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# Forgiveness as a Mediator of Neuroticism and Subjective Well-Being among University Students in Yogyakarta, Indonesia

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## ABSTRACT

This research is intended to determine the role of the personality traits of neuroticism and forgiveness on the psychological well-being of students. The research subjects were active students at various universities in the Special Region of Yogyakarta, Indonesia. The method used is a quantitative method. Data were collected using the Personality Scale, Neuroticism subscale, Forgiveness Scale, and SPANE, and SWLS. Data were analyzed using Structural Equation Modeling (SEM). The research hypothesis is that forgiveness acts as a mediator in the relationship between the personality trait of emotional stability and students' subjective well-being. The results of the research show that the neuroticism variable plays a role in the forgiveness variable with a standardized regression coefficient value of -0.569 and a significance of p = 0.000 (p < 0.05), the forgiveness variable plays a role in the subjective well-being variable with a standardized regression coefficient value of 0.264 and a significance of p = 0.000 (p < 0.05), and the neuroticism variable plays a role in the subjective well-being variable with a standardized regression coefficient value of -0.485 and a significance of p = 0.000 (p < 0.05).

**Keywords**

emotional stability; forgiveness; mediation; neuroticism; personality traits; structural equation modeling; subjective well-being

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## INTRODUCTION

Various studies have demonstrated that the level of students' subjective well-being remains suboptimal. Research by Jamshaid et al. (2023) and Talarowska et al. (2023)

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indicates that, in the post-pandemic context, students experienced a decline in mental health, except for those who maintained regular physical exercise, adequate sleep quality, and proper dietary habits. Gaol & Darmawanti (2022) reported several conditions reflecting low levels of subjective well-being among students, such as stress and anxiety related to academic tasks, unmet needs for peer interaction, frequent fatigue, and poor sleep quality. Furthermore, Putri's (2023) study found that 12.9% of 171 first-year students at a higher education institution exhibited low subjective well-being.

Subjective well-being experienced by individuals, including university students, is influenced by personality traits. Personality traits are closely associated with dimensions of subjective well-being, namely positive affect and negative affect (Librán, 2006). Individual differences in personality play a crucial role in fostering protective behaviors and modulating the interaction between the immune system and stress triggers (Khosravi, 2020). Several studies conducted with octogenarians and centenarians have identified personality as the strongest predictor of subjective well-being (Boyd et al., 2000). Other research provides further evidence that personality factors can predict subjective well-being, in which neuroticism (vis-à-vis emotional stability) emerges as one of the traits significantly shaping subjective well-being (Anglim et al., 2020). Neuroticism is a personality dimension characterized by a heightened tendency toward anxiety, anger, depression, and emotional reactivity (McCrae & Costa Jr., 2003).

Empirical evidence demonstrates that neuroticism is correlated with subjective well-being. Zhang & Renshaw (2020) found that the personality trait of neuroticism—alongside extraversion and conscientiousness—was positively associated with the subjective well-being of university students. Similarly, Serrano et al. (2020) reported that neuroticism, together with extraversion, showed a positive correlation with the subjective well-being of adolescents. In the same vein, Soto (2015) observed that emotional stability—along with extraversion, agreeableness, and conscientiousness—significantly influenced adolescents' subjective well-being.

Beyond personality traits, forgiveness constitutes another factor influencing subjective well-being. Thompson et al. (2005) define forgiveness as the effort to reframe perceived transgressions in such a way that an individual's response toward the offender, the event, and its consequences shifts from negative to neutral or even positive. In adopting a multiperspective approach, Thompson et al. (2005) further emphasize that forgiveness encompasses not only forgiveness of others but also forgiveness of oneself and forgiveness of situational circumstances.

A growing body of research has demonstrated that forgiveness exerts an influence on subjective well-being. Doss & Nathan (2023), Liu et al. (2023), and Rienneke & Setianingrum (2018) found that forgiveness is positively correlated with subjective well-

being. Consistent with these findings, Tehranchi et al. (2018) also identified forgiveness as one of the predictors of happiness. Happiness itself has been recognized as a protective factor against depression, with lower levels of depression serving as an indicator of greater subjective well-being (Su, 2020).

The foregoing discussion illustrates that both the personality trait of neuroticism and forgiveness exert an influence on subjective well-being. An intriguing question, however, is whether forgiveness functions as a mediating variable. Several studies conducted in Indonesia and other countries have positioned forgiveness as a variable shaped by neuroticism. Empirical findings reveal that neuroticism serves as a predictor of forgiveness among various Indonesian ethnic groups, including Javanese (Nashori, Iskandar, et al., 2020), Madurese (Nashori et al., 2019), and Minangkabau (Nashori et al., 2023). In addition, other research has found that neuroticism and agreeableness act as strong predictors of forgiveness (Hodge et al., 2019).

The study conducted by Nashori, Diana, et al. (2020) among undergraduate and graduate students revealed that neuroticism is positively correlated with forgiveness. Meanwhile, Nugroho & Hartini (2022) found that forgiveness is correlated with personality traits, particularly neuroticism, although the relationship identified was negative. Taken together, these findings suggest that forgiveness is more appropriately positioned as a mediating variable between neuroticism and psychological well-being. Accordingly, a key contribution of the present study, distinguishing it from previous research, lies in conceptualizing forgiveness as a mediator between neuroticism and subjective well-being.

Based on the foregoing discussion, the objective of this study is to examine the influence of the personality trait of neuroticism on students' subjective well-being, with forgiveness serving as a mediating variable. The hypothesis proposed in this research posits that emotional stability exerts an effect on forgiveness, which in turn functions as a mediator. From a theoretical standpoint, this study is expected to contribute to the development of theoretical frameworks concerning the influence of emotional stability on subjective well-being, particularly by positioning forgiveness as a mediating variable.

## METHOD

### Research Subjects

The subjects of this study were undergraduate and graduate students enrolled in various universities in the Special Region of Yogyakarta, all of whom resided in the same region. Yogyakarta is widely known as a center of higher education that attracts

students from across Indonesia as well as from abroad. The total sample comprised 536 participants.

## Data Collection Method

This study employed a quantitative research design, utilizing several psychological scales. Each scale generated scores that indicated levels of subjective well-being, forgiveness, and neuroticism.

### *Subjective Well-Being Scale*

Subjective well-being was measured using the Scale of Positive and Negative Experience (SPANE) (Diener et al., 2010) and the Satisfaction with Life Scale (SWLS) (Diener et al., 1985). SPANE, adapted into Indonesian by Rahmania et al. (2019) based on Diener's (1999) subjective well-being theory, showed a Cronbach's alpha of 0.792. The scale consists of 12 items, with six assessing positive affect and six assessing negative affect. Participants reported their experiences and emotions over the past month, a time frame selected to balance the adequacy of affective sampling and memory accuracy (Li et al., 2013). Responses were recorded on a five-point Likert scale ranging from 1 (very rarely or never) to 5 (very often or always). The SWLS, adapted by Takwin et al. (2012) from Diener's (1985) original instrument, was also administered to assess global life satisfaction. It consists of five items and demonstrated a Cronbach's alpha of 0.87.

### *Neuroticism Scale*

Neuroticism was assessed using the NEO-PI, developed by Costa Jr. & McCrae (1995) based on Goldberg's (1981) personality theory. The neuroticism subscale measures six facets representing the antithesis of emotional stability: anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability. The neuroticism scale consisted of 12 items and yielded a Cronbach's alpha of 0.908. As with the SPANE, participants were asked to evaluate their experiences and emotions during the past month to ensure both reliable affective sampling and memory accuracy (Li et al., 2013).

### *Forgiveness Scale*

Forgiveness was measured using the Forgiveness Scale developed by Thompson et al. (2005) and adapted into Indonesian by Subandi et al. (2010). The adapted version demonstrated item-total correlations ranging from 0.306 to 0.482 and a Cronbach's alpha of 0.803. It measures forgiveness of others, self-forgiveness, and situational forgiveness. The scale uses a five-point Likert model with response options ranging from 1 (very rarely) to 5 (very often). Favorable items were scored accordingly, with higher scores indicating higher levels of forgiveness.

## Data Analysis

The collected data were analyzed using Structural Equation Modeling (SEM) with AMOS software, which allows simultaneous testing of direct and indirect effects among variables. Prior to hypothesis testing, data were examined for normality, reliability, and validity. Goodness-of-fit indices, including Chi-square, GFI, AGFI, CFI, TLI, RMSEA, and CMIN/DF, were used to evaluate model fit. The significance of both direct and indirect effects was assessed at the 0.05 level, and standardized regression weights were reported to interpret the magnitude of effects.

## Ethical Considerations and Informed Consent

This study adhered to established ethical guidelines for research involving human participants. The study was approved by Faculty of Psychology and Socio-Cultural Sciences, Universitas Islam Indonesia, Yogyakarta, Indonesia, with Description of Research Ethics Letter (2022). Participants were informed about the objectives, procedures, and voluntary nature of the study. Written informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity were assured by coding all responses and reporting results in aggregate form. Participants retained the right to withdraw from the study at any point without penalty.

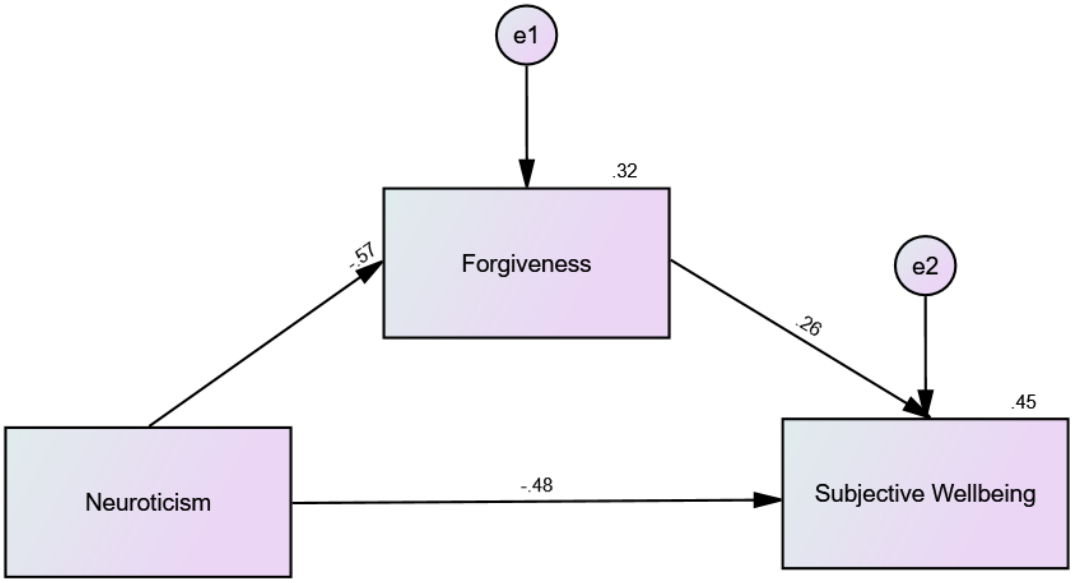
# RESULTS

## Study 1

Figure 1 illustrates the structural equation model testing the mediating role of forgiveness in the relationship between neuroticism and subjective well-being. The results show that neuroticism exerted a significant negative effect on forgiveness ($\beta$ = -0.57), indicating that individuals with higher levels of neuroticism are less likely to engage in forgiving responses. In turn, forgiveness positively predicted subjective well-being ($\beta$ = 0.26), confirming its role as a resilience factor that contributes to psychological adjustment. Moreover, neuroticism demonstrated a direct negative effect on subjective well-being ($\beta$ = -0.48), underscoring its detrimental impact on students' emotional health. The squared multiple correlations ($R^2$) further indicate that forgiveness explained 32% of its variance, while subjective well-being was explained by 45% of the model. Taken together, these findings provide robust empirical support for the partial mediating role of forgiveness in the link between neuroticism and subjective well-being.

**Figure 1**

*Structural Model of the Mediating Role of Forgiveness in Study 1*




Source: Primary data. Authors' analysis.

### *Normality Test*

Table 1 presents the results of the normality test for the primary variables, namely neuroticism, forgiveness, and subjective well-being. The skewness and kurtosis values for each variable fall within the acceptable range, indicating that the data distribution approximates normality. For neuroticism, the skewness was -0.179 with a critical ratio of -1.693, while forgiveness displayed a skewness of 0.047 with a critical ratio of 0.443. Subjective well-being exhibited a skewness of -0.153 with a critical ratio of -1.443. The kurtosis values also suggest an adequate distribution, although forgiveness (0.919; c.r. = 4.342) and subjective well-being (0.711; c.r. = 3.359) showed slightly higher values. The multivariate normality test yielded skewness and kurtosis critical ratios of 3.293 and 6.960, respectively, which remain within tolerable thresholds for structural equation modeling (SEM) analyses, thereby supporting the suitability of the dataset for subsequent hypothesis testing.

**Table 1**

*Normality Test Results*

| Variable | Min | Max | Skewness | C.R. | Kurtosis | C.R. |
|---|---|---|---|---|---|---|
| Neuroticism | 8.000 | 40.000 | -0.179 | -1.693 | -0.111 | -0.523 |
| Forgiveness | 29.000 | 86.000 | 0.047 | 0.443 | 0.919 | 4.342 |
| Subjective Well-Being | 21.000 | 81.000 | -0.153 | -1.443 | 0.711 | 3.359 |
| Multivariate | | | | 3.293 | | 6.960 |

Source: Primary data. Authors' analysis.

### *Model Fit Evaluation*

The goodness-of-fit test results presented in Table 2 provide an overview of the model's suitability for further analysis. As shown, both the Goodness of Fit Index (GFI = 1.000) and the Comparative Fit Index (CFI = 1.000) exceeded the recommended threshold of 0.90, indicating a strong fit between the hypothesized model and the observed data. However, several indices such as the Adjusted Goodness of Fit Index (AGFI), the Tucker-Lewis Index (TLI), and the chi-square probability did not meet the established cut-off values, suggesting partial misfit. The RMSEA value of 0.573 is considerably higher than the recommended threshold (< 0.08), further indicating limitations in overall model fit. Taken together, while certain indices confirm model adequacy, others highlight areas requiring cautious interpretation, thus warranting careful consideration in subsequent structural equation modeling analyses.

**Table 2**

*Goodness of Fit Test*

| Index | Cut-off Value | Result |
|---|---|---|
| Chi-square | Small | 0.000 |
| Probability | > 0.05 | – |
| AGFI | > 0.90 | – |
| GFI | > 0.90 | 1.000 |
| CFI | > 0.90 | 1.000 |
| TLI | > 0.90 | – |
| CMIN/DF | < 2.00 | – |
| RMSEA | < 0.08 | 0.573 |

Source: Primary data. Authors' analysis.

### *Standardized Regression Weights*

Table 3 displays the standardized regression weights for the hypothesized structural model. The results indicate that neuroticism negatively predicted forgiveness ($\beta$ = -0.569, $p < 0.05$), suggesting that higher levels of neuroticism are associated with lower tendencies to forgive. Forgiveness, in turn, exerted a positive influence on subjective well-being ($\beta = 0.264$, $p < 0.05$), confirming its role as a protective factor in psychological adjustment. Additionally, neuroticism had a significant negative effect on subjective well-being ($\beta = -0.485$, $p < 0.05$), indicating that emotionally unstable individuals tend to experience lower levels of well-being. Collectively, these findings support the proposed model in which forgiveness partially mediates the relationship between neuroticism and subjective well-being, consistent with previous empirical evidence emphasizing the detrimental impact of neuroticism and the adaptive role of forgiveness in enhancing psychological outcomes.

**Table 3**

*Standardized Regression Weights (N = 536)*

| Dependent Variable | Independent Variable | Estimate |
|---|---|---|
| Forgiveness | Neuroticism | -0.569 |
| Subjective Well-Being | Forgiveness | 0.264 |
| Subjective Well-Being | Neuroticism | -0.485 |

Source: Primary data. Authors' analysis.

## Hypothesis Testing

Table 4 presents the results of the hypothesis testing for the proposed structural model. The findings demonstrate that neuroticism had a strong negative effect on forgiveness ($\beta = -0.794$, $p < 0.01$), indicating that individuals with higher levels of neuroticism tend to exhibit lower levels of forgiving behavior. Forgiveness, in turn, showed a positive and significant influence on subjective well-being ($\beta = 0.297$, $p < 0.01$), underscoring its role as a facilitator of psychological adjustment. Furthermore, neuroticism was found to negatively predict subjective well-being ($\beta = -0.759$, $p < 0.01$), highlighting its detrimental impact on students' emotional health. Taken together, these results provide robust support for the hypothesized model, confirming that forgiveness operates as a significant mediator in the relationship between neuroticism and subjective well-being.

**Table 4**

*Hypothesis Testing (N = 536)*

| Dependent Variable | Independent Variable | Estimate | S.E. | C.R. | p | Result |
|---|---|---|---|---|---|---|
| Forgiveness | Neuroticism | -0.794 | 0.050 | -16.020 | 0.000 | Significant |
| Subjective Well-Being | Forgiveness | 0.297 | 0.044 | 6.771 | 0.000 | Significant |
| Subjective Well-Being | Neuroticism | -0.759 | 0.061 | -12.425 | 0.000 | Significant |

Source: Primary data. Authors' analysis.

## Direct Effects

Table 5 illustrates the direct effects among the studied variables within the structural model. Neuroticism demonstrated a significant negative effect on forgiveness ($\beta = -0.569$), suggesting that higher neurotic tendencies reduce the likelihood of forgiving behavior. In addition, neuroticism was found to negatively predict subjective well-being ($\beta = -0.485$), reinforcing the notion that emotional instability undermines psychological health. Conversely, forgiveness exhibited a positive direct effect on subjective well-being ($\beta = 0.264$), indicating its role as a resilience factor that enhances overall life satisfaction and affective balance. These results provide empirical support for the theoretical framework that positions forgiveness as a key protective factor while

confirming the adverse influence of neuroticism on well-being. Together, the findings strengthen the evidence for forgiveness as a pathway that partially offsets the negative psychological consequences of neuroticism.

**Table 5**

*Direct Effects (N = 536)*

| Dependent Variable | Independent Variable | Estimate |
|---|---|---|
| Forgiveness | Neuroticism | -0.569 |
| Subjective Well-Being | Neuroticism | -0.485 |
| Subjective Well-Being | Forgiveness | 0.264 |

Source: Primary data. Authors' analysis.

### *Indirect Effects*

Table 6 reports the indirect effects among the variables in the structural model. The results indicate that neuroticism had a negative indirect effect on subjective well-being (β = -0.150), suggesting that part of its detrimental influence operates through intermediate pathways rather than solely via direct associations. However, no indirect effects were observed between neuroticism and forgiveness or between forgiveness and subjective well-being, as the estimates were equal to zero. These findings imply that while forgiveness plays a role in directly enhancing subjective well-being, its mediating function in the indirect relationship between neuroticism and well-being is limited. Thus, the data provide stronger support for partial mediation, whereby forgiveness contributes primarily through direct rather than indirect mechanisms in mitigating the adverse consequences of neuroticism.

**Table 6**

*Indirect Effects (N = 536)*

| Dependent Variable | Independent Variable | Estimate |
|---|---|---|
| Forgiveness | Neuroticism | 0.000 |
| Subjective Well-Being | Neuroticism | -0.150 |
| Subjective Well-Being | Forgiveness | 0.000 |

Source: Primary data. Authors' analysis.

### *Total Effects*

Table 7 summarizes the total effects of neuroticism and forgiveness within the structural model. The results show that neuroticism exerted a substantial negative total effect on forgiveness (β = -0.569), indicating that higher levels of neuroticism consistently undermine forgiving tendencies. Neuroticism also demonstrated a stronger negative total effect on subjective well-being (β = -0.635), reinforcing its detrimental role in shaping students' psychological outcomes. Conversely, forgiveness exerted a positive total effect on subjective well-being (β = 0.264), supporting its protective and restorative role in enhancing life satisfaction and affective balance. Taken together,

these findings confirm that neuroticism is the dominant risk factor reducing both forgiveness and subjective well-being, whereas forgiveness contributes as a compensatory factor that fosters greater psychological resilience and overall well-being.

**Table 7**

*Total Effects (N = 536)*

| Dependent Variable | Independent Variable | Estimate |
|---|---|---|
| **Forgiveness** | Neuroticism | -0.569 |
| **Subjective Well-Being** | Neuroticism | -0.635 |
| **Subjective Well-Being** | Forgiveness | 0.264 |

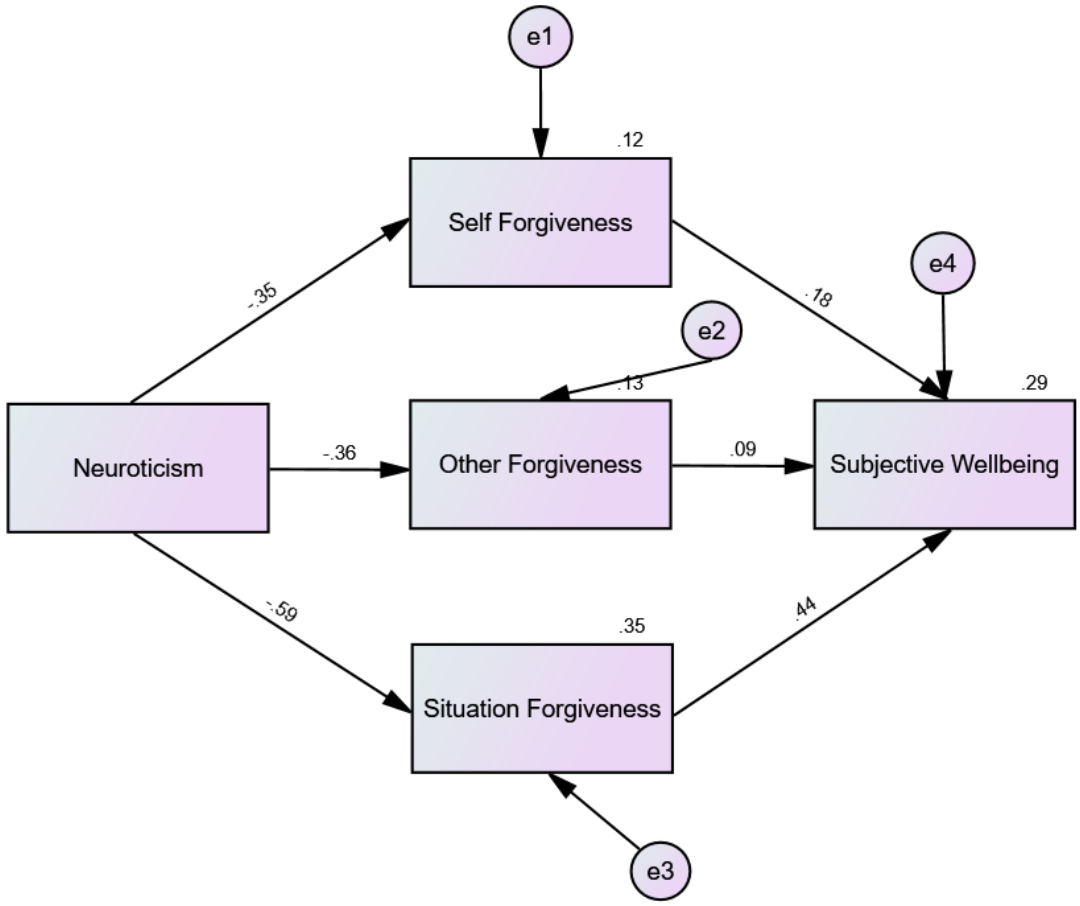
Source: Primary data. Authors' analysis.

## Study 2

Figure 2 presents the structural model from Study 2, which examined the mediating effects of different dimensions of forgiveness—self-forgiveness, forgiveness of others, and situational forgiveness—on the relationship between neuroticism and subjective well-being. The results show that neuroticism negatively predicted self-forgiveness ($\beta$ = -0.35), forgiveness of others ($\beta$ = -0.36), and situational forgiveness ($\beta$ = -0.59), highlighting its detrimental influence across forgiveness domains. Among these, situational forgiveness exerted the strongest positive effect on subjective well-being ($\beta$ = 0.44), while self-forgiveness ($\beta$ = 0.18) also showed a significant contribution. By contrast, forgiveness of others demonstrated a weaker association with well-being ($\beta$ = 0.09). The model further explained 29% of the variance in subjective well-being, suggesting that forgiveness processes, particularly situational and self-forgiveness, play a critical role in mitigating the adverse psychological effects of neuroticism and in fostering students' subjective well-being.

**Figure 2**

*Structural Model of Specific Dimensions of Forgiveness as Mediators in Study 2*




Source: Primary data. Authors' analysis.

### *Normality Test*

Table 8 reports the results of the normality test for neuroticism, the three dimensions of forgiveness, and subjective well-being. The skewness values ranged from -0.238 to 0.169, while kurtosis values ranged from -0.111 to 0.711, all of which fall within the generally accepted thresholds, indicating no substantial deviation from normality. The multivariate critical ratios for skewness (6.308) and kurtosis (8.728) were higher than univariate indices but remain tolerable for structural equation modeling (SEM) analyses, consistent with recommendations for large sample sizes (Kline, 2023). These results suggest that the data distribution across variables approximates normality and can therefore be considered adequate for subsequent SEM procedures. Importantly, this ensures that the assumptions underlying the analysis are satisfied, lending greater reliability to the interpretation of structural relationships among neuroticism, forgiveness, and subjective well-being.

**Table 8**

*Normality Test (N = 536)*

| Variable | Min | Max | Skewness | C.R. | Kurtosis | C.R. |
|---|---|---|---|---|---|---|
| Neuroticism | 8.000 | 40.000 | -0.179 | -1.693 | -0.111 | -0.523 |
| Forgiveness of Others | 7.000 | 30.000 | -0.238 | -2.249 | 0.041 | 0.195 |
| Self-Forgiveness | 9.000 | 28.000 | 0.024 | 0.226 | 0.323 | 1.528 |
| Situational Forgiveness | 9.000 | 30.000 | 0.169 | 1.595 | 0.379 | 1.792 |
| Subjective Well-Being | 21.000 | 81.000 | -0.153 | -1.443 | 0.711 | 3.359 |
| Multivariate | | | | 6.308 | | 8.728 |

Source: Primary data. Authors' analysis.

### *Model Fit Indices for the Forgiveness Dimensions Model*

Table 9 presents the goodness-of-fit indices for the structural equation model involving neuroticism, forgiveness dimensions, and subjective well-being. The results indicate that the model did not achieve satisfactory fit according to conventional standards (Hair Jr et al., 2020; Kline, 2023). Specifically, the chi-square test was significant ($\chi^2$ = 219.804, $p < 0.001$), and indices such as AGFI (0.465), GFI (0.857), CFI (0.727), and TLI (0.317) all fell below the recommended cut-off value of 0.90. Furthermore, the CMIN/DF ratio (54.951) far exceeded the acceptable threshold (< 2), while the RMSEA value (0.318) was well above the recommended limit (< 0.08). These findings suggest that the hypothesized model requires modification or re-specification to better capture the underlying relationships among neuroticism, forgiveness sub-dimensions, and subjective well-being.

**Table 9**

*Goodness of Fit Test (N = 536)*

| Index | Cut-off Value | Result |
|---|---|---|
| Chi-square | Small | 219.804 |
| Probability | > 0.05 | 0.000 |
| AGFI | > 0.90 | 0.465 |
| GFI | > 0.90 | 0.857 |
| CFI | > 0.90 | 0.727 |
| TLI | > 0.90 | 0.317 |
| CMIN/DF | < 2.00 | 54.951 |
| RMSEA | < 0.08 | 0.318 |

Source: Primary data. Authors' analysis.

### *Standardized Regression Weights for the Forgiveness Dimensions Model*

Table 10 summarizes the standardized regression weights for the structural paths between neuroticism, forgiveness dimensions, and subjective well-being. The results indicate that neuroticism negatively predicted all three forgiveness dimensions, with the strongest effect on situational forgiveness ($\beta$ = -0.587), followed by forgiveness of

others (β = -0.357) and self-forgiveness (β = -0.347), all significant at p < 0.05. In contrast, situational forgiveness demonstrated the strongest positive association with subjective well-being (β = 0.444, p < 0.05), while self-forgiveness (β = 0.176, p < 0.05) and forgiveness of others (β = 0.092, p < 0.05) showed weaker yet significant contributions. These findings suggest that situational forgiveness plays the most prominent role in mitigating the negative effects of neuroticism, thereby enhancing subjective well-being, whereas self- and other-forgiveness provide additional but comparatively modest protective effects.

**Table 10**

*Standardized Regression Weights (N = 536)*

| Dependent Variable | Independent Variable | Estimate |
|---|---|---|
| Situational Forgiveness | Neuroticism | -0.587 |
| Self-Forgiveness | Neuroticism | -0.347 |
| Forgiveness of Others | Neuroticism | -0.357 |
| Subjective Well-Being | Situational Forgiveness | 0.444 |
| Subjective Well-Being | Self-Forgiveness | 0.176 |
| Subjective Well-Being | Forgiveness of Others | 0.092 |

Source: Primary data. Authors' analysis.

### *Hypothesis Testing Results*

Table 11 presents the hypothesis testing results for the structural model. Neuroticism was found to significantly predict all three dimensions of forgiveness, with the strongest negative association observed for situational forgiveness (β = -0.368, p < 0.001), followed by forgiveness of others (β = -0.248, p < 0.001) and self-forgiveness (β = -0.178, p < 0.001). In turn, situational forgiveness emerged as the strongest positive predictor of subjective well-being (β = 1.082, p < 0.001), while self-forgiveness (β = 0.524, p < 0.001) and forgiveness of others (β = 0.201, p < 0.05) also contributed significantly, though with smaller effect sizes. These findings suggest that while neuroticism consistently undermines forgiveness across domains, situational forgiveness in particular plays a central role in enhancing subjective well-being, reinforcing its importance as a protective psychological mechanism.

**Table 11**

*Hypothesis Testing (N = 536)*

| Dependent Variable | Independent Variable | Estimate | S.E. | C.R. | p | Result |
|---|---|---|---|---|---|---|
| Situational Forgiveness | Neuroticism | -0.368 | 0.022 | -16.788 | 0.000 | Significant |
| Self-Forgiveness | Neuroticism | -0.178 | 0.021 | -8.557 | 0.000 | Significant |

| Dependent Variable | Independent Variable | Estimate | S.E. | C.R. | p | Result |
|---|---|---|---|---|---|---|
| Forgiveness of Others | Neuroticism | -0.248 | 0.028 | -8.837 | 0.000 | Significant |
| Subjective Well-Being | Situational Forgiveness | 1.082 | 0.092 | 11.728 | 0.000 | Significant |
| Subjective Well-Being | Self-Forgiveness | 0.524 | 0.111 | 4.716 | 0.000 | Significant |
| Subjective Well-Being | Forgiveness of Others | 0.201 | 0.082 | 2.453 | 0.014 | Significant |

Source: Primary data. Authors' analysis.

### *Direct Effects of Neuroticism and Forgiveness Dimensions*

Table 12 outlines the direct effects of neuroticism and forgiveness dimensions on one another and on subjective well-being. The results demonstrate that neuroticism exerted significant negative direct effects on forgiveness of others (β = -0.357), self-forgiveness (β = -0.347), and situational forgiveness (β = -0.587), with the strongest impact observed for situational forgiveness. In contrast, the three forgiveness dimensions contributed positively to subjective well-being, although their effect sizes varied. Situational forgiveness showed the largest direct positive effect (β = 0.444), followed by self-forgiveness (β = 0.176) and forgiveness of others (β = 0.092). These findings indicate that while neuroticism consistently undermines forgiveness across domains, situational forgiveness emerges as the most influential factor in enhancing well-being, highlighting its central role as a protective mechanism against the negative effects of emotional instability.

**Table 12**

*Direct Effects (N = 536)*

| Dependent Variable | Neuroticism | Forgiveness of Others | Self-Forgiveness | Situational Forgiveness |
|---|---|---|---|---|
| Forgiveness of Others | -0.357 | 0.000 | 0.000 | 0.000 |
| Self-Forgiveness | -0.347 | 0.000 | 0.000 | 0.000 |
| Situational Forgiveness | -0.587 | 0.000 | 0.000 | 0.000 |
| Subjective Well-Being | 0.000 | 0.092 | 0.176 | 0.444 |

Source: Primary data. Authors' analysis.

### *Indirect Effects of Neuroticism and Forgiveness Dimensions*

Table 13 presents the indirect effects within the structural model. The results reveal that neuroticism exerted a negative indirect effect on subjective well-being (β = -0.355),

suggesting that part of its influence operates through mediating mechanisms, particularly the forgiveness dimensions. However, no other indirect effects were detected, as the estimates for forgiveness of others, self-forgiveness, and situational forgiveness on subjective well-being were all zero. These findings indicate that while forgiveness plays an important direct role in enhancing well-being, its mediating contribution is limited when modeled separately. The data therefore provide stronger support for partial mediation, in which neuroticism continues to directly undermine well-being, but forgiveness—especially situational forgiveness—remains a crucial factor in buffering its negative psychological consequences.

**Table 13**

*Indirect Effects (N = 536)*

| Dependent Variable | Neuroticism | Forgiveness of Others | Self-Forgiveness | Situational Forgiveness |
|---|---|---|---|---|
| Forgiveness of Others | 0.000 | 0.000 | 0.000 | 0.000 |
| Self-Forgiveness | 0.000 | 0.000 | 0.000 | 0.000 |
| Situational Forgiveness | 0.000 | 0.000 | 0.000 | 0.000 |
| Subjective Well-Being | -0.355 | 0.000 | 0.000 | 0.000 |

Source: Primary data. Authors' analysis.

### *Total Effects of Neuroticism and Forgiveness Dimensions*

Table 14 summarizes the total effects of neuroticism and forgiveness dimensions on one another and on subjective well-being. The results demonstrate that neuroticism had consistent negative total effects on all forgiveness dimensions, with the strongest effect on situational forgiveness (β = -0.587), followed by forgiveness of others (β = -0.357) and self-forgiveness (β = -0.347). In relation to subjective well-being, situational forgiveness emerged as the most influential positive predictor (β = 0.444), followed by self-forgiveness (β = 0.176) and forgiveness of others (β = 0.092). Conversely, neuroticism had a negative total effect on subjective well-being (β = -0.355), underscoring its detrimental role. These findings highlight situational forgiveness as the most critical factor in mitigating the negative impact of neuroticism and enhancing well-being, while other forms of forgiveness contribute more modestly to psychological resilience.

**Table 14**

*Total Effects (N = 536)*

| Dependent Variable | Neuroticism | Forgiveness of Others | Self-Forgiveness | Situational Forgiveness |
|---|---|---|---|---|
| Forgiveness of Others | -0.357 | 0.000 | 0.000 | 0.000 |
| Self-Forgiveness | -0.347 | 0.000 | 0.000 | 0.000 |
| Situational Forgiveness | -0.587 | 0.000 | 0.000 | 0.000 |
| Subjective Well-Being | -0.355 | 0.092 | 0.176 | 0.444 |

Source: Primary data. Authors' analysis.

## DISCUSSION

The findings of this study indicate that neuroticism influences subjective well-being both directly and indirectly through a mediating variable. This result demonstrates that forgiveness functions as a partial mediator in the relationship between neuroticism and well-being. The present findings are consistent with previous research. Empirical evidence has repeatedly shown that neuroticism is correlated with subjective well-being. Supporting studies include those by Serrano et al. (2020), Soto (2015), and Zhang & Renshaw (2020), which revealed that emotional stability—the antithesis of neuroticism—was positively associated with university students' subjective well-being. Similarly, research by Ghazzawi et al. (2021) confirmed that emotional stability significantly contributes to individual well-being. In line with these observations, neuroticism has also been shown to correlate negatively with life satisfaction and positive affect, while correlating positively with negative affect (Jensen et al., 2020). Collectively, these findings reinforce the theoretical view that neuroticism is inversely related to subjective well-being.

Individuals with high emotional stability are generally better equipped to regulate negative emotions such as anxiety and depression (Tian et al., 2023). This capacity enables them to achieve higher levels of subjective well-being, as a key indicator of enhanced well-being is the reduced frequency and intensity of negative emotional experiences. This finding is consistent with the study of Kobylińska et al. (2022), which demonstrated that emotional stability exerts a negative influence on negative affect. Conversely, neuroticism, as the inverse of emotional stability, has been shown to correlate positively with negative affect (Hisler et al., 2020). Individuals characterized by neuroticism are more prone to experiencing negative emotions, which may be explained by attentional differences. Specifically, neurotic individuals tend to exhibit

heightened emotional reactivity when confronted with stressors (Hisler et al., 2020; Wendt et al., 2020).

Furthermore, the present findings are consistent with the study by Spark & O'Connor (2020), which revealed that neuroticism is negatively correlated with positive affect, thereby predisposing individuals to lower levels of subjective well-being. In line with this, individuals with dominant neurotic traits are more likely to perceive the world as unsafe and threatening (Garcia & Zoellner, 2017; Hong, 2010; Tamir et al., 2006). Such perceptions may lead them to focus disproportionately on unpleasant experiences rather than on those that could foster positive emotions. This tendency reduces opportunities for cultivating well-being through adaptive emotional regulation. Notably, Khan & Siddiqui (2021) also found a positive correlation between positive thought and positive affect, further reinforcing the importance of fostering adaptive cognitive patterns as a buffer against the adverse psychological effects associated with neuroticism.

Research by Ghazzawi et al. (2021) also demonstrated that emotional stability is positively correlated with life satisfaction. Similarly, Vavricek (2020) found that individuals with higher emotional stability are less likely to employ avoidant coping strategies. In line with this, Almeida et al. (2021) reported that coping strategies characterized by acceptance of circumstances, cognitive reappraisal of reality, active engagement, and systematic planning were positively associated with life satisfaction. These findings collectively suggest that emotionally stable individuals are more likely to adopt adaptive coping mechanisms that promote constructive responses to challenges, thereby enhancing their overall life satisfaction. Thus, individuals with greater emotional stability are better positioned to experience a deeper sense of fulfillment and contentment with their lives.

The findings of this study support a general perspective on the benefits of forgiveness. Forgiveness has been shown to generate diverse positive outcomes over time, including improvements in cognition, physiological responses, behavioral intentions, emotions, motivation, and other adaptive behaviors (Fernández-Capo et al., 2017). More specifically, the present findings corroborate prior research demonstrating that forgiveness significantly contributes to subjective well-being among university students (Batik et al., 2017), teachers (Chan, 2013), and adolescents (Rienneke & Setianingrum, 2018). Similarly, Tehranchi et al. (2018) found that forgiveness serves as a predictor of subjective happiness among individuals with major depressive disorder (MDD). Happiness, in turn, functions as a protective factor against depression. Collectively, these findings reinforce the theoretical view that forgiveness is positively correlated with subjective well-being. This relationship has been confirmed across

diverse populations, including adolescents, university students, teachers—representing young adulthood—as well as individuals with psychological disorders.

Specifically, the results of this study both support and challenge the relationships between different dimensions of forgiveness and subjective well-being. Some findings, such as those of Bintamur (2019), demonstrated a positive association between forgiveness and life satisfaction, with self-forgiveness and situational forgiveness showing highly significant relationships, while forgiveness of others displayed a moderately significant effect. In contrast, Çam & Alkal (2019) reported that all three dimensions of forgiveness—self-forgiveness, forgiveness of others, and situational forgiveness—were significantly and positively correlated with life satisfaction. Similarly, Alam & Ansari (2019) found that forgiveness of others and self-forgiveness exerted significant effects on life satisfaction. These variations across studies highlight both the consistency and complexity of the association between forgiveness dimensions and subjective well-being, suggesting that contextual and individual differences may shape the extent to which each dimension contributes to overall life satisfaction.

Forgiveness is also significantly associated with both positive and negative emotions. Gao et al. (2022) demonstrated that individuals who are more forgiving tend to experience higher levels of positive affect and lower levels of negative affect. Furthermore, Swickert et al. (2016) explained that forgiving behavior has the capacity to dissolve feelings of resentment and hostility when individuals are confronted with transgressions. In a similar vein, Dahiya & Rangnekar (2019) argued that forgiveness of others reduces feelings of disappointment, animosity, and desires for revenge, while simultaneously enhancing positive emotions such as affection and empathy. Taken together, these findings suggest that forgiveness functions as an adaptive emotional regulation strategy, promoting emotional balance by reducing negative affect and reinforcing positive affect, thereby contributing to improved psychological well-being.

In addition, self-forgiveness has been found to correlate positively with positive affect and negatively with negative affect (Kaleta & Mróz, 2022; Martinčeková & Enright, 2020). Moreover, greater ease in forgiving oneself has been associated with reduced vulnerability to feelings of shame and guilt (Martinčeková & Enright, 2020), while simultaneously facilitating an increase in self-esteem (Tiwari et al., 2023). Self-esteem, in turn, has been identified in longitudinal research as a significant predictor of positive affect (Joshanloo, 2022). These findings underscore the crucial role of self-forgiveness in emotional regulation, suggesting that it not only alleviates negative self-conscious emotions but also fosters the development of self-esteem, which subsequently enhances positive affect. Thus, self-forgiveness appears to operate as a pathway through which individuals can improve both their emotional balance and overall subjective well-being.

Situational forgiveness, particularly among individuals with high levels of depression, has been shown to foster feelings of relief and the emergence of hope (Rahmandani & Amaranggani, 2023). Elevated levels of hope in individuals experiencing depression have further been associated with a reduction in self-harming symptoms. These findings highlight the therapeutic value of situational forgiveness, suggesting that it not only alleviates the emotional burden of depressive experiences but also strengthens psychological resources such as hope. In turn, hope functions as a protective factor that mitigates the severity of depressive symptoms, thereby contributing to improved psychological adjustment and subjective well-being.

The findings of this study also demonstrate a negative correlation between neuroticism and forgiveness. Neuroticism was found to be negatively associated with forgiveness among university students (Nashori, Diana, et al., 2020) as well as within specific cultural groups such as the Madurese (Nashori et al., 2019), Javanese (Nashori, Iskandar, et al., 2020), and Minangkabau (Nashori et al., 2023). Furthermore, Karduz & Şar (2019) reported that neuroticism is negatively correlated with situational forgiveness, while Hampton et al. (2023) showed that neuroticism adversely affects self-forgiveness. Karduz & Şar (2019) further explained that individuals with low emotional stability find it more difficult to forgive themselves, as this personality trait is strongly associated with heightened vulnerability to guilt and depression. Likewise, individuals with higher levels of neuroticism are less inclined to forgive others, as the trait is often linked with greater anger, resentment, and a desire for revenge.

## CONCLUSION

This study examined the role of forgiveness as a mediator in the relationship between neuroticism and subjective well-being among university students. The findings revealed that neuroticism had a significant negative effect on forgiveness and subjective well-being, both directly and indirectly. In contrast, forgiveness demonstrated a positive impact on subjective well-being, thereby functioning as a partial mediator. These results underscore the detrimental role of neuroticism in undermining emotional stability and highlight the protective contribution of forgiveness in sustaining psychological resilience.

The findings also contribute to the broader literature by clarifying the differential roles of forgiveness dimensions. Situational forgiveness emerged as the strongest predictor of subjective well-being, while self-forgiveness and forgiveness of others played secondary but still significant roles. This nuanced understanding extends prior evidence by showing that forgiveness does not operate uniformly but rather through specific dimensions that vary in their protective strength. Such insights enrich

theoretical perspectives in personality and positive psychology by demonstrating how maladaptive traits may be offset by adaptive coping resources.

Overall, this study confirms that forgiveness partially mediates the link between neuroticism and subjective well-being, reinforcing prior research while offering culturally contextualized evidence from Indonesian students. The results hold practical implications for interventions in higher education, particularly in fostering forgiveness-based strategies to improve students' mental health and life satisfaction. By positioning forgiveness as a resilience factor, this research emphasizes its relevance not only in clinical settings but also in everyday contexts of student development.

## Limitations of the Study

Although the study provides valuable insights, several limitations must be acknowledged. First, the use of self-report questionnaires may introduce response biases, including social desirability and memory recall limitations. Second, the sample was drawn exclusively from universities in the Special Region of Yogyakarta, which may constrain the generalizability of the findings to other cultural or demographic contexts. Third, the cross-sectional design precludes causal interpretations of the relationships observed, limiting the ability to confirm whether forgiveness mediates the impact of neuroticism over time. Additionally, while forgiveness was examined through its key dimensions, other psychological constructs such as gratitude or mindfulness were not considered, which might also influence subjective well-being.

Moreover, statistical limitations were evident in the model fit indices, particularly in the analysis involving forgiveness sub-dimensions, which suggests the need for model refinement. While large sample size strengthened the study's validity, unmeasured variables—such as family background, social support, or religious values—may also play a role in shaping forgiveness and well-being. Taken together, these constraints call for caution in interpreting the results and highlight the importance of conducting more diverse and methodologically rigorous studies in the future.

## Recommendations for Future Research

Future studies should build on these findings by employing longitudinal designs to better capture causal relationships between neuroticism, forgiveness, and subjective well-being. Tracking participants over time would provide stronger evidence of forgiveness as a mediator and clarify whether its protective role persists under varying life circumstances. Experimental or intervention-based studies, particularly forgiveness training programs, could also help to establish practical applications of these findings in educational and clinical settings.

Furthermore, comparative research across different cultural groups and age ranges is recommended to test the universality of these relationships. The inclusion of

additional psychological variables, such as gratitude, optimism, and mindfulness, could enrich the model and provide a more holistic account of well-being. Researchers should also consider incorporating qualitative methods to capture nuanced perspectives on how individuals understand and practice forgiveness. Finally, integrating physiological or behavioral measures alongside self-report instruments may improve data validity and offer a multidimensional view of how forgiveness contributes to resilience and subjective well-being.

## Author Contributions

Conceptualization: F.N. & S.; Data curation: F.N. & R.R.D.; Formal analysis: F.N. & L.I.S.D.; Funding acquisition: F.N. & R.R.D.; Investigation: F.N. & R.R.D.; Methodology: F.N., S., & R.A.; Project administration: F.N. & R.R.D.; Resources: F.N. & R.R.D.; Software: F.N. & R.R.D.; Supervision: S. & R.A.; Validation: F.N., S., R.A., R.R.D., & L.I.S.D.; Visualization: F.N. & L.I.S.D.; Writing – original draft: F.N. & L.I.S.D.; Writing – review & editing: F.N., S., R.A., R.R.D., & L.I.S.D. All authors have read and agreed to the published version of the manuscript.

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## Institutional Review Board Statement

The study was approved by Program Studi Psikologi Profesi (S2), Universitas Islam Indonesia, Kab. Sleman, Indonesia.

## Informed Consent Statement

Informed consent was obtained before respondents filled out the questionnaire for this study.

## Data Availability Statement

The data presented in this study are available on request from the corresponding author. The data are not publicly available due to institution's policy.

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## Conflicts of Interest

The authors declare no conflicts of interest.

## Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work the authors used ChatGPT, Grammarly, and PaperPal in order to translate from Bahasa Indonesia into English, and to improve clarity of the language and readability of the article. After using these tools, the authors reviewed and edited the content as needed and took full responsibility for the content of the published article.

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