

The effectiveness of art therapy to reduce academic stress among students during online learning

Linda Fitria¹, Ananda Maha Putri¹, Rima Pratiwi Fadli², Ifdil Ifdil^{2*}

¹Universitas Putra Indonesia YPTK Padang, Indonesia, ²Universitas Negeri Padang, Indonesia

*Corresponding author, ✉e-mail: ifdil@konselor.org

Abstract

Many changes have occurred as a result of the COVID-19 pandemic and also be seen in the sphere of education, as learning methods are being transitioned from offline to online learning. These changes cause academic stress among students. Academic stress results in a drop in student learning motivation, and failure to complete lecture assignments on time. The researcher used this phenomena to conduct a one-design group experimental investigation on five academically challenged teenagers. Art therapy was utilized as the intervention, with an academic stress scale tool used to measure its effectiveness. During COVID-19, data collection and intervention operations are carried out directly through the use of health protocols. The Student-t Test is used to analyze the data with the help of Jeffreys' Amazing Statistics Program software. According to the findings of the study, an art therapy intervention was beneficial in reducing student academic stress in online learning.

Keywords: Academic stress, art therapy, covid-19, online learning, JASP analysis.

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Introduction

A study of student stress and motivation found no link between academic achievement and student stress and motivation (Tus, 2020). Academic stress has been shown to affect and lower student performance (Crego, Carrillo-Diaz, Armfield, & Romero, 2016; Kötter, Wagner, Brüheim, & Voltmer, 2017). Previous studies on how to deal with academic stress used rational coping mechanisms such problem solving, giving positive feedback, and seeking social support (Crego et al., 2016). Another study discovered a link between academic stress, coping methods, and academic success (Bello & Gumarao, 2016). Female students, when considered from the perspective of gender, are at a greater risk of becoming trapped in a vicious cycle of stress and low academic performance (Kötter et al., 2017). Individuals with high emotional intelligence are less likely to experience academic stress (Ranasinghe, Wathurapatha, Mathangasinghe, & Ponnampereuma, 2017). High self-satisfaction is linked to emotional intelligence (Gupta, Singh, & Kumar, 2017).

Individual inability, fear of failure, difficulties forming interpersonal relationships with teachers, poor teacher-student relationships, and inadequate learning facilities are all sources of academic stress (Reddy, Menon, & Thattil, 2018). Academic stress develops into a problem that threatens students' psychological well-being and mental health (Reddy et al., 2018). Academic stress is also produced by cultural characteristics such as race and ethnicity, according to a study (Gougis, 2020). The findings

suggest that academic stress lowers students' willingness to learn and interferes with their cognitive processes during learning.

High academic stress and poor learning results are associated with high levels of weariness (Rui Gomes, Simões, Morais, & Couto, 2022). Excessive parental intervention can cause academic stress (Jeong, Ferguson, & Lee, 2019). As a result of this academic stress, students' learning results, as well as their ability to self-efficacy and resilience, might be negatively impacted (Frazier, Gabriel, Merians, & Lust, 2019).

Individuals who are under a lot of academic stress have poor academic achievements and are more likely to burnout (Rui Gomes et al., 2022). Students who study while working had reduced academic stress than students who do not work, according to the findings (Barros, Sacau-Fontenla, & Fonte, 2022). Individuals who are subjected to academic stress may develop depression (Fu, Ren, & Liang, 2022). Academically stressed students require social support from their parents in the form of parent-child contact (Fu et al., 2022). According to other studies, parents who develop communication with their children can lessen academic stress (Jeong et al., 2019). Stress can lead to weariness, burnout, anxiety, a weakened immune system, and organ damage in people (Martin et al., 2018). This can be understood to mean that stress has an affect on the individual's bodily well-being as well as their psychological well-being.

Academic stress has an effect on people's psychological health and well-being, as can be observed from the explanation above. As a result, treatment for this illness is necessary. Art therapy is one of the intervention techniques for dealing with academic stress. According to research, adopting art therapy, particularly art modalities, reduces stress levels significant (Martin et al., 2018). Art therapy is most commonly utilized to help cancer patients. (!!! INVALID CITATION !!!). Art therapy is also used to treat autistic children (Emery, 2004; Schweizer, Spreen, & Knorth, 2017), children with post-traumatic stress disorder (Chapman, Morabito, Ladakakos, Schreier, & Knudson, 2001; Ugurlu, Akca, & Acarturk, 2016), children who have been exposed to trauma (Eaton, Doherty, & Widrick, 2007; Elbrecht, 2019; Hermann, 2021; Schouten, de Niet, Knipscheer, Kleber, & Hutschemaekers, 2015), anxiety (Dionigi & Gremigni, 2017), and depression (Gussak, 2007). Individual mental health is currently being treated with creative art therapy (Chiang, Reid-Varley, & Fan, 2019).

In terms of art therapy, no specific research has been found to address academic stress; instead, the majority of research continues to focus on stress in general. As a result, researchers in this study looked into the usefulness of art therapy in reducing academic stress in students.

Method

This study employs a quasi-experimental design and an experimental technique. The participants in this study are students who are under a lot of academic pressure. The academic stress scale was utilized as the instrument. The research subject was directly involved in the data collection process. Art therapy instruments are used in direct interventions, which are carried out in compliance with the Covid-19 transmission prevention strategy. Jeffreys' Amazing Statistics Program program was used to analyze research data. The following link osf.io/ms4ua/ will take you to the research data.

Results and Discussions

The following is a summary of the research findings based on the analysis.

Table 1. Data Normality Test

		W	p
Pre-Test	- Post-Test	0.928	0.583

Note. Significant results suggest a deviation from normality.

The assumption of data normality (Shapiro-Wilk) is significant, as seen in table 1. This shows that the data is dispersed normally. The methodology used afterwards for significant results is the Student's t-test.

Tabel 2. Paired Samples T-Test

Measure 1	Measure 2	t	df	p	Mean Difference	SE Difference	Cohen's d
Pre-Test	- Post-Test	5.616	4	0.005	47.800	8.511	2.512

Note. Student's t-test.

According to the results of the paired sample t-test, there was a significant difference in academic stress before and after art therapy session. The average difference between before and after art therapy intervention, which is 47,800, demonstrates this. A large effect is indicated by Cohen's d value. Academic stress levels were lower before and after art therapy intervention, according to descriptive and plot data.

Tabel 3. Descriptive & Bayesian Analysis

Descriptives

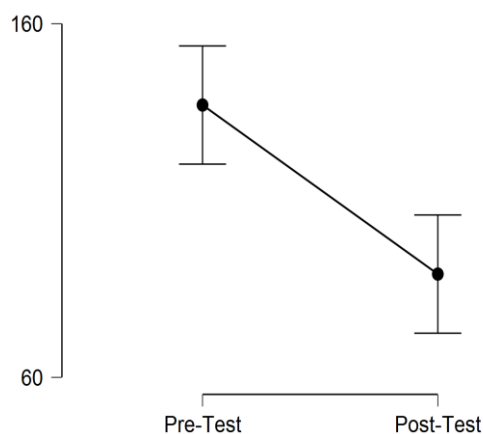
	N	Mean	SD	SE
Pre-Test	5	137.000	19.558	8.746
Post-Test	5	89.200	1.483	0.663

Bayesian Wilcoxon Signed-Rank Test

Measure 1	Measure 2	BF ₁₀	W	Rhat
Pre-Test	- Post-Test	4.194	0.000	1.034

Note. Result based on data augmentation algorithm with 5 chains of 1000 iterations.

Pre-Test - Post-Test



Prior and Posterior

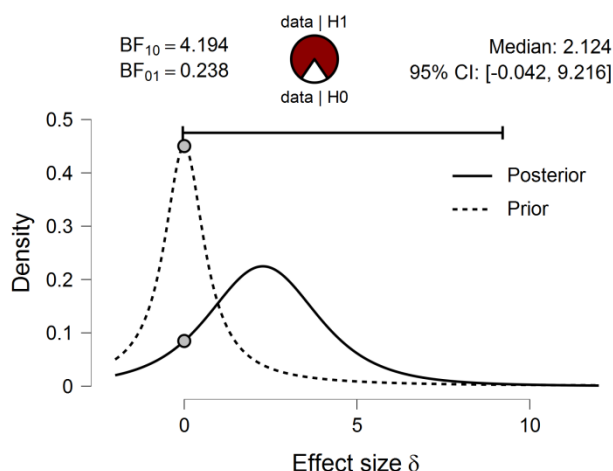


Figure 1 <Bayesian Analysis>

According to the findings, after receiving an art therapy intervention, the average responder saw a 47,800 (SE: 8,511) decrease in academic stress levels. Academic stress levels were found to be significantly lower ($t(4) = 5,616$ in a paired sample t-test). Cohen's d value revealed a significant effect.

Art therapy can be used as a non-verbal intervention to assist clients to convey their experiences (Emery, 2004; Gilroy & Lee, 2019) using art or art equipment, and it can be utilized to overcome individual psychiatric disorders. Art therapy can help people become more self-aware and stimulate growth (Emery, 2004; Gilroy & Lee, 2019). The intervention's art therapy proved to be beneficial in healing the individual's physical and psychological issues (Meghani et al., 2018). Another research showed that art therapy can not only be used to address physical difficulties but can also be utilized to cure burnout, anxiety, and depression in clients (Tang et al., 2019).

Art therapy is beneficial as a psychological therapist intervention because it works by producing calm and gaining access to subconscious memories, which allows it to study individual cognition and

improve emotion control (Abbing et al., 2018). This treatment can assist individuals in opening up and exploring their psychological problems (Rowe et al., 2017). Academic stress is predicted by elements that produce it, such as life satisfaction, locus of control, and gender. The use of art therapy investigates the predicted conditions that research participants face (Karaman, Lerma, Vela, & Watson, 2019). Art therapy can be an alternate remedy for school counselors, therapists, and psychological specialists to cope with academic stress difficulties that occur in schools and higher education, as explained above.

Conclusions

Art therapy was determined to be useful in dealing with academic stress difficulties based on the outcomes of the study. This treatment can assist clients in opening up and exploring their feelings in relation to their concerns. Academic stress circumstances that are owned by individuals who utilize art therapy can be used to investigate the origins of academic stress in clients.

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