Forgiveness-Hope Relationships Considering the Risk of Depression: Samples from Public School Students in A Religious Country

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ABSTRACT

This study aimed to describe forgiveness-hope relationships among normal adolescents and those at high risk of depression in Indonesia, which is considered a religious country. This quantitative study involved 713 adolescents from a state vocational school in Semarang, obtained purposively in both sample groups (male = 64.1%; NhHigh Risk = 42; nNormal = 671). Measurements used the DASS-Depression, Forgiveness Scale, and State Hope Scale. Data distributions supported non-parametric tests. Statistical analysis particularly uses Spearman's rho correlation. Additional analyses used descriptive statistics and Mann-Whitney U. The study resulted in a significant positive correlation between forgiveness and hope in each sample group; the correlation coefficient was greater in the high risk sample ($r_{xy}$ normal = .184, $p < .001$; $r_{xy}$ high-risk = .413, $p = .006$). When the correlation in the normal sample was significant for each sex, the correlation in the male high-risk sample was not significant alone ($r_{xy}$ = .374, $p = .104$). Specifically, both sexes of the high-risk sample received benefits on their pathways but not on the agency subscale. Among all the forgiveness dimensions in the high-risk sample, only forgiveness of situations contributed to hope ($r_{xy}$ = .437, $p = .004$), as opposed to the normal sample, which had the least contribution ($r_{xy}$ = .109, $p = .005$). The results indicate that forgiveness may encourage better hope in more depressed adolescents, especially female adolescents. Targeting forgiveness in situations is the primary goal for depressed adolescents, thus encouraging efforts to find coping strategies regardless of their capacity. Further experimental studies can be suggested.

Citation:
INTRODUCTION

Depression is one of the leading causes of disability and impairment in the world, with more than 280 million people worldwide affected (World Health Organization, 2021). At its worst, depression can lead to suicide, which is the fourth most common cause of death among people aged 15-19 years (World Health Organization, 2020). Among Indonesian adolescents, Idris and Tuzzahra (2023) recorded that 29.1% of the 3603 samples in Indonesia had depressive symptoms based on data from the Indonesian Family Life Survey 2014. Meanwhile, another study on 786 samples of Indonesian adolescents in Bandung by Dhamayanti et al. (2020) recorded a depression prevalence of 5.47% based on measurements using The Children's Depression Inventory and a psychiatric structured interview. Further, several studies have found that experiencing depression in childhood-adolescence is associated with a variety of adverse outcomes, including low academic achievement (López-López et al., 2021), failure to complete secondary school, unemployment, pregnancy/parenthood (Clayborne et al., 2018), depression recurrence, and higher severity of symptoms in the future (Roberts et al., 2021).

However, being religious and studying religion in school do not necessarily make adolescents immune to mental health problems like depression (Bulut et al., 2021). Even if the evidence shows that religiosity should have a positive association with aspects of mental health (Malinakova et al., 2020). According to a survey from Tamir et al. (2020), Indonesia can be called a religious country because 98% of the respondents deemed religion to be an important part of their lives. Defining oneself based on religious beliefs held significant significance among Indonesians, resulting in a scarcity of individuals identifying as religiously unaffiliated, such as agnostics and atheists, within the country. Indonesian laws ensure the freedom of religion; the practical application of this right requires individuals to align themselves with one of the six recognized official religions: Buddhism, Catholicism, Confucianism, Hinduism, Islam, or Protestantism (Iswara, 2020).

Scholars have observed that Indonesia, despite being a predominantly Muslim nation, does not qualify as an Islamic state or a completely secular one. Instead, religion is primarily framed as a socio-political matter within the country’s democratic and nationalist framework (Diamant, 2021; Iswara, 2020). As a result, religious lessons became one of the compulsory subjects that must be learned in school. Even so, regarding depression among adolescents, religion always encourages humans to stay hopeful even when faced with the deepest troubles, as there is always God's mercy. According to Islam as the majority religion in Indonesia, this is in accordance with what is said in Surah Yusuf verse 87: "And never give up hope of Allah’s soothing mercy; truly no one despairs of Allah’s soothing Mercy, except those who have no faith." Thus, a good bond with God will make a person have better mental functioning, as the Quran mentions,
"...And whosoever puts his trust in Allah, then He will suffice him..." (Quran 65:3; Bulut et al., 2021).

Hope is one of the qualities involved in depression. For adolescents in general, hope plays an important role. Hope is empirically proven to be a predictor of personal well-being in life among adolescents (Botor, 2019). It positively relates to positive psychological constructs such as self-compassion (Jiang et al., 2020), happiness with life, life satisfaction, and resilience (Botor, 2019; Bowers & Bowers, 2023). In an educational setting, hope relates to academic functioning, including school engagement and academic achievement (Bryce et al., 2019). It helps consolidate personal identity during adolescence and set the stage for future educational and career goals (Fraser et al., 2021). How hope has positive implications seems to be related to more adaptive functions such as planning and problem solving (Bowers & Bowers, 2023). This result is in line with Islamic thought, which sees hope as a source of light, but it should be coupled with fear and reliance on God (Bahmani et al., 2018). Hope in Islam is not only for things that are worldly or temporary but also for things that are ukhrawi (Wahyuna & Fitriana, 2020).

Hope is no exception when it comes to stressful situations, specifically transgression-related events. It has been observed that stressful situations, specifically transgressions such as those experienced in childhood, may result in low hope and affect emotions, even behaviors. A study by Muñoz and Hanks (2021) found that painful adversity experiences during childhood could lower hope into adulthood, which is explained by the limited abilities of survivors to focus on present goals due to rumination as a byproduct of trauma, thereby lowering hope. Moreover, these may lead to self-destructive behaviors and greater obstacles. Depression as a negative emotional state and its symptom, i.e., suicide ideation, can finally be predicted by hope, as a study by Pharris et al. (2023) among adolescent samples shows.

There are at least two major concepts of hope that relate to the interrelationship of hope and depression: dispositional hope, which is in line with the understanding of hope as a trait, and state hope. Trait hope as well as state hope (Snyder et al., 2021) contain two components that are a cognitive set based on a reciprocally-derived sense of successful agency (goal-directed determination) and pathways (planning to meet goals). Agency taps the individual's perceived capacity for initiating and maintaining the actions necessary to reach a goal. While pathways tap the perceived ability to generate routes to one's goals (Snyder et al., 2021). The difference is that trait hope is conceptualized as a stable and enduring cognitive set reflecting general rather than specific outcome expectations. The different roles of agency and pathways subscales regarding their relationship with depression have been investigated previously (Ritschel & Sheppard, 2018).

Hope as a trait has been investigated in relation to depression using various measures. A study by Kaleta and Mróz (2020) observed a negative correlation
between these two variables. Trait hope was also researched by Oakey-Frost (2022), who concluded that it negatively predicted suicide cognitions. Nurdiyanto (2020) also found that hope was one of the reasons why suicidal ideation was suspended. A study by Pharris et al. (2023) on depressed adolescents supported the above description that the presence of hope could buffer their level of depression and suicide attempts.

In other studies on samples from more diverse populations, hope as a state may act as a dependent variable where its presence is predicted by other variables, including self-compassion (Todorov et al., 2019), gratitude (Witvliet et al., 2019), and spirituality (Espedal, 2021). Furthermore, these predictors are likely to be linked to the presence of depression, which also turned out to predict the state of hope (e.g., Todorov et al., 2019). Meanwhile, hope as an independent variable has been evaluated systematically in the educational setting by Marques et al. (2017) and found that it positively predicts academic achievement (including grade point average) as well as student assets, but otherwise negatively predicts liabilities. The correlation is stronger for elementary, junior high, and high school students compared to undergraduate and graduate students.

In addition to the two conceptualizations related to hope above, hopelessness – as briefly mentioned earlier – is widely known to be consistently associated with depression. A study in patients with chronic disease by Liu et al. (2020) concluded that high hopelessness predicts suicidal ideation, mediated by depression and demoralization. According to the hopelessness theory of depression (Abramson et al., in Haefel et al., 2017), some individuals have cognitive vulnerability, which will increase the chance of depression when interacting with stressful life events. When individuals who have cognitive vulnerability encounter stressful life events, they tend to: (a) attribute these events to stable and global causes; (b) view these events as likely leading to other negative consequences; and (c) interpret these events as evidence that they are unworthy and deficient. Individuals who generate these negative conclusions are hypothesized to be at risk for hopelessness, which is seen as a proximal and sufficient cause of depression.

The description above also indirectly suggests that there is a ‘vicious cycle’ of hope and depression, which means that once depression reaches a higher level, effort may be useless. Based on the hopelessness theory of depression as explained by Liu et al. (2015), the interaction between cognitive vulnerability and adverse life events can trigger feelings of hopelessness, which in turn leads to the development of depression—not only as a first onset but also as a recurrence or relapse. The appraisal that there is no hope may lead to depression – characterized by a low level of activities– which further lowers hope. These are what happen next until the increasing depression level—without any intervention—will degenerate the overall psychological function. That is why individual resources may be different between those who are in a normal
psychological state and those who are in a depressive state, so the different levels of depression need to be taken into account in the study. Depression symptoms occur as a result of prolonged negative responses to stressful events that also affect the state of hope. As exemplified by Muñoz and Hanks (2021) above, stressful situations may involve transgressions that are close to forgiveness or, otherwise, unforgiveness. Forgiveness has been investigated, but limitedly, as one of the variables that inter-correlated with depression and hope. A study by Kaleta and Mróz (2020), previously mentioned, further examined the mediation effect of forgiveness on the correlation between hope and depression. Results indicated that the general level of forgiveness, as well as overcoming unforgiveness, fully mediated the correlation between hope and depression symptoms. The findings demonstrate that the tendency to forgive might be a mechanism through which hope reduces the odds of depression (Kaleta & Mróz, 2020). The mechanism of trait forgiveness contributing to depression among adolescents was investigated, for example, by Zhang et al. (2020), which resulted in a direct effect or was partially atemporal mediated by cognitive reappraisal and expression suppression. Hope itself is an expression of cognitive reappraisal regarding capacity or ability related to certain circumstances (Snyder et al., 1996).

Forgiveness is important in religion, which is taught to make people understand the limitations of themselves and the perpetrator as human beings, and is a good way to deal with unpleasant situations (Warsah, 2020). As proposed by Thompson et al. (2005), forgiveness as disposition is a dialectical process through which people synthesize their prior assumptions and the reality of the transgression into a new understanding of the transgression, transgressors, transgression sequences, and, potentially, of themselves, other people, or the world. Therefore, considering transgressors, there are three dimensions of forgiveness according to Thompson et al. in addition to forgiveness in general itself, i.e., oneself, others, and situations.

In relation to hope and depression, the forgiveness dimensions have been studied and appear to make unique contributions. As the study by Kaleta and Mróz (2020), which distinguished the negative (reduction of unforgiveness) and positive (positive forgivingness) scales from Thompson et al. (2005), found, reduction of unforgiveness of others was not related to hope and depression, in contrast to reduction of unforgiveness of oneself and situations. On the other hand, positive forgivingness of others, as well as of oneself and situations, was significantly related to hope and depression.

Hope and forgiveness are two of the positive psychological variables that are examined together for their role in a number of studies. Both hope and forgiveness are robustly associated with self-compassion (Booker & Perlin, 2020), which in turn is implicated in reducing levels of distress (Rahmandani et al., 2021) and depression (Pullmer et al., 2019). In another study, both forgiveness and hope are jointly investigated for their role as mediators in the correlation
between meaning in life and subjective well-being; the results indicate that hope and forgiveness fully mediate the correlation between meaning in life and subjective well-being (Yalçın & Malkoç, 2014). Research on the correlation between forgiveness and state hope, taking into account depression levels, is still limited, so it needs to be conducted.

Another variable considered in the current study was sex and its effect, which was quite consistent in distinguishing the above variables. Among examples of previous studies on adolescents that support is the one suggested by Kaleta and Mróz (2022), that forgiveness and its affective correlates were distinguished by sex. Another study among adolescents that examined the association between trait forgiveness and depression by Zhang et al. (2020) also concluded that the mediating effect of cognitive reappraisal, –which in turn relates to the emotion-regulation process– in females was significantly greater than that in males. In the context of depression among adolescents, a study by Quintana-Orts and Rey (2018), for example, also concluded that there were differences between sexes in terms of the mediating role of forgiveness in the association between depression and suicidal thoughts and behaviors.

Based on the explanation above, it can be suggested that forgiveness correlates positively with hope among adolescents, but it is proposed that the contribution will be different depending on the level of depression risk and sex. Therefore, the aim of this study was to describe the correlations between forgiveness and hope among adolescents by considering those who were at normal and high risk of depression, as well as those who were males and females. It was hypothesized that forgiveness related positively to hope in both samples, while their descriptive comparisons would show differences. Furthermore, our hypotheses surrounding these variables were more exploratory in nature since we observed two different samples and took into account the dimensions/subscales of these variables as well as sex, for which research was still limited. Precisely, this report wants to describe how this topic applies to adolescents who are taking non-religious formal education in a religious country, namely Indonesia. Furthermore, religious education in formal education in Indonesia, even if it is a religious country, is limited to approximately three hours per week (Ministry of Education and Culture, 2018). Researchers target students in public high schools, especially state vocational schools that have a focus on graduates with a ready-to-work profile.

**METHODS**

This quantitative study used a cross-sectional design with self-reported questionnaires. This method was intended to retrieve data from the subjects and observe the variables of research interest at the same time. Self-reported questionnaires were used, taking into account their feasibility in the target population. The variables in this study were forgiveness and hope. Researchers
also considered other variables to be controlled for, namely the level of depression symptoms and sex.

**Research Subjects**

A total of 909 adolescents from an A-accredited state vocational school in Semarang, Indonesia, who were initially obtained through cluster random sampling techniques, were involved in data collection using the paper and pencil test method in 2019. Subjects that involved several classes from grades 1 to 3 had depression symptom levels in the normal, mild, moderate, severe, and profound categories, respectively 73.82% (n=671), 12.65% (n=115), 8.91% (n=81), 3.3% (n=30), and 1.32% (n=12). According to the purpose of this study, Table 1 shows demographic characteristics and descriptive statistics of age involving 713 subjects (M$_{Age}$=15.9; SD$_{Age}$=.91; Male=64.1%) who were purposively obtained from those in normal category (n=671 [94.11%]; M$_{Age}$=15.9; SD$_{Age}$=.9; Male=65.13%), and in high-risk, particularly severe and profound categories of depression symptom levels (n=42 [5.89%]; M$_{Age}$=15.9; SD$_{Age}$=.9; Male=47.62%).

<table>
<thead>
<tr>
<th>Sample Category</th>
<th>All</th>
<th>High Risk</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M$_{Age}$</td>
<td>SD$_{Age}$</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>457</td>
<td>16</td>
<td>.91</td>
</tr>
<tr>
<td>Female</td>
<td>256</td>
<td>15.8</td>
<td>.86</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>276</td>
<td>15.2</td>
<td>.58</td>
</tr>
<tr>
<td>2nd</td>
<td>287</td>
<td>16.1</td>
<td>.63</td>
</tr>
<tr>
<td>3rd</td>
<td>150</td>
<td>17</td>
<td>.46</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td>713</td>
<td>15.9</td>
<td>.91</td>
</tr>
</tbody>
</table>

**Instruments**

Depression in this study was measured using the Depression Anxiety Stress Scale (DASS), which was originally developed by Lovibond and Lovibond (1995) and measures the three dimensions specified in the tripartite model (Brown et al., 1997), one of which is low positive affectivity (DASS-Depression). The DASS-Depression of the short-form version of the DASS-21 consists of 7 items and has been tested in a large non-clinical sample (Henry & Crawford, 2005). The Indonesian version of DASS-21 used was the one adapted by Damanik (2011). Cronbach’s $\alpha$ for DASS-Depression was .799. Participants were asked to choose one of the responses within the range of 0 to 3 (‘0’ means ‘the response does not suit me at all, or never’ to ‘3’ means ‘very much matches me, or very often’) on each item to describe their experiences during the past week. The total score was obtained from the sum of all responses multiplied by two. Five levels of depression symptoms were obtained through categorizing scores, i.e., ‘normal’ (score x<10), ‘mild’ (score 10≤x<14), ‘moderate’ (score 14≤x<21), ‘severe’ (score 21≤x<28), and ‘profound’ (score x≥28).
The forgiveness scale used in this study was a scale compiled by Rahmandani et al. (2016) based on Thompson et al. (2005) by paying attention to the three dispositions of forgiveness. A total of 274 college students were involved in the tryout. Respondents were asked to choose one of the responses on each item that best described themselves. The scale consists of 40 items, which are divided into 3 subscales: self-forgiveness, forgiveness of others, and forgiveness of situations. This Likert scale consists of four responses for each item, namely "Strongly Disagree", "Disagree", "Agree", and "Strongly Agree". In favorable items, they are scored 0, 1, 2, and 3, respectively, while in unfavorable items, they are scored 3, 2, 1, and 0, respectively. The score for each dimension is derived by adding up the scores on all items representing each dimension, while the total score for forgiveness in general is the sum of all item scores. Cronbach's α for this scale was .867.

In this study, hope was measured using The State Hope Scale (Snyder et al., 1996), which is a six-item scale and contains an agency subscale (a cognitive set based on a reciprocally-derived sense of successful agency or goal-directed determination) and a pathways subscale (planning to meet goals). This scale was adapted into Indonesian using forward and backward translation procedures and was reported by Salma et al. (2020). Cronbach’s α in this study population was .701. Respondents were asked to take a few moments to focus on what was going on in their lives and select the number that best described how they thought about themselves and put that number in the blank provided (on an 8-point scale, with 1 = Definitely False, 2 = Mostly False, 3 = Somewhat False, 4 = Slightly False, 5 = Slightly True, 6 = Somewhat True, 7 = Mostly True, and 8 = Definitely True). The even-numbered items are agencies, and the odd-numbered items are pathways. Subscale scores for agency or pathways are derived by adding the three even- and odd-numbered items, and the total State Hope Scale score is the sum of all six items.

Procedures

Data collection on classes and cluster random sampling were carried out not long after the official approval was given by the principal and communication was established with the appointed subordinate teacher. The questionnaire was self-administered in 2019 using pencil and paper. Before starting to fill out the form, the subject received research information and agreed to be involved voluntarily by signing the informed consent. Data collection was obtained in the classroom, with two people in charge (one researcher and one trained research assistant) observing the process.

Statistical Analysis

Data analysis in this study used non-parametric statistics by considering the results of the Kolmogorov-Smirnov One-Sample normality test (presented in Table 2), which showed that the distribution of data on the variables in each sample was not normal. The Kolmogorov-Smirnov values for all variables in the normal sample has p<.001, while the high risk sample has p<.001 to p=.049
(p<.05), except for forgiveness of self (p=.200), others (p=.074), and the agency subscale of hope (p=.200). All values of Kolmogorov-Smirnov with p>.05 were considered normal, and conversely.

Table 2. The Results of Normality Assumption Test Using One-Sample Kolmogorov-Smirnov Test

<table>
<thead>
<tr>
<th>Samples at high risk of depression</th>
<th>Depress-</th>
<th>Forgive-</th>
<th>Forgiveness Dimensions</th>
<th>Hope</th>
<th>Hope Subscales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ion</td>
<td>ness</td>
<td>Self</td>
<td>Others</td>
<td>Situations</td>
</tr>
<tr>
<td>Test Statistic</td>
<td>.287</td>
<td>.136</td>
<td>.082</td>
<td>.130</td>
<td>.171</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.000c</td>
<td>.049c</td>
<td>.200c,d</td>
<td>.074c</td>
<td>.003c</td>
</tr>
<tr>
<td>Normal Samples</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Statistic</td>
<td>.195</td>
<td>.052</td>
<td>.077</td>
<td>.061</td>
<td>.090</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.000c</td>
<td>.000c</td>
<td>.000c</td>
<td>.000c</td>
<td>.000c</td>
</tr>
</tbody>
</table>

Note:

a. Test distribution is Normal.  
c. Lilliefors Significance Correction.  
b. Calculated from data.  
d. This is a lower bound of the true significance.

Spearman's rho correlations were used to observe the correlation between forgiveness and hope, both in general and according to the dimensions of forgiveness or hope subscales, in each sample and for each sex. The researcher also analyzed the data using descriptive statistics and the Mann-Whitney U test. Descriptive statistics were used to explain the mean and standard deviation of each sample according to sex, while Mann-Whitney U tests were used to see the difference in the scores of the variables between samples and between sexes in each sample. All data analysis in this study used software, i.e., the Statistical Package for the Social Sciences (SPSS) 22.0 for Windows and Microsoft Excel.

The flowchart of the relationship between the variables involved in this study can be seen in Figure 1. Forgiveness (X₁) is hypothesized to have a positive association with hope (Y). While the levels of depression (X₂) and sex (X₃) are also taken into account in the analysis. Typically, such a chart indicates the moderating effect of the two variables. However, the moderation test was not carried out considering the distribution of the data (which would later become a suggestion for further research). Therefore, the differences in the correlations are observed descriptively.

Figure 1. The Flowchart of the Relationship between the Variables
RESULT AND DISCUSSION

Descriptively, Figure 2 shows the differences in the means of all variables between sample categories and sexes, while Figure 3 shows the differences in standard deviations. Inferentially, the significance of these differences can be seen in Table 3. There were clear significant differences in all variables between samples based on depression categories, indicating that those who were normal had higher forgiveness and hope in general (as well as according to their dimensions and subscales) than those who were high-risk \( (p < .001) \). The results also showed that sex differed in levels of general forgiveness in those who were normal \( (z = -4.535; p < .001) \), specifically that males had higher levels of self- and situation forgiveness than females. For those who were high-risk, forgiveness in general was not differentiated by sex \( (z = -0.403; p = .687) \), but males had higher self-forgiveness and otherwise lower forgiveness of others than females. In addition, sex did not differentiate hope in both sample categories of depression.

<table>
<thead>
<tr>
<th>Sample Category</th>
<th>Sex</th>
<th>Depression</th>
<th>Forgiveness</th>
<th>Forgiveness of Self</th>
<th>Forgiveness of Others</th>
<th>Forgiveness of Situations</th>
<th>Hope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female, normal</td>
<td></td>
<td>69.6</td>
<td>23.9</td>
<td>34.3</td>
<td>18.7</td>
<td>36.8</td>
<td></td>
</tr>
<tr>
<td>Male, normal</td>
<td></td>
<td>73.7</td>
<td>25.5</td>
<td>35.1</td>
<td>18.8</td>
<td>37.5</td>
<td></td>
</tr>
<tr>
<td>Female, high risk</td>
<td></td>
<td>52.6</td>
<td>16.9</td>
<td>32.4</td>
<td>17.7</td>
<td>30.4</td>
<td>15.9</td>
</tr>
<tr>
<td>Male, high risk</td>
<td></td>
<td>50.3</td>
<td>20.2</td>
<td>26.9</td>
<td>14.1</td>
<td>29.8</td>
<td>15.8</td>
</tr>
<tr>
<td>All, normal</td>
<td></td>
<td>72.3</td>
<td>25</td>
<td>34.8</td>
<td>23.2</td>
<td>37.3</td>
<td>19.1</td>
</tr>
<tr>
<td>Female, high risk</td>
<td></td>
<td>51.5</td>
<td>18.5</td>
<td>29.8</td>
<td>13.9</td>
<td>30.2</td>
<td>15.9</td>
</tr>
<tr>
<td>Male, high risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All, high risk</td>
<td></td>
<td>51.5</td>
<td>18.5</td>
<td>29.8</td>
<td>13.9</td>
<td>30.2</td>
<td>15.9</td>
</tr>
</tbody>
</table>

Figure 2. Chart of Mean of All Variables between Sample Categories and Sexes

<table>
<thead>
<tr>
<th>Sample Category</th>
<th>Sex</th>
<th>Depression</th>
<th>Forgiveness</th>
<th>Forgiveness of Self</th>
<th>Forgiveness of Others</th>
<th>Forgiveness of Situations</th>
<th>Hope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female, normal</td>
<td></td>
<td>10.69</td>
<td>3.74</td>
<td>6.89</td>
<td>4.38</td>
<td>5.45</td>
<td>1.76</td>
</tr>
<tr>
<td>Male, normal</td>
<td></td>
<td>10.66</td>
<td>3.89</td>
<td>6.21</td>
<td>4.38</td>
<td>5.39</td>
<td>1.63</td>
</tr>
<tr>
<td>Female, high risk</td>
<td></td>
<td>12.26</td>
<td>3.77</td>
<td>8.42</td>
<td>6.39</td>
<td>8.97</td>
<td>4.59</td>
</tr>
<tr>
<td>Male, high risk</td>
<td></td>
<td>13.72</td>
<td>6.86</td>
<td>7.72</td>
<td>6.32</td>
<td>9.05</td>
<td>5.09</td>
</tr>
<tr>
<td>All, high risk</td>
<td></td>
<td>12.87</td>
<td>5.66</td>
<td>8.46</td>
<td>6.28</td>
<td>8.9</td>
<td>4.79</td>
</tr>
</tbody>
</table>

Figure 3. Chart of Standard Deviation of All Variables between Sample Categories and Sexes
Table 3. The Tests of Variables Differences Using Mann-Whitney U

<table>
<thead>
<tr>
<th>Z (Grouping Variable)</th>
<th>Depression</th>
<th>Forgiveness</th>
<th>Forgiveness Dimensions Self</th>
<th>Others</th>
<th>Situations</th>
<th>Hope</th>
<th>Hope Subscales Agency Pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z (Category of depression) Samples at high risk of depression</td>
<td>-11.112***</td>
<td>-8.899***</td>
<td>-7.443***</td>
<td>-3.769***</td>
<td>-8.794***</td>
<td>-5.508***</td>
<td>-5.667***</td>
</tr>
<tr>
<td>Z (Sex)</td>
<td>-1.309</td>
<td>-.403</td>
<td>-2.222*</td>
<td>-2.145*</td>
<td>-.519</td>
<td>-.568</td>
<td>-.607</td>
</tr>
<tr>
<td>Normal Samples Z (sex)</td>
<td>-3.488***</td>
<td>-4.535***</td>
<td>-4.860***</td>
<td>-1.152</td>
<td>-4.669***</td>
<td>-1.530</td>
<td>-1.188</td>
</tr>
</tbody>
</table>

Note: *) p < 0.05; **) p < 0.01; ***) p < 0.001 (2-tailed)

Table 4 contains the results that answer the purpose of this study, namely that there were significant positive correlations between forgiveness and hope in both sample groups, normal (r_x = .184; p < .001) and high-risk (r_xy = .413; p = .006). The correlation coefficients were greater in the high-risk sample, but this inference needs to be applied carefully considering the large difference between the two sample sizes. Almost all correlations (including those that were specific based on dimensions and subscales) in the normal sample were significant for both sexes, except among males where there was a forgiveness dimension left, namely situations that were not related to hope (r_xy = .028; p = .565).

Table 4. Spearman’s rho Correlations among Variables

<table>
<thead>
<tr>
<th>All Normal (N=671)</th>
<th>All High Risk (N=42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depre...</td>
<td>Forgiveness</td>
</tr>
<tr>
<td>Hope</td>
<td>- .161***</td>
</tr>
<tr>
<td>Agency</td>
<td>-.150***</td>
</tr>
<tr>
<td>Pathways</td>
<td>-.116**</td>
</tr>
<tr>
<td>Male</td>
<td>Depression</td>
</tr>
<tr>
<td>Hope</td>
<td>- .186***</td>
</tr>
<tr>
<td>Agency</td>
<td>-.138***</td>
</tr>
<tr>
<td>Pathways</td>
<td>-.181***</td>
</tr>
<tr>
<td>Female</td>
<td>Depression</td>
</tr>
<tr>
<td>Hope</td>
<td>-.100***</td>
</tr>
<tr>
<td>Agency</td>
<td>-.166***</td>
</tr>
<tr>
<td>Pathways</td>
<td>.023**</td>
</tr>
</tbody>
</table>

Note: *) p < 0.05; **) p < 0.01; ***) p < 0.001 (2-tailed)

Between the correlations of forgiveness and hope in the high-risk sample, the correlation in males was not significant alone (r_xy = .374; p = .104). The inspection of correlations based on forgiveness dimensions and hope subscales in the high-risk sample was different and more unique than the normal sample. Specifically, among all the forgiveness dimensions in the high-risk sample (also separately...
specific for each sex), only forgiveness of situations contributed to hope, especially for females ($r_{xy} = .488; p = .021$). In males, it was not significant ($r_{xy} = .384; p = .095$). Interestingly, in the normal sample, the contribution of situation forgiveness was the lowest among all dimensions ($r_{xy} = .109; p = .005$). In both sexes of the high-risk sample, forgiveness in general and specifically forgiveness of situations provided benefits on their pathways ($r_{xy} = .464-.562; p = .006-.039$) but not on the agency subscale ($r_{xy} = .210-.383; p = .079-.375$). This actually also applied to the normal sample, where the correlation coefficients to pathways subscale ($r_{xy} = .194; p < .001$) were greater than to agency subscale ($r_{xy} = .124; p = .001$).

Finally, in addition, forgiveness generally contributed negatively to depression in both sample groups and both sexes. Forgiveness by dimensions contributed uniquely. Furthermore, in contrast to the normal sample, depression in the high-risk sample was not related to hope or its subscales.

**Forgiveness and Hope in Both Sample Groups Were Significantly Positively Correlated – The Pathways Subscale Was Greater Benefited than the Agency Subscale.**

The above results conclude that there were significant positive correlations between forgiveness and hope in both sample groups, normal and high-risk. The mechanism of the correlation between the two variables, one of which may be mediated by the role of the socio-cognitive variable in dealing with stressful situations or transgressions, According to Thompson et al. (2005), as mentioned before, transgressors or offenders here include others, situations, or even oneself. Washington-Nortey et al. (2023) concluded that forgiveness played an active role in forgivers’ socio-cognitive readjustment toward transgression, particularly their reappraisal of the wrongdoing and repositioning toward the offender. Washington-Nortey et al. also added that forgiveness initially and significantly predicted an increase in empathy and a decrease in perceived severity over time regarding transgression. A similar study by Contreras et al. (2020) also explained the role of socio-cognitive variables in the correlation between transgression-related events in children (i.e., exposure to domestic violence) and violence against their parents when they were teenagers. When a child witnesses violence at home and there is no resolution to the impact of the transgression, it can be attributed to dysfunctional components of social-cognitive processing. Some of these components (like feeling angry and reacting aggressively) are positively correlated to child-to-parent violence motivated by reactive reasons; other components (like anticipating positive consequences of violence and finding justification for it) are positively correlated to the instrumental use of the violence against parents (Contreras et al., 2020). In summary, the arguments above explain that forgiveness as an adaptive coping mechanism implies softening the appraisal of events, and conversely, the absence of an appropriate coping mechanism for exposure to transgression implies intergenerational transmission of violence. Both studies involve the role of socio-cognitive variables, whether they are functional (for forgiveness) or dysfunctional (for unforgiveness). This corresponds to Warsah’s (2020) earlier observation that, as an important concept
in religion, forgiveness is a cognitive attempt to understand and accept the limitations of oneself and the transgressor(s) so that one can conform to unpleasant situations.

Furthermore, another study emphasizes how socio-cognitive processing plays a role in problem solving, where hope is also considered (Avry et al., 2020). According to Avry et al., socio-cognitive processes in task-related problem solving that involve other parties include sustaining mutual understanding, information pooling, reaching consensus, transactivity, task management, and time management. These processes work in a variety of situations. Along with the socio-cognitive process used to master the task, hope can also arise as a prospective and activating emotion of achievement (Avry et al., 2020). Hope synergizes with the learner's focus so that it leads to the ongoing activity or its prospective or retrospective outcomes. This is supported by Rasi and Moula (2015), whose research concluded that socio-cognitive empowerment-based intervention contributed to the emergence of several mental capacity developments, including (a) the chance for a hopeful life accompanied by goal-directedness and positivity, which is interconnecting with other mental capacities, i.e., (b) deliberative problem solving and decision making, (c) social awareness achievement through learning spaces, and (d) self-perception.

It has been mentioned the hope relation to socio-cognitive and problem solving. Other previous studies had proven that problem solving as a process supported by socio-cognitive factors had implications for hope. This is in line with the conceptualization of hope according to Snyder et al. (2021), which was a cognitive set that drove an individual's perceived capacity for initiating and maintaining the actions necessary to reach a goal (agency) and perceived ability to generate or find alternative routes to one's goals under challenging circumstances (pathways). Later, the explanation will also underline the results of this study that forgiveness provided greater benefits on the pathways subscale than the agency subscale. This means that people with high forgiveness are encouraged to seek strategies for dealing with stressful situations or the consequences of transgression, even when they are not quite sure of their capacities.

This result is in line with the previous review by Bowers and Bowers (2023) in promoting positive youth development across non-WEIRD (Western, educated, industrialized, rich, and democratic nations) contexts by considering the role of hope. It was found that hope-pathways contributed more to positive thinking and direct problem solving than hope agencies (with fewer but significant correlations). Even when there was no correlation between hope agency and planning as well as overall coping use, a correlation occurred between hope pathways and planning as well as overall coping use. However, this result appears to contradict the teachings of Islam, which emphasize that the concepts of agency and pathway thinking should go hand in hand. According to Islamic beliefs, agency thinking is necessary for accomplishing goals, strengthening faith, and nurturing the spiritual soul, where the increase in 'guidance' is due to their
spirituality. Meanwhile, pathways are thought of as human efforts to achieve both worldly and spiritual goals. The Holy Quran (Tobe’h: Ayat71) states "assuming virtue and sincerity in doing things that make Allah and his Prophet (PBUH) happy and avoiding sins and things that make Allah and his Prophet (PBUH) sad".

The Correlation Coefficients Were Greater in the High Risk Sample than in the Normal Sample. Specifically, the results also showed that the correlation coefficients were greater in the high-risk sample than in the normal sample, or, in other words, forgiveness contributed to greater hope in those with a high risk of depression. Despite the fact that the variable level was significantly lower in the high-risk group, assuming there was a similarity in the level of forgiveness in both samples, the high-risk group felt more hope than the normal group. As an explanation, there is a likelihood of solving the problem when someone forgives, as described before, and that problem solving will be more meaningful for those who are more affected by stressful situations or transgressions. The effect of forgiveness on at-risk adolescents who were severely impaired due to those situations or events allows them to better understand that the anger they feel has negative effects, better understand forgiveness, and learn that forgiveness is a very helpful option (Freedman, 2018). This understanding makes the idea of how to let go of anger the most helpful. This mechanism is naturally less significant in individuals with fewer negative effects as a result of the situation or event. According to a study by Zhou et al. (2013) on a college student population, the sample group that had recovered from a history of depression reported higher scores on certain cognitive and affective strengths as compared with the "currently depressed" or "without a history of serious depressive episodes" sample group. Furthermore, there were strengths that mediated the correlation between depression recovery and coping strategies, including forgiveness and hope, in addition to love, gratitude, bravery, and a love of learning.

The explanation provided by Bahmani et al. (2018) can be employed to analyze the findings from an Islamic perspective. The equilibrium between hope and fear, which is the recommended emotional state, is the result of a true inner faith. This state can lead to the wholehearted practice of divine law and ethics (Bahmani et al., 2018). Those with a greater risk of depression will feel more fear than those at normal levels, so hope contributes more. Nevertheless, it should be noted, as highlighted by Bahmani et al. (2018), that both excessive fear and excessive hope are pathological conditions for the human soul as they result in disobedience to God and engaging in immorality. When environmental factors such as facing death disrupt the balance and instill fear in a patient with a terminal illness, for example, spiritual support becomes essential in order to restore equilibrium by increasing the emotion of hope.

Forgiveness of Situations Was the Only Dimension That Was Significantly Related and the Biggest Contributor to the High-Risk Group. Another specific result that needs to be highlighted is that all dimensions of forgiveness in the normal group were
significantly related to hope, while the only dimension that was significantly related and the biggest contributor to the high-risk group was the situation dimension of forgiveness. Furthermore, which also indicates the different roles of each forgiveness dimension, the contribution of situation forgiveness to hope in the normal group was the lowest among all dimensions (specifically for males, it was not related to hope). Based on descriptive statistics (means and standard deviations), we try to explain that normal individuals tend to 'agree' that their higher degree of forgiveness (in general and according to dimensions) has a share of higher hope. However, it may happen that as the severity of the problem increases to a high-risk level, some individuals lose control over themselves and others, so that the pattern of correlations between the two forgiveness dimensions of self and others and hope becomes inconsistent and weak, yet insignificant. In the case of forgiveness in a situation, normal individuals are more likely to show variations in the correlation between this forgiveness dimension and hope (the direction is not clear enough, especially for males, and it is insignificant). Normal individuals may tend to perceive situations as being under or out of control, forgivable or unforgivable.

Forgiving situations in the high-risk group are the opposite. That group is thought to be deeper in ruminating on stressful situations or transgressions and perceiving the situation as uncontrollable, resulting in high levels of distress and depression symptoms. The difference in the correlation coefficients in the two samples may also be supported by the other results, which showed the significance of differences in all variables between samples, that those who were normal had higher forgiveness and hope than those who were high-risk, in general as well as according to their dimensions and subscales. Measures of standard deviations and variances must have been taken into account. As an added result, forgiveness generally contributed negatively to depression in both sample groups and both sexes. However, in contrast to the normal sample, depression in the high-risk sample was not related to hope or its subscales.

According to helplessness theory, the depressed state refers to the inability of individuals to pursue, utilize, or attain effective practical responses, so that they seem to have given up hope that it is possible to control important environmental events effectively and voluntarily. They accept that they will be messed up by bad things and have little control over them (Gazzaniga, 2018). Individuals who experience long-lasting and intricate challenges come to believe that their responses and events are unrelated. The situation takes place, and the learning attained actually debilitates imminent learning and leads to inactivity. As a result, they will be unsuccessful in addressing any issue, even when a viable solution exists (Mohanty et al., 2015). Concerning these explanations, granting forgiveness towards situations is expected to help people, especially those with high levels of depression, feel relieved and achieve higher hope. Specifically, between the two sexes, females showed this, while males showed a significant correlation, especially with the pathways subscale. The reasons why pathways
The concept of forgiveness in situations has not been studied specifically in the Islamic view. Rather than that, forgiveness in Islam is more directed at being forgiven by God, in addition to self-forgiveness and forgiveness of others (Uyun et al., 2019). In fact, this result is interesting because the unforgiveness of situations may be related to the rejection of God's fate. Instead of blaming God, who rules his fate, one chooses to blame situations. But it is different in Islam, where one prefers to take responsibility for his actions and not just blame things outside himself, including others and circumstances or situations (Mohammad, 2012). One must remember that God is wise, and God's decrees are right, just, good, and fair. Therefore, Muslims must submit and surrender to His Will (Mohammad, 2012).

**Unique Differences According To Sex.** According to sex, it has been mentioned in the discussion above that both sexes in the normal sample had almost all significant correlations between forgiveness and hope (including those that were specific based on dimensions and subscales), except that the forgiveness of situations among males was not related to hope. In the high-risk sample, the correlation between forgiveness and hope in males was not significant compared to females, but both sexes agreed that forgiveness—especially forgiveness of situations—applied to the pathways subscale of hope.

A comparison of both sexes in each group also showed that sex differed in levels of general forgiveness in those who were normal; specifically, males had higher levels of self- and situation forgiveness than females. For those who were high-risk, forgiveness in general was not differentiated by sex, but males had higher self-forgiveness and otherwise lower forgiveness of others than females. However, sex did not differentiate hope in each sample category of depression, either generally or based on its subscales.

We try to explain—but lack evidence—through previous studies such as those by Jiang et al. (2018) that may support result differences by sex among adolescents, particularly those in the high-risk group. Jiang et al. concluded that hope in general was negatively related to adolescent non-suicidal self-injury and that hope (specifically the dimension of pathways thinking but not agency thinking) attenuated the association between depressive symptoms and non-suicidal self-injury among females. This means that hope plays a greater role in depressive female adolescents in reducing non-suicidal self-injury symptoms. However, those results may unequivocally contradict the study by Quintana-Orts and Rey (2018), which concluded that forgiveness moderated the correlation between depression and suicidal ideation for males but not for female adolescents. This means that among male adolescents, the correlation between depression and suicidal thoughts and behaviors weakens as levels of forgiveness increase. The indication of contradictory results in the two previous studies above suggests consideration that certain specific variables related to the population involved...
may have played a role in the results of the current study. Further exploration can be carried out in future research.

CONCLUSION

The results of this study showed positive correlations between forgiveness and hope in both the normal and high-risk sample groups. The contribution of forgiveness might be greater in high-risk samples. When the correlations of the high-risk samples were compared descriptively by sex, the forgiveness dimensions, and the hope subscales, unique results were obtained. Despite all the results, this study contains several considerations, i.e., (a) differences in sample sizes and (b) statistical analysis techniques. As references for proving the hypothesis, the correlations in the high-risk group were less significant than those in the normal group. This is likely because of differences in sample sizes, where a small sample size will have a greater error. Likewise, statistical analysis techniques still applied non-parametric statistics because the data was not normal, so comparisons and conclusions needed to be made carefully.

While it is understandable why the sample size of the high-risk group was far smaller than the normal group, it is still necessary to consider a larger number of samples in the high-risk group. The possibility of using parametric statistics also needs to be taken into account. Further, indications of mediating and moderating effects among the variables are suggested, such as using the variables of sex and depression levels in the correlation between forgiveness and state hope. The rationale for this is that the differences between the two groups appear to be related to the severity of the perceived impact of the stressful situation or transgression, as well as sex. Factors thought to mediate, such as socio-cognitive or cognitive appraisal toward the stressful situation or transgression in the correlation between forgiveness and hope, both in general and based on dimensions and subscales, can also be re-examined in future studies in this population.

Further, the review of forgiveness and hope among the sample of young people in this study has not been able to fully describe expectations that are in line with religious views, in this case from the perspective of Islam as the majority religion. The development of religion-based forgiveness and hope instruments can be suggested. In addition, further research can use spirituality or religiosity as a mediator or moderator so as to provide a better explanation. Practically, religious education on this matter in public schools that is sensitive to the stage of development can also be further suggested.

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Forgiveness - Hope Relationships Considering the Risk of Depression: Samples from Public School Students in A Religious Country


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