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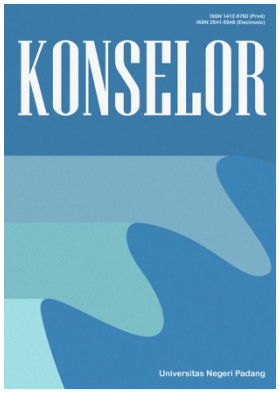


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# What Predicts Hopelessness Among Muslim Final-Year Students in Indonesia? A Psychosocial Investigation

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# What Predicts Hopelessness Among Muslim Final-Year Students in Indonesia? A Psychosocial Investigation

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**Abstract:** Final year students often face high academic and psychological pressures, especially towards the completion of their studies. In the context of Muslim students in Indonesia, this situation is even more complex as they are faced with academic demands, social expectations, and spiritual dynamics that shape their psychological experience. One of the impacts of this pressure is the emergence of hopelessness, which is a feeling of hopelessness about the situation at hand. This study aims to understand the psychosocial factors that influence hopelessness in final-year Muslim students, focusing on the role of peer attachment, healthy lifestyle, social media addiction, academic stress, and religiosity. This study used a confirmatory quantitative approach with Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis technique. A total of 815 final-year Muslim students from various universities in Indonesia participated in the online survey. The research instrument measured six main constructs, and the data were analyzed to test the validity, reliability, direct and indirect effects, and mediating and moderating roles in the conceptual model. The results of the analysis showed that academic stress was a significant mediator in the relationship between healthy lifestyle, social media addiction, and religiosity with hopelessness. Meanwhile, religiosity also acts as a moderator that strengthens or weakens the relationship between peer attachment, academic stress, and social media addiction with hopelessness. This model is able to explain 93.6% of the variance of academic stress and 97.8% of the variance of hopelessness. However, peer attachment showed no significant direct or indirect effect on hopelessness. These findings confirm the importance of comprehensive guidance and counseling services for final year students, especially in managing academic stress, social media use, and strengthening the meaning of life. Healthy lifestyle-based interventions and targeted emotional support are needed to prevent hopelessness in this population.

**Key Words:** Hopelessness; academic stress; social media addiction; religiosity; muslim university students

## INTRODUCTION

Final year students are individuals who are in a crucial phase in their higher education process. In this phase, students are required to complete various academic responsibilities such as thesis,

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internship, or other final assignments that are required for graduation (González Hernández et al., 2024; Luo et al., 2023; Zile et al., 2021). In addition, they are also faced with major life decisions, such as continuing their studies, entering the workforce, or even building a more serious relationship towards marriage (Belle et al., 2022; Picton, 2021; Robinson et al., 2021). Under ideal conditions, final year students have emotionally mature characters, are able to manage time and pressure well, and have a clear vision of the future (Ayala Calvo & Manzano García, 2021; Campbell et al., 2022; Koo, 2021; Mirza et al., 2021). They are also expected to have strong psychological resilience as a foundation to face various academic and personal challenges (Hamzah et al., 2021; Hartson et al., 2023; Robinson et al., 2021).

However, the reality is often not as beautiful as expectations. Many final-year students actually experience tremendous pressure, both from within themselves and the surrounding environment (Keane et al., 2021). One psychological condition that is increasingly reported to be experienced by students is hopelessness (Asher BlackDeer et al., 2023; Gao et al., 2022; Meeks et al., 2023). Hopelessness is a mental state in which a person feels that the future will not bring positive changes and that there is nothing that can be done to improve their life situation (Kocalevent et al., 2017). In the context of students, this condition can affect their learning spirit, academic productivity, and overall quality of life.

Recent studies have shown that the prevalence of hopelessness in university students has increased significantly in recent years, especially since the COVID-19 pandemic which has had a major impact on the dynamics of academic life. A study by Šorgo et al. (2022) conducted at several universities in Europe noted that most students experience moderate to high levels of hopelessness. In Asia, a study by Chen et al. (2024) in China found that students who were completing their final project showed higher hopelessness scores than first and second year students. These studies show that hopelessness is not just a temporary emotional state, but a serious threat to the psychological well-being of young educated people.

Psychological issues among Indonesian university students, especially those nearing graduation, have drawn increasing attention in recent years. Putra and Ardi (2024) found that more than 40% of students in Indonesia experience moderate to high levels of academic stress, particularly related to final project demands, time pressure, and academic expectations. Their study also revealed that academic stress significantly contributes to emotional exhaustion, decreased learning motivation, and emerging symptoms associated with hopelessness. These findings indicate that academic pressure is not merely an academic challenge but has become a serious risk factor for students' mental well-being, especially during the final stage of their studies.

In the Indonesian context, the phenomenon of hopelessness cannot be underestimated. Students in Indonesia, especially those who are Muslim, often experience dissonance between modern academic demands and their spiritual values (Daulay et al., 2022). Islam as a religion that emphasizes the importance of hope (raja') and submission to Allah should be a protection against hopelessness (Rassool & Khan, 2024). However, in practice, not a few Muslim students feel that they have lost direction and meaning in living their lives (Fereydouni & Forstmeier, 2022; Rashid et al., 2021; Tineo et al., 2021; Totonchi et al., 2022). This shows that religiosity is not always an automatic protective factor, but needs to be supported by the quality of mature and integrative religiosity.

Hopelessness in final year students is thought to be the result of a complex interaction of various psychosocial factors. One important factor is peer attachment (Hooper et al., 2023; Shin & Bae, 2024; Spensieri et al., 2021). Students who have positive social attachments tend to have good emotional support and are better able to manage academic stress (Armsden & Greenberg, 1987). Conversely, social alienation can increase feelings of loneliness and helplessness, leading to hopelessness (Hou et al., 2025; Tam et al., 2023).

In addition to social attachment, a healthy lifestyle also contributes to the psychological state of college students (Buizza et al., 2022; Herbert, 2022; Hoying et al., 2024). A nutritious diet, adequate physical activity, good stress management, and healthy interpersonal relationships are important elements of a healthy lifestyle that can strengthen students' emotional resilience (Townsend et al., 2013). Unfortunately, many final year students neglect these aspects because they are too focused on academic tasks, thus indirectly increasing the risk of experiencing hopelessness.

In today's digital age, social media addiction is also a noteworthy variable. Students who spend long hours on social media tend to experience attention disruption, sleep disturbances, and high social anxiety (Allahverdi, 2022; Zhao, 2023). Andreassen et al. (2012) showed that social media addiction is positively correlated with depression, anxiety, and hopelessness, especially in the young adult age group. In Indonesia, this condition is even more relevant considering the intensity of social media use among university students is very high.

Another important factor is academic stress. High academic pressure, thesis deadlines, parental expectations, and fear of the future can all cause tremendous psychological pressure on final year students (Putra & Ardi, 2024; Putwain, 2007). When this pressure is not managed well, students will feel mentally exhausted which ultimately triggers the emergence of hopelessness.

Religiosity is a variable that has a dual role in this model. On the one hand, religiosity is seen as a direct predictor of hopelessness because spiritual beliefs can be a source of meaning, hope, and inner calm (Kavak Budak et al., 2021; Koenig & Büssing, 2010). On the other hand, religiosity is also thought to have a role as a moderator variable, which strengthens or weakens the influence of other factors such as academic stress, social attachment, and social media addiction on hopelessness. Students with strong religiosity may be more resilient to pressure, wiser in using social media, and more able to form meaningful social relationships (Edara et al., 2021; Gan et al., 2023; Schwalm et al., 2022).

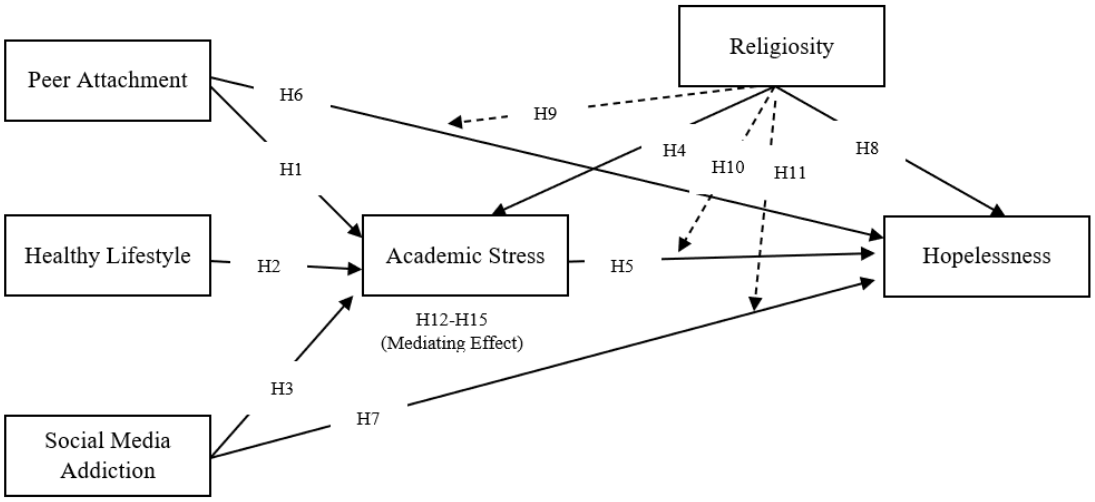


**Figure 1.** Conceptual Model

The following are the 15 hypotheses proposed in this study:

H1: There is a negative and significant correlation between peer attachment and academic stress.
H2: There is a negative and significant correlation between healthy lifestyle and academic stress.
H3: There is a positive and significant correlation between social media addiction and academic stress.
H4: There is a negative and significant correlation between religiosity and academic stress.
H5: There is a negative and significant correlation between academic stress and hopelessness.
H6: There is no significant correlation between peer attachment and hopelessness.
H7: There is a positive and significant correlation between social media addiction and hopelessness.
H8: There is a negative and significant correlation between religiosity and hopelessness.
H9: Religiosity moderates the correlation between peer attachment and hopelessness.
H10: Religiosity moderates the correlation between academic stress and hopelessness.
H11: Religiosity moderates the correlation between social media addiction and hopelessness.
H12: Academic stress mediates the correlation between peer attachment and hopelessness.
H13: Academic stress mediates the correlation between healthy lifestyle and hopelessness.
H14: Academic stress mediates the correlation between social media addiction and hopelessness.
H15: Academic stress mediates the correlation between religiosity and hopelessness.


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This study makes several important contributions to the existing literature on student mental health. First, it focuses specifically on final year Muslim university students in Indonesia, a population that has received limited scholarly attention despite facing a unique combination of academic, social, and spiritual challenges. Second, the study introduces a comprehensive structural model that examines five key psychosocial predictors of hopelessness, incorporating the mediating role of academic stress and the moderating role of religiosity. Third, it highlights the dual function of religiosity, not only as a direct protective factor but also as a contextual variable that influences the strength of other psychological relationships within the model. This study offers a strong empirical framework to deepen the understanding of hopelessness among students approaching graduation in a culturally and religiously relevant context.

## METHOD

### Study Design

This study uses a quantitative approach with a survey method to test the relationship between psychosocial variables based on a previously developed theoretical framework. This method was chosen because it is suitable for confirmatory research, which is research that aims to test theoretical models through empirical data and explicitly formulated hypothesis testing (John & Creswell David, 2014). The research design used is confirmatory research design based on Partial Least Squares Structural Equation Modeling (PLS-SEM), which allows researchers to test the strength and direction of causal relationships between complex latent constructs. PLS-SEM is widely used in social and psychological research because it is able to accommodate large and complex theoretical models, and is suitable for use when the main focus of research is on theory validation rather than exploration of new structures (Sarstedt et al., 2021). Thus, this design provided a strong analytical framework to confirm the conceptual model of hopelessness in final-year university students that had been theoretically developed and underpinned by previous literature.

### Participants

The participants in this study were Muslim final year students from various universities in Indonesia. Table 1 shows that the research participants have diverse backgrounds, in terms of gender, age, education level, place of residence, regional origin, and social media usage habits. The majority of participants were female (59.02%) and in the age range of 21-23 years (76.32%), which is generally the age of students in the final stage of study. Most lived in boarding houses or rented houses (55.21%) and came from the western part of Indonesia (75.46%). In terms of monthly expenditure, more than half of the participants were in the one to two million rupiah category. Interestingly, most students also reported using social media for four to six hours per day (40.49%), indicating a high intensity of digital exposure. This diversity of characteristics provides a comprehensive picture of the life dynamics of final-year Muslim students in Indonesia and strengthens the relevance of the study to the conditions of the target population.

**Table 1.** Demographics of Research Respondents

| No. | Demographic Categories | Sub-Category | Total | Percentage |
|---|---|---|---|---|
| 1 | Gender | Male | 334 | 40.98% |
| | | Female | 481 | 59.02% |
| 2 | Age | < 21 years old | 149 | 18.28% |
| | | 21-23 years old | 622 | 76.32% |
| | | > 23 years old | 44 | 5.40% |
| 3 | Education Level | Diploma | 126 | 15.46% |
| | | Undergraduate | 606 | 74.42% |
| | | Postgraduate | 83 | 10.18% |
| 4 | Status of Residence | With parents | 249 | 30.55% |
| | | Dormitory | 84 | 10.31% |
| | | Boarding House/Contract | 450 | 55.21% |

| No. | Demographic Categories | Sub-Category | Total | Percentage |
|---|---|---|---|---|
| | | More | 32 | 3.93% |
| 5 | Regional Origin | Western Indonesia | 615 | 75.46% |
| | | Central Indonesia | 122 | 14.97% |
| | | Eastern Indonesia | 78 | 9.57% |
| 6 | Expenses per Month (IDR) | < 1.000.000 | 122 | 14.97% |
| | | 1.000.000 - 2.000.000 | 413 | 50.67% |
| | | 2.000.001 - 3.000.000 | 207 | 25.40% |
| | | > 3.000.000 | 73 | 8.96% |
| 7 | Religion | Islam | 687 | 84.29% |
| | | Christianity | 58 | 7.12% |
| | | Catholic | 25 | 3.07% |
| | | Hindu | 27 | 3.31% |
| | | Buddhism | 18 | 2.21% |
| 9 | Social Media Duration per Day | < 1 hour | 43 | 5.28% |
| | | 1-3 hours | 287 | 35.21% |
| | | 4-6 hours | 330 | 40.49% |
| | | > 6 hours | 155 | 19.02% |

**Source:** Field Data (2025)

## Sampling Procedures

The sampling procedure in this study was carried out using purposive sampling technique, which is a non-probability sampling method that allows researchers to select respondents based on certain characteristics relevant to the research objectives. In this case, the inclusion criteria include final year students who are Muslim, are actively pursuing studies at the Diploma, Undergraduate, or Postgraduate levels, and are willing to fill out questionnaires online. This technique was chosen because it is considered most suitable for capturing participants who have specific characteristics that cannot be reached randomly, and is often used in social and psychological research based on established theories (Etikan, 2016).

## Instrumentation

The instruments used in this study consist of six psychological scales that have been standardized and widely used in various international studies. Each instrument was carefully selected based on its suitability to the construct under study, and has gone through an adaptation process to the context of Muslim students in Indonesia. The adaptation procedure was carried out using the forward-backward translation method by two bilingual experts, followed by pilot testing on a small group of university students to ensure semantic clarity and measurement consistency. All scales in this study refer to credible academic sources and have demonstrated high validity and reliability in previous studies. The following table presents a summary of each instrument used in this study. This adaptation process followed the standard procedure of forward and backward translation conducted by two independent bilingual experts. To ensure methodological rigor, the translation process adhered to established international guidelines, particularly those proposed by Beaton et al. (2000) for the cross-cultural adaptation of self-report measures. These guidelines emphasize conceptual rather than literal equivalence, and recommend a structured process including translation, synthesis, back-translation, expert committee review, and pretesting.

**Table 2.** Research Instruments

| No. | Instruments | Indicators | N of Items | Source |
|---|---|---|---|---|
| 1 | Peer attachment scale | Trust between friends<br>Effective communication<br>Alienation from peers | 9 | Armsden & Greenberg (1987). |
| 2 | Healthy lifestyle scale | Responsibility for Health<br>Physical activity<br>Nutrition<br>Spiritual growth<br>Interpersonal relationships | 18 | Townsend et al. (2013). |


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| No. | Instruments | Indicators | N of Items | Source |
|---|---|---|---|---|
| | | Stress management | | |
| 3 | Social media addiction scale | Salience<br>Mood modification<br>Tolerance<br>Withdrawal<br>Conflict | 5 | Andreassen et al. (2012). |
| 4 | Academic stress scale | Academic pressure<br>Emotional stress<br>Socio-academic engagement<br>Somatic impact | 20 | Putwain (2007). |
| 5 | Religiosity scale | Organizational religious activity (ORA)<br>Non-organized religious activity (NORA)<br>Intrinsic religiosity (IR) | 5 | Koenig & Büssing (2010). |
| 6 | Hopelessness scale | Negative feelings about the future<br>Loss of motivation<br>Pessimism towards hope | 9 | Kocalevent et al. (2017). |

To ensure the validity and reliability of the instruments before being applied in the main data collection, the researcher conducted a pilot test on all scales. The pilot test results show that each instrument has an average loading factor value above 0.90 and a high Cronbach's Alpha value, indicating that this instrument has excellent convergent validity and internal reliability. Details of the pilot test results can be seen in the following table.

**Table 3.** Instrument Pilot Test Results

| Instrument | Average Loading Factor | Decision | Cronbach's Alpha | Decision |
|---|---|---|---|---|
| Peer Attachment | 0.952 | Valid | 0.949 | Reliable |
| Healthy Lifestyle | 0.965 | Valid | 0.985 | Reliable |
| Social Media Addiction | 0.965 | Valid | 0.981 | Reliable |
| Academic Stress | 0.963 | Valid | 0.974 | Reliable |
| Religiosity | 0.939 | Valid | 0.933 | Reliable |
| Hopelessness | 0.969 | Valid | 0.967 | Reliable |

**Source:** Field Data (2025)

All items in the questionnaire were measured using a 5-point Likert scale. For instruments such as peer attachment, academic stress, religiosity, and hopelessness, respondents were asked to give a rating from 1 (strongly disagree) to 5 (strongly agree). Meanwhile, on the healthy lifestyle scale, some items are rated based on the frequency of behavior (1 = never, 5 = always). The higher the scores obtained on peer attachment, healthy lifestyle, and religiosity, indicating a positive level of each of these constructs. In contrast, high scores on social media addiction, academic stress, and hopelessness indicate higher levels of the problematic conditions under study.

## Procedures

Data collection in this study was conducted online using the SurveyMonkey platform during the period January to April 2025. The utilization of this platform allows wide and efficient distribution of questionnaires to final year students from various universities in Indonesia, without being limited by geographical location. Before filling out the questionnaire, each participant is required to read and agree to an informed consent that explains the purpose of the research, data confidentiality, participant rights, and guarantees that participation is voluntary and anonymous. Only respondents who gave explicit consent were able to proceed to the body of the questionnaire. This process ensured that the research was conducted in consideration of the ethical principles of social research and the protection of participants' rights.

### Data Analysis

Data analysis in this study was conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, which was operated through the latest version of SmartPLS software. PLS-SEM was chosen because of its ability to handle complex research models with many latent variables, as well as its flexibility in managing data that is not normally distributed and large sample sizes. PLS-SEM analysis is carried out in two main stages, namely outer model and inner model evaluation (Hair et al., 2020; Sarstedt et al., 2021). Outer model evaluation aims to assess the quality of indicators against the measured constructs, including convergent validity, discriminant validity, and reliability tests. Meanwhile, the inner model evaluation is used to test the relationship between latent constructs as specified in the conceptual model, through hypothesis testing, path coefficient significance, and the coefficient of determination (R-square) of each endogenous construct. This evaluation framework provides a strong basis for confirming the theoretical validity as well as the predictive power of the proposed research model.

Table 4. Model Fit

| | Saturated model | Estimated model |
|---|---|---|
| SRMR | 0.033 | 0.036 |
| d_ULS | 0.320 | 0.385 |
| d_G | n/a | n/a |
| Chi-square | ∞ | n/a |
| NFI | n/a | n/a |

**Source:** Field Data (2025)

In this study, the evaluation of model fit focused on the Standardized Root Mean Square Residual (SRMR) and the squared Euclidean distance (d_ULS), both of which are widely recognized as essential and sufficient indicators for assessing model fit in PLS-SEM. According to Henseler et al. (2016), SRMR is the most commonly recommended global goodness-of-fit criterion for PLS-SEM, as it effectively captures the discrepancy between the observed and predicted correlation matrices. Likewise, d_ULS is considered a robust indicator when using the consistent PLS algorithm. Although other fit indices exist, SRMR and d_ULS have been shown to provide a parsimonious and reliable approximation of model fit, particularly when the research objective is theory confirmation rather than covariance-based model testing. Thus, the use of these two indicators in this study aligns with current best practices in PLS-SEM literature (Hair et al., 2020; Sarstedt et al., 2021).

The analysis results show that all constructs meet the convergent validity criteria with loading factor values above 0.70 and Average Variance Extracted (AVE) values that exceed the minimum limit of 0.50. Discriminant validity is also achieved based on the Fornell-Larcker criteria, and all constructs have excellent internal reliability with Cronbach's Alpha and composite reliability values above 0.80. The inner model test showed that most of the relationship paths between variables were statistically significant at the 95% confidence level, supporting most of the proposed hypotheses. In addition, the R-square value for endogenous constructs, particularly hopelessness (0.978), indicates that the model has a very strong predictive ability in explaining the variables under study. These findings indicate that the conceptual model developed in this study is empirically supported and relevant in the context of final-year students in Indonesia.

## RESULTS

### Outer Model

The results of evaluating the outer model and inner model of the PLS-SEM analysis are shown in the following figure. This visualization shows the strength of the relationship between constructs as well as the direction of the path formed in the conceptual model.


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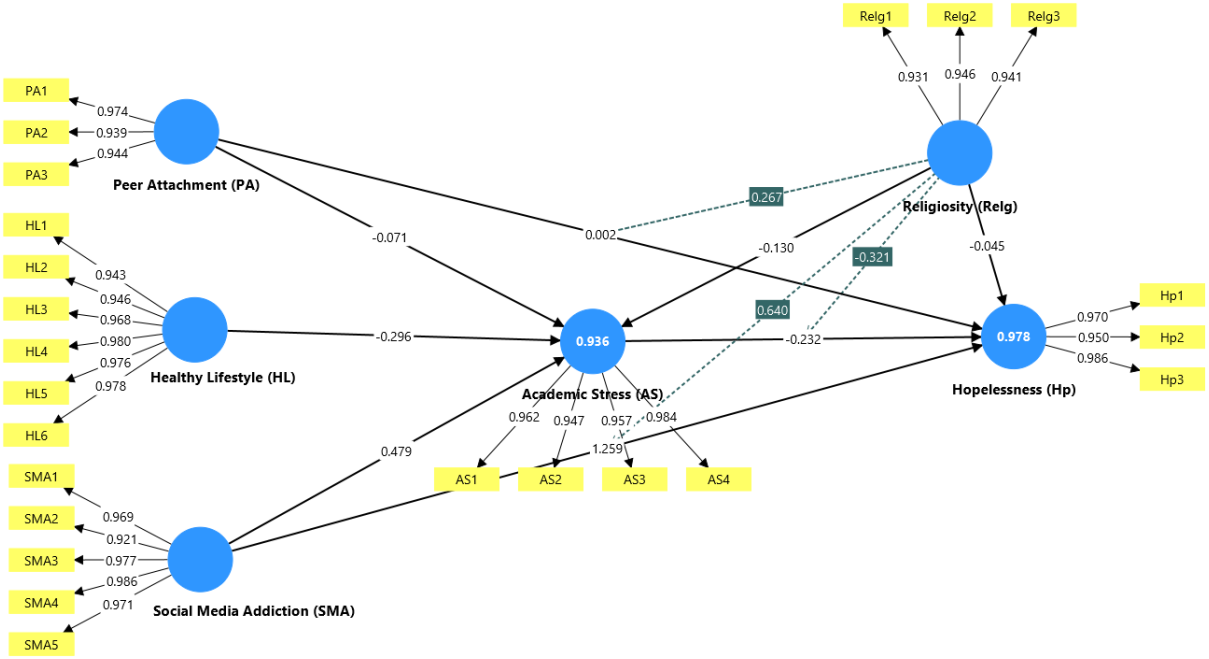


**Source:** Field Data (2025)

**Figure 2.** Measurement Model Evaluation

The structural model shown shows that most of the paths between constructs are statistically significant, as hypothesized earlier. Path coefficient values are listed on each line, indicating the direction and strength of the relationship between variables. These findings provide a basis for further interpreting the relative contribution of each construct in influencing the hopelessness of final year university students in Indonesia.

## *Convergent Validity*

The convergent validity test is carried out to assess the extent to which the indicators in one construct can explain the variable in question consistently. According to Sarstedt et al. (2021), convergent validity is considered achieved if the loading factor value of each indicator is above 0.70, which indicates a substantial contribution to the latent construct.

**Table 5.** Loading Factor Value

| | Academic Stress (AS) | Healthy Lifestyle (HL) | Hopelessness (Hp) | Peer Attachment (PA) | Religiosity (Relg) | Social Media Addiction (SMA) |
|---|---|---|---|---|---|---|
| AS1 | 0.962 | | | | | |
| AS2 | 0.947 | | | | | |
| AS3 | 0.957 | | | | | |
| AS4 | 0.984 | | | | | |
| HL1 | | 0.943 | | | | |
| HL2 | | 0.946 | | | | |
| HL3 | | 0.968 | | | | |
| HL4 | | 0.980 | | | | |
| HL5 | | 0.976 | | | | |
| HL6 | | 0.978 | | | | |
| Hp1 | | | 0.970 | | | |
| Hp2 | | | 0.950 | | | |
| Hp3 | | | 0.986 | | | |
| PA1 | | | | 0.974 | | |
| PA2 | | | | 0.939 | | |
| PA3 | | | | 0.944 | | |
| Relg1 | | | | | 0.931 | |
| Relg2 | | | | | 0.946 | |
| Relg3 | | | | | 0.941 | |

| | Academic Stress (AS) | Healthy Lifestyle (HL) | Hopelessness (Hp) | Peer Attachment (PA) | Religiosity (Relg) | Social Media Addiction (SMA) |
|---|---|---|---|---|---|---|
| SMA1 | | | | | | 0.969 |
| SMA2 | | | | | | 0.921 |
| SMA3 | | | | | | 0.977 |
| SMA4 | | | | | | 0.986 |
| SMA5 | | | | | | 0.971 |

**Source:** Field Data (2025)

Table 5 show that all indicators have high loading factor values, which are above 0.90, indicating that each item is able to represent the construct very well. Thus, all constructs in this model meet the criteria of convergent validity, and can proceed to the stage of testing discriminant validity and construct reliability.

## *Discriminant Validity*

In addition to convergent validity, discriminant validity testing is also needed to ensure that each construct in the model is truly unique and does not overlap with each other. In this study, discriminant validity was evaluated using the Fornell-Larcker criterion, which is by comparing the square root of the AVE of each construct to the correlation between constructs. Sarstedt et al. (2021) state that a construct meets discriminant validity if the AVE square root value is higher than the correlation value with other constructs.

**Table 6.** Results of Discriminant Validity Evaluation (Fornell-Lacker Criteria)

| | Academic Stress (AS) | Healthy Lifestyle (HL) | Hopelessness (Hp) | Peer Attachment (PA) | Religiosity (Relg) | Social Media Addiction (SMA) |
|---|---|---|---|---|---|---|
| Academic Stress (AS) | 0.963 | | | | | |
| Healthy Lifestyle (HL) | -0.960 | 0.966 | | | | |
| Hopelessness (Hp) | 0.933 | -0.965 | 0.969 | | | |
| Peer Attachment (PA) | -0.934 | 0.945 | -0.938 | 0.953 | | |
| Religiosity (Relg) | -0.945 | 0.956 | -0.951 | 0.942 | 0.939 | |
| Social Media Addiction (SMA) | 0.966 | -0.987 | 0.982 | -0.962 | -0.970 | 0.965 |

**Source:** Field Data (2025)

Table 6 show that the diagonal value or square root of AVE for each construct is higher than the correlation value between constructs. This indicates that each construct is quite unique and does not measure the same thing. Thus, discriminant validity in this model can be declared empirically fulfilled and in accordance with the criteria suggested by Sarstedt et al. (2021).

## *Reliability*

After construct validity is confirmed, the next step is to evaluate the internal reliability of each construct. Reliability is used to assess the internal consistency of indicators in measuring a construct. Sarstedt et al. (2021) recommends that reliability can be assessed through three main measures, namely Cronbach's Alpha, composite reliability (rho_c), and average variance extracted (AVE). Cronbach's Alpha and composite reliability values are considered adequate if they are greater than 0.70, while AVE is declared valid if it is above 0.50.


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**Table 7.** Reliability Test Results

| | Cronbach's alpha | Composite reliability (rho_a) | Composite reliability (rho_c) | Average variance extracted (AVE) |
|---|---|---|---|---|
| Academic Stress (AS) | 0.974 | 0.974 | 0.981 | 0.927 |
| Healthy Lifestyle (HL) | 0.985 | 0.986 | 0.988 | 0.932 |
| Hopelessness (Hp) | 0.967 | 0.968 | 0.979 | 0.938 |
| Peer Attachment (PA) | 0.949 | 0.953 | 0.967 | 0.907 |
| Religiosity (Relg) | 0.933 | 0.934 | 0.958 | 0.883 |
| Social Media Addiction (SMA) | 0.981 | 0.982 | 0.985 | 0.932 |

Based on Table 7, all constructs have very high Cronbach's Alpha and composite reliability values, which are well above the minimum threshold of 0.70. The AVE value is also above 0.90 for most constructs, indicating that the proportion of variance explained by the indicator to the construct is very large. Thus, it can be concluded that all constructs in this study meet the criteria for excellent reliability as recommended by Hair and Alamer (2022), so that the results of the model analysis can be trusted and stable.

## Inner Model

After the outer model evaluation shows qualified results, the next step is to test the inner model to evaluate the strength of the relationship between latent constructs and test the research hypothesis. This analysis is carried out by examining the path coefficient value, statistical significance (t-value and p-value), and the coefficient of determination (R-square) on endogenous constructs. According to Hair and Alamer (2022), testing the inner model aims to assess the extent to which the independent variables are able to explain the dependent variable in the model and test the causal relationship that has been determined theoretically. In addition, the effect of mediation and moderation is also tested to determine the role of intermediaries or amplifiers between variables in a complex model structure.

### *Hypothesis Testing*

Hypothesis testing in this study was carried out by analyzing the path coefficient value, t-statistic, and p-value for each path relationship between latent constructs in the model. According to Hair et al. (2020), a relationship can be considered statistically significant if the t-statistic value $\geq 1.96$ and p-value $\leq 0.05$ at the 95% confidence level. The path coefficient value indicates the direction and strength of the relationship between variables, while statistical significance indicates whether the relationship can be generalized inferentially. The results of hypothesis testing in this study are summarized in the Table 8.

**Table 8.** Hypothesis Test Results

| | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (\|O/STDEV\|) | P values | Decision |
|---|---|---|---|---|---|---|
| Direct Effect | | | | | | |
| Peer Attachment (PA) -> Academic Stress (AS) | -0.071 | -0.071 | 0.035 | 2.000 | 0.046 | H1 Accepted |
| Healthy Lifestyle (HL) -> Academic Stress (AS) | -0.296 | -0.299 | 0.042 | 6.988 | 0.000 | H2 Accepted |
| Social Media Addiction (SMA) -> Academic Stress (AS) | 0.479 | 0.475 | 0.075 | 6.374 | 0.000 | H3 Accepted |
| Religiosity (Relg) -> Academic Stress (AS) | -0.130 | -0.131 | 0.045 | 2.887 | 0.004 | H4 Accepted |
| Academic Stress | -0.232 | -0.232 | 0.023 | 9.976 | 0.000 | H5 Accepted |

| | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (\|O/STDEV\|) | P values | Decision |
|---|---|---|---|---|---|---|
| (AS) -> Hopelessness (Hp) | | | | | | |
| Peer Attachment (PA) -> Hopelessness (Hp) | 0.002 | 0.002 | 0.031 | 0.053 | 0.958 | H6 Rejected |
| Social Media Addiction (SMA) -> Hopelessness (Hp) | 1.259 | 1.260 | 0.043 | 29.044 | 0.000 | H7 Acceped |
| Religiosity (Relg) -> Hopelessness (Hp) | -0.045 | -0.045 | 0.016 | 2.734 | 0.006 | H8 Accepted |
| Moderating Effect | | | | | | |
| Religiosity (Relg) x Peer Attachment (PA) -> Hopelessness (Hp) | 0.267 | 0.266 | 0.019 | 13.721 | 0.000 | H9 Accepted |
| Religiosity (Relg) x Academic Stress (AS) -> Hopelessness (Hp) | -0.321 | -0.320 | 0.016 | 19.798 | 0.000 | H10 Accepted |
| Religiosity (Relg) x Social Media Addiction (SMA) -> Hopelessness (Hp) | 0.640 | 0.639 | 0.026 | 24.215 | 0.000 | H11 Accepted |
| Mediating Effect | | | | | | |
| Peer Attachment (PA) -> Academic Stress (AS) -> Hopelessness (Hp) | 0.016 | 0.016 | 0.009 | 1.913 | 0.056 | H12 Rejected |
| Healthy Lifestyle (HL) -> Academic Stress (AS) -> Hopelessness (Hp) | 0.069 | 0.069 | 0.013 | 5.400 | 0.000 | H13 Accepted |
| Social Media Addiction (SMA) -> Academic Stress (AS) -> Hopelessness (Hp) | -0.111 | -0.110 | 0.019 | 5.933 | 0.000 | H14 Accepted |
| Religiosity (Relg) -> Academic Stress (AS) -> Hopelessness (Hp) | 0.030 | 0.031 | 0.011 | 2.619 | 0.009 | H15 Accepted |

**Source:** Field Data (2025)

Table 8 show that most of the hypotheses were accepted, which means that there is a significant relationship between the constructs in the model. Three paths were rejected because they did not meet the significance value, namely the direct relationship between peer attachment and hopelessness (H6), as well as the indirect path through academic stress to peer attachment (H12). These findings provide strong empirical evidence that academic stress and religiosity play an important role as mediators and moderators in explaining hopelessness in final year students. The effect of social media addiction on hopelessness showed the most path strength in this model, indicating the importance of attention to digital dynamics in the psychological well-being of college students.

## *R-Square*

In addition to testing the significance of the relationship between constructs, PLS-SEM analysis also evaluates the predictive ability of the model on endogenous variables through the R-square ($R^2$) value. The $R^2$ value indicates the proportion of variance of the dependent construct that can be explained by the independent constructs in the model. Sarstedt et al. (2021) suggest that an $R^2$ value of


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0.75 is categorized as high, 0.50 as medium, and 0.25 as low, depending on the context of the field of study under study.

**Table 9.** R-square value

| | R-square | Adjusted R-square |
|---|---|---|
| Academic Stress (AS) | 0.936 | 0.936 |
| Hopelessness (Hp) | 0.978 | 0.978 |

**Source:** Field Data (2025)

Table 9, the $R^2$ value for academic stress of 0.936 indicates that 93.6% of the variance in academic stress can be explained by peer attachment, healthy lifestyle, social media addiction, and religiosity. Meanwhile, the $R^2$ value for hopelessness of 0.978 indicates that almost all (97.8%) of the variance in hopelessness can be explained by the constructs in the model, including direct, mediation, and moderation paths. This finding reflects a very high predictive power and provides empirical support for the accuracy of the conceptual model used in this study.

While the R-square values for academic stress (0.936) and hopelessness (0.978) indicate excellent predictive power, such high values may raise concerns regarding potential overfitting of the model. To address this, the multicollinearity assumption was evaluated by examining the Variance Inflation Factor (VIF) values of each construct, all of which were found to be well below the recommended threshold of 5.0 (Hair et al., 2020), indicating no significant multicollinearity among predictors. In addition, although this study used a single dataset, model validation procedures were implemented through bootstrapping with 5,000 subsamples to assess the stability and generalizability of the estimated parameters. Nevertheless, future research is encouraged to apply holdout samples or cross-validation techniques to further ensure model robustness and minimize the risk of overfitting.

## DISCUSSION

This study provides a deeper understanding of the psychological state of Muslim final-year university students in Indonesia, particularly in relation to hopelessness. Based on the conceptual model developed, this study tested fifteen hypotheses reflecting the complex relationship between academic, social, lifestyle, social media use and religiosity factors.

The first finding supports that peer attachment and healthy lifestyle significantly reduce the level of academic stress (H1 and H2 accepted). Students who have good attachments with peers tend to feel more emotionally supported (Fang & Wang, 2024), while a healthy lifestyle provides the physical and mental stability needed to deal with academic stress (Casey et al., 2022). This is in line with Voltmer et al. (2021) research, which shows that habits such as adequate sleep, consumption of nutritious food, and good physical routines correlate with reduced stress levels in university students. In guidance and counseling services, these results show the importance of interventions that facilitate the formation of positive social relationships and healthy lifestyle counseling, such as time management training, interpersonal skills, and mental health education.

The results also show that social media addiction significantly increases academic stress (H3 accepted) and has a very strong direct effect on hopelessness (H7 accepted). Students who spend excessive time on social media tend to be distracted from academic responsibilities, experience negative social comparisons more easily, and lose self-confidence (Arslan et al., 2022). These findings are supported by the study of Durmuş et al. (2025), which showed that social media addiction was positively correlated with hopelessness and loneliness in university students. Relevant guidance and counseling interventions in this regard include digital literacy programs, social media management, as well as individual counseling that focuses on managing the healthy and conscious use of technology.

Academic stress itself is proven to contribute significantly to hopelessness (H5 accepted). The higher the academic pressure felt by students, the more likely they are to experience feelings of hopelessness (Putra & Ardi, 2024). This supports the research of Halliday and Clark (2024), who found that academic stress is a major predictor of burnout and other negative psychological conditions. Therefore, academic counseling services need to be an integral part of campus support, with

counselors trained to assist students in final project planning, time management, and self-empowerment when facing academic challenges.

Religiosity was found to have two important roles, namely as a direct predictor (H8 accepted) and as a mediator through academic stress (H15 accepted) which reduces hopelessness. Students with high levels of religiosity tend to have a stronger meaning of life and hope, which helps them manage pressure and maintain positive expectations for the future (Ardi et al., 2024). Bukhori et al. (2022) study also stated that religiosity is negatively correlated with hopelessness. In the context of guidance and counseling, it is important to respect and support students' spiritual values as part of a holistic approach in counseling services. Not to replace the professional approach, but as part of the life context they live in.

The role of religiosity as a moderator also proved significant in the relationship between peer attachment and hopelessness (H9 accepted), academic stress and hopelessness (H10 accepted), and social media addiction and hopelessness (H11 accepted). This means that religiosity can strengthen the positive impact of social relationships and simultaneously reduce the negative impact of stress and digital media addiction. This is evidence that religiosity functions as a psychological shield, which can strengthen students' resilience in facing end-of-study challenges. Counselors may consider integrating reflective elements and exploration of students' personal values in counseling sessions to strengthen their mental resilience.

The other three hypotheses that tested the mediating role of academic stress also proved significant. Healthy lifestyle (H13 accepted), social media addiction (H14 accepted), and religiosity (H15 accepted) affect hopelessness indirectly through academic stress. That is, the influence of these three factors on hopelessness takes place through how much they impact on students' academic stress levels. These results suggest that counseling interventions aimed at improving lifestyle, reducing digital addiction, and supporting students' personal beliefs and practices would be most beneficial if directed at reducing academic stress first, as the primary intervention point.

The findings of this study can be further interpreted through the lens of established psychological theories. The role of academic stress in predicting hopelessness aligns with Russell (2020) transactional model of stress and coping, which posits that stress emerges from an individual's cognitive appraisal of environmental demands and their perceived ability to cope. In the case of final-year students, the pressure to complete a thesis or secure employment may be appraised as exceeding their coping resources, resulting in negative emotional states such as hopelessness. Additionally, the moderating and mediating role of religiosity in this model reflects concepts within McFadden and Pargament (1998) theory of religious coping, which views religion as a significant framework through which individuals interpret adversity and construct meaning. Students with higher levels of religiosity may utilize spiritual coping mechanisms, such as prayer, surrender to divine will, or seeking spiritual support, thereby reframing academic challenges and reducing psychological distress. Integrating these theoretical perspectives offers a deeper understanding of the cognitive and spiritual processes that underlie the development or prevention of hopelessness in the academic context.

However, not all hypotheses were supported by the data. The sixth hypothesis (H6) which stated that there is a direct effect between peer attachment and hopelessness was not significantly proven. This suggests that social relationships with peers, although important in reducing stress, are not strong enough to directly reduce hopelessness. This implies that social reinforcement programs need to be complemented with training in managing expectations and making meaning of academic experiences to effectively prevent hopelessness.

Likewise, the twelfth hypothesis (H12), which states that academic stress mediates the relationship between peer attachment and hopelessness, is also not significant. This finding indicates that the relationship between peer attachment and hopelessness is not fully explained by academic stress, and that other factors may play a role in this pathway. In the future, counselors can examine other dimensions of social relationships, such as communication quality or deeper perceptions of emotional support, to find out how social attachment can be optimized in an effort to reduce hopelessness.

Although peer attachment was found to have a negative association with academic stress, the magnitude of its effect was very small and lacked theoretical significance. Likewise, the direct relationship between peer attachment and hopelessness was statistically nonsignificant. These findings


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suggest that, while peer relationships may support students' emotional well-being (Fang & Wang, 2024), such support may not be strong enough to directly reduce academic stress or hopelessness among final-year students. One possible explanation is that academic stress in the final phase of study is more heavily influenced by structural pressures, such as thesis completion, urgency to graduate, and uncertainty about future plans (Halliday & Clark, 2024; Putra & Ardi, 2024), which cannot be mitigated solely through peer-based support. Furthermore, peer attachment may exert its influence indirectly through other psychological variables such as academic self-efficacy, emotional regulation, or perceived social support, which were not included in the present model (Hooper et al., 2023; Tam et al., 2023). Future studies are encouraged to explore these mediating or moderating variables in order to gain a more comprehensive understanding of the role of peer attachment in the development of hopelessness among university students.

While the high R-square values of 0.936 for academic stress and 0.978 for hopelessness indicate that the model explains a substantial portion of variance, this also warrants a critical interpretation. Such values, although statistically impressive, may suggest overfitting or conceptual overlap among constructs. This concern was addressed through multicollinearity diagnostics, with VIF scores falling within acceptable thresholds. Nonetheless, future research is advised to conduct cross-validation and explore more parsimonious models to ensure broader generalizability.

Beyond the methodological strengths, this study also offers a meaningful contribution to the global literature on hopelessness by foregrounding a culturally and religiously specific context. Most existing research on hopelessness has been conducted in Western, secular academic settings. In contrast, this study explores hopelessness among final-year Muslim university students in Indonesia, where spiritual beliefs and sociocultural expectations are deeply embedded in the academic experience. By integrating religiosity as both a moderator and mediator, the findings illuminate the complex ways in which spiritual frameworks influence psychological vulnerability and resilience. This culturally grounded insight enriches the global discourse on student mental health and underscores the importance of contextualized approaches to psychological research.

### Limitations

This study has several limitations that need to be considered in interpreting the results. First, the cross-sectional nature of the research design limits the ability to draw causal inferences between the variables studied. Although the relationship between constructs looks strong, the direction of causality still needs to be confirmed through longitudinal or experimental studies. Secondly, all data was collected through self-report so the potential for social bias or honesty bias of respondents cannot be completely avoided. Thirdly, although the study population includes Muslim students from various regions in Indonesia, these findings may not necessarily be generalizable to student populations across other religions or cultural contexts. Therefore, further studies are recommended to use a multi-method approach and consider cross-cultural dimensions and institutional influences that may contribute to shaping the dynamics of student hopelessness.

In relation to hopelessness, this study primarily treated it as an outcome variable influenced by a range of psychosocial factors. However, future research could explore the bidirectional or dynamic nature of hopelessness over time, particularly through longitudinal designs. There is also a need to investigate potential protective factors beyond religiosity, such as purpose in life, academic self-efficacy, or future orientation, that may buffer students against hopelessness. Moreover, qualitative or mixed-method approaches may offer richer insight into the subjective experience of hopelessness among final-year students, including how they make sense of academic failure, spiritual doubt, or social isolation. Expanding the scope in this direction would deepen theoretical understanding and support the development of more tailored and culturally sensitive interventions.

## CONCLUSION

This study concluded that hopelessness in Muslim final year students in Indonesia is significantly influenced by academic stress, social media addiction, healthy lifestyle, peer attachment,

and religiosity. Academic stress proved to be the main mediator in the relationship between healthy lifestyle, social media addiction, and religiosity with hopelessness, while religiosity also acts as a moderator that strengthens or weakens the relationship between other variables. These findings suggest that hopelessness prevention and intervention efforts among university students need to be carried out comprehensively, taking into account interrelated psychosocial and spiritual factors. Guidance and counseling services in higher education play a strategic role in designing programs that include healthy lifestyle education, management of social media use, strengthening social support, and assistance based on values and meaning of life, to help students complete their studies with better mental resilience.

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