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THE EFFECT OF THE BUTTERFLY HUG TECHNIQUE ON ANXIETY IN STUDENTS AT STATE MIDDLE SCHOOL 169 WEST JAKARTA

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ABSTRACT

Background: Anxiety is an undefined and pervasive feeling of discomfort, associated with uncertainty and helplessness. Anxiety can be seen directly through changes in a person's physiology and behavior, both directly and indirectly through cognitive and affective responses. Anxiety in adolescents is often characterized by an emotional state that arises from feelings of stress accompanied by significant physical reactions. Butterfly Hug is a therapy that involves techniques to help individuals feel better by suggesting themselves. This technique can significantly increase blood oxygen levels and provide a sense of calm**.** **Objective:** This study aims to determine the effectiveness of Butterfly Hug therapy on anxiety in students of SMP Negeri 169 West Jakarta. **Method:** This study uses a Quasy Experiment research design with a one group Pre-test and Post-test design. This design does not involve a control group**. Result:** There is an influence of Butterfly Hug on anxiety with a sig value <0.05, namely a P-value of 0.000. **Conclusion:** The average level of anxiety before the Butterfly Hug intervention was 30.89 with a min-max anxiety level of 25-41. After the intervention, a value of 14.7 was obtained with a min-max anxiety level of 2-26. So the results show that there is an effect of the Butterfly Hug technique on anxiety.
Keywords: "Butterfly Hug, "Anxiety", "Teenager"

INTRODUCTION

Anxiety is an uncomfortable, undefined, and pervasive condition associated with uncertainty and a sense of helplessness (N. Aulia & Astuti, 2024). Anxiety may manifest directly through physiological and behavioral changes or indirectly through emotional and cognitive reactions. According to data from the World Health Organization (WHO, 2020), anxiety disorders have increased globally by 26%. Meanwhile, data from the Indonesian Ministry of Health (Kemenkes) reported more than 18,000 cases of anxiety in Indonesia during the same year. Among adolescents, the Indonesia National Adolescent Mental Health Survey (I-NAMHS, 2022) revealed that approximately 26.7% of individuals aged 10–17 years experience mental health problems, with anxiety disorders being the most prevalent (3.7%). In Jakarta, the prevalence of anxiety is particularly high, reaching 64.8% (Kemenkes, 2022), with West Jakarta identified as the region with the highest rate of adolescent anxiety (Ramdhiani et al., 2021). This indicates the urgency of effective anxiety management among students. In Indonesia, 47.7% of adolescents are reported to experience anxiety-related problems (Kemenkes, 2021). Furthermore, the latest data published by the Ministry of Health in August 2022 show that anxiety is commonly experienced by the people of DKI Jakarta, with 64.8% of the population affected. This makes Jakarta the province with one of the highest levels of emotional mental disorders, particularly anxiety. According to the 2018 Basic Health Research (RISKESDAS), the prevalence of emotional mental disorders in Jakarta reached 10.1% out of 28,746 respondents. The prevalence of anxiety among residents aged 15–24 years in West Jakarta was 7.1%, ranking as the highest in the Jakarta region (Riskesdas in Ramdhiani et al., 2021). Adolescent anxiety is often characterized by mental distress triggered by stress, accompanied by noticeable physical symptoms such as elevated blood pressure, rapid heart rate, and persistent worry about uncertain situations. Fear of the unknown or fear without a specific cause may also manifest as symptoms of

anxiety (Fitria & Ifdil, 2020). During this developmental stage, adolescents frequently face unpredictable situations, impulses, and unconscious threats that can trigger anxiety responses.

In efforts to reduce anxiety, various intervention methods have been developed, one of which is the *Butterfly Hug* therapy. This therapy is a form of bilateral stimulation designed to produce a calming effect and alleviate emotional tension (Setiawati et al., 2024). It has been proven effective in helping individuals who experience trauma, stress, and other anxiety-related disorders (Yuliana et al., 2024). Several studies have shown that *Butterfly Hug* therapy produces significant results in reducing anxiety levels, both among adolescents facing school examinations and university students under academic pressure (Azka Widi Zulfa Aulia et al., 2024; Mila Naspufah et al., 2022). The researcher selected the Butterfly Hug as the intervention because this therapy is a form of cognitive psychotherapy and is beneficial in managing anxiety. The Butterfly Hug serves as a form of psychological first aid for individuals experiencing anxiety, as it provides self-stimulation that helps individuals calm themselves when facing negative emotions such as discomfort, sadness, fear, and anxiety.

A preliminary study conducted among ninth-grade students at SMP Negeri 169 West Jakarta found that most students experienced anxiety before exams and expressed concerns about their future education. Changes in the curriculum were also identified as contributing factors to academic stress. In this context, nurses play a strategic role in introducing, guiding, and evaluating the implementation of *Butterfly Hug* therapy among students, while also providing adequate emotional support (Rahmi Karoenia et al., 2024).

Based on the aforementioned background and empirical findings, this study aims to examine **the effectiveness of *Butterfly Hug* therapy in reducing anxiety levels among students at SMP Negeri 169 West Jakarta**.

MATERIALS AND METHODS

This study employed a quasi-experimental design using a one-group pre-test and post-test design. The research was conducted from March 11 to March 14, 2025, at one junior high school in West Jakarta. The sampling technique used was purposive sampling, involving 35 respondents who met the inclusion and exclusion criteria. The inclusion criteria were: students enrolled in Grade IX at SMP Negeri 169 West Jakarta; students experiencing moderate to severe anxiety; and students who were willing to participate in the study. The exclusion criteria were: students who did not experience anxiety or only had mild anxiety; and students who were not present during the intervention period. Data were collected using primary data, obtained through the direct distribution of questionnaires by the researcher. The data were analyzed using the Paired Sample T-Test. In this study, ethical approval was obtained by the researcher prior to administering the intervention to the respondents. This study also acknowledges the possibility of bias, as the researcher did not divide the respondents into separate intervention and control groups.

The procedure of the Butterfly Hug technique was as follows: selecting a comfortable position to perform the method; crossing both arms in front of the chest with the fingertips placed on the shoulders; regulating breathing and tapping the shoulders alternately using the right and left hands; performing the butterfly-wing-like movements for several minutes until a feeling of calmness and relaxation is achieved; taking a deep breath and exhaling slowly; and while performing the movements, giving positive self-affirmations for self-motivation. This therapy was carried out for three days, with a duration of 10 minutes per session. Before the intervention, respondents were trained in how to perform the technique. The level of anxiety was measured before and after the intervention.

RESULTS AND DISCUSSION

1. Univariate Analysis

   The total number of respondents in this study was **35 students**. The demographic characteristics included gender, as presented in Table 1.

Table 1. Frequency Distribution of Anxiety Levels Before the Intervention (n = 35)

Anxiety Level	Frekuensi	
	N	%
No anxiety	0	0
Mild anxiety	0	0
Moderate anxiety	28	80
Severe anxiety	7	20

Total	35	100

source : primary data, 2025

Table 1 shows that the majority of students experienced moderate anxiety, with 28 respondents (80%).

Table 2. Frequency Distribution of Anxiety Levels After the Intervention (n = 35)

Anxiety Levek	Frekuesnsi	
	N	%
No anxiety	14	40
Mild anxiety	19	54,3
Moderate anxiety	2	5,7
Severe anxiety	0	0
Total	35	100

Source : Primary Data, 2025

Table 2 shows that the highest frequency of anxiety level after the intervention was mild anxiety, experienced by 19 respondents (54.3%), while the lowest was moderate anxiety, experienced by 2 respondents (5.7%).

Table 3. Mean Scores of Pre-Test and Post-Test Anxiety Levels Among Students at SMP Negeri 169 West Jakarta (n = 35)

Anxiety Level	mean	SD	Min-max
Pre-test	30.89	4.613	25-41
Post-test	14.17	6.373	2-26

Source : Primary Data, 2025

Based on Table 3, the mean anxiety score before the *Butterfly Hug* intervention was 30.89 with a standard deviation of 4.613. The lowest pre-test score was 25 (moderate anxiety) and the highest was 46 (severe anxiety). After the intervention, the mean score decreased to 14.17 with a standard deviation of 6.373. The lowest post-test score was 2, indicating no anxiety.

2. Bivariate Analysis

Table 4. Shapiro–Wilk Normality Test

Variable	N	Statistic	Sig
Pre-test	35	0.940	0.054
Post-test	35	0.970	0.439

Source : Primary Data,2025

Table 4 shows that both pre-test and post-test data are normally distributed, as indicated by *p*-values greater than 0.05.

Table 5. Paired Sample T-Test of Anxiety Levels Before and After Intervention (n = 35)

Intervention	Mean	SD	P Value
Before	30.89	4.613	0,000
After	14.17	6.373	

Source : Primary Data, 2025

Table 5 shows that the Paired Sample T-Test produced a *p*-value of 0.000, indicating that the alternative hypothesis (Ha) was accepted. This means that the *Butterfly Hug* technique had a significant effect on reducing anxiety levels among students at SMP Negeri 169 West Jakarta.

DISCUSSION

A. Univariate Discussion

a. Anxiety Levels Before the Butterfly Hug Intervention

Based on the study results, before the intervention was given to 35 respondents, 28 students (80%) experienced moderate anxiety, while 7 students (20%) experienced severe anxiety. The prevalence of anxiety among adolescents is relatively high and can occur at an early age. Analysis of the questionnaires filled out by students showed moderate to severe anxiety levels, which were influenced by several factors such as fear of facing final examinations, college entrance tests, parenting style, parental expectations, and poor peer relationships. Among these, the external environment was identified as the most dominant factor contributing to students' anxiety.

Anxiety in students can arise as a result of the pressure from the academic workload they are facing. In addition, a lack of family support and an unsupportive social environment can also trigger anxiety. Therefore, it is important to address students' anxiety promptly, as it can interfere with concentration and hinder their learning process.

b. Anxiety Levels After the Butterfly Hug Intervention

Based on the results of the study, the anxiety levels of the 35 participants decreased after the Butterfly Hug intervention was administered. After the therapy, 14 respondents **(**40%) were categorized as having no anxiety**,** with a mean score of 30.89 and a minimum score of 2**.** Meanwhile, 19 respondents (54.3%) experienced mild anxiety, and 2 respondents (5.7%) still had moderate anxiety, with a maximum score of 26.It can be concluded that the average anxiety level of the respondents decreased after the intervention was given. According to a study conducted by Azka (2024)**,** performing the Butterfly Hug for **t**hree days**,** with one session per day lasting 10 minutes, was effective in reducing anxiety (A. W. Z. Aulia, Yuliatuti, et al., 2024).

Other studies conducted over one week with five sessions lasting 15–20 minutes each also showed a decrease in anxiety levels among students. This therapy helps reduce anxiety by regulating thoughts and bodily responses, promoting a sense of calm. Moreover, it enhances self-confidence and supports recovery from emotional trauma, as it incorporates positive affirmations and deep breathing techniques that help respondents feel more relaxed.

B. Bivariate Discussion

Anxiety is a psychological condition in which individuals experience excessive and uncontrollable worry, negatively affecting their daily lives. Feelings of anxiety arise in uncomfortable situations, often accompanied by difficulty concentrating and restlessness.

The results of this study indicate a significant decrease in anxiety levels between the pre-test and post-test. The mean score decreased by 16.72 points, from 30.89 (before intervention) to 14.17 (after intervention), with a *p*-value of 0.000. This finding aligns with research conducted by A. W. Z. Aulia, Yuliatuti, et al. (2024), titled *"The Effect of Butterfly Hug Therapy on Anxiety Levels in Adolescents,"* which also reported a significant reduction in anxiety ($p = 0.000$). Similarly, Mila Naspufah, Adi Saprudin, and Yana Heriana (2022) found that administering the *Butterfly Hug* for three consecutive days, once daily for 10 minutes, effectively decreased anxiety levels (Naspufah et al., 2022).

The *Butterfly Hug* technique offers several advantages over other therapies, including helping to reduce anxiety by harmonizing mind and body, inducing calmness, and balancing brain chemicals related to mood regulation. It also stimulates the release of endorphins, which can alleviate stress.

After receiving the intervention, participants reported feeling more relaxed and able to think positively. The researcher assumes that this therapy effectively reduces anxiety because it incorporates self-healing techniques that relax the mind and foster self-awareness. According to Suara & Retnanigsih (2023), the *Butterfly Hug* technique

helps individuals relax in anxiety-provoking situations by encouraging self-affirmation and positive manifestation, allowing them to achieve a state of calmness and emotional balance.

CONCLUSION

Based on the results of the study entitled *"The Effect of the Butterfly Hug Technique on Anxiety at SMP Negeri 169 West Jakarta"*, the following conclusions can be drawn:

1. The level of anxiety before the butterfly hug intervention among students at SMP Negeri 169 West Jakarta showed the lowest score in the moderate anxiety category at 25, and the highest score in the severe anxiety category at 41.
2. The level of anxiety after the butterfly hug intervention among students at SMP Negeri 169 West Jakarta showed the lowest score at 2 and the highest score at 26.
3. The mean level of anxiety before and after the butterfly hug intervention was 30.89 with a standard deviation of 4.631 and a minimum–maximum range of 25–41. The mean level of anxiety after the intervention was 14.7 with a standard deviation of 6.373 and a minimum–maximum range of 2–26.
4. The results of the study indicate that there is an effect of the butterfly hug technique on anxiety among students at SMP Negeri 169 West Jakarta, as evidenced by a P-Value of 0.000, which means $P < 0.05$, indicating a significant difference in anxiety levels before and after the intervention.

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