

## Mindfulness and Art Therapy Drawing: Innovative Therapy to Reduce Student Stress

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### ABSTRACT

Academic stress is a condition of pressure experienced by individuals due to demands in higher education. This study aimed to examine the effectiveness of mindfulness and art therapy drawing in reducing stress among final-year students. The study employed a pre-experimental one group pretest-posttest design. A total of 41 students received the intervention after completing a pretest, followed by a posttest. Analysis showed that the mean stress score before intervention was 148.22 and decreased to 125.88 after intervention. The Paired T-Test yielded a p-value of 0.001 ( $\leq 0.05$ ), indicating a significant effect of the intervention on stress reduction. Mindfulness therapy helps individuals reinterpret stress more positively, while art therapy drawing serves as a creative outlet for emotional expression. The combination of both proved effective in reducing student stress levels.

**Keywords:** Academic Stress, Art-Drawing Therapy, Mindfulness, Students

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### INTRODUCTION

Academic stress is defined as a condition in which an individual experiences pressure resulting from perceptions and evaluations of academic stressors related to learning demands in higher education (1). It emerges when students feel overwhelmed by assignments, examinations, and achievement expectations that exceed their adaptive abilities (2,3). College students are particularly vulnerable to mental health issues, especially those related to stress management (4). Academic demands such as writing papers, class presentations, practicums, and daily tasks often become significant sources of pressure. When unmanaged, academic stress can lead to decreased cognitive performance, impaired concentration, memory problems, and lower academic achievement (3).

Several factors contribute to academic stress, including heavy academic workloads, accumulated assignments, low exam grades, achievement pressures, and the surrounding social environment. Motivation also plays a significant role in influencing academic stress levels among students (5). Research shows that internal factors—such as difficulty regulating emotions and responding to academic challenges—and external factors—such as increased workload, complex course material, and reduced academic performance—can intensify stress. Female students are reported to be at higher risk due to hormonal differences and psychosocial stressors. In final-year students, these challenges are compounded by demanding thesis completion and academic burnout (6).

In relation to academic stress experienced by students, a program is

needed to train students' abilities in academic stress management, one of which is art therapy (7). Art therapy is not only limited to painting or coloring activities, but it works through several psychological mechanisms, including emotional expression, symbolic processing, cognitive reframing, and physiological relaxation. Through drawing, painting, and coloring, individuals can externalize internal emotional tension, process stressful experiences symbolically, and stimulate parasympathetic nervous system activation, which contributes to decreased physiological arousal (8).

Coloring therapy—one form of art therapy—has been shown to reduce academic stress in students, as research subjects demonstrated lower stress levels and improved emotional states after participating in coloring activities. In previous studies, students also showed renewed enthusiasm in engaging in online learning, completing assignments, and actively seeking information related to coursework. During art therapy sessions, participants reported feelings of relief, relaxation, and emotional release, all of which support stress reduction (8). Evidence from international studies further supports that art therapy can reduce cortisol levels, improve emotional regulation, and decrease anxiety, reinforcing its relevance as an intervention for academic stress.

Students experience academic stress due to a combination of internal and external factors. Internal factors include difficulties in understanding academic material, limited emotional regulation, and an inability to respond effectively to academic challenges. External factors include increasing academic workload, receiving lower grades than expected, pressures from the social and family environment, and the complexity of courses that increases as students

progress in their studies. Female students are also reported to have almost twice the risk of experiencing stress due to hormonal differences and variations in psychosocial stressors. These stressors are further intensified among final-year students who often experience burnout as they face demanding requirements such as completing a thesis and final academic reports (6). Given the substantial impact of these interconnected stressors, appropriate interventions are required to help students manage their academic stress, one of which is art therapy (9).

Students experiencing academic stress in the high category were 28% (10). Studies also show that entering university can create tension or stress because students must adapt to changes in the learning system, lifestyle, and social environment (11). Similar conditions are also experienced by final-year students, who have been consistently reported to experience high levels of academic stress. Research in Indonesia found that most final-year students experience high academic stress (66%) due to the demands of completing a thesis, financial burdens such as tuition payments, difficulty accessing printed literature, limited consultation time with supervisors, and various personal problems (12).

Other studies also indicate that final-year nursing students experience increased stress marked by emotional exhaustion, decreased concentration, and academic burnout during the thesis-writing period (13,14). Based on these prevalence data, academic stress among university students—particularly those in their final year—requires immediate attention. Stress management may include pharmacological and non-pharmacological approaches, one of which is mindfulness therapy. Mindfulness therapy applies cognitive

principles and meditative techniques consisting of two important components: (1) present-moment awareness without judgment and (2) acceptance-based attitude formation (15). Therefore, this study adopts a combined intervention using mindfulness therapy and art drawing therapy to help students manage academic stress more adaptively.

METHODS

This study employed a quantitative method with a pre-experimental one-group pretest–posttest design (16). The study involved a single intervention group that received both mindfulness therapy and art drawing therapy. Before the intervention, a pre-test was administered, followed by the treatment sessions, and afterward a post-test was conducted to determine changes in academic stress levels. This study has passed ethical approval with registration number 000911/KEP IKesT Muhammadiyah Palembang/2025.

**Inclusion criteria** included: (1) final-year students enrolled in the undergraduate nursing program; (2) actively working on thesis or final academic tasks; (3) willing to participate and sign informed consent; and (4) experiencing moderate to high academic stress based on pretest scores. **Exclusion criteria** were: (1) students currently receiving psychological or psychiatric treatment; (2) students who did not complete all intervention sessions; and (3) individuals taking psychotropic medications.

The intervention consisted of **three structured sessions** conducted face-to-face in small groups. **Session 1** included 20 minutes of mindfulness breathing exercises focusing on present-moment awareness. **Session 2** involved 25 minutes of guided mindfulness imagery designed to enhance emotional regulation and reduce physiological arousal. **Session 3** provided 30 minutes of art drawing therapy, where participants were instructed to express their emotional experiences through free drawing using A4 paper and coloring media. All sessions were facilitated by a trained mindfulness practitioner and supervised by the research team.

To assess changes in academic stress, the **Student Life Stress Inventory (SLSI)** was used as the pre-test and post-test instrument (17). The SLSI consists of **51 statement** items measuring five domains of academic stress, each rated on a Likert scale from 1 to 5. Participants completed the instrument using printed paper forms in a classroom setting, requiring approximately **10–15 minutes** to finish each administration. Data were analyzed by comparing pre-test and post-test scores to determine the effect of the intervention on academic stress reduction among final-year students.

RESULTS AND DISCUSSION

Table 1 shows the distribution of student stress data at the final level before being given mindfulness therapy and art therapy drawing.

Table 1. Stress before the intervention Effectiveness of Mindfulness Therapy and Art Therapy Drawing on Stress in Final Year Students

| Variable                                                                                                                     | Mean   | Median | Min-Max |
|------------------------------------------------------------------------------------------------------------------------------|--------|--------|---------|
| Stress before the intervention Effectiveness of Mindfulness Therapy and Art Therapy Drawing on Stress in Final Year Students | 148.22 | 149.00 | 91-209  |

Table 2. Stress after the Effectiveness of Mindfulness Therapy and Art Therapy Drawing Intervention on Stress in Final Year Students

| Variable                                                                                                                    | Mean   | Median | Min-Max |
|-----------------------------------------------------------------------------------------------------------------------------|--------|--------|---------|
| Stress after the Effectiveness of Mindfulness Therapy and Art Therapy Drawing Intervention on Stress in Final Year Students | 125.88 | 125.00 | 87-156  |

Table 3. Normality Test

| Variable                  | Kolmogorov-Sminov |    |      |
|---------------------------|-------------------|----|------|
|                           | Statistic         | N  | Sig  |
| Pretest academic stress   | .096              | 41 | .200 |
| Post test academic stress | .132              | 41 | .072 |

Table 4. Difference in Average Stress of Students Undergoing Mindfulness Therapy and Art Therapy Drawing Interventions on Stress in Final Year Students

| Variable                   | N  | Mean   | Min | Max | p-value |
|----------------------------|----|--------|-----|-----|---------|
| Stress before Intervention | 41 | 148.22 | 91  | 209 | .001    |
| Stress after Intervention  | 41 | 125.88 | 87  | 156 |         |

Based on table 1, it can be seen that the mean and median values of the 41 respondents before being given the Mindfulness Effectiveness Intervention and Art Therapy Drawing on Final Year Student Stress were 148.22 for the mean value and the median value was 149.0 with a minimum score of 91 and a maximum score of 209.

Based on table 2, it can be seen that the mean and median values of 41 respondents after being given the Effectiveness of Mindfulness Therapy and Art Therapy Drawing Intervention on Final Year Student Stress were 125.88 and 125.00 with a minimum score of 87 and a maximum score of 156.

Based on table 3, the data normality test has been carried out using the Kolmogorov-Smirnov Test on the pre-test obtained a sig value of .200 and the post-test obtained a sig value of .072 therefore it can be said that the data is normally distributed because the significant value is  $>0.05$ . If the data is normally distributed, it is recommended to use the Parametric Alternative Paired T Test.

Based on table 4, the results of the analysis above show the average stress value before being given the effectiveness of mindfulness therapy and art therapy drawing intervention on the stress of final year students, the mean value is 148.22, and after being given the intervention, the median value is 125.88, so the results of the intervention before

and after with a p-value of .001 ( $<0.05$ ) it can be concluded that there is an influence of the effectiveness of mindfulness therapy and art therapy drawing on the stress of final year students.

Stress is a natural and common occurrence in life. Stress can also occur in an academic environment (academic stress). Academic stress occurs due to the inability of students to adapt to the lecture situation (18). Academic stress is a condition where students are faced with academic demands that they cannot cope with properly, thus disrupting academic progress. Thesis is one of the academic demands where many students experience academic stress (19).

Stressful conditions that are often considered pressing will be able to be seen and interpreted differently. Individuals no longer feel threatened by the source of stress but have clarity of thought to respond to the stress. The awareness that arises in a mindful state will help someone see a stressful situation more clearly, so that a new perspective appears in seeing the problem and alternative solutions. A mindful state will provide awareness to individuals that they have control over their choices, thus encouraging the emergence of a responsive attitude, rather than a reactive attitude to the situation around them (20).

Mindfulness has high effectiveness which can reduce stress that experienced by students (21). Mindfulness helps students manage stress through increased self-awareness, acceptance of academic pressure, and more adaptive emotional management. Mindfulness-based interventions can be an effective strategy in managing students' academic stress (22).

Art therapy with the coloring method is chosen because when someone is coloring, they will automatically divert focus or concentration from the source of stress. The emotions felt can be released or poured out through strokes of color on paper, canvas, or whatever the media. When successfully pouring out emotions, the negative intensity felt will slowly decrease. All anxiety, fear, sadness will slowly decrease so that you can be more relaxed. When this happens, stress levels will also decrease.

When someone is free to choose the color they like, there is no binding benchmark. In fact, what is felt can be completely released if you choose freely. Art Therapy combines the process of making art (drawings, paintings, sculptures, and other art media) with psychotherapy methods to improve and improve the psychological well-being of individuals of all ages (23).

Before participating in art therapy, participants reported various academic stressors such as disappointment over academic performance, heavy workload from group assignments, and emotional exhaustion. During the art therapy session in this study, the participants produced drawings that symbolically reflected their emotional state and ideal self-image. **These drawings (mountains, villages, rice fields, and butterflies) are original findings from this study**, not from previous literature—indicating personal interpretations of tranquility, balance, freedom, and the desire to escape role-related pressures (such as expectations toward the first child).

Participants described that the art therapy process helped them feel more relaxed and mentally refreshed, consistent with previous studies showing that art-based interventions can reduce academic stress and enhance cognitive

inspiration (24,25). In the present study, two major qualitative improvements were identified.

**First, participants demonstrated increased self-awareness.** Through drawing, they were able to articulate the contrast between their current emotional condition—often overwhelmed and pressured—and the peaceful, balanced, or empowered self-image they aspired to. This reflective process indicates that art therapy facilitated cognitive processing and emotional clarification, enabling students to recognize what aspects of their academic and personal lives needed change.

Second, participants experienced improved mood and enhanced motivation. Exposure to creative activities allowed individuals to release tension and experience positive affect, which supported a more optimistic outlook toward completing academic tasks. Students expressed greater enthusiasm and renewed drive to pursue their goals after the intervention. This aligns with existing literature demonstrating that art therapy can elevate mood and foster emotional resilience (27).

Overall, the qualitative findings of this study highlight that art drawing therapy not only reduces stress but also supports deeper psychological benefits, particularly in helping students recognize their emotional needs and regain motivation during high-pressure academic periods.

## LIMITATIONS

This study has limitations in terms of design that only uses one group without a control group, so it cannot completely eliminate the influence of external factors on the results of the study. In addition, the duration of the intervention

is relatively short and the long-term effects of the intervention are not yet known. The limited number of samples is also an obstacle in generalizing the results to a wider population. In the future, it is recommended to conduct further research with experimental designs and comparison groups.

## RESEARCH ETHIC

This research has been approved by the Research Ethics Committee of Muhammadiyah Ahmad Dahlan Palembang University with No: 000911/KEP IKesT Muhammadiyah Palembang/2025. All participants were given an explanation of the purpose and procedures of the study and signed an informed consent before participating in the study.

## CONFLICT OF INTEREST

The author declares that there is no conflict of interest, either personal or institutional, in the implementation and reporting of this research. This research was conducted independently without intervention from sponsors or interested external parties.

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## CONCLUSION

Mindfulness helps individuals to see the source of stress more clearly and objectively, so that a more responsive attitude emerges than a reactive one. Meanwhile, art therapy, especially

through coloring activities, allows individuals to channel emotions creatively, which gradually reduces the intensity of negative emotions. The combination of the two can reduce stress levels and bring individuals to a calmer and more relaxed state.

This approach can be used as an alternative non-pharmacological intervention in academic stress management in higher education environments and it is recommended that higher education institutions consider implementing mindfulness therapy and art therapy drawing programs routinely as part of student counseling or mentoring services. Further research can use experimental designs with control groups and expand the scope of the sample to obtain more generalist results.

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