50 students in grade XI, and 60 students in grade XII, totaling 167 female students across all grades. This study aims to determine the impact of implementing relaxation techniques in reducing stress in menstruating adolescents.

METHOD

The research design employed is an experimental design using the one-group pretest-posttest design approach. In this design, measurements of the independent and dependent variables are conducted retrospectively. This means that the effects of the intervention are identified in the present, while risk factors are analyzed based on their existence or occurrence in the past. This approach is particularly useful for identifying cause-and-effect relationships even when a full experimental setup with control groups is not feasible (Nursalam, 2013). The population in this study consists of all female students at SMA Negeri 1 Waisala who have experienced menstruation, totaling 167 students. The sample for the study is drawn from this population using Slovin's formula, with a margin of error set at 30% (or 0.3). Applying this calculation results in a sample size of 56 participants. The research instrument used in this study is a questionnaire. The questionnaire was developed by the researcher based on relevant literature, ensuring its validity and relevance to the study objectives. This instrument is designed to collect data on the variables under investigation.

RESULT

Table 1.
Respondent characteristics (n=50)

Age	Grade			Total	%
	X	XI	XII		
15 years	10	0	0	10	17.9
16 years	8	22	0	30	53.6
17 years	0	3	13	16	28.5
Total	18	25	13	56	100

Based on Table 1 among the 56 respondents studied, the highest number of respondents, 22 (39.3%), were 16 years old and enrolled in Grade XI. Meanwhile, the lowest number, 3 respondents (5.4%), were 17 years old and in Grade XII.

Table 2.
Results of the Pre-Test and Post-Test on Adolescents Who Menstruate at SMA Negeri 1
Waisala, Seram Bagian Barat Regency in 2023

Pre-Test	Post-Test			Total	%
	Moderate Stress	Severe Stress	Very Severe Stress		
Severe Stress	18	6	2	26	46.4
Very Severe Stress	14	14	2	30	53.6
Total	32	20	4	56	100

Based on Table 2 above, it is known that out of 56 respondents, the highest number is 18 respondents (32.1%) who experienced severe stress before the treatment (Pre-test) and moderate stress after the treatment (Post-test). Meanwhile, the lowest number is 2 respondents (3.6%) who experienced very severe stress both before and after the treatment

DISCUSSION

The statistical test results indicate that the application of relaxation techniques has an effect on reducing stress in adolescents experiencing menstruation. Everyone will experience stress from time to time, and generally, a person can cope with stress by adapting to stressors. Adaptation is useful for responding to stressors. Adaptation to stress is divided into two dimensions: physiological responses and psychosocial responses (Potter & Perry, 2021). The results of the application of relaxation techniques show that more students experienced severe stress. However, the difference between severe and very severe stress is not significant. This is due to individual characteristics that can influence how students respond to stress. Based on the pre-test results, the highest number is 30 students (53.6%) experiencing very severe stress, while based on the post-test results, the highest number is 32 students (57.1%) experiencing moderate stress. Moreover, the reduction of stress in dysmenorrhea explains that at least three important factors make relaxation techniques significantly meaningful for pain scale reduction: proper positioning, a calm mind, and a peaceful environment. These conditions also occur in respondents when relaxation techniques are performed properly, coupled with a calm mind and a peaceful environment, which greatly contribute to the process of reducing the dysmenorrhea pain scale (Damayanti et al, 2022).

Moreover, the reduction of stress in dysmenorrhea explains that at least three important factors make relaxation techniques significantly meaningful for pain scale reduction: proper positioning, a calm mind, and a peaceful environment. These conditions also occur in respondents when relaxation techniques are performed properly, coupled with a calm mind and a peaceful environment, which greatly contribute to the process of reducing the dysmenorrhea pain scale (Hanifa & Dewi, 2023). These results are also consistent with research conducted by Damayanti (2022), which stated that there is an effect of deep breathing relaxation therapy on female employees of Quantum Kids tutoring center in Pontianak, as evidenced by a p-value of $0.000 \leq 0.05$. The study results showed a significant difference before and after the deep breathing relaxation therapy, meaning that H_0 is rejected and H_a is accepted. The researcher assumes that to reduce stress in menstruating adolescents, relaxation techniques should be applied so that the adolescents feel more comfortable and relaxed, preventing them from experiencing stress.

Relaxation techniques, such as yoga and progressive muscle relaxation exercises, have been shown to be effective in reducing menstrual pain in adolescents. A study conducted in Yogyakarta showed that relaxation yoga exercises using an Android application for 30 minutes significantly reduced dysmenorrhea pain compared to a control group that only received leaflet information (Fitriani et al, 2019). In addition, the combination of massage and progressive relaxation exercises is also effective in reducing pain intensity and other menstrual symptoms (Yildiz & Acaroğlu, 2022). Relaxation techniques also play an important

role in reducing stress and anxiety experienced by adolescents during menstruation. A study comparing various relaxation techniques found that guided imagery meditation (GIM) and listening to music (ML) significantly increased feelings of relaxation and decreased systolic blood pressure (Dib et al, 2020). In addition, progressive muscle relaxation exercises have also been shown to be more effective in reducing stress levels than other conventional methods (Balakrishnan et al, 2016).

Relaxation exercises not only reduce physical pain but also improve psychological well-being. A study involving female athletes showed that progressive muscle relaxation exercises significantly improved mood and reduced anxiety during menstruation (Abdelkefi & Jarraya 2024). This suggests that relaxation techniques can help adolescents manage the emotional changes that often occur during menstruation. Different relaxation techniques have varying effectiveness in reducing stress and menstrual pain. Comparative studies have shown that progressive muscle relaxation techniques, massage, and pelvic floor exercises are all effective in reducing dysmenorrhea and perceived stress. However, pelvic floor exercises were found to be more effective in reducing dysmenorrhea pain, while massage and progressive muscle relaxation techniques were more effective in reducing stress (Veena & Rajan, 2023).

CONCLUSION

Based on the research findings and discussion presented earlier, it can be concluded that there is a significant effect of applying relaxation techniques in reducing stress among adolescent girls experiencing menstruation at SMA Negeri 1 Waisala, Seram Bagian Barat District, in 2023, with a p-value of 0.000.

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