



THE EFFECTIVENESS OF SAJOJO DANCE ON ANXIETY AND STRESS IN ADOLESCENT IN PAPUA

Yustika Rahmawati Pratami*, Harlinda Widia Putri, Nurhilmi

Universitas Jayapura, Jl. Kamp Wolker, Yabansai, Heram, Jayapura, Papua 99224, Indonesia

*Yustikarahmawati068@gmail.com

ABSTRACT

This research is a 2024 Kemendikbudristek Grant research which is a form of development of non-pharmacological and cost-effective interventions selected based on scientific research that have benefits for adolescents in reducing stress and anxiety that are safe and enjoyable. The aims to determine whether the sajojo dance as a typical Papuan dance is effective in reducing anxiety and stress in adolescents. Method: this study is a true experimental with a pretest-posttest control group design and uses proportional random sampling techniques. The population in this study was 40 students. This study found that there was no significant change in the control group because it was accompanied by an increase in anxiety and stress in adolescents and there was a significant change in the intervention group related to reducing anxiety and stress. Sajojo dance is effective as a non-pharmacological treatment in reducing anxiety and stress in adolescents.

Keywords: adolescent; anxiety; sajojo dance; stress

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INTRODUCTION

Adolescents are in an age group that is vulnerable to mental health problems (Yoduke et al., 2023). The World Health Organization states that 14% of adolescents aged 10-19 years experience mental health problems. Where, as many as 13% are recorded as a global burden of disease (Blakemore, 2019). In Indonesia, around 5.5% of adolescents are diagnosed with mental health disorders, or around 2.45 million adolescents are in the group of People with Mental Disorders (ODGJ) (Amirah Ellyza Wahdi, 2022). Around 3.7% of anxiety disorders are the most common mental disorders in adolescents aged 10-17 years in Indonesia (Erskine et al., 2023).

The immature physiological and psychological development of adolescents, then they have to face greater pressure in various aspects such as education, themselves, and their peers, making adolescents vulnerable to mental health problems (D'souza et al., 2021). Mental health problems are referred to as one of the most worrying health problems (Saikia et al., 2023). The prevalence of anxiety disorders increases in adolescence, while the prevalence of stress increases with age (Tyas Nurma Islami & Religia Mujahid, 2022). Stress is associated with the development of anxiety symptoms, if not managed properly, stress can cause anxiety (Salihu et al., 2021). While anxiety that is not handled properly can develop into anxiety (Zhang et al., 2021).

Adolescents are more likely to experience anxiety and stress related to academics (Pontes et al., 2024). This is due to the academic pressures that adolescents experience as they get older, as well as the different social and developmental challenges that adolescents face (Huang et al., 2022). The impacts that can arise when adolescents experience mental health problems are

decreased academic achievement, and adolescent satisfaction with the school environment which results in absenteeism from school. Long-term negative impacts that can affect adolescents' personal development in addition to affecting their academic achievement, namely adolescents will experience social dysfunction, substance abuse, and suicide (Putri et al., 2022). Therefore, it is necessary to provide appropriate interventions for adolescents in processing stress and anxiety so that adolescents are able to cope with the pressures in their lives and carry out their academic activities well (Johnston et al., 2021). The intervention in question is to use the movement/dance method, namely the Sajojo dance, a typical Papuan dance. The purpose of this study was to determine whether the Sajojo dance as a typical Papuan dance is effective in reducing anxiety and stress in adolescents. Furthermore, the researcher's aim in using the Sajojo dance is not only because its movements are energetic, full of joy, enthusiasm and the majority of people are familiar with the Sajojo dance, the researcher also wants to highlight the local wisdom of the land of Papua so that it can continue to be preserved.

METHOD

This study is a true experimental study with a pretest-posttest control group design. The sample in this study was taken using the proportional random sampling technique. This study divided respondents into two groups with one type of treatment, namely being given the sajojo dance. Before dividing the groups, a pretest was conducted to find samples which were then randomly selected to be divided into two groups, namely the experimental group and the control group. The experimental group is the group that is given the sajojo dance intervention every morning before starting learning for approximately 15 to 20 minutes. The control group is the group that is not given any intervention. The number of respondents in this study was 40 students with 20 students in the control group and 20 students in the intervention group. This study was conducted from July 2024 to November 2024. This study was at SMA N I Arso. The following is a description of the research design:

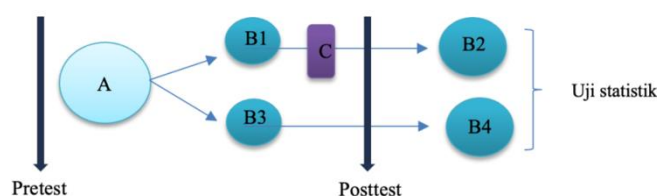


Figure 1. Research Design

Furthermore, the tool used to measure anxiety and stress levels is the Depression Anxiety Stress Scales (DASS 42) instrument and then the data will be analyzed using SPSS.

RESULT

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The following are the results of univariate analysis which are the frequency distribution and presentation of characteristics on the variables studied, namely age and gender. The results of univariate analysis are depicted in table 1.

Tabel 1.
Univariate Analysis of Age and Gender

Karakteristik Responden	Control Group (n=20)		Intervention Group (n=20)	
	f	%	f	%
USIA				
15-16 Years Old	11	55	14	70
17 Years Old	9	45	6	30
Total	20	100	20	100
Gender				
Male	3	15	3	15
Female	17	85	17	85

*Deskriptive Statistic Frequencies & Chi-square

Based on table 1, data shows that there are 20 students in the control group and 20 students in the intervention group with a balanced number of female and male students with an age range of 15-17 years.

Tabel 2.
Frequency Distribution Analysis of Anxiety and Stress (Pre Test and Post Test of Control and Intervention Groups)

Treatment Results		Pre test		Post test	
		f	%	f	%
Control Group					
Anxiety	Normal	7	35	8	40
	Mild	3	15	3	15
	moderate	6	30	2	10
	severe	4	20	5	25
	Very Severe	0	0	2	10
Stress	Normal	10	50	8	35
	Mild	4	20	3	15
	moderate	6	30	6	30
	severe	0	0	3	20
Intervention Group					
Anxiety	Normal	6	30	18	90
	Mild	7	35	1	5
	moderate	6	30	1	5
	severe	1	5	0	0
Stress	Normal	8	40	20	100
	Mild	3	15	0	0
	moderate	6	30	0	0
	severe	3	15	0	0

*Deskriptive Statistic Frequencies

Based on table 2, it was found that in the control group, although no intervention was given, there were changes, both decreasing and increasing, including in the category of norm anxiety level, the number of students increased by 1, mild anxiety had no change, moderate anxiety decreased by 4 students, severe anxiety increased by 1 student and very severe anxiety increased by 2 students. In the stress category, the control group also saw changes, including normal stress levels decreased by 2 students, mild stress decreased by 1 student, moderate stress remained the same with 6 students and severe stress increased by 3 students. Furthermore, in the intervention group, the overall anxiety and stress level categories found a decrease in each level of anxiety and stress.

Bivariate Analysis

Bivariate analysis is shown in the table below. The analysis of this research data using the T test was previously carried out a homogeneity test (homogeneity result test) then continued with a normality test. The results obtained in the homogeneity test are values > 0.05, meaning that the normality test in the pretest and posttest assessments in the control and intervention groups is not normally distributed. So the test used to see the comparison of pre and post in each variable and group is to use a non-parametric test, namely the Wilcoxon test, with results as in the table below:

Tabel 3.
Analysis of the Effectiveness of Sajojo Dance on Anxiety and Stress (Pre Test and Post Test)
Control and Intervention Groups

Group	Treatment Results	Pre test Mean±SD	Post test Mean±SD	P. Value
Control	Anxiety	13.50±7.345	13.35±10.941	0.762
	Stress	15.90±8.175	16.10±9.819	1.000
Intervention	Anxiety	12.00±4.888	5.35±4.671	0.000
	Stress	14.70±5.048	6.35±3.717	0.000

* Uji Wilcoxon

Based on table 3, the descriptive mean value of the pre-test and post-test of the control group is shown, namely 13.50 > 13.35, meaning that there is a difference in the average anxiety before and after but it is not significantly different and the mean result is 15.90 < 16.10, meaning that there is a difference in the average but not significant before and after. From the results of the paired differentials analysis, the Sig. (2-tailed) p value is 0.762 < 0.005 and 1.000, meaning that there is no change in the decrease in depression and stress. Furthermore, the Mann-Whitney test was carried out to see the effectiveness of the Sajojo dance in reducing anxiety and stress with the following results:

Tabel 4.
Analysis of the Effectiveness of Sajojo Dance in Reducing Anxiety and Stress

Treatment Results	Group	N	Mean±SD	P. Value
Anxiety	Control	20	2.78±7.000	0.000
	Intervention	20		
Anxiety	Control	20	2.98±8.119	0.000
	Intervention	20		

Table 4 shows that the Sajojo dance is effective in reducing anxiety and stress with a p value of 0.000.

DISCUSSION

Physical activity plays a role as a factor that influences mental health, this is due to its essential nature, namely physical activity that is carried out consciously and has the intention and motivation within the adolescents, in this case the adolescents are invited to do dance (Nardi et al., 2022). This study used the sajojo dance which is a regional cultural dance from Papua. The use of this sajojo dance is because cultural dances that focus on emotional and spiritual healing are cost-effective solutions that are able to handle holistic aspects in clinical practice and mental health rehabilitation programs (Joo et al., 2023). The results above show several changes, namely a decrease in the frequency of anxiety and stress in adolescents in the intervention group, while in the control group, although there was a decrease in the frequency of anxiety and stress, it was accompanied by an increase in the frequency of anxiety and stress. In this study, the intervention group was given sajojo dance treatment every morning

before starting learning for approximately 15 to 20 minutes. Many previous studies have discussed that dance sports are a non-pharmacological treatment for anxiety and other psychological problems (Nur Azizah & Sampe Tondok, 2022). Physical exercise or cardio vascular exercise such as aerobics, in this study the researchers used the Sajojo dance for cardio exercise, can improve mood and mental well-being such as stress and anxiety, reduce the risk of chronic diseases, and improve heart health (Sánchez-Alcalá et al., 2024).

Another study conducted a review highlighting the important role of the hippocampus in anxiety, as it is a key brain structure associated with emotion. Individuals with anxiety often show smaller hippocampal volumes (Schmaal et al., 2016). The study conducted a 6-week aerobic dance intervention study to measure hippocampal volume with anxiety. The study findings showed that continuous aerobic exercise for six weeks led to improvements in participants' anxiety conditions. (Li et al., 2024) Furthermore, research was conducted to look at serotonin production in mice to assess the decrease in levels of mental health problems such as anxiety and stress. The serotonin hormone itself functions to regulate mood or is also called a mood-regulating hormone. Previous research using 40 mice that were given dance relaxation with interesting music in between their daily activities showed that increased expression of serotonin 1A (5-HT_{1A}) receptors in the brain. Furthermore, this study conducted in China emphasized the importance of exercise because it is one of the non-pharmacological methods in managing mental health (Ma, 2024). Another study using the meta-analysis literature study method showed that dance movement therapy has moderate effectiveness in reducing stress levels (Auliya & Yudiarso, 2022).

Furthermore, research in line with this study was conducted in India with an experimental quantitative research method with each control and intervention group of 40 respondents with a total of 80 respondents with the aim of evaluating the effectiveness of aerobic exercise on anxiety symptoms. This study found that there was a significant decrease in anxiety and stress symptoms when in the intervention group when compared to the control group using the same test as this study, namely the independent T-Test (Salihu et al., 2021). Further experimental research was conducted in Canada with 80 respondents divided into a control group of 40 respondents and an intervention group of 40 respondents. The study found that there was a decrease in scores from moderate to severe anxiety and stress to mild to normal anxiety (Elgendy et al., 2024). Research conducted in several countries including Australia, Finland, and China with the aim of determining the effectiveness of dance in reducing mental health problems such as depression and stress, and managing feelings, sleep quality and quality of life states that dance is effective in reducing mental health problems such as depression and stress (Christopher et al., 2024; Gu, 2022; Kella et al., 2022).

CONCLUSION

Sajojo dance is effective as a non-pharmacological treatment in reducing anxiety and stress in adolescents.

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