



## Article

# The Relationship Between the Intensity of Tahajud Prayer with Stress Levels on Medical Faculty Students of Ahmad Dahlan University

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### ABSTRACT

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Tahajud prayer is a night prayer that is performed when most people are fast asleep, in the last third of the night. Physiologically, human life has a diurnal circadian rhythm pattern. If we perform tahajud prayer, the circadian rhythm pattern can become nocturnal, it can change behavioral pattern. Stress is a condition where a person's physical and psychological balance is disturbed. Through prayer, a person will feel close to the Creator, so that all tiredness and problems are abandoned. This study aims to analyze whether there is a relationship between the intensity of tahajud prayer and stress levels in students of the Faculty of Medicine, Ahmad Dahlan University Yogyakarta. The research method used in this study is an observational analytic quantitative method using a cross-sectional design. The research sample amounted to 153 respondents. The research instruments were the Perceived Stress Scale (PSS-10) questionnaire and the Tahajud Prayer Practice questionnaire. Statistical tests using the Rank-Spearman analysis test and Kendall's Tau analysis test. The Rank-Spearman test found a p-value of 0.000 with a correlation coefficient of -0.342 and the Kendall's Tau test found a p-value of 0.000 with a correlation coefficient of -0.328 indicating moderate correlation strength. This study concludes that there is an inversely proportional relationship between the intensity of tahajud prayer and stress levels in Ahmad Dahlan University Faculty of Medicine students. Therefore, it is expected that students can increase the intensity of tahajud prayer in their daily lives to reduce stress levels.

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## INTRODUCTION

Tahajud prayer is an honor for Muslims. Tahajud prayer has many benefits and privileges, including erasing sins that have been committed during the day, bringing health, avoiding

loneliness in the grave, being an ornament of heaven, guaranteeing life needs, and perfuming body odor<sup>1</sup>.

The Tahajud prayer is also believed to have other benefits and privileges, which for people who pray tahajud, are given security and happiness both in this world and the hereafter, including the light of faith will shine on his face, Allah will protect him from various kinds of dangers, every word he says has meaning and others will respect him, he will get attention and be loved by those around him, and when he is resurrected from the grave, his face will shine with dazzling brightness. Tahajud prayer is also used to prevent oneself from committing bad and evil deeds<sup>2</sup>.

This is by the word of Allah in Q.S. Al-Ankabut verse 45 which means:

"Recite what has been revealed to you, the Book (Quran), and pray. Verily, prayer prevents evil and forbidden deeds. And surely the remembrance of Allah (prayer) is greater (in virtue than other acts of worship). And Allah knows what you do "<sup>3</sup>.

Physiologically, humans have a diurnal circadian rhythm pattern. However, if this pattern is accompanied by the obligation to perform tahajud prayer at midnight, it can change the circadian rhythm pattern to nocturnal. As a result, there are behavioral changes in the central nervous system that aim to adjust to the change in circadian rhythm. Therefore, for people who get sick after performing tahajud prayer, it is most likely due to insincere intentions. Doing it under duress can fail in the process of adjusting to changes in circadian rhythms<sup>4</sup>.

Overall, stress is a condition in which a person's psychological and physical balance is disturbed due to a trigger or stressor, both internal and external to the body. This condition can hinder a person in carrying out their tasks<sup>5</sup>.

According to WHO<sup>6</sup>, the incidence of stress has reached a significant number, where approximately 350 million people worldwide experience stressful conditions, making it the 4th ranked disease in the world. Research conducted in the UK by the Health and Safety Executive involved 487,000 UK residents with productive age categories in the 2013-2014 period. The results showed that the incidence of stress was dominated by women (54.62%) rather than men (45.38%)<sup>6</sup>.

Based on the results of the Basic Health Research (Riskesdas) in 2018, a total of 37,728 people in Indonesia with more than 15 years of age experienced stress <sup>7</sup>. Research conducted by Ambarwati showed that 47.5% of students experienced stress, with 13.8% mild, 29.7% moderate, and 4.0% severe stress<sup>6</sup>.

The negative impacts of stress experienced by students include decreased productivity, interference in decision making, difficulty in concentrating, decreased ability to remember information, and triggering health problems such as hypertension, heart failure, symptoms of nausea and dizziness<sup>8</sup>. Based on research on medical students, there are three main causes of stress in students, namely: academic stress, pressure to succeed, and postgraduate plans<sup>9</sup>.

Academic activities play a role as a stressor for medical students, especially as they face changes in learning styles, coursework demands and grade attainment. This is particularly true for new students. New students are more likely to experience stress as they are going through a period of transition or change in their lives<sup>10</sup>. The Faculty of Medicine is known for its hectic academic activities, including tutorial discussions, medical skills practice, and various types of exams such as practicum pretests, mini quizzes, and block exams held weekly. In fact, sometimes exams are often scheduled at the same time<sup>11</sup>.

In Islam, stress is introduced in life as a test in Surah Al-Baqarah verse 155 which means "and indeed We will give you trials, with little fear, hunger, lack of wealth, soul and fruit. and give good news to those who are patient"<sup>3</sup>.

Surah Al-Baqarah verse 153 Allah SWT. states that "O you who believe, make patience and prayer your helper, Verily Allah is with those who are patient"<sup>3</sup>. Through prayer, a person will feel close to the creator, all fatigue, problems, burdens of thought, and emotions, all of which are solemnly dropped during prayer. Thus, the practice of prayer has become a treatment for the fears that arise due to the pressures faced. Belief in this can calm the heart and reduce stress levels for individuals who perform it<sup>12</sup>.

The word of Allah SWT in surah Ar-Ra'd verse 28 means: "(i.e.) those who believe and their hearts are calmed by remembering Allah. Remember, only by remembering Allah does the heart become calm"<sup>3</sup>.

## **METHODS**

This study is an observational analytic quantitative study using a cross-sectional design. The population in the study were all students of the Faculty of Medicine, Ahmad Dahlan University class of 2019, 2020, 2021 and 2022. The sample size was calculated using the Slovin formula as many as 153 students.

The inclusion criteria of this study are Muslims, students of the Faculty of Medicine, Ahmad Dahlan University class of 2019, 2020, 2021, and 2022, and willing to become respondents, by agreeing to informed consent. The exclusion criteria of this study are Incomplete filling of the questionnaire and in the past month diagnosed with mental disorders by a psychiatrist.

In this study, the independent variable is the intensity of tahajud prayer and the dependent variable is the level of stress in Ahmad Dahlan University Faculty of Medicine students. The instruments for data collection used in the study were the Perceived Stress Scale (PSS-10) questionnaire and the Tahajud Prayer Practice questionnaire. The questionnaire has been tested for validity and reliability in Table 1 and table 2. Data analysis in the form of univariate analysis and bivariate analysis using the Pearson correlation test for data with normal distribution. If the

distribution of data is not normal, use an alternative test, the rank-spearman analysis test and Kendall's tau analysis test.

## RESULTS

Table 1. Validity test

<b>Number of Item</b>	<b>r<sub>count</sub></b>	<b>r<sub>table 5% (30)</sub></b>	<b>Sig.</b>	<b>Criteria</b>
Item 1	0,572	0,361	0,001	Valid
Item 2	0,867	0,361	0,000	Valid
Item 3	0,818	0,361	0,000	Valid
Item 4	0,604	0,361	0,000	Valid
Item 5	0,842	0,361	0,000	Valid
Item 6	0,618	0,361	0,000	Valid

Based on table 1, all values of r count > r table, which indicates that all questions are valid.

Table 2. Reliability test

<b>Cronbach's Alpha</b>	<b>N of Items</b>
0,780	6

Based on table 2, the results show that r count (Cronbach's alpha) > r table, so the questionnaire is reliable (consistent).

Table 3. Frequency Distribution of Gender Categories

<b>Gender</b>	<b>Amount (n)</b>	<b>Percentage (%)</b>
Male	45	29.4
Female	108	70.6
<b>Total</b>	153	100

In Table 3, the respondents in the study totaled 153 students consisting of 45 (29.4%) male students and 108 (70.6%) female students.

Table 4. Frequency Distribution of Age Categories

<b>Age</b>	<b>Amount (n)</b>	<b>Percentage (%)</b>
18 years old	7	4.6
19 years old	29	19.0
20 years old	36	23.5
21 years old	35	22.9
22 years old	37	24.2
23 years old	8	5.2
24 years old	1	0.7
<b>Total</b>	153	100

Table 4 shows that there are 153 respondents in this study. Of these, 7 respondents (4.6%) were 18 years old, 29 respondents (19%) were 19 years old, 36 respondents (23.5%) were 20 years old, 35 respondents (22.9%) were 21 years old, 37 respondents (24.2%) were 22 years old, 8 respondents (5.2%) were 23 years old, and 1 respondent (0.7%) was 24 years old.

Table 5. Frequency Distribution of Stress Level

<b>Stress Level</b>	<b>Amount (n)</b>	<b>Percentage (%)</b>
Low	14	9.2
Moderate	128	83.7
High	11	7.2
<b>Total</b>	<b>153</b>	<b>100.0</b>

Table 5 above explains that in all 153 respondents, 14 respondents experienced low stress (9.2%), 128 respondents experienced moderate stress (83.7%), and 11 respondents experienced severe stress (7.2%).

Table 6. Frequency Distribution of Tahajud Prayer Intensity Categories

<b>Tahajud Prayer Intensity</b>	<b>Amount (n)</b>	<b>Percentage (%)</b>
Never do tahajud	8	5.2
Not every day	121	79.1
Every day 3 rak'ahs	12	7.8
Every day 5-9 rak'ahs	8	5.2
Every day 11 rak'ahs	4	2.6
<b>Total</b>	<b>153</b>	<b>100</b>

Based on Table 6, it is found that in all 153 respondents, 8 respondents never pray tahajud (5.2%), 121 respondents do tahajud prayer not every day (79.1%), 12 respondents do tahajud prayer every day 3 rakats (7.8%), 8 respondents do tahajud prayer every day 5-9 rakats (5.2%), and 4 respondents do tahajud prayer every day 11 rakats (2.6%).

Table 7. Frequency Distribution of Tahajud Prayer Intensity Categories (Rank-Spearman Analysis Test)

		<b>Stress Level</b>	<b>Intensity of Tahajud Prayer</b>
Spearman's rho	Stress Level	Correlation Coefficient	1.000
		Sig. (2-Tailed)	-0.342
	Intensity of Tahajud Prayer	Correlation Coefficient	0.000
		Sig. (2-Tailed)	153
		N	153
		N	153

Based on Table 7, the results of the Rank-Spearman analysis test between the intensity of tahajud prayer and stress level obtained Sig. (2-Tailed) 0.000, smaller than 0.05, so the results show that there is a relationship between the variable intensity of tahajud prayer on stress levels in Ahmad Dahlan University Faculty of Medicine students. Based on the correlation coefficient, the result is -0.342, the negative sign indicates that the relationship between variables is inversely proportional, and the number 0.342 can be interpreted that the two variables have a moderate correlation.

Table 8. Frequency Distribution of Tahajud Prayer Intensity Categories (Kendall's Tau Analysis Test)

			<i>Stress Level</i>	<i>Intensity of Tahajud Prayer</i>
Kendall's Tau	Stress Level	Correlation Coefficient	1.000	-0.328
		Sig. (2-Tailed)		0.000
		N	153	153
	Intensity of Tahajud Prayer	Correlation Coefficient	-0.328	1.000
		Sig. (2-Tailed)	0.000	
		N	153	153

Based on Table 8, the results of Kendall's Tau analysis test between the intensity of tahajud prayer and stress level obtained the Sig value. (2-Tailed) 0.000, smaller than 0.05, so the results show that there is a relationship between the variable intensity of tahajud prayer on stress levels in Ahmad Dahlan University Faculty of Medicine students. Based on the correlation coefficient, the result is -0.328, the negative sign indicates that the relationship between variables is inversely proportional, and the number 0.328 can be interpreted that the two variables have a moderate correlation.

## DISCUSSION

Based on the research that has been conducted, the results show that the two variables studied, namely tahajud prayer and stress, have a significant relationship. The relationship between the two variables shows a negative correlation or inversely proportional, which indicates that the higher the intensity of tahajud prayer, the lower the stress level. Conversely, the lower the intensity of tahajud prayer, the higher the stress level.

Mental health disorders can be prevented if individuals who pray tahajud can adapt and achieve a balance of homeostasis. This is due to the human cognitive ability to take precautions so as not to experience pain. One form of prevention is through coping mechanism. The process of coping involves self-adjustment and the process of learning and memory. As found in this study, individuals who pray tahajud more than 10 days a month have low levels of stress. Therefore, it

can be concluded that tahajud prayer can maintain the balance of the body's homeostasis. If the tahajud prayer is performed earnestly, solemnly, on time, sincerely, and regularly, it can develop motivation, positive emotions, and perceptions, increasing coping effectiveness, which helps avoid stress reactions<sup>4</sup>.

In line with Rofiqoh's research<sup>13</sup>, when performing prostration movements, the position of the brain is below the heart, causing blood flow to the brain to be smoother. Every cell in the body needs an adequate supply of oxygen to produce energy. Cells in the brain are one type of cell that really needs a continuous supply of oxygen<sup>14</sup>. In the morning, there is an increase in the acidity and oxygen level of the blood, and the ability of hemoglobin to bind oxygen increases<sup>15</sup>. If the blood supply to the brain is sufficient, this can lead to the release of hormones such as serotonin, endorphin, dopamine and oxytocin. The impact of the release of these hormones is physiological stress reduction<sup>16</sup>.

Tahajud prayer has significant elements of relaxation and meditation, and has potential as a strategy to reduce stress<sup>17</sup>. Individuals who regularly perform tahajud prayer will experience benefits in the form of life wisdom, remain optimistic in facing life's challenges, and maintain a constructive attitude<sup>4</sup>.

## CONCLUSION

Based on the results of the research and the previous discussion, it is concluded that there is an inversely proportional relationship between the intensity of tahajud prayer and stress levels in Ahmad Dahlan University Faculty of Medicine students, which can be interpreted that the higher the intensity of tahajud prayer, the lower the stress level, and vice versa if the intensity of tahajud prayer is lower, the higher the stress level. The relationship between the two variables has a weak correlation strength.

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