

## Cultivating Resilience Through Forgiveness Training: A Quasi-Experimental Study Among Indonesian University Students

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### Abstract

University students frequently encounter academic pressures and personal challenges that can undermine their adaptive capacity. Resilience is an essential protective factor that enables individuals to recover from difficulties and maintain psychological balance. This study aimed to examine the effectiveness of a structured forgiveness training program in enhancing students' resilience. A quasi-experimental design with an experimental and a control group was applied. Participants consisted of 109 undergraduate students (85 in the experimental group and 24 in the control group) selected through purposive sampling. Resilience was measured using the Indonesian adaptation of the resilience intelligence scale (Cronbach's  $\alpha = .87$ ). The two-day intervention included psycho-educational methods, guided reflection, and forgiveness practice based on Enright's forgiveness model. Data were analyzed using a general linear model (GLM) with repeated measures. Results revealed a significant interaction effect between time and group,  $F(1, 107) = 25.62, p < .001, \eta^2 = .193$ , indicating that the experimental group experienced a substantial increase in resilience ( $\Delta M = +12.30$ ) compared to the control group ( $\Delta M = +0.17$ ). These findings demonstrate that forgiveness training serves as an effective promotive psychological intervention for enhancing resilience among university students.

### Abstrak

Mahasiswa sering menghadapi tekanan akademik dan tantangan pribadi yang dapat melemahkan kemampuan adaptif mereka. Resiliensi merupakan faktor protektif penting yang memungkinkan individu untuk bangkit kembali dari kesulitan dan mempertahankan keseimbangan psikologis. Penelitian ini bertujuan untuk menguji efektivitas pelatihan pemaafan terstruktur dalam meningkatkan resiliensi mahasiswa. Penelitian menggunakan desain kuasi-eksperimen dengan kelompok eksperimen dan kelompok kontrol. Partisipan terdiri dari 109 mahasiswa S1 (85 pada kelompok eksperimen dan 24 pada kelompok kontrol) yang dipilih melalui teknik *purposive sampling*. Resiliensi diukur menggunakan skala kecerdasan resiliensi versi adaptasi Indonesia dengan reliabilitas yang tinggi (Cronbach's  $\alpha = 0,87$ ). Intervensi dilaksanakan selama dua hari dan mencakup kegiatan psikoedukasi, refleksi terarah, serta latihan praktik pemaafan yang disusun berdasarkan model pemaafan oleh Enright. Analisis data menggunakan *general linear model (GLM) repeated measures*. Hasil menunjukkan terdapat interaksi signifikan antara waktu dan kelompok,  $F(1, 107) = 25,62, p < 0,001, \eta^2 = 0,193$ , yang mengindikasikan peningkatan resiliensi yang substansial pada kelompok eksperimen ( $\Delta M = +12,30$ ) dibandingkan kelompok kontrol ( $\Delta M = +0,17$ ). Temuan ini menunjukkan bahwa pelatihan pemaafan merupakan intervensi psikologis promotif yang efektif untuk meningkatkan resiliensi pada mahasiswa.



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## INTRODUCTION

University students often face diverse academic and personal challenges that can deplete their psychological resources and affect their overall well-being. These challenges may include heavy academic workloads, adjustment to independent learning, and social or financial stressors that have intensified in the post-pandemic era. One of the key protective factors that enables students to adapt effectively to adversity is resilience, which refers to the individual's ability to recover from setbacks, regulate emotions, and maintain psychological balance in the face of difficulties (Reivich & Shatté, 2002).

Recent empirical findings reaffirm that resilience plays a critical role in maintaining student well-being and academic persistence in higher education. Panayiotou et al. (2024) found that university students with higher resilience levels experienced significantly lower symptoms of depression and anxiety in post-pandemic learning settings, highlighting resilience as a psychological buffer against distress. Similarly, Chen et al. (2023) reported that resilience significantly predicted well-being and engagement among students coping with online and hybrid education challenges. These results align with Southwick et al. (2014), who emphasized that insufficient resilience can limit academic achievement and hinder personal growth. Together, these findings demonstrate that developing resilience remains a vital concern in modern higher education, both as a means of supporting mental health and as a foundation for sustained academic success.

In the Indonesian context, student resilience is particularly relevant as many undergraduates must manage not only academic demands but also social and socioeconomic pressures (Lesmana, 2020). A recent meta-analysis confirmed that resilience significantly reduces psychological distress among Indonesian students, with a medium effect size, thus highlighting the urgent need for effective resilience-building interventions (Manullang, 2024). These findings indicate that universities must explore strategies that directly target resilience enhancement.

Among the various approaches proposed in positive psychology, forgiveness-based interventions have shown considerable promise. Forgiveness is understood as a deliberate process of releasing anger and resentment toward oneself or others and fostering more adaptive emotions such as empathy and acceptance (Worthington & Scherer, 2004). Recent empirical studies have demonstrated that forgiveness contributes not only to healthier interpersonal relationships but also to stronger resilience, particularly when individuals face conflict or emotional hardship (Wade et al., 2016; Kim et al., 2022). Furthermore, Toussaint et al. (2016) reported that forgiveness was consistently associated with lower levels of distress and greater capacity for adaptation across diverse populations.

Although international studies have provided growing evidence of the link between forgiveness and resilience, research in Indonesia remains limited. Previous studies in the Indonesian context have primarily examined resilience in relation to social support, coping strategies, or self-efficacy (Lesmana, 2020), with little attention given to forgiveness as a structured intervention. This lack of focus underscores a research gap that is both theoretically and practically significant.

Theoretically, forgiveness aligns closely with the core components of resilience identified by Reivich and Shatté (2002), namely emotional regulation, optimism, and self-efficacy. Through the process of reducing negative emotions and fostering positive reinterpretation of experiences, forgiveness can enhance psychological flexibility and adaptive coping, both of which are fundamental elements of resilience. Recent studies have further supported this theoretical link. For instance, Kim

et al. (2022) found that forgiveness education significantly improved emotional regulation, hope, and resilience among college students, suggesting that forgiveness serves as an emotional regulation strategy that strengthens adaptive functioning.

Similarly, Molinero et al. (2024) in their systematic review concluded that forgiveness-based interventions contribute to greater emotional stability and psychological growth, particularly in university populations experiencing academic stress. Moreover, Vismaya et al. (2024) highlighted that self-forgiveness promotes self-regulation and cognitive reappraisal, which mediate the relationship between forgiveness and resilience. These findings collectively affirm that forgiveness plays an integral role in reinforcing the psychological mechanisms that sustain resilience. Practically, forgiveness training provides a structured and accessible intervention that can be systematically applied in educational settings to help students manage academic pressures, interpersonal conflicts, and emotional challenges effectively.

Based on these considerations, the present study aims to examine the effectiveness of a structured forgiveness training program in enhancing resilience among Indonesian university students. The novelty of this research lies in introducing forgiveness as a systematic intervention within the Indonesian higher education context, where empirical evidence remains scarce. The findings are expected to contribute to the advancement of positive psychology literature and provide practical recommendations for resilience-based interventions in universities.

## **METHODS**

This study employed a quasi-experimental design, specifically the untreated control group design with dependent pretest and posttest samples (Shadish et al., 2002). The participants consisted of 109 undergraduate students, comprising 85 in the experimental group and 24 in the control group. Participants were selected through purposive sampling based on the following inclusion criteria: (1) active enrollment as undergraduate students; (2) aged between 18 and 23 years; and (3) willingness to participate in all sessions.

The use of purposive sampling was intended to ensure that participants shared comparable academic backgrounds and developmental characteristics typical of the emerging adulthood stage, a period considered crucial for the development of resilience and emotional regulation (Arnett, 2016). The unequal group sizes resulted primarily from differences in voluntary participation rates, as a higher number of students expressed willingness to engage in the forgiveness training compared to those opting for the control condition. Due to ethical considerations and institutional constraints within the educational setting, random assignment was not feasible. However, such a non-equivalent group distribution is methodologically acceptable within quasi-experimental research, provided that sources of bias are addressed and statistically controlled (Shadish et al., 2002).

To minimize potential bias, both groups were matched on key demographic variables, including age, gender, and academic year. Preliminary analyses confirmed homogeneity of variance across the groups. Resilience was measured using the resilience intelligence scale, adapted from Reivich & Shatté (2002), which consists of seven dimensions: emotional regulation, impulse control, optimism, causal analysis, empathy, self-efficacy, and reaching out. The Indonesian adaptation of this instrument demonstrated high reliability (Cronbach's  $\alpha = .87$ ; Lesmana, 2020).

The intervention implemented was a structured forgiveness training program, adapted from Enright (2015). The program was conducted over two consecutive days and comprised psychoeducation, guided reflection, and experiential exercises designed to reduce resentment, enhance empathy, and promote adaptive coping. The training sessions were structured to: (1) increase awareness of the value of forgiveness; (2) foster emotional readiness for the forgiveness process; and

(3) apply practical strategies to release anger and strengthen resilience. A detailed session structure and activity outline are provided in Appendix A.

Both groups completed pretest and posttest resilience assessments. The experimental group received the forgiveness training between the two assessments, while the control group received no intervention. Data analysis was performed using the general linear model (GLM) repeated measures procedure to examine changes in resilience scores over time and between groups. This approach was chosen because it is robust to moderate inequality in group sizes and provides an accurate estimation of both within- and between-group effects (Field, 2018; Tabachnick & Fidell, 2019). Partial eta squared ( $\eta^2$ ) was calculated as an indicator of effect size. Additionally, violin plots were generated to visualize data distribution and to assess normality and homogeneity of variance assumptions.

## RESULTS

The implementation of the forgiveness training program began with the administration of the pretest, followed by program preparation, the training sessions, and the administration of the posttest.

### Descriptive Statistics

Table 1 presents the descriptive statistics of resilience scores for both groups across pretest and posttest. The experimental group showed a clear increase in mean scores after the intervention, while the scores for the control group remained relatively stable.

Table 1.  
Descriptive Statistics of Resilience Scores

Group	N	Pretest		Posttest		Mean
		M	SD	M	SD	
Experimental	85	177.90	±12.4	190.20	±13.1	+12.30
Control	24	185.04	±11.7	185.21	±12.0	+0.17

The experimental group showed a 12.3-point increase in resilience, while the control group's change was negligible (0.17).

### Inferential Analysis

To test the hypothesis, a repeated measures GLM analysis was conducted with time (pretest, posttest) as a within-subjects factor and group (experimental, control) as a between-subjects factor. Results indicated a significant time  $\times$  group interaction effect,  $F(1, 107) = 25.62, p < .001, \eta^2 = .193$ . This suggests that changes in resilience scores over time differed significantly between groups. Further analysis showed that the experimental group experienced a significant improvement in resilience from pretest to posttest,  $F(1, 84) = 28.51, p < .001, \eta^2 = .253$ . In contrast, the control group showed no significant change,  $F(1, 23) = 0.03, p = .867, \eta^2 < .01$ .

Table 2.  
Results of GLM Repeated Measures on Resilience Scores

Effect	<i>F</i>	<i>df</i>	<i>p</i>	$\eta^2$
Time (Pre vs. Post)	19.87	1.107	< .001	.157
Group (Exp vs. Control)	12.42	1.107	.001	.104
Time $\times$ Group Interaction	25.62	1.107	< .001	.193

### Data Visualization

To provide a clear visual representation of the findings, Figure 1 is placed directly after the presentation of the inferential statistical results. This positioning ensures that the figure complements the explanation of the general linear model (GLM) repeated measures analysis and helps readers interpret the differences more intuitively. As displayed in Figure 1, the violin plots illustrate the distribution of resilience scores for both the experimental and control groups at pretest and posttest. The experimental group's plot shows a marked upward shift in scores following the forgiveness training program. The plot becomes narrower at the top end, indicating that posttest scores were not only higher but also more consistently distributed among participants. This suggests an overall improvement in resilience as well as reduced variability in adaptive responses after the intervention.

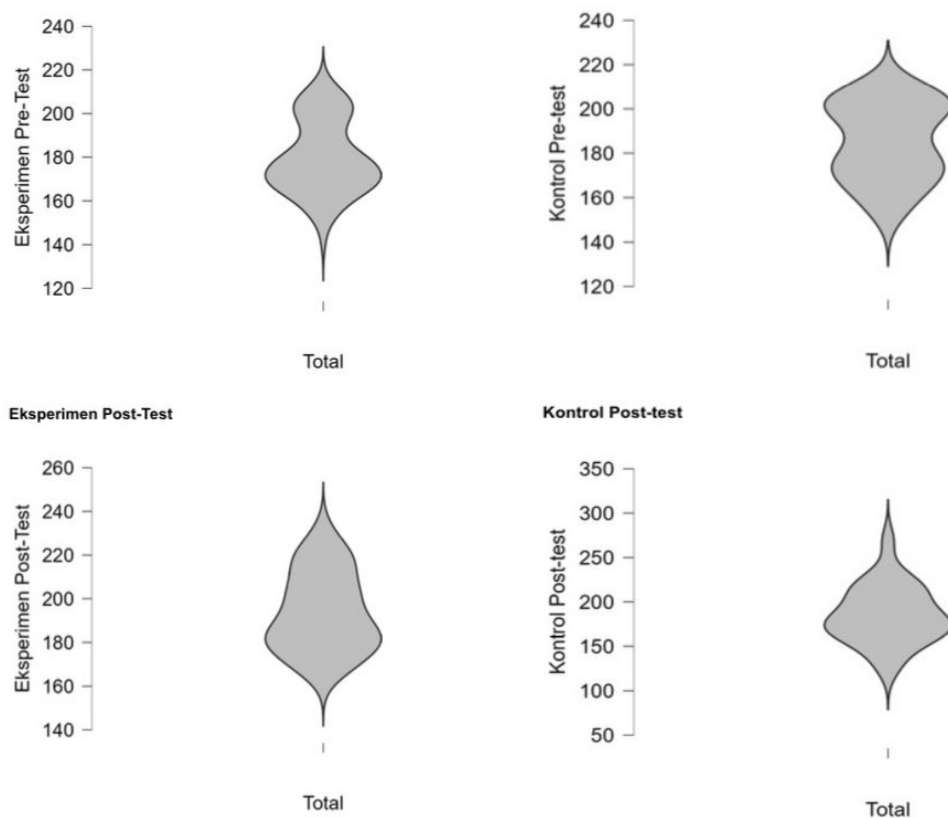


Figure 1.  
Distribution of Resilience Scores (Violin Plot)

By contrast, the control group's violin plots remain almost identical between pretest and posttest, with no substantial upward shift or narrowing of distribution. This indicates stability in their resilience levels across the two measurement points. Placing the figure immediately after the results section allows readers to visually confirm the statistical evidence of a significant time  $\times$  group interaction effect. The graphical pattern strengthens the interpretation that resilience improvement was driven by the forgiveness training program rather than by extraneous factors.

### DISCUSSION

The findings of this study demonstrate that the forgiveness training program significantly improved resilience among university students in the experimental group, while the control group did not show

any meaningful change. This result confirms the initial hypothesis and provides empirical evidence that forgiveness-based interventions can serve as an effective strategy for strengthening resilience.

From a theoretical standpoint, the findings support the resilience quotient model proposed by Reivich and Shatté (2002), which emphasizes emotion regulation, optimism, and self-efficacy as the core components of resilience. By helping students release negative emotions and reframe adverse experiences, forgiveness training appears to reinforce these mechanisms. This is consistent with Enright (2015), who conceptualized forgiveness as an emotion-focused coping strategy that reduces psychological strain and fosters adaptive functioning.

The results also align with prior empirical studies. Kim et al. (2022) found that forgiveness training effectively reduced depression and anxiety while enhancing hope among students with emotional trauma. Similarly, Wade et al. (2016) reported that forgiveness interventions significantly contributed to resilience and psychological well-being across different contexts. In the Indonesian context, Estari and Huwae (2023) demonstrated that forgiveness was positively associated with resilience in adolescents from non-intact families. Together, these findings underscore forgiveness as a key psychological resource that contributes to resilience across diverse populations.

Beyond theoretical contributions, the findings of this study hold practical implications for higher education. University students often face cumulative stressors from academic, social, and personal domains, which place them at risk of diminished resilience (Southwick et al., 2014). The structured forgiveness training program tested in this study can be incorporated into student counseling and development programs as a promotive psychological intervention. Such efforts may better prepare students to handle adversity and sustain well-being throughout their academic journey.

Nevertheless, several limitations should be acknowledged. First, the sample sizes between the experimental and control groups were not balanced, which may affect the generalizability of the results. Second, the study relied on self-report measures, which are subject to potential response biases. Third, the follow-up period was relatively short, making it unclear whether the observed improvement in resilience would persist over time. Future research should employ larger and more balanced samples, incorporate longitudinal designs, and explore additional outcome variables such as academic performance or interpersonal adjustment.

## **CONCLUSION**

This study confirmed that a structured forgiveness training program significantly enhanced the resilience of Indonesian university students. While the experimental group experienced a substantial increase in resilience, the control group showed no significant change. These findings affirm the theoretical proposition that forgiveness functions as a protective factor by reducing negative emotions, fostering optimism, and reinforcing self-efficacy. Theoretically, this study contributes to positive psychology literature in Indonesia by providing empirical evidence that forgiveness can systematically strengthen resilience. Practically, the results suggest that forgiveness training can be implemented as a promotive intervention in higher education to support student well-being and adaptation. However, the study is not without limitations, particularly regarding sample imbalance and reliance on self-reported data. Future studies should extend this line of research by using more rigorous designs, larger and diverse samples, and longer follow-up periods. Despite these limitations, the present findings highlight the value of forgiveness-based interventions as an accessible and effective approach for cultivating resilience among university students.

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**APPENDIX**

**Forgiveness Training Module**

Pretest Implementation				
<b>Day One</b>				
<b>Part 1</b>				
Objective: To understand the importance of forgiveness and to gain an accurate definition of forgiveness.				
Materials: 1. Laptop, Projector, Screen 2. Sound system/Wireless microphone 3. Worksheet: “Why is Forgiveness Important?”				
Activity Flow:				
Stage	Activity	Time	Method	Materials
A	Opening	15 minutes	Ice Breaking and initial reflection	Opening questions
B	Core Material	60 minutes	Lecture	Presentation slides
C	Practical Activity	15 minutes	Reflection and discussion	Reflection questions

Pretest Implementation				
<b>Part 2</b>				
Objective: To prepare oneself psychologically for the forgiveness process through character strengthening and life perspective development.				
Materials: 1. Laptop, Projector, Screen 2. Sound system/Wireless microphone 3. Worksheet: “Becoming Fit for Forgiveness”				
Activity Flow :				
Stage	Activity	Time	Method	Materials
A	Opening	15 minutes	Review and reflection on previous tasks	Opening questions
B	Core Material	60 minutes	Lecture	Presentation slides
C	Practical Activity	15 minutes	Reflection and discussion	Reflection questions

Pretest Implementation <b>Part 3</b>				
Objective: To prepare oneself psychologically for the forgiveness process through character strengthening and life perspective development.				
Materials: 1. Laptop, Projector, Screen 2. Sound system/Wireless microphone 3. Worksheet: “Identifying Sources of Pain and Managing Inner Turmoil”				
Activity Flow :				
Stage	Activity	Time	Method	Materials
A	Opening	15 minutes	Task and emotional check-in	Opening questions and mental preparation
B	Care Material	60 minutes	Lecture and video	Presentation slides
C	Practical Activity	15 minutes	Discussion and commitment	Reflection questions

Pretest Implementation <b>Part 4</b>				
Objective: To develop a new perspective toward the person who caused hurt through visualization exercises and deep reflection.				
Materials: 1. Laptop, Projector, Screen 2. Sound system/Wireless microphone 3. Worksheet: “Developing a Forgiving Mindset”				
Activity Flow :				
Stage	Activity	Time	Method	Materials
A	Opening	15 minutes	Check-in and task review	Opening questions and concept introduction
B	Core Material	60 minutes	Lecture and video	Presentation slides
C	Practical Activity	15 minutes	Reflection and discussion	Reflection questions

Posttest Implementation <b>Day Two</b> <b>Part 1</b>				
Objective: To help participants find positive meaning in their suffering as part of the healing and growth process.				
Materials: 1. Laptop, Projector, Screen 2. Sound system/Wireless microphone 3. Worksheet: “Finding Meaning in What You Have Suffered”				
Activity Flow :				
Stage	Activity	Time	Method	Materials
A	Opening	15 minutes	Check-in and reflection on journey	Opening questions
B	Core Material	60 minutes	Lecture and video	Presentation slides
C	Practical Activity	15 minutes	Reflection and discussion	Reflection questions

Posttest Implementation <b>Part 2</b>				
Objective: To equip participants with practical strategies to overcome obstacles and difficulties in the forgiveness process.				
Materials: 1. Laptop, Projector, Screen 2. Sound system/Wireless microphone 3. Worksheet: “Overcoming Challenges in the Forgiveness Journey”				
Activity Flow :				
Stage	Activity	Time	Method	Materials
A	Opening	15 minutes	Check-in and reflection	Opening questions
B	Core Material	60 minutes	Lecture	Presentation slides
C	Practical Activity	15 minutes	Discussion and commitment	Commitment worksheet

Posttest Implementation				
<b>Part 3</b>				
Objective: To develop students' ability to forgive themselves for past mistakes by mastering self-compassion techniques and differentiating identity from actions, thereby freeing themselves from unproductive guilt and restoring healthy self-worth.				
Materials:				
1. Laptop, Projector, Screen				
2. Sound system/Wireless microphone				
3. Worksheet: "Overcoming Guilt and Self-Regret"				
Activity Flow :				
Stage	Activity	Time	Method	Materials
A	Opening	15 minutes	Check-in and reflection	Opening questions
B	Core Material	60 minutes	Lecture and video	Presentation slides
C	Practical Activity	15 minutes	Discussion and commitment	Commitment worksheet

Posttest Implementation				
<b>Part 4</b>				
Objective: To master practical steps and concrete techniques in self-forgiveness through self-compassion exercises, meaningful repairs, and integration of healthy self-values to achieve sustainable growth and resilience in facing future mistakes.				
Materials:				
1. Laptop, Projector, Screen				
2. Sound system/Wireless microphone				
3. Worksheet: "Overcoming Guilt and Self-Regret"				
Activity Flow :				
Stage	Activity	Time	Method	Materials
A	Opening	15 minutes	Review and clarification	Opening questions
B	Core Material	60 minutes	Lecture	Presentation slides
C	Practical Activity	15 minutes	Affirmation, commitment and blessing	Commitment worksheet