

## **EFFECT OF ISLAMIC SPIRITUAL INTERVENTIONS (WUDHU AND DHUHA PRAYER) ON ANXIETY LEVELS OF MEDICAL STUDENTS BEFORE CLINICAL SKILLS EXAMINATION**

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**Abstract: Effect of Islamic Spiritual Interventions (Wudhu and Dhuha Prayer) on Anxiety Levels of Medical Students Before Clinical Skills Examination.** Anxiety is a physiological and emotional response to perceived threats, often experienced by medical students before exams such as the LKK exam. High levels of anxiety can negatively affect academic performance and mental well-being. Islamic psychotherapy techniques, such as wudhu (ablution) and dhuha prayer, are believed to have calming effects that reduce stress and anxiety. This study aims to analyze the effect of wudhu therapy and dhuha prayer on anxiety levels among medical students at Muhammadiyah University of Palembang before the LKK exam. This quasi-experimental study employed a pretest-posttest design without a control group. A total of 62 students meeting the inclusion and exclusion criteria were selected through simple random sampling. Anxiety levels were assessed using the Hamilton Anxiety Rating Scale (HARS) questionnaire. Data analysis was performed using the Wilcoxon test with a significance level of  $p < 0.05$ . The study findings indicate a significant reduction in anxiety levels following the intervention, with a  $p$ -value of  $< 0.05$ . Before the intervention, 87.1% of students exhibited moderate anxiety, while after the intervention, 91.9% of students reported mild anxiety. These results support the effectiveness of wudhu therapy and dhuha prayer as non-pharmacological interventions for reducing anxiety. The practice of wudhu and dhuha prayer significantly reduces anxiety levels in medical students before exams. These findings highlight the potential benefits of integrating Islamic psychotherapy into academic stress management strategies.

**Keywords:** Anxiety, Dhuha Prayer, Wudhu Therapy

**Abstrak : Pengaruh Intervensi Spiritual Islam (Wudhu dan Shalat Dhuha) terhadap Tingkat Kecemasan Mahasiswa Kedokteran Sebelum Ujian Keterampilan Klinis.** Kecemasan merupakan respons fisiologis dan emosional terhadap ancaman yang dirasakan, yang sering dialami oleh mahasiswa kedokteran menjelang ujian seperti ujian LKK. Tingkat kecemasan yang tinggi dapat berdampak negatif terhadap prestasi akademik dan kesejahteraan mental. Teknik psikoterapi Islam, seperti wudhu dan salat dhuha, diyakini memiliki efek menenangkan yang dapat mengurangi stres dan kecemasan. Penelitian ini bertujuan untuk menganalisis pengaruh terapi wudhu dan salat Dhuha terhadap tingkat kecemasan di kalangan

mahasiswa kedokteran Universitas Muhammadiyah Palembang menjelang ujian LKK. Penelitian kuasi-eksperimental ini menggunakan desain pretest-posttest tanpa kelompok kontrol. Sebanyak 62 mahasiswa yang memenuhi kriteria inklusi dan eksklusi dipilih melalui pengambilan sampel acak sederhana. Tingkat kecemasan diukur menggunakan kuesioner Hamilton Anxiety Rating Scale (HARS). Analisis data dilakukan menggunakan uji Wilcoxon dengan tingkat signifikansi  $p < 0,05$ . Temuan studi menunjukkan penurunan signifikan pada tingkat kecemasan setelah intervensi, dengan nilai  $p < 0,05$ . Sebelum intervensi, 87,1% mahasiswa menunjukkan kecemasan sedang, sedangkan setelah intervensi, 91,9% mahasiswa melaporkan kecemasan ringan. Hasil ini mendukung efektivitas terapi wudhu dan salat dhuha sebagai intervensi non-farmakologis untuk mengurangi kecemasan. Praktik wudhu dan salat dhuha secara signifikan mengurangi tingkat kecemasan pada mahasiswa kedokteran menjelang ujian. Temuan-temuan ini menyoroti manfaat potensial dari pengintegrasian psikoterapi Islam ke dalam strategi manajemen stres di lingkungan akademis.

**Kata Kunci :** Kecemasan, Salat Dhuha, Terapi Wudhu

## INTRODUCTION

Anxiety is a physiological and emotional response to a perceived threat, characterized by feelings of fear, restlessness, and physical and mental tension (Beesdo et al., 2009). In the world of education, anxiety is often experienced by students, especially medical students who have to face high academic pressure, such as clinical skills exams (LKK Exams) (Novitarum et al., 2018). This exam requires a combination of theoretical understanding, clinical skills, and mature rationality, thus triggering mental stress that can interfere with academic performance (Yuhelrida et al., 2016). The prevalence of anxiety in medical students globally reaches 33.8% (Quek et al., 2019). While in Indonesia it ranges from 30-70% (Demak & Suherman, 2016). This condition shows the need for effective anxiety management strategies to help students deal with this academic pressure (Puspitasari, 2019).

The Islamic Psychotherapy approach, such as wudhu therapy and dhuha prayer, is one alternative intervention that can be used to reduce anxiety (Puspitasari, 2019). Dhuha prayer, a sunnah prayer performed in the morning, is useful for providing a relaxing effect and improving mood through spiritual meditation (Al Mahfani, 2008). Meanwhile, wudhu therapy, which involves washing the body parts with air,

has physiological benefits in the form of water massage that helps relieve muscle tension, increase focus, and provide calm (El-Bantanie, 2010). Previous studies have shown that there is a positive effect of Ablution on Anxiety in Facing National Exams (Jamaludin et al., 2023) and dhuha prayer in Reducing Anxiety About Students' Future Careers at SMA Muhammadiyah 8 Gresik (Agustin, 2019).

This study aims to analyze the effect of wudhu therapy and dhuha prayer on the level of anxiety of medical students at the University of Muhammadiyah Palembang before facing the LKK Exam. Although several studies have investigated spiritual practices and anxiety reduction, limited studies have examined the combined effect of wudhu therapy and dhuha prayer among medical students facing clinical skills examinations. For these reason, this study is expected to provide scientific evidence regarding the effect of the Islamic Psychotherapy approach especially wudhu and dhuha prayer as a non-pharmacological solution in reducing student anxiety. With the results obtained, educational institutions are expected to be able to provide alternative strategies for dealing with anxiety that are practical and in accordance with spiritual values.

## METHODS

This research is a quantitative study with a quasi-experimental method with a pre-post test design without a control group. The intervention consisted of performing ablution followed by a two-rak'ah dhuha prayer conducted individually before the examination. This research was conducted in the campus environment of the Medical study program, Faculty of Medicine, Muhammadiyah University of Palembang, and was implemented in September 2024. Target population in this study were all medical students of Muhammadiyah University of Palembang, and the accessible population were medical students of Muhammadiyah University of Palembang in the 2024/2025 academic year. The sample was taken using a simple random sampling technique with a total of 62 respondents and met the inclusion and exclusion criteria. Data collection used

the Hamilton Anxiety Rating Scale (HARS) questionnaire.

Data analysis was carried out by conducting a normality test with the Kolmogorov-Smirnov test and the data was not normally distributed, then data transformation and repeated normality tests were carried out with the same test and the data was still not normally distributed, so statistical analysis was carried out using the Wilcoxon alternative test. This study received ethical approval from the Ethics Committee of the Faculty of Medicine, Universitas Muhammadiyah Palembang number 100/EC/KBHKI/FK-UMP/XI/2024.

## RESULT

Research was conducted in the campus environment of the Medical study program, Faculty of Medicine, Muhammadiyah University of Palembang. Data were collected in September 2024.

**Table 1. Respondent Characteristics Based on Gender**

Gender	Frequency	Percentage (%)
Female	39	62,9
Male	23	37,1
<b>Total</b>	<b>62</b>	<b>100</b>

Based on table 1, there were 62 respondents consisting of 39 female respondents (62.9%), and 23 male respondents (37.1%).

**Table 2. Anxiety Levels Before Interventions**

Anxiety Level	Male(N)	Female(N)
Mild	2(8.7)	0(0)
Moderate	19(82.6)	35(89.7)
Severe	2(8.7)	4(10.3)
<b>Total</b>	<b>23(37.1)</b>	<b>39(62.9)</b>

Based on table 2 before the intervention was carried out from a total of 62 respondents, consisting of 23 (37.1%) male respondents, and 39 (62.9%) female respondents, 2 respondents experienced mild anxiety levels, consisting of 2 (8.7%) male respondents, and 0 (0%) female

respondents, 54 respondents experienced moderate anxiety levels, consisting of 19 (82.6%) male respondents, 35 (89.7%) female respondents, and 6 respondents experienced severe anxiety levels consisting of 2 (8.7%) male respondents and 4 (10.3%) female respondents.

**Table 3. Anxiety Levels After Interventions**

<b>Anxiety Level</b>	<b>Male(N)</b>	<b>Female(N)</b>
Mild	20(80.7)	37(94.9)
Moderete	3(13)	2(5.1)
Severe	0(0)	0(0)
<b>Total</b>	<b>23(37.1)</b>	<b>39(62.9)</b>

Based on table 3, it is obtained that after the intervention, there was a change in the level of anxiety of the respondents. A total of 57 respondents were in a mild level of anxiety, consisting of 37 women (94.9%) and 20 men (87%). 5 respondents, namely 3 men (13%) and 2 women (5.1%) were in a moderate level of anxiety. Meanwhile, there were no respondents, both men and women, who were in a severe level of anxiety.

**Table 4. Comparison of Anxiety Scores Before and After Intervention**

<b>Anxiety Score (Mean(SD))</b>		<b>P</b>
<b>Before</b>	<b>After</b>	
22.45 (4.10)	11.52 (2.85)	<0,001

Based on table 4 before the intervention, the average respondent experienced a moderate level of anxiety with an average anxiety level score of 22.45. After the intervention, the average respondent experienced a significant decrease in anxiety levels to mild anxiety levels ( $P < 0.001$ ) with an average anxiety score 11.52

## DISCUSSION

In table 1. It was found that there were more female respondents than male respondents. Rana and Mahmood research ((Rana & Nasir, 2010) stated that there were gender differences in dealing with anxiety, especially anxiety in evaluation/exams, showing that women had higher levels of anxiety compared to men.

In table 2. It was found that before the intervention, women had higher levels of anxiety compared to men. These findings are consistent with previous studies demonstrating that spiritual practices can activate relaxation responses and reduce psychological stress. One of the factors that causes differences in anxiety levels between women and men is the anatomical structure of the limbic system, especially in the amygdala and hippocampus (Stuart & Laraia, 2023; Thalib, 2017). In

women, the amygdala is more responsive to emotional stimuli, while in men, the amygdala tends to be more responsive to the "fight or flight" response, especially those that contain potential physical threats, so women are more susceptible to anxiety (Stevens & Hamann, 2012). The female hippocampus tends to be larger than that of men, so it can increase the tendency to remember traumatic and anxious experiences in more detail (Maciejewski et al., 2014).

In table 3. After the intervention in the form of wudhu therapy and dhuha prayer, there was a change in the level of anxiety in respondents. This happens because wudhu therapy involves physical contact with water which has a relaxing effect on the body and mind by stimulating the vagus nerve which is part of the parasympathetic nervous system which plays a role in reducing the "flight or fight" response from the amygdala so that it can reduce anxiety (Mather, 2015). This agrees with El-Bantanie (El-Bantanie, 2010) that ablution has the property of cooling the nerve endings in the hands and feet, helping to increase mental focus. This also agrees with previous research conducted by Jamaludin (2023), regarding the Effect of Ablution on Anxiety in Facing National

Exams in Students of Mts Al-Hidayah Cinangka Depok ( $P < 0.001$ ).

Dhuha prayer has an impact on reducing anxiety, because when praying, concentration on movement and prayer helps reduce excessive amygdala activity and activates the prefrontal cortex through focus and calmness so that it can calm the limbic system as a whole and reduce anxiety (Stevens & Hamann, 2012). In addition, dhuha prayer has a mindfulness effect that improves emotional regulation in the hippocampus, mindfulness helps process negative emotions better, and reduces anxiety responses. In addition, spiritual activities such as prayer can increase the release of dopamine hormones and endorphins, which play a role in increasing feelings of calm and happiness (Stevens & Hamann, 2012). This is in accordance with Purnomosidi's study which concluded that (Purnomosidi, 2017) Dhuha prayer involves physical movements that resemble active meditation, thus affecting the reduction of stress hormones such as endorphins which affect anxiety. In previous research conducted by Rana & Nasir (Rana & Nasir, 2010), there was a significant influence of Spiritual Relaxation on Student Anxiety Facing the OSCA Exam at Stikes Aisyiyah Surakarta ( $P < 0.001$ ).

In table 4. It was found that respondents experienced a decrease in anxiety levels, from moderate anxiety levels with an average respondent anxiety level score of 22.45 to mild anxiety levels with an average respondent anxiety level score of 11.52. These results indicate that there is a significant influence between wudhu therapy intervention and dhuha prayer on students' anxiety levels before the LKK Exam ( $P < 0.001$ ). This is supported by previous research conducted by Utomo (Utomo, 2015) that there is a significant influence between Ablution on Anxiety When Facing Practical Exams in Nursing Students at Uin Syariah Hidayatullah Jakarta ( $P < 0.001$ ), another study conducted by Agustin (Agustin, 2019) concluded that there was a

significant influence of Dhuha Prayer Therapy in Reducing Students' Future Career Anxiety at SMA Muhammadiyah 8 Gresik ( $P < 0.001$ ).

This study has several limitations, including the absence of a control group and a relatively small sample size. This study also exposed only in one university sample.

## CONCLUSION

After conducting the research, it can be concluded that wudhu therapy and dhuha prayer have a significant effect on reducing the anxiety levels of students of the Faculty of Medicine, Muhammadiyah University of Palembang before the LKK Exam ( $P < 0.05$ ). The findings suggest that Islamic spiritual practices such as wudhu and dhuha prayer should be implemented as a simple non-pharmacological intervention to manage exam-related anxiety among medical students.

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