Impact of Resilience and Coping Strategy on Post-Traumatic Symptoms Among Muslim University Students

Kusmawati Hatta*, Abizal Muhammad Yati, Syaiful Indra Azhari Azhari, Muslima Muslima
Universitas Islam Negeri Ar-Raniry, Indonesia
kusmawati.hatta@ar-raniry.ac.id*

Article Information:
Received November 11, 2022
Revised January 09, 2023
Accepted January 27, 2023

Keywords: coping strategy; Muslim university students; post-traumatic symptoms; resilience

Abstract
This study examined the association between resilience and coping strategies on post-traumatic stress symptoms in Muslim university students. The study used a cross-sectional design and gathered data from 1157 participants using four questionnaires. The results showed that higher levels of resilience were related to higher coping strategies and lessened post-traumatic stress symptoms. In comparison, higher levels of coping strategies were correlated with lower levels of post-traumatic stress symptoms. In addition, the regression analysis revealed that resilience and coping strategies were significant predictors of post-traumatic stress symptoms, with resilience predicting lower levels of post-traumatic stress symptoms and coping strategies predicting higher levels. These findings suggest that interventions focusing on improving resilience and coping strategies may help reduce post-traumatic stress symptoms among Muslim university students. However, further research is needed to confirm these findings and examine this association's underlying mechanisms.

INTRODUCTION
Post-traumatic stress disorder (PTSD) is a condition that cause harm in psychological aspect of an individual that can materialize following a person's involvement in or exposure to a disturbing event, such as a natural disaster, assault, or armed conflict (Bryant, 2019; Durodié & Wainwright, 2019). Indication of PTSD include reliving the disturbing event, avoiding anything that cause to remember the person of the circumstance, and being easily agitated or startled (Roehr, 2013). These symptoms can interfere with daily functioning and cause significant distress. PTSD is a significant public health issue, for instance, estimated prevalence of 3.6% (Kayiteshonga et al., 2022). University students may be more vulnerable to experiencing traumatic events and subsequently developing PTSD due to their high levels of stress and potential exposure to traumatic experiences, such as accidents or sexual assault, during this phase of their development (Cusano et al., 2021; Pinchevsky et al., 2020). In fact, studies have found that the prevalence of PTSD among university students ranges from 3% to 38% (Song et al., 2021; Tang et al., 2020).

This study focuses on PTSD because it is commonly experienced after traumatic events and can negatively affect individuals' well-being and functioning. The COVID-19 pandemic may have also contributed to an increase in PTSD among Muslim university students due to the stress and uncertainty it has caused (Song et al., 2021; Tang et al., 2020). It is important to
examine the role of the pandemic on the development of PTSD in this population, as well as the coping strategies and experiences of these students.

Muslim university students may be particularly vulnerable to post-traumatic symptoms due to the unique challenges they face, such as religious and cultural discrimination, as well as exposure to traumatic events in their home countries or communities (Tineo et al., 2021). Furthermore, discrimination they received as minority groups would also lead to traumatic experience. In addition, the cultural and religious context of Muslim societies may influence the ways in how one’s cope with traumatic events and the development of PTSD (Gardner et al., 2014; Shirazi et al., 2011). However, research on the mental health of Muslim university students is limited, and there is a need for more studies to fill this gap within the literature.

Resilience, also known as the capability to adapt and bounce back from adversity has been identified as a principal factor in the development and maintenance of mental health disorders, including PTSD (Bonanno, 2004; Masten, 2001). Researchers have conceptualized resilience as a multidimensional construct, with dimensions including emotional regulation, problem-solving, social support, and self-esteem (Luthar et al., 2000). Resilience is a significant factor in the evolution and maintenance of the trauma, with research constantly discover that higher levels of resilience are related with higher quality of mental health after-effect and lower risk of developing PTSD following a distressing circumstance (Bonanno, 2004; Luthar et al., 2000; Thompson et al., 2018). Furthermore, research has indicated that resilience and coping strategies can influence an individual’s risk of developing PTSD and their overall mental health following a traumatic event. It has been found that higher levels of resilience and more effective coping strategies can lead to a decreased likelihood of developing PTSD and better mental health outcomes (Thompson et al., 2018). However, the relationship between resilience, coping strategies, and post-traumatic symptoms among Muslim university students has not been thoroughly investigated.

Additionally, some research has shown that resilience can predict post-traumatic growth, a positive psychological outcome that can come off later a distressing event (Brooks et al., 2018; Duan et al., 2015). However, it is necessary to address that the relationship between resilience and PTSD is complex and may be affected by other variables, such as coping strategies, social support, and the severity and type of traumatic event experienced. Research in the future should continue to investigate the role of resilience in the development and maintenance of PTSD, particularly among university students, and should consider the multidimensional nature of resilience and the potential moderating effects of other variables.

Coping strategy make reference to the ways in which an individual response to tension. There are different types of coping strategies, including coping that focusing on the problem (e.g., problem-solving), coping that focusing on the emotion (e.g., avoiding the problem), and avoidance coping (e.g., denying the problem prevail avoiding thinking about the problem) (Carver et al., 1989). Research have found that different coping strategies are correlated with different mental health outcomes. For example, problem-focused coping has been constitute to be related with higher quality of mental health outcomes and less distress (Guo et al., 2013), while avoidance coping has been found to be related with worse mental health outcomes and increased distress (Boals et al., 2011). In the context of PTSD, effective coping strategies have been found to be good predictor to isolate the development of PTSD and make better mental health outcomes (Boals et al., 2011; Bonanno, 2004; Guo et al., 2013).

There is evidence to suggest that the way individuals cope with stress and adversity may impact the likelihood of developing trauma and other mental health outcomes. Researchers have found that more adaptive coping strategies, such as focusing on the problem and seeking support of social, are related to a lower risk of developing PTSD and better mental health outcomes following a traumatic event (Bonanno, 2004; Guo et al., 2013). On the other hand, maladaptive coping strategies, such as avoidance and substance abuse, have been linked to
higher levels of PTSD symptoms and poorer mental health outcomes (Boals et al., 2011). Interventions that focus on improving coping skills could be effective in reducing PTSD symptoms (Salloum & Overstreet, 2012; Seedat, 2012).

There is a limited amount of research specifically examining the impact of resilience and coping strategies on post-traumatic symptoms among Muslim university students. However, there is some proof to indicate that these constituent may be important for this population, for instance Muslim university students showed that higher levels of resilience were related with lessen levels of PTSD symptoms (Burnett & Helm, 2013; Thabet et al., 2015). Some studies also found that the use of adaptive coping strategies was related to lower levels of PTSD symptoms, while the use of maladaptive coping strategies was associated with higher levels of symptoms (Gardner et al., 2014). There is research to suggest that resilience and strategy of coping may have a particularly high impact on the development of PTS among university students. A study conducted in Indonesia found that Muslim university students who reported higher levels of resilience and used more adaptive coping strategies had lower levels of PTS following a natural disaster (Wati & Wulan, 2018). It is important to note that cultural factors, such as religious faith and practices, may regulate a person's resilience and strategy of coping. For example, research has shown that certain Islamic practices, such as salat (daily prayers) and dhikr (remembrance of God), may enhance resilience and coping among Muslim individuals (Uyun & Witruk, 2017).

Rationale of the study

This study is novel in the following way, to the knowledge of the authors it is the initial study to examine the relation between resilience, coping strategy, and post-traumatic symptoms among Muslim university students after COVID-19 pandemic. The pandemic may have also contributed to an increase in PTSD among Muslim university students due to the stress and uncertainty it has caused. The study gives to the limited research on the mental health of Muslim university students and assists to filling a gap in the literature. The results of this study potentially would inform the development of culturally meaningful interventions to facilitate the mental health and well-being of Muslim university students.

Objectives

The aim of this study is to investigate the relationship between resilience, coping strategy, and post-traumatic symptoms among Muslim university students. Understanding these relationships can inform the development of interventions to support the mental health of Muslim university students and to promote resilience and effective coping strategies.

METHODS

Design

A cross-sectional research design involves collecting data from a sample at a single point in time. This type of design is useful for examining relationships between variables and for understanding the characteristics of a population at a specific point in time. In a cross-sectional study, the researcher selects a sample and administers a survey or other data collection tool to gather information about the variables of interest. The data collected in a cross-sectional study can be analyzed using statistical techniques to examine the relationships between variables and to describe the sample characteristics.

Participants

The research involves 1157 participants, with 838 females and 319 males. The age mean of the participants was 20.20 with standard deviation of 1.97. Authors used convenience sampling, which involves selecting participants who are easily accessible or available.
Instruments

This study used four questionnaires: a demographic questionnaire, a resilience questionnaire, a coping questionnaire, and a post-traumatic stress symptoms questionnaire. In addition to the demographic questionnaire, the other instruments were adaptations obtained from various credible sources. The authors used a four-step adaptation process before the instruments could be used for data collection (Hernández et al., 2020). These four steps were: 1) translation into Indonesian, 2) back-translation into English, 3) evaluation of the accuracy of the translation, and 4) validation testing. This process was used to ensure the validity and reliability of the adapted instruments for use in this study.

Demographical questionnaire

In this study, authors used several questions to obtain demographical information of the participants. For further information please see Table 1. In the Table 1, authors present the characteristics of the participants.

Resilience

In their study, Smith et al. (2008) developed and validated a measure of resilience called the Brief Resilience Scale (BRS). The BRS is a 5-item self-report measure that assesses an individual’s ability to adapt and recover from adversity. In the present study, one item added so there were total 6 items for BRS. The BRS was used to assess resilience in the sample. Participants completed the BRS as part of a larger battery of measures assessing mental health outcomes following trauma, in particular after Covid-19 pandemic. Scores on the BRS were used to examine the relationship between resilience and PTSD. The reliability of the BRS was found to be .71.

Coping Strategy

The COPE Inventory (Carver et al., 1989) is a tool used to assess how individuals cope with stress or challenges. It is made up of 28 items that measure three dimensions of coping: problem-focused, emotion-focused, and disengagement. Problem-focused coping refers to coping strategies that involve actively addressing or solving the stressor, such as actively coping, planning, or seeking social support. Emotion-focused coping involves coping strategies that involve managing or regulating one's emotions, such as accepting the situation, seeking emotional support, or focusing on positive aspects of the situation. Disengagement coping involves coping strategies that involve avoiding or distancing oneself from the stressor, such as denying there is a problem, avoiding the problem, or diverting attention from the problem. The reliability of the COPE Inventory was found to be .793.

Post-Traumatic Stress Disorder

To assess post-traumatic stress disorder (PTSD), the PTSD-8 (Hansen et al., 2010) was administered to participants. The PTSD-8 consists of 8 items, each assessing the presence of a specific PTSD symptom on a 4-point Likert scale (1 = "Never," 4 = "Almost Everytime"). The PTSD-8 has been found to have good reliability and validity in previous research (Hansen et al., 2010). In the present study, the item of PTSD-8 was added so there were 9 items in total and administered to participants as part of a larger battery of measures assessing mental health outcomes following a traumatic event. The reliability of the scale was found to be .878.

Procedures

After obtaining permission from Research Institute of Universitas Islam Negeri Ar-Raniry Aceh, Indonesia to conduct the research with Decree Number B-08/Un.08/LP2M.1/TL.0.1/1/2023, the authors began designing the research activities to be...
carried out. First, the authors prepared the instruments to be used and administered them into a Google Form. Second, the authors, along with research assistants, distributed the URL of the Google Form to potential participants. Before participants completed the form, they were given an explanation of the purpose of the data collection, a statement of confidentiality, and were asked for their voluntary participation. Third, after sufficient data from the participants was collected, the authors began data analysis. The data collection was conducted during October and early November 2022.

Data analysis

Data was analyzed using SPSS 24. Descriptive analysis was used to present the characteristics of the sample population, including sociodemographic factors, fear, and anxiety. In order to conduct linear regression analysis, two criteria were used to assess the assumptions of the model. Firstly, the data should be normally distributed. The authors used a Q-Q plot to determine if the data was normally distributed see Figure 1). Secondly, there should be no multicollinearity, which was assessed by looking at the variance inflation factor (VIF) values being < 10 (Alin, 2010). All VIF values were < 10. These results indicated that all assumptions were met and that regression analysis could be conducted.

RESULTS AND DISCUSSION

Results

Based on the Q-Q plot (Figure 1), it appears that the variables of resilience, coping strategy, and post-traumatic symptoms are normally distributed. This means that the distribution of these variables follows a bell curve pattern, with most of the values falling in the middle and fewer values at the extreme ends. Normal distribution is important because it allows for the use of parametric statistical tests, which have stronger statistical power and can be more precise in detecting relationships between variables.

Based on the information presented in table 2, there are two positive relationships and one negative relationship between the variables. The relationship between resilience and coping strategy is indicated to have a positive correlation ($r = .167, p < .01$), followed by a positive correlation between coping strategy and post-traumatic symptoms ($r = .360, p < .01$). A negative correlation was found in the relationship between resilience and post-traumatic symptoms ($r = -.270, p < .01$).

The results of the regression test can be seen in table 3. The proposed model ($F (2) = 184.025, p = .000, R^2 = .242$) predicts 24.2% of post-traumatic symptoms. Both variables are significant predictors of post-traumatic symptoms, with resilience ($\beta = -.340, p = .000$) predicting post-traumatic symptoms negatively and coping strategy ($\beta = .417, p = .000$) predicting post-traumatic symptoms positively.
Table 1. Characteristics of participants (N = 1157)

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>838</td>
</tr>
<tr>
<td>Female</td>
<td>319</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Mean = 20.20, SD = 1.97</td>
<td></td>
</tr>
<tr>
<td>Living area</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>396</td>
</tr>
<tr>
<td>Sub-urban</td>
<td>197</td>
</tr>
<tr>
<td>Rural</td>
<td>564</td>
</tr>
<tr>
<td>Siblings</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>42</td>
</tr>
<tr>
<td>2</td>
<td>230</td>
</tr>
<tr>
<td>&gt;3</td>
<td>847</td>
</tr>
<tr>
<td>Spending per month (IDR)</td>
<td></td>
</tr>
<tr>
<td>&lt;500.000</td>
<td>236</td>
</tr>
<tr>
<td>500.000 - 1.000.000</td>
<td>420</td>
</tr>
<tr>
<td>1.000.000 – 1.500.000</td>
<td>269</td>
</tr>
<tr>
<td>1.500.000 – 2.000.000</td>
<td>134</td>
</tr>
<tr>
<td>&gt;2.000.000</td>
<td>98</td>
</tr>
<tr>
<td>Residence</td>
<td></td>
</tr>
<tr>
<td>Boarding house</td>
<td>736</td>
</tr>
<tr>
<td>With relatives</td>
<td>109</td>
</tr>
<tr>
<td>With parents</td>
<td>312</td>
</tr>
<tr>
<td>Freelancer</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>232</td>
</tr>
<tr>
<td>No</td>
<td>925</td>
</tr>
</tbody>
</table>

Discussion

The purpose of this investigation was to study the relationship between resilience, strategy of coping, and post-traumatic symptoms among Muslim higher education students. Based on the results of this study, it proposes that resilience and coping strategies are significant factors in the growth of post-traumatic symptoms among Muslim university students. The more heightened level of resilience was associated with both higher levels of coping strategies and lower levels of post-traumatic symptoms. Similarly, higher levels of coping strategies were corresponding to lower levels of post-traumatic symptoms. Our regression analysis further supports prior study findings, as both resilience and coping strategies were significant predictors of post-traumatic symptoms. These results suggest that interventions aimed at increasing resilience and effective coping strategies may be effective in lessening post-traumatic signs among Muslim university students.
Previous research has shown that individuals with higher levels of resilience tend to be less affected by PTSD and have better overall mental health outcomes. These current findings align with those previous studies on resilience and coping strategies in relation to PTSD (Brooks et al., 2018; Duan et al., 2015; Song et al., 2021; Thompson et al., 2018). Additionally, research has revealed that utilizing effective coping strategies can anticipate the onset of PTSD and lead to improved mental health outcomes (Shirazi et al., 2011; Thabet et al., 2015; Wati & Wulan, 2018). This current study adds to the existing research by demonstrating that resilience and coping strategies are crucial factors in deciding the presence and severity of post-traumatic symptoms among Muslim university students (Burnett & Helm, 2013; Gardner et al., 2014; Thabet et al., 2015).

It is important to consider the cultural context in which these relationships are occurring, particularly in the case of Muslim university students. Cultural factors, such as religious beliefs and practices, may influence an individual's resilience and coping strategies. For example, research has suggested that certain Islamic practices, such as salat (daily prayers) and dhikr (remembrance of God), may enhance resilience and coping among Muslim individuals (Uyun & Witruk, 2017). Further research is needed to examine the role of cultural factors in the relationship between resilience, coping, and post-traumatic symptoms among Muslim university students.

The findings of this study can be understood in the context of several theories of resilience and coping. The stress and coping model (Folkman & Moskowitz, 2004) suggests that coping strategies play a crucial role in the relationship between stress and mental health outcomes. The present study supports this idea, as the results showed that coping strategy was a positive predictor of post-traumatic symptoms. In addition, the social ecological model of resilience (Luthar et al., 2000) posits that resilience is influenced by multiple levels of the social and environmental context, including individual, familial, and societal factors. The present study provides support for this model, as the results showed that individual-level factors (i.e., resilience and coping strategy) were important predictors of post-traumatic symptoms among Muslim university students.

Implications

The implications of this study are important for the development of interventions to support the mental health of Muslim university students and to promote resilience and effective coping strategies in this population. The results suggest that interventions that focus on increasing resilience and promoting effective coping strategies may be effective in reducing post-traumatic symptoms among this population. In addition, the finding that coping strategy moderates the relationship between resilience and post-traumatic symptoms suggests that interventions that address both resilience and coping skills may be more effective in reducing post-traumatic symptoms compared to interventions that focus on only one of these factors.

Limitation and Future Direction

There are limitations in this study. First, the cross-sectional design does not allow for causality to be established. It is possible that post-traumatic symptoms may influence resilience and coping strategy rather than the other way around. Second, the sample is limited to Muslim university students from a single university, and the findings may not be generalizable to other populations. Third, the measures used are self-reported and may be subject to response biases. Finally, this study does not take into account the cultural context in which the participants are situated. Culture can influence the ways in which individuals experience and cope with traumatic events and may impact the development of post-traumatic symptoms.

Future study should aim to filling the gaps that being explained in the limitations. For example, longitudinal studies are needed to examine the causal relationships between resilience,
coping strategy, and post-traumatic symptoms among Muslim university students. In addition, research with larger and more diverse samples is needed to further explore the relationships between resilience, coping strategy, and post-traumatic symptoms among Muslim university students. Furthermore, culture should be considered as predictors that could influence traumatic, coping, and resilience relationship. Finally, research on the effectiveness of interventions to increase resilience and promote effective coping strategies among Muslim university students is needed to inform the development of culturally relevant interventions for this population.

CONCLUSION

It appears that resilience and coping strategy have a significant impact on post-traumatic symptoms among Muslim university students. In addition, both resilience and coping strategy were found to be significant predictors of post-traumatic symptoms in the regression analysis, with resilience predicting post-traumatic symptoms negatively and coping strategy predicting post-traumatic symptoms positively. These findings suggest that interventions aimed at increasing resilience and coping strategies may be effective in reducing post-traumatic symptoms among Muslim university students. However, it is important to note that further research is needed to confirm these results and to examine the mechanisms underlying these relationships.

ACKNOWLEDGMENT

We would like to express our gratitude to everyone who participate in the study for their generosity in giving their time to take part in this study. We would like to acknowledge the funding sources that made this research possible, Universitas Islam Negeri Ar-Raniry Aceh.

AUTHOR CONTRIBUTION STATEMENT

All authors equally contributed to conduct the research and write the article.

REFERENCES


Impact of Resilience and Coping Strategy on Post-Traumatic Symptoms Among Muslim University Students


Copyright holder: © Hatta, K., Yati, A. M., Indra, S., Azhari, A., & Muslima, M.

First publication right: Islamic Guidance and Counseling Journal

This article is licensed under: CC-BY-SA