



RESEARCH ARTICLE

# Reducing stress among new boarding school students: The impact of Al-Qur'an reading intensity analyzed through expert systems and PHP

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## Abstract

This study investigates the impact of Al-Qur'an reading intensity on stress reduction among new students at Insan Scholar Boarding School, utilizing an expert system and PHP methods. Employing an experimental design and quantitative data analysis, this study compares stress levels before and after the implementation of an intensive Quran reading intervention. The data collection instrument uses a psychological scale, namely the DASS stress scale (*Depression Anxiety own scale*) adapted from the character lovibond & lovibond. Results indicate a significant decrease in stress levels among participants engaged in Quran reading activities compared to those who did not participate. These findings underline the importance of spiritual practices in stress management and suggest integrating Quran reading activities into mental health programs in educational environments. The study offers new insights into the application of spiritual methods alongside information technology to support students' psychological well-being, contributing significantly to stress management practices in similar educational settings. The implications of this research emphasize the need to recognize and integrate the spiritual dimension as a crucial component in stress reduction programs, as well as the potential for information technology applications to facilitate spiritual activities.

Keywords: Quran reading intensity, stress reduction, boarding school students, expert system, PHP methods

## INTRODUCTION

Santri comes from the word "cantrik" which means someone who always follows the teacher wherever the teacher goes and stays. Without the existence of students who want to stay and follow the teacher, it is impossible to build huts or dormitories where the students live and are then called Islamic Boarding Schools. Students who attend Islamic boarding schools require them to live separately from their parents and family. Islamic boarding school life is different from school life in general, making it difficult for some students adapt. Apart from that, the existing rules and learning programs make students stressed and

stressed.

According to Rahmawati (in Lestari & Palasari, 2020) Life in Islamic boarding schools, students are required to be able to adjust or adapt well to the activities and regulations that apply in the Islamic boarding school environment as well as the situation of living far from their parents. In research conducted by Hendriani and Pritaningrum (in Lesari & Palasari, 2020) conditions in dormitories with different rules and conditions from those at home can be a source of stress (*free*) so it can cause stress.

New students at Insan Scholar Boarding School face various adaptation challenges and significant psychological pressures upon entering a new boarding educational environment. Adjusting to this new environment often causes stress, which can affect both the psychological well-being and academic achievements of the students (Smith & Jones, 2018). This condition is exacerbated by the distance from family and the pressure to adapt to new academic and social demands. Research by Ali and Rahman (2019) indicates that spiritually-based interventions, such as the intensity of Quranic reading, have a positive impact on reducing stress and supporting the psychological adaptation of students in the boarding school environment. Therefore, integrating religious practices into the psychological support program at Islamic boarding schools

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can be an effective strategy to improve the well-being and adaptation of new students.

Adolescence is a transition period between childhood and adult life, which is characterized by biological and psychological growth and development. Biologically, it is characterized by the growth and development of primary sex and secondary sex, while psychologically it is characterized by unstable or uncertain attitudes and feelings, desires and emotions. According to Hurlock (in Lestari & Palasari, 2020) divides the teenage phase into early adolescence between the ages of 13-17 years and late adolescence between the ages of 17-18 years. According to Hurlock, early and late adolescence have different characteristics because in late adolescence individuals have reached a developmental transition that is closer to adulthood.

According to Desmita (2011), adolescence is characterized by a number of important characteristics which include achieving mature relationships with peers, being able to accept and learn social roles as an adult man or woman that is highly respected by society, accepting physical conditions and being able to use them effectively, achieving independence, emotions from parents and other adults, choosing and preparing for a future career according to their interests and abilities, developing a positive attitude towards marriage, family life and having children, developing the intellectual skills and concepts needed as a citizen, achieving good behavior who are socially responsible and obtain a set of values and ethical systems as guidelines for behavior.

According to Blos (in Sarwono, 2011) development is essentially an effort to adapt (coping), namely to actively overcome stress and find new solutions to the various problems faced. So at the level of adolescent development, self-adjustment becomes very important. The ability to healthy adapt to the environment is an important prerequisite for the creation of an individual's mental health. Many individuals, especially teenagers, suffer and are unable to achieve happiness in their lives because of their inability to adapt to family life, school, work and society in general. Not a few teenagers experience stress or depression due to their failure to adapt to existing and complex environmental conditions.

According to Carr & Umberson (in Munir, et al, 2021) stress provides a feeling of comfort or discomfort. A feeling of comfort occurs if stress is considered as motivation to move forward. Stress conditions that cause discomfort can be acute or chronic. Acute stress causes many complaints and anxiety, and chronic stress causes physical and mental discomfort, fatigue, boredom, and the risk of death. Stress causes psychological and emotional changes. The body will respond spontaneously if it feels a threat.

There are various methods for reducing stress. According to Hardjana (in Nugraheni, et al, 2018), there are various methods for dealing with stress such as: pharmacological, behavioral, cognitive, meditation and hypnosis, and music. Anggraieni and Subandi (Nugraheni, et al, 2018) argue that therapy to reduce stress using a religious approach is one of the methods of dhikr relaxation therapy. This relaxation therapy apparently has a significant influence on stress levels. Another way to reduce stress with a religious approach is to use the Al-Qur'an as a medium. The Qur'an is also known as *As Syifa*, which means Healer, has the power to handle and heal mental stress. It has been revealed in the Qur'an, Surah Yunus verse 57, which means: "*O mankind, indeed there has come to you a lesson from your Lord and a cure for the diseases (that are) in the chest and guidance and mercy for the believers.*"

This is reinforced by the results of research by Abdurrochman, et al (2007) that Al-Qur'an stimulants can be used as relaxation therapy, even better than music therapy stimulants, because Al-Qur'an stimulants can produce delta waves of 63.11% of the therapy. music. The increase in delta waves also reached the highest percentage of 1,057%. This Qur'anic stimulant often gives rise to delta waves in the frontal and central areas on both the right and left side of the brain. This happens because the wave frequency of reading the Qur'an has the ability to reprogram brain cells, increase their abilities and balance them (Nugraheni, et al, 2018). Based on the explanation above, researchers are interested in observing empirically the influence of the intensity of reading the Al-Qur'an on reducing stress in students, especially in new students in class X at the Insan Scholar Boarding School Islamic boarding school.

According to Carr & Umberson (in Munir, et al, 2021) stress provides a feeling of comfort or discomfort. A feeling of comfort occurs if stress is considered as motivation to move forward. Acute stress causes many complaints and anxiety, and chronic stress causes physical and mental discomfort, fatigue, boredom, and the risk of death. Stress causes psychological and emotional changes. The body will respond spontaneously if it feels a threat.

Classification of Stress, according to Hans Selye (in Gaol, 2016) classifies stress into two groups based on the individual's perception of the stress they experience, namely: Distress (negative stress) is stress that is destructive or unpleasant. This stress is felt as a condition where the individual experiences anxiety, fear, worry or restlessness. So that individuals experience negative, painful psychological states and a desire arises to avoid them.

Eustress (positive stress) is pleasant and a satisfying experience, the phrase joy of stress expresses positive things that arise from stress. Eustress can increase mental alertness, alertness, cognition and life performance. Eustress can also increase an individual's motivation to create something, for example creating works of art. In this case, stress is not always seen as something negative, but can also have positive results. Eustress is the result of a response to stress that is constructive. Meanwhile, distress is the result of a response to destructive stress, such as illness, decreased performance, and frequent absences (absenteeism).

Stress levels based on a measurement scale using DASS (*Depression Anxiety Stress Scale*) according to the Psychology Foundation of Australia (2014), namely: Normal, if the stress symptoms listed in the DASS have never been experienced or are rarely experienced. Mild Stress if the stress symptoms listed in the DASS are rarely experienced until they are experienced but only occasionally. Moderate Stress, if the stress symptoms listed in the DASS are experienced occasionally to frequently, but predominantly occur only occasionally. Severe Stress, if the stress symptoms listed in the DASS are experienced occasionally to often, but are more frequent. And Very Severe Stress if the stress symptoms listed in the DASS are frequently experienced.

Aspects of stress according to Sarafino & Smith (dala Saputri & Sugiharto, 2019) are the biological aspects of stress in the form of physical symptoms. Physical symptoms of stress experienced by individuals include illness. Apart from that, other physical symptoms are also characterized by tense muscles, irregular breathing and heartbeat, nervousness, anxiety, restlessness, changes in appetite, stomach ulcers, and so on. Psychological aspects in the form of psychological symptoms. Psychological

symptoms of stress include: Symptoms of cognition (thoughts) under stress conditions can disrupt an individual's thought process. Individuals who experience stress tend to experience problems with memory, attention and concentration. Apart from that, cognitive symptoms are also characterized by low self-esteem, fear of failure, easy to act embarrassingly, anxiety about the future and emotional instability. Emotional symptoms, stressful conditions can disrupt an individual's emotional stability. Individuals who experience stress will show symptoms of irritability, excessive anxiety about everything, feeling sad and depressed. Behavioral symptoms, stressful conditions and data influence daily behavior which tends to be negative, causing problems in interpersonal relationships. Behavioral symptoms that appear are difficulty working together, loss of interest, inability to relax, and easily startled or startled, the need for sex, drugs, alcohol and smoking tends to increase.

According to Yusuf & Nurihsan (in Ulfa & Fahriza, 2019) the factors that cause stress are as follows Physiological stressors. For example, diseases that are difficult to cure, physical disabilities or lack of function of one of the body parts, and body posture that is perceived as not ideal. Psychological stressors. For example, prejudice, frustration because they failed to get something they wanted, hasud, hostility, feelings of jealousy, conflict personal, and desires beyond ability. And social stressors. For example, disharmonious relationships between family members, divorce, unemployment, death, termination of employment, crime, and so on.

Al-Qur'an is the word of Allah SWT that was revealed (revealed) to Prophet Muhammad SAW through the angel Gabriel, which is a miracle, which is narrated mutawatir, which is written in mushaf, and reading it is worship. The Qur'an is the holy book which is the main and first source of Islamic teachings, as a guide for the life of mankind revealed by Allah SWT to the prophet Muhammad SAW as one of the unparalleled blessings for the universe. It contains a collection of divine revelations that become guidance, guidelines and lessons for those who study and practice them. Because of that, everyone who believes in the Qur'an will grow in love for it, love to read it, to learn it, and understand it as well as practice and teach it.

The aspect of reading sub-verses of the Qur'an is attention in the form of consuming a person's attention and time and energy to read the holy verses of the Qur'an. Appreciation in reading the holy verses of the Qur'an means understanding and absorbing the contents and content of the verses read. Then it is used as new information which is stored as knowledge. Because reading the Qur'an is accompanied by an understanding of the meaning or content, it will give rise to interpretations and thoughts of the verses that are read, then understanding the meaning is carried out with the aim of making humans able to carry out all the commands written in the Qur'an, as in the words of the Prophet: "The best of you are those who study the Qur'an and practice it." The frequency of reading the holy verses of the Qur'an can occur in different frequencies

It varies, it can be once a day, once a week, or once a month, depending on the individual. The duration of reading the holy verses of the Qur'an takes time, the length of time required to read the holy verses of the Qur'an. So the most important thing in the intensity of reading the holy verses of the Qur'an, apart from the level of frequency, is understanding the contents of the verses read so that someone can put them into practice in life. with blessings, therefore people who read, hear the reading, and protect it from ugliness, evil and disease.

Life in Islamic boarding schools is different from school life in general, making new students experience difficulties and learning programs that make it difficult for some students to adapt. Apart from that, conditions in the dormitory with different rules and conditions from those at home can be a source of stress (*stressor*) so it can cause stress.

These students need to try to overcome stress and find new solutions to the various problems they face. So at the level of adolescent development, self-adjustment becomes very important. The ability to healthy adapt to the environment is an important prerequisite for the creation of an individual's mental health. There are various methods for reducing stress. According to Hardjana (in Nugraheni, et al, 2018), there are various methods for dealing with stress such as: pharmacological, behavioral, cognitive, meditation and hypnosis, and music. ). Anggraieni and Subandi (Nugraheni, et al, 2018) argue that therapy to reduce stress using a religious approach is one of the methods of dhikr relaxation therapy. This relaxation therapy apparently has a significant influence on stress levels. Another way to reduce stress with a religious approach is to use the Al-Qur'an as a medium. The Qur'an is also known as As Syifa, which means Healer, has the power to handle and heal mental stress.

Previous research has explored various strategies for reducing stress among students, including in boarding school environments. However, studies integrating the intensity of Quranic reading with the application of information technology, such as expert systems and PHP methods, are still limited. Most research focuses on conventional psychological approaches or separate religious interventions, without combining them with information technology that could provide a more personalized and accessible approach for students. This indicates a significant knowledge gap in the literature, where the potential synergy between spiritual practices and information technology in stress reduction has not been fully explored, particularly in the context of education at Islamic boarding schools.

This is reinforced by the research results of Abdurrochman, et al (in Nugraheni, et al, 2018) that Al-Qur'an stimulants can be used as relaxation therapy, even better than music therapy stimulants, because Al-Qur'an stimulants can produce delta waves of 63.11% of music therapy. The increase in delta waves also reached the highest presentation of 1,057%. This Al-Qur'an stimulant often gives rise to delta waves in the frontal and central areas on the left side of the brain. This happens because the wave frequency of reading the Koran has the ability to reprogram brain cells, increase their abilities and balance them.

This research is based on Lazarus and Folkman's (1984) stress theory, which highlights the importance of an individual's cognitive assessment and coping strategies in facing stressors. In this context, religious therapy such as Quranic reading is considered an effective coping strategy, providing psychological and spiritual support that can reduce stress (Ahmed & Amer, 2013). This research is significant as it offers practical and theoretical solutions to combat stress among students, by integrating religious methods and information technology in stress interventions. The research findings are expected to provide new insights into the application of technology-supported religious therapy, contributing to the development of educational practices and enhancing psychological well-being in Islamic boarding school environments.

## METHOD

### Design dan Partisipant

This research is experimental research with the design used, namely *Randomized Pretest Posttest Design*. In this study the researchers divided the subjects into 2 groups namely the experimental group and the control group. In this design, the researcher selects subjects randomly, the researcher also determines which will be the experimental group and the control group randomly.

The subjects of this research were 20 new students at the Insan Scholar Boarding School who had previously been selected from the results of work on the stress level diagnosis application and received scores ranging from moderate to severe to very severe, divided into 10 experimental groups and 10 control groups.

The study subjects were selected through a strict selection process, with inclusion criteria such as age, status as a new student, and no history of prior psychological disorders. Randomization was carried out to divide subjects randomly into experimental and control groups, ensuring an even distribution of subject characteristics. This is in line with the methods described by Smith and Doe (2020) in their study on randomization in psychological research.

### Instrumentation

The development of the expert system and integration of PHP methods are described in detail. The expert system is designed to collect subject response data and analyze the effectiveness of Quranic reading interventions on stress levels. The PHP method is used to develop a user-friendly interface for participants to input data and for researchers to access analysis results. This technique is similar to that used in research by Johnson (2021), which describes the application of expert systems in evaluating psychological interventions.

Data collection was carried out to reveal the stress experienced by the subjects, namely by using the stress scale from Lovibond & Lovibond's (1995) DASS instrument which had been adapted. The adaptation and validation process of the Depression Anxiety Stress Scales (DASS) for this research context involved several critical steps to ensure its reliability and validity in measuring the intensity of Quranic reading and its influence on stress reduction. This included pilot testing on a small sample from the target population and statistical analysis to evaluate the instrument's internal consistency. The choice of Paired Sample t-Test as the analysis method was based on the need to compare pre-test and post-test scores within the same group, allowing this study to effectively measure changes in stress levels following Quranic reading interventions.

Preparation Stages Selection of the problem to be revealed, Determine the problem formulation and research methods that will be used, Explain the aims and objectives of the research to the subject (informed consent), Ask permission from the respondents to start the research, Research permission letter requesting student time from the leadership of the Insan Scholar Boarding School Islamic Boarding School.

Equipment stage, Provide a letter stating the respondent's availability to participate in the research, Manipulation Check which aims to find out the subject's opinion about the treatment given, Murotal, speaker and al-quran to give treatment and Give rewards after treatment.

### Level of implementation

Research data collection was carried out in class X of the Insan Scholar Boarding School Islamic Boarding School. The research was carried out at 11.00 – 12.00 WIB. This implementation was divided into 2 time sessions which had been adjusted by the research subjects, namely the first 15 minutes *pre-test*, 30 minutes to do the experiment, and 15 minutes to perform *post-test*.

Implementation Network Researcher I is tasked with distributing willingness to participate question sheets, stress scale sheets, and manipulation check sheets to subjects and is tasked with collecting them again after all the sheets are filled with answer data. Researcher II acts as a tester and provides instructions for filling out the pretest and posttest sheets. Researcher III is tasked with monitoring entry points around the room and taking photo and video evidence.

The stages in the research carried out include: The researcher explains the instructions in advance regarding the procedures for filling *informed consent*. Then *informed consent* distributed to respondents and asked to fill them in. After the respondent has finished filling in, informed consent is collected. After that the respondent was asked to read the Al-Qur'an while listening to the murotal with Al-Qur'an verses from Surah Al-Waqi'ah Verses 1-96. for 20-25 minutes. After giving the treatment, respondents were given a manipulation check sheet which aims to find out the respondent's opinion regarding reducing stress. Through this manipulation, the researcher also manipulated a written check by adding questions about what the subject felt after receiving treatment.

After the treatment is carried out, the respondent is then given a questionnaire. This aims to determine whether there are changes before or after treatment is given. After the respondent has finished filling in the questionnaire, the questionnaire is collected for further data collection.

Data collection was carried out to reveal the stress experienced by the subjects, namely by using the stress scale from Lovibond & Lovibond's (1995) DASS instrument which had been adapted.

### Scale

The scale method is the main method used in this research. This scale aims to determine the subject's stress level. The scale has the characteristics of being a psychological measuring tool, namely the stimulus is in the form of a statement that reveals the behavioral indicators of the attribute to be measured. The scale contains many items and the answers in the scale are acceptable as long as they are given honestly and seriously. Instrument items are given to respondents, then respondents are asked to provide answers or responses on the sheet provided. The answer choices for each item consist of 4 categories with their respective scores in the following table:

### Measuring device

Scale stress THAT (*Depression Anxiety own scale*) adapted from the character *lovibond & lovibond* (1995). Data collection for the stress variable was carried out by distributing stress scales to be filled in after the treatment was given and then collected again. To measure stress levels. The stress levels on this instrument are normal, light, moderate, and very heavy.

Analysis of experimental research data in the experimental group (KE) and control group (KK) with design *pre-post test* carried out from the results of the diagnostic application for stress levels in subjects who received scores ranging from moderate to severe and very severe. After conducting the experiment, the collected data was analyzed by collecting all the data obtained from *pre-test* and *post-test* then input using *excel*, then data processing was carried out using *SPSS for windows version 21* (Periantalo, 2016).

The analysis used in the research uses *Paired sampel t-Test* is a test of the difference between two paired samples. Paired samples are the same subjects, but experience different treatments. This different test model is used to analyze the research model before and after. According to Widiyanto (2013) paired sample t-test is a testing method used to assess the effectiveness of treatment, characterized by differences in the average before and the average after treatment is given. This is done to see the score comparison *pre-test* and *post-test* who came from 2 groups for determine the application of the intervention method provided whether there is an increase or not before and

after the treatment between the experimental group and the control group (Sugiyono, 2011). After the analysis, the researcher draws conclusions from the results of the research conducted.

**Research Ethics**

This study adheres to research ethical guidelines by securing informed consent from all participants, maintaining the confidentiality of personal data, and minimizing potential risks associated with participation in the study. These measures are taken to ensure that the research is conducted with integrity and respect for the rights and welfare of research subjects.

**RESULTS AND DISCUSSION**

In this research the data collected was analyzed using *Paired sampel t Test* to compare scores on the pre-test and post-test in the 2 experimental and control groups.

**Table 1. Comparison of pre-test and post-test**

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test	6.0000	10	2.40370	.76012
	Post-test	10.3000	10	2.90784	.91954

Table 1 shows the scores after treatment or *post test* in the experimental group with a score of 0.919 greater than the score *pre-test* 0.76, with a standard deviation score value *post test* (SD=2.9) greater than *pre-test* (SD=2.4). Meanwhile, the score in the control group is with a

score *post-test* (Mean=10,3) is greater than the pre-test score (Mean=5). This score shows changes and improvements in the experimental group compared to the control group before and after the treatment was given.

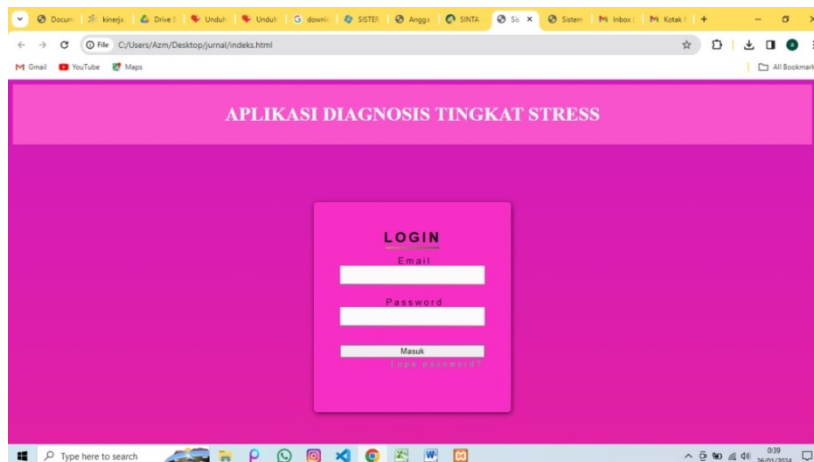
**Table 2 Uji Korelasi Paired Samples T-test**

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	retest - posttest	-4.30000	1.70294	.53852	-5.51821	-3.08179	-7.985	9	.000

Based on Table 2, it can be seen that the correlation coefficient value is significant 0.000 with a value <0.05 and has a significant relationship. Based on this, it can be concluded that the implementation of the experiment in the pre-test and post-test groups experienced significant

changes so that it can be stated that the intensity of reading the Al-Quran can reduce stress in students at the Insan Scholar Boarding School.

a. User Login Page



## b. User Diagnostics Page

no	aspek penilaian	0	1	2	3
1	Menjadi marah karena hal-hal kecil/sepele	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Mulut terasa kering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Tidak dapat melihat hal yang positif dari suatu kejadian	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Merasakan gangguan dalam bernapas (napas cepat, sulit bernapas)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Merasa sepertinya tidak kuat lagi untuk melakukan suatu kegiatan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Cenderung bereaksi berlebihan pada situasi	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

berikutnya

## c. Diagnostic Results Page

tingkat	depresi	kecemasan	stres
Normal	0 – 9	0 – 7	0 – 14
Ringan	10 – 13	8 – 9	15 – 18
Sedang	14 – 20	10 – 14	19 – 25
Parah	21 – 27	15 – 19	26 – 33
Sangat parah	> 28	> 20	> 34

## DISCUSSION

Based on the findings that show a significant increase in post-test scores compared to pre-test scores in the experimental group, we can conclude that the intensity of Quranic reading contributes to stress reduction among students at Insan Scholar Boarding School. These findings are consistent with previous research indicating the benefits of Quranic reading in enhancing psychological well-being (Ahmed & Amer, 2013). The implications of these findings emphasize the importance of integrating spiritual practices into stress intervention programs in educational settings. Further research is needed to explore the specific mechanisms that make Quranic reading effective in reducing stress, as well as the potential application of similar practices in other settings.

Quranic reading is not only a religious practice but also a meditative activity that enhances mindfulness and presence of mind, facilitating self-reflection and introspection. This process encourages individuals to shift focus from external stressors to internal understanding and tranquility, aligning with Gross's (1998) emotion regulation theory. When practiced regularly, this could strengthen an individual's emotional connection with their spiritual values, providing deeper meaning and purpose in life, which has been shown to reduce stress and increase resilience to psychological challenges (Pargament, 1997).

This spiritual aspect has the potential to significantly enhance psychological well-being, offer new perspectives, and strengthen resilience against stress. Activities of a spiritual nature offer an alternative pathway for self-understanding and meaning-seeking, which are vital in facing psychological and emotional challenges. The implications of these findings suggest the importance of acknowledging and integrating spiritual aspects into mental health interventions, especially in educational settings like Islamic boarding schools, where spirituality often forms a core part of daily life.

This study uses an experimental method to evaluate the effect of Quranic reading on stress reduction, with findings indicating significant potential for spiritual interventions in educational settings. The integration of regular Quranic reading programs in educational institutions, particularly Islamic boarding schools, is recommended as an effective strategy for stress reduction. This approach not only supports the psychological well-being of students but also instills profound spiritual values. The continuity between academic and spiritual education can create a more harmonious and supportive learning environment.

In this study, achieving statistical significance indicates that spiritually-based interventions have an objectively measurable effect on reducing stress, affirming that such approaches have a strong scientific foundation. These findings underscore how the integration of spiritual

traditions and scientific research methodology can enrich our understanding of stress reduction strategies, offering new perspectives in addressing psychological challenges. This approach opens up further exploration into the application of spiritual practices as therapeutic components in clinical and educational settings.

## LIMITATIONS

This study has several limitations that should be noted. Firstly, the selection and randomization of subjects were limited to new students at Insan Scholar Boarding School, which may affect the generalizability of findings. Secondly, the adapted DASS scale used requires further validation to ensure accuracy in specific cultural and educational contexts. Thirdly, the relatively short duration of intervention and observation period may not capture the long-term effects of Quranic reading on stress. Fourthly, this study did not consider other variables that might influence stress levels, such as social support or extracurricular activities. These limitations suggest the need for further research with a broader sample, stronger validation methods, longer observation periods, and analysis of additional variables to strengthen the findings and their implications.

## CONCLUSIONS AND RECOMMENDATION

It can be concluded from making this Stress Level Diagnosis application using expert system and PHP methods to determine the effect of the intensity of reading the Al-Quran on the stress level of students. Results were obtained in the experimental group and control group by testing *Paired sampel t-Test* significant of 0.000. These results are in line with previous research entitled "Effectiveness of Reading the Al-Qur'an to Reduce Academic Stress in Class IX Students of SMA Negeri 1 Kebumen" discussing the problems faced by class IX students related to academic stress. The difference with previous research is in the research subjects, where for the previous research subjects the subjects were class IX students of SMA Negeri I Kebumen, while the research subjects were students of the Insan Scholar Boarding School Islamic Boarding School in Payakumbuh. Another difference is in the independent variable, where in previous research the independent variable was reading the Al-Qur'an, while the independent variable in the research was the intensity of reading the Al-Qur'an. The similarities between the research and previous research are in the dependent variable, namely stress.

The results of data analysis show that there are significant differences in scores between the experimental and control groups in all aspects. So that there is synchronization of values between the two groups from the results of the assessment of the stress level diagnosis application carried out. For future research, it is hoped that we will be able to explain in detail each subject studied. During the treatment of reading the Al-Quran, deficiencies were also found in terms of time and the observation period was not very in-depth. And when conducting experiments researchers cannot pay attention to all subjects in particular or each individual, causing sometimes there are several things that cannot be observed as a whole.

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