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The Effect of Stress Management Training on Stress Levels among Undergraduate Students Writing Their Theses

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ABSTRACT

This study examines the effectiveness of a single-session stress management training intervention in addressing stress among undergraduate students writing their theses. Using a one-group pretest–posttest design, the study involved eight participants selected through purposive sampling. The intervention consisted of one session focused on stress management techniques. Measurements using the DASS-21 showed no significant difference between pretest and posttest scores ($p = 0.944$). These findings suggest that a single-session intervention may be insufficient to produce meaningful changes in academic stress levels. They also underscore the importance of considering factors such as intervention duration, session frequency, and individual characteristics when developing stress management programs for students. This study provides a basis for further research using more robust designs and more comprehensive interventions.

Kata Kunci:

Film Hichki,
Kepribadian guru;
Pendidikan karakter;
Revolusi karakter

ABSTRAK

Penelitian ini mengevaluasi efektivitas intervensi pelatihan manajemen stres tunggal terhadap tingkat stres mahasiswa penyusun skripsi. Menggunakan desain one-group pretest-posttest, studi melibatkan delapan partisipan yang dipilih melalui purposive sampling. Intervensi dilaksanakan dalam satu sesi dengan fokus pada teknik manajemen stres. Pengukuran menggunakan skala DASS-21 menunjukkan tidak adanya perbedaan signifikan antara pengukuran pre-test dan post-test ($p = 0,944$). Hasil menunjukkan bahwa intervensi tunggal mungkin tidak memadai untuk menghasilkan perubahan bermakna pada tingkat stres akademik. Temuan ini menyoroti pentingnya mempertimbangkan faktor-faktor seperti durasi intervensi, frekuensi sesi, dan karakteristik individu dalam pengembangan program manajemen stres untuk mahasiswa. Studi ini memberikan dasar untuk penelitian lanjutan dengan desain yang lebih kuat dan intervensi yang lebih komprehensif.

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INTRODUCTION

Writing an undergraduate thesis is one of the most challenging stages in students' academic lives and is often accompanied by increased stress levels (Beiter et al., 2015). Excessive academic stress can negatively affect mental health, quality of life, and academic performance (Dusselier et al., 2005). According to the American Psychological Association (APA, 2020), students are among the groups vulnerable to chronic stress, with completing a final academic project such as an undergraduate thesis being one of its primary triggers.

Data indicate that 60–70% of students experience moderate to severe stress while writing their theses (Karyotaki et al., 2020), with symptoms including sleep disturbances (42.2%), anxiety (36.5%), and reduced productivity (31.8%) (Puthran et al., 2016). These findings are supported by a recent meta-analysis by Cuijpers et al. (2023), which showed that students writing their theses were 2.3 times more likely to experience psychological distress than other students (OR = 2.31; 95% CI [1.87–2.86]). In Indonesia, a study by Suryani et al. (2022) involving 612 students writing their theses found that 67.3% experienced moderate to severe stress, as measured by the PSS-10, with stress levels higher among students in their final semesters ($p < 0.01$).

Stress management has been recognized as an effective approach to reducing the effects of academic stress (Regehr et al., 2013). Stress management training—including relaxation techniques, mindfulness, and cognitive restructuring—has demonstrated benefits in various educational settings (Gallego et al., 2014). Recent evidence from Cuijpers et al. (2023), based on an analysis of 215 randomized controlled trials (RCTs), indicates that CBT-based interventions can reduce academic stress, with a moderate effect size ($g = 0.68$; 95% CI [0.59–0.77]). However, the effectiveness of single-session interventions remains a matter of debate. Some studies have found that brief interventions can have positive effects (Harnett et al., 2010), whereas others argue that ongoing interventions are more effective (Conley et al., 2015).

Previous studies on stress management among students have generally focused on multisession interventions (Shapiro et al., 2007), leaving a gap in the literature regarding the effectiveness of a single-session training program. Cuijpers et al. (2023) also noted that only 12% of studies evaluated brief interventions (one to three sessions), most of which were conducted in Western countries. Therefore, this study aims to evaluate the effect of a single-session stress management training intervention on stress levels among students writing their theses.

Although stress management techniques such as Cognitive Behavioral Therapy (CBT) have been shown to be effective in various studies, a recent study by Cuijpers et al. (2023) identified three key limitations in their implementation. First, most CBT interventions are designed as long-term programs lasting 8–12 sessions, making them less practical in academic settings. Second, most studies involve clinical populations, limiting their relevance to the general student population. Third, nearly all evidence of effectiveness comes from Western countries, with very little research conducted in Asian contexts. This study seeks to address these limitations by developing a single-session CBT-based intervention tailored to nonclinical students in Indonesia.

This study is based on the Transactional Model of Stress (Lazarus & Folkman, 1984), adapted to the academic context. The intervention developed for this study integrates three evidence-based components: diaphragmatic breathing, which has been shown to reduce physiological stress responses (Zaccaro et al., 2018); a brief version of cognitive restructuring adapted from a single-session CBT protocol (Schleider et al., 2020); and coping-planning training

based on the theory of problem-focused coping (Carver et al., 2017). This approach was selected because it can address multiple aspects of the stress experience comprehensively within a limited timeframe.

The novelty of this study lies in several aspects. First, it focuses on evaluating a single-session intervention that is more feasible to implement in a university setting. Second, it emphasizes a nonclinical population that has received limited attention in the stress intervention literature. Third, it adapts the techniques to the Indonesian cultural context, which has not been widely explored. Fourth, it uses a direct experimental design and valid measures to evaluate the intervention's effectiveness. The findings are expected to make a practical contribution by providing empirical evidence on the feasibility of brief interventions in educational settings, recommendations for developing more adaptive programs, and a basis for designing intervention modules that are sensitive to local culture. Theoretically, the findings may also enhance our understanding of the mechanisms of change that can occur through brief interventions in the context of academic stress.

METHODS

This study used an experimental research method with a One-Group Pretest–Posttest Design. This design involves a single group that is measured twice: at pretest, before the intervention, and at posttest, after the intervention. Participants were selected using nonrandomized purposive sampling, a sampling technique based on specific criteria (Sugiyono, 2012). The participants were eight final-year students at Universitas Syiah Kuala who were working on their undergraduate theses. Those who met the criteria were asked to complete an informed consent form and provide their personal details to indicate their willingness to participate in the experiment. The experimental intervention was stress management training, delivered in a session lasting approximately 60 minutes. The session was conducted once and consisted of psychoeducation covering the definition of stress, ways to manage stress, stress management methods, and various stress management techniques. The training was delivered through interactive presentations and psychoeducation using slides on stress management, as well as discussions between the participants and the facilitator.

Data were collected using a measurement instrument administered through Google Forms. The instrument was the DASS-21 (Depression, Anxiety, and Stress Scale–21), developed by Lovibond and Lovibond in 1995. The DASS-21 is a multidimensional measure of depression, anxiety, and stress. It uses a Likert scale with four response options: Very Appropriate, Appropriate, Less Appropriate, and Inappropriate. According to Sugiyono (2012), a Likert scale is used to measure a person's or group's attitudes, opinions, and perceptions of a particular social phenomenon.

To ensure measurement accuracy, the Indonesian version of the DASS-21 adapted by Hakim and Aristawati (2023) was used. Based on the construct validity test using confirmatory factor analysis (CFA), the model fit indices were acceptable after model modification: RMSEA = 0.072, SRMR = 0.045, CFI = 0.914, and TLI = 0.901. These values indicate that the model fits the theoretical three-factor structure of depression, anxiety, and stress. In addition, factor loadings for all items ranged from 0.312 to 0.843, indicating that each item made a significant contribution to the construct being measured.

The construct reliability results also indicate that the instrument has very good internal consistency. The construct reliability (CR) values were 0.88 for depression, 0.86 for anxiety, and 0.77 for stress, all of which fall within the good reliability category according to the criteria of Hair et al. (2010). Thus, the Indonesian version of the DASS-21 has been shown to be a valid and reliable measure of depression, anxiety, and stress, particularly among Indonesia's young adult population. The data were analyzed using the Wilcoxon signed-rank test, a nonparametric test used to analyze paired data by comparing two sets of paired observations to determine whether there was a significant difference before and after the intervention.

RESULT

RESULTS

Implementation of the Stress Management Training

The training was conducted on November 5, 2024, and lasted 2 hours and 15 minutes. The session began with an opening, a prayer, and administration of the pretest. It continued with psychoeducation on mental health and an introduction to stress management techniques. These techniques were presented as skills for students writing their theses to help them improve their ability to manage the stress they experience during the process. The training was based on Lazarus and Folkman's (1984) theory, which describes two main forms of coping: problem-focused coping and emotion-focused coping. The session concluded with an evaluation and closing.

Table 1. Schedule of the Stress Management Training

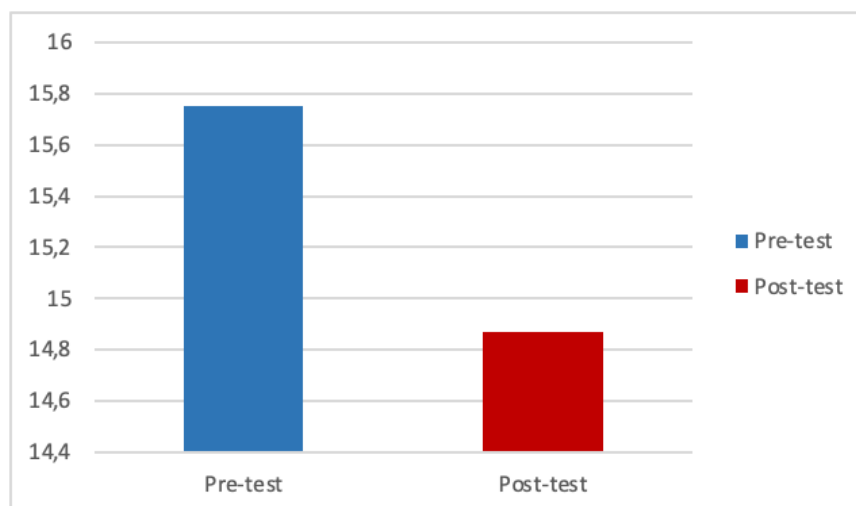
Duration	Activity	Presenter	Description
10 min	Opening	Researcher	Opening, introductions, review of the agenda, and explanation of the session's objectives
5 min	Prayer	Researcher	Prayer
10 min	Pretest administration	Researcher	Participants completed the pretest form shared by the organizing team via WhatsApp group
30 min	Mental health psychoeducation	Psychologist	Lecture-based presentation supplemented by questions and answers, using PowerPoint slides
45 min	Stress management training: introduction to forms of coping	Psychologist	Lecture-based presentation supplemented by questions and answers, using PowerPoint slides
20 min	Asr prayer break	-	Break for Asr prayer
10 min	Posttest administration	Researcher	Participants completed the posttest form shared by the organizing team via WhatsApp group
5 min	Evaluation and closing	Researcher	Reflection on the training and posttest, followed by the closing

Pretest and Posttest Results

The experimental study involved eight active students at Universitas Negeri Malang who were working on their theses. It used a One-Group Pretest–Posttest Design. The data comprised pretest and posttest scores for the effectiveness of stress management training among students. The pretest data were collected before the intervention, and the posttest data were collected after it. The data were then grouped and analyzed, with the following results:

Table 2. Descriptive Analysis of Pretest and Posttest Results

Evaluasi	N	SD	Mean	SE
<i>Pre Test</i>	8	2.659	15.750	0.940
<i>Post Test</i>	8	7.396	14.875	0.615

**Figure 1. Pretest and Posttest Results**

Hypothesis Testing

The hypothesis was tested using JASP 0.16 for Windows and a paired *t*-test to determine the effect of stress management training on stress levels among final-year students working on their theses.

Table 3. Hypothesis Test Results

Evaluasi	SD	Mean	Sig.	Keterangan
Pre Test	2.65	15.75	0.944	Tidak ada perbedaan signifikan
Post Test	7.39	14.87		

The main finding was that stress levels did not differ significantly between the measurements taken before and after the stress management training in the experimental group ($p = 0.944, > 0.05$). This indicates that the stress management training did not affect stress levels among final-year students working on their theses.

DISCUSSION

The findings indicate that stress management training did not have a significant effect on stress levels among final-year students completing their theses. This is consistent with previous findings that highlight the challenges of implementing stress management training. For example, Baer (2003) noted that the success of such training is strongly influenced by its duration, intensity, and the extent to which its content meets participants' specific needs. Several factors may explain why the training in this study did not produce a significant effect. One possibility is that the training was relatively brief, giving participants insufficient opportunity to develop a thorough understanding of the coping strategies taught and apply them in their daily lives. This is consistent with Hakim et al. (2017), who found that two days of stress management training led to significant

changes in participants' stress levels. Parks et al. (2012) likewise found that stress management training can significantly reduce stress, particularly when the program includes follow-up over a longer period. Bana et al. (2023) also emphasized that stress management training needs to be intensive and persuasive, given the complex and varied stressors faced by the current generation.

Students completing their theses face complex and distinctive pressures involving academic, emotional, and social factors. Therefore, stress management training based on an overly general approach may be less effective in addressing these pressures. This is consistent with Lazarus and Folkman's (1984) theory, which emphasizes that effective coping strategies should be tailored to the situation and the characteristics of the individuals experiencing it. In this study, the intervention was limited to providing information and explanations about stress management, without specific techniques that participants could practice directly. To improve the intervention's effectiveness, the training could be modified to include more practical techniques, such as relaxation and cognitive appraisal. Approaches shown to be effective in reducing stress include stress management based on Cognitive Behavioral Therapy and mindfulness (Aryuni et al., 2025). Herlena (2023) also found that using role-play in progressive muscle relaxation techniques can help participants engage with their feelings about personal and social problems and develop skills for coping with stress, thereby reducing stress levels more significantly. Thus, interventions that are more context-sensitive, practical, and sustained are needed to address students' needs as they face the pressures of completing a thesis.

CONCLUSION

This study concludes that stress management training provided to final-year students working on their theses did not significantly reduce their stress levels. This indicates that the intervention was not sufficiently effective in addressing the pressure experienced by the participants. Possible reasons include the training's short duration and the absence of post-training follow-up to support the application of stress management strategies in daily life.

Theoretically, this study underscores the importance of designing stress management training that is more adaptive, context-sensitive, comprehensive, and tailored to participants' unique needs, particularly those facing specific pressures such as completing a thesis. Potential limitations of the training, including its brief duration and the lack of follow-up, should also be considered when evaluating the intervention's effectiveness. Future efforts should include follow-up and ongoing support, or extend the duration of the intervention, to improve its effectiveness. These findings provide a basis for strengthening the validity of research findings and developing more effective stress management training programs in the future.

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