



## **The Effect of Progressive Muscle Relaxation Towards Reducing Anxiety in Seventh Grade Students in Facing Exams at Islamic Boarding School of Al-Ikhlâs Female Kuningan Jawa Barat**

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**Abstract.** Exams are one of the factors that affect the level of anxiety. The anxiety experienced by women higher than that of men, the reason is because the hormones possessed by women are faster in bringing out the side of empathy. One of them is facing an exam. Therefore, it is necessary to have an intervention to reduce anxiety, one of which is Progressive Muscle Relaxation therapy. This study aims to determine the effect of Progressive Muscle Relaxation to reduce anxiety levels in seventh grade students in facing exams. This quasi-experimental research uses a one group pretest-posttest design. The sample in this study amounted to 28 participants. The sampling technique used was total sampling. The research instrument using an anxiety questionnaire is the Hamilton Anxiety Rating Scale (HARS). This questionnaire has been tested for validity and reliability with a coefficient value of Cronbach's Alpha 0.793 with a total of 14 items. The data were analyzed using the Wilcoxon test to determine the effect of Progressive Muscle Relaxation on reducing anxiety levels. The results showed that there was a significant decrease in the results of the pre and post anxiety level questionnaires with an average decreasing value of 14.50. And the obtained Wilcoxon test results  $0.000 < 0.05$ , which means that there is an effect of giving progressive muscle relaxation therapy on anxiety in class VII students. Progressive Muscle Relaxation can reduce anxiety levels in female students in facing exams.

**Keywords:** Progressive Muscle Relaxation, Anxiety, Exams, Students

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### **INTRODUCTION**

Pesantren is a distinctive and unique Islamic education system in Indonesia, where most of the population is Muslim. It is distinctive because the pesantren education model proliferates in Indonesia and is not easily found in other countries. Pesantren has a uniqueness not found in public schools, such as the presence of Kyai, santri, huts, yellow books, and mosques (Shofiyyah et al., 2019). Pesantren is one educational institution that equips students with Islamic religious education and practice as well as general education (Karimah, 2018). With a more comprehensive holistic education, Pesantren provides a more effective environment to develop future leaders who can carry the carriages and motors of social, political, economic, and religious life movements.

The Islamic boarding school curriculum is designed to develop students' intelligence, skills, character, and moral values. Islamic boarding schools, dormitories, and community environments are all supervised by teachers to ensure these goals are achieved. This system is suitable for all student activities that are programmatic, organized, and scheduled. Meanwhile, institutional rules have many moral values in them. The Islamic boarding school system emphasizes self-reliance education, which can benefit students (Chandra, 2020). Students who choose education in pesantren are called santri and santriwati. Santriwati is a word that means female students studying in pesantren (Fitriyah et al., 2018).

Life in pesantren differs significantly from outside, such as in the family or community. Those who have never experienced the world of pesantren before will undoubtedly find it difficult to adapt themselves to the environment or conditions in the pesantren. The pesantren environment is different from the home environment, which generally always fulfills all the needs of parents. In pesantren, students are educated to be independent and manage all their needs, ranging from clothing, clothing, and financial management to other daily needs (Nursyamsiyah, 2019). The evaluation system applied to Islamic boarding schools uses written and oral examinations.

Oral examinations are applied to determine students' language skills. Evaluation of learning in Islamic boarding schools includes three cognitive, psychomotor, and affective assessments. Cognitive assessment on the midterm and end-of-term exam tests. Affective assessment on student activeness while in pesantren, while psychomotor assessment is seen from student service (Amrulloh, 2017). The discipline recognition system was implemented early, such as obeying teachers and rules set in Islamic boarding schools. For example, in the application of discipline in exams. Students highly anticipate the exam; during it, students can see their abilities during learning. Santri hopes to get maximum value.

However, judging from the application of the exam, there are several opposing sides experienced by students, namely anxiety and anxiety when the test scores are not as expected (Arisandi, 2019). Pain, fear, and anxiety, especially anticipatory anxiety, are warning systems that notify us of dangers or threats to the body's integrity. Anxiety is posed by threats that are less predictable or by threats that are physically or psychologically more distant. So anxiety is a longer-lasting state of fear (Nersessian & Edward, 2013). The American Anxiety and Depression Association found in research conducted in 2017 that, on average, every month, three out of four Americans suffer from an anxiety disorder (Creative, 2020).

## LITERATURE

Santriwati is a term for pesantren students who are female (Fitriyah et al., 2018). The term santri is already very popular in Indonesia, especially among Muslims. The existence of pesantren has an essential role in the development of Indonesia because pesantren has given birth to many national figures and shaped the character of the Indonesian nation. The word Pesantren which, according to experts, is a gathering place for students or, in the language terms of pesantren itself, is a loanword from the santri itself by adding the addition of Pe- di at the beginning and -en at the end, from where it can be concluded that the origin of the word is santri. Hence, it turns into pesantren (Ahmad et al., 2020).

Santri comes from Sanskrit, which means literate. The word santri, which in Javanese "Tantrik," is someone who follows a teacher wherever he goes or stays to be able to learn science from him (Purnama et al., 2019). Santri is the name of people or children studying in every Islamic boarding school. The students came from distant areas, but some were close to their homes from the Islamic boarding school. The education system in the Islamic boarding school is twenty-four hours full under the guidance of kai, ustadz-ustadzah, and administrators/coaches. This ensures that students receive a solid educational foundation and practical training.

Education in Islamic boarding schools aims to equip students with the knowledge and skills they need to succeed in the national education system and their schools. Pesantren is Indonesia's oldest and most famous Islamic educational institution (Karimah, 2018). With the increasing popularity of science and technology, traditional pesantren began to shift in the early 20th century. The rapid development of technology, information, and communication significantly impacts students' habits and character. Modern pesantren are open to anyone, and a public lesson system is applied to everyone.

While schools that adhere to Islam already have electronic devices that support the educational process, such as laptops, focus, and others. This also impacts the examination system applied in Islamic boarding schools (Romdoni & Malihah, 2020). Santriwati, who live in Islamic boarding schools, must adapt to the new environment. The independence of a student can indicate their fighting power. When living in a pesantren environment, students often encounter obstacles such as wanting to go home, being uncomfortable with friends, not wanting to study, breaking the rules, and even experiencing anxiety. These factors significantly affect the health of female students and will have a negative impact if it lasts continuously (Rahim, 2017).

## METHOD

This research is quantitative research using the Quasi-Experimental method research design. According to (Sugiyono, 2019), experimental research methods are methods used to look for influences on something that is treated against others under controllable conditions. Quasi-experiment is an experiment in which the smallest experimental unit is not randomly placed in an experimental and control group (nonrandom assignment). Quasi-experiments use all subjects in the intact group to be treated rather than randomly drawn subjects. The research design approach uses one group pretest-posttest design, which is a design to clarify cause and effect by involving a group of subjects, an intervention group without a control group. The subject group was observed before and after the intervention (Hastjarjo, 2019).

## DISCUSSION

The study's results will be presented in two parts: univariate and bivariate analyses. The following is a description of the results of the research that has been done.

### Univariate Analysis

Based on table 1.3, the level of adolescent anxiety in facing exams before the intervention was most dominant, namely mild anxiety, which was 11 people (39%).

**Table 1.3 Participants' Anxiety Levels before the Intervention (n=28)**

Variable	Frequency	Percentage (%)
Anxiety Level		
No Anxiety	10	36%
Mild Anxiety	11	39%
Moderate Anxiety	4	14%
Severe Anxiety	3	11%
Severe Anxiety	0	0

Based on table 1.4 that the level of anxiety of adolescents in facing the exam after the intervention 26 participants (93%) did not experience anxiety.

**Table 1.4 Participants' Anxiety Levels after Intervention (n=28)**

Variable	Frequency	Percentage (%)
Anxiety Level		

No Anxiety	26	93%
Mild Anxiety	2	7%
Moderate Anxiety	0	0
Severe Anxiety	0	0
Severe Anxiety	0	0

### Bivariate Analysis

Before the data is analyzed further, an analysis requirements test is first needed, namely the normal distribution test or commonly called the normality test. A normality test is performed to determine whether the data obtained is normally distributed or not. This normality test uses the SPSS (statistical package for social science) version 16 program. This study used the shapiro wilk normality test. Data can be said to be normally distributed if the significance value is greater than 0.05 ( $> 0.05$ ).

The following are the results of the pre and post intervention data normality test.

**Table 1.5 Pre and post intervention data Normality Test**

Variable	Significance Value	Information
Pre intervention	0,007	abnormally distributed
Post intervention	0,003	abnormally distributed

Based on table 1.5 above, it can be seen that the results of the pre-intervention normality test of Progressive Muscle Relaxation in class VII students obtained a significance value of 0.007 which is less than 0.05 which means it is abnormally distributed and the results of the post-intervention normality test of Progressive Muscle Relaxation in class VII students obtained a significance value of 0.003 which is less than 0.05 which means it is abnormally distributed. The data in this study are abnormally distributed due to the small number of samples and the numbers produced close to each other or far apart. So researchers use nonparametric tests to analyze the data.

Because the data is not normally distributed, the analysis continues using the Wilcoxon test. Researchers used the Wilcoxon test with SPSS software version 16. The results of the pretest and posttest values with the Wilcoxon test can be seen in table 1.6.

**Table 1.6 Description of Pretest and Posttest (n=28)**

N	Mean Rank	Sum of Ranks
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Post Questionnaire	Negative Ranks			
-	Pre	28a	14.50	406.00
Questionnaire	Positive Ranks	0b	.00	.00
	Ties	0c		
	Total	28		

- a. Post Questionnaire < Pre Questionnaire
- b. Post Questionnaire > Pre Questionnaire
- c. Post Questionnaire = Pre Questionnaire

From table 1.6 obtained the following results:

The negative ranks between pre- and post-intervention anxiety levels were 28. A score of 28 showed that as many as 28 participants' scores decreased in value in the post-intervention. The mean rank or average decrease in value is 14.50, while the sum of rank or negative rank is 406. The positive difference result is 0 which means there is no positive difference or increase in value from pre and post intervention. The tie result is 0 which means there is no similarity in value between pre and post intervention. Hypothesis testing using the Wilcoxon test can be seen in table 1.7.

**Table 1.7 Effect of Anxiety Level Before and After Intervention (n=28)**

	Post Kuesioner - Pre Kuesioner
Z	-4.629a
Asymp. Sig. (2-tailed)	.000

- a. Based on positive ranks.
- b. Wilcoxon Signed Ranks Test

Based on the output that can be seen in table 1.7 it is known that Asymp. Sig. (2-tailed) is worth 0.000. Because the values of  $0.000 < 0.05$  can be interpreted that there is a significant effect of progressive muscle relaxation therapy on anxiety given before and after the intervention. Based on the average value of post and pre-questionnaire that the average post questionnaire decreased from pre-questionnaire which can be interpreted that there is a decrease in anxiety levels after the intervention. Based on the results of the study, researchers conducted a discussion to answer the formulation of problems related to the effect of progressive muscle

relaxation on reducing anxiety in class VII students in facing exams at the Al-Ikhlas Putri Modern Islamic Boarding School, Kuningan, West Java. The discussion that researchers mean is to compare theory with research results.

Anxiety is a worry related to feelings of uncertainty and helplessness. This emotional state has no specific object, is experienced subjectively and communicated. One of the specialist therapies of mental nursing as anxiety management is progressive muscle relaxation which is part of relaxation therapy. The use of relaxation in the clinical field has begun since the early 20th century when Edmund Jacobson conducted research and reported in a book *Progressive Relaxation* (Syafi'udi, 2020).

### **Anxiety levels before progressive muscle relaxation interventions**

Based on the study's results, table 1.3 showed that as many as 28 participants experienced anxiety with varying levels of anxiety. Among them, there was no anxiety in as many as 10 participants (36%), mild anxiety in as many as 11 participants (39%), moderate anxiety in as many as 4 participants (14%), and severe anxiety in 3 participants (11%). The dominant level of anxiety on this questionnaire was 11 participants with mild anxiety levels.

Participants with severe anxiety level category There were 3 participants with category values of feeling severe anxiety, severe tension, feeling of significant depression, severe cardiovascular symptoms, severe gastrointestinal symptoms, severe urogenital symptoms, and severe autonomous symptoms. In the questionnaire value before the intervention, it was found that the highest anxiety score was 32 with the category of severe anxiety characterized by severe feelings of anxiety, moody feelings such as loss of interest, sadness, feelings of change, indigestion, weight loss, frequent urination, easy sweating, to feel a severe headache.

Tabulating pre-questionnaire data on anxiety levels in participants, the most dominant category affecting participants' anxiety levels is the category of anxiety, including participants having anxiety, bad feelings, fear of their thoughts, and irritability. This is in line with research conducted by Hayat (2017) that anxiety arises as a result of tension reactions from outside or inside the body controlled by the autonomic nervous system; the heart will move faster, breathing will become tight, the mouth becomes dry, and the palms will sweat. Fear, tension, worry, restlessness and restlessness, nervousness, confusion, and fear of one's thoughts can also be experienced by people who feel anxiety.

Class VII students experience anxiety due to external factors, namely conditions during exams that are pretty difficult; students must try hard to study Islamic boarding school and general subjects. Santriwati feels unable to complete it well, more willing to get high scores, so to

achieve this hope makes students feel anxious when facing exams, feeling less confident about being able to answer the questions, afraid of the wrong answer, afraid of failing grades and achievements, even afraid of not going to class (Arisandi, 2019). Internal factors that can cause anxiety are decreased concentration conditions and the hormone serotonin that women have faster in bringing out their empathetic side. Women have a higher emotional level and more fearful feelings than men (Hou et al., 2020).

Women are more open about their feelings than men; women are more easily sad and afraid, causing anxiety (Aydm, 2017). According to several studies that have been conducted, anxiety is more common in women than in men; anxiety will arise due to frustration, conflict, and stress, for example, in the context of exams (Anastasia & Marsella, 2020). Women tend to experience anxiety twice as often as men because women's hormones are faster in bringing out the empathetic side. Women have a higher emotional level and more fearful feelings than men (Sari, 2017).

Research that discusses external factors that cause anxiety, one of which is research conducted by Idris (2019), said that the exam is an evaluation system for students after getting lessons at school to find out changes in behavior, both potential and actual. However, in this case, sometimes students respond to exams as a big problem, so from this assumption arises a sense of fear and anxiety (Idris, 2019). Another study, Hamdani (2020), also states that exams can be a stressor for students in the academic learning process and will cause an increase in anxiety conditions.

### **Anxiety levels after progressive muscle relaxation interventions**

The results showed that as many as 26 participants (93%) had no anxiety, and 2 participants (7%) experienced mild anxiety. The decrease in anxiety levels after the progressive muscle relaxation intervention was based on the participants' compliance and cooperation in performing progressive muscle relaxation. The scores shown on the questionnaire after this intervention decreased relatively low, where participants who experienced severe anxiety decreased to mild anxiety even to no anxiety. One of these very low decreases was in tension and feelings of depression or moodiness, with a value of 3 (weight) to 0 (no symptoms).

The average value obtained in the questionnaire before the intervention was 0, i.e., no symptoms. The lowest total score among participants is 1 (No anxiety). This is because, after progressive muscle relaxation, the body becomes relaxed due to the influence of parasympathetic nerves, also known as nutrients, which can cause feelings of wanting to rest and physical

improvements in the body. Thus the value of anxiety levels will be lower after progressive muscle relaxation (Rihiantoro et al., 2019).

Anxiety experienced by participants expressed impaired intelligence and digestive symptoms, such as difficulty concentrating, poor memory, frequent bowel movements, and weight loss. This is due to the conditions of applying discipline during exams and the thinking of students who want to get the best scores. This study found a decrease in anxiety that evenly even dropped drastically due to the response of the influence of progressive muscle relaxation on reducing anxiety. The theory mentioned by Lindquist (2018) is that the benefits of progressive muscle relaxation techniques can reduce muscle tension and reduce anxiety, reduce fatigue, and overcome muscle cramps so that they can cause better concentration.

Decreased scores on the HARS questionnaire The study results showed that progressive muscle relaxation effectively reduced students' anxiety in facing exams. When undergoing progressive muscle relaxation therapy, participants followed directions correctly, and participants practiced progressive muscle relaxation therapy well, resulting in a positive response from participants to progressive muscle relaxation techniques. The relaxation response during progressive muscle relaxation caused a decrease in anxiety levels in students, seen from several pre and post-questionnaire data that showed a decrease in the value of student anxiety levels.

The relaxation response is a general decline in cognitive, physiological, and behavioral awareness. Relaxation also involves a reduction in arousal. The relaxation process lengthens muscle fibers, reduces nerve impulses sent to the brain, and thus decreases brain activity and other body systems. Decreased heart and respiratory rates, blood pressure, oxygen consumption, increased brain activity, and peripheral skin temperature characterize the relaxation response (Suzanne et al., 2010). This is in line with research conducted by Nurnaningsih (2020) that there is a decrease in anxiety levels after the intervention of progressive muscle relaxation techniques. However, everyone scores differently, depending on the solemnity, concentration, and focus carried out by participants.

The effectiveness of the effect of progressive muscle relaxation on anxiety is also in line with research conducted by Burhan (2021) that the effectiveness of progressive muscle relaxation in reducing anxiety has a success rate of up to 93%. Progressive muscle relaxation is considered applicable in Indonesia (Burhan, 2021).

### **Effects of Progressive Muscle Relaxation on Anxiety Levels**

The intervention carried out in this study was a progressive muscle relaxation technique given to class VII students at Al-Ikhlâs Putri Modern Islamic Boarding School. The results of

statistical test analysis on anxiety level scores before and after progressive muscle relaxation intervention showed a significant difference in anxiety levels between before and after progressive muscle relaxation in the intervention group using the Wilcoxon test. The results of the Wilcoxon Test showed that the pre-questionnaire value was more significant than the post-questionnaire value, with an average decrease of 14.50. The results of the questionnaire also showed that there was no equal answer between the pre and post-questionnaire. Asymp obtained the results of the Wilcoxon Test. Sig. (2-tailed) 0.000, which means that Asymp. Sig. (2-tailed) < 0.05.

The impact progressive muscle relaxation can have on individuals to feel relaxed is supported by previous research, revealing that progressive muscle relaxation is effective in lowering academic stress levels. Some actions of progressive muscle relaxation techniques affect the human nervous system. This is in line with Benson's theory that parasympathetic nervous system activity can lead to feelings of rest and physical improvements in the body. This activity is the basis of what Benson calls the relaxation response. Parasympathetic responses include decreased heart rate and blood pressure and increased blood flow. Thus, the relaxation response can be awakened through relaxation exercises, leading to a calm state (Sutira, 2017).

According to the results of the data obtained, this shows the level of anxiety reduced after doing progressive muscle relaxation. That is, progressive muscle relaxation is influential in lowering anxiety levels. The progressive muscle relaxation response performed by participants with focus and according to the direction of standard operating procedures helped the effectiveness of progressive muscle relaxation in reducing anxiety levels. Relaxation is one of the methods used to conduct counseling practices for a group or individual. Progressive muscle relaxation can also be said to be an activity to relax the muscles in the body, which helps reduce the tension felt by the body (Aufar & Raharjo, 2020).

The application of relaxation techniques to deal with anxiety in facing exams shows that relaxation techniques effectively reduce students' anxiety levels in facing exams (Rasyidin & Pratiwi, 2022). Supported by research conducted by Nurnaningsih (2022) showed that students who have done relaxation can reduce anxiety experienced during exams so that they can easily concentrate. The opinion expressed by Nwokolo (2017) is that progressive muscle relaxation can help individuals to reduce anxiety and tension levels. This technique involves tense and relaxing activities on muscle groups (facial muscles, hand muscles, leg muscles, etc.).

The difference in the anxiety of national exam students with progressive muscle relaxation therapy at SMK Islam Sudirman stated that there was a significant decrease after progressive

muscle relaxation. The adaptive response shown, for example, is no longer restless or calm in the face of the test, facial expressions do not show tension, and the airway is normal. This is an excellent response to relaxation to teach students to cope more adaptively (Liyanovitasi et al., 2018).

## CONCLUSION

Based on the results of the research and the discussion described above, it can be concluded from the research "The Effect of Progressive Muscle Relaxation on Reducing Anxiety in Class VII Students in Facing Exams at Al-Ikhlâs Putri Kuningan Modern Islamic Boarding School, West Java" as follows:

1. Based on the study's results, it was found that the level of anxiety before the intervention of progressive muscle relaxation techniques was as many as 18 participants (64%) who experienced anxiety with varying levels of anxiety. Among them were mild anxiety in as many as 11 participants (39%), moderate anxiety in as many as 4 participants (14%), and severe anxiety in 3 participants (11%).
2. Based on the study's results, it was found that the level of anxiety after the intervention of progressive muscle relaxation techniques was A total of 26 participants (93%) had no anxiety, and 2 participants (7%) experienced mild anxiety.

Based on the results of the *Wilcoxon* test, *Asymp. (2-tailed) Sig. (2-tailed) 0.000 < 0.05* can be interpreted as a decrease in the level of anxiety experienced by class VII students after progressive muscle relaxation techniques. Therefore, the results of this study stated that progressive muscle relaxation was affected by reducing anxiety levels in class VII students facing exams at the Al-Ikhlâs Putri Modern Islamic Boarding School, Kuningan, West Java.

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