

Suicidal Ideation Among Pakistani Youth During the COVID-19 Outbreak: Moderating Role of Religious Orientation and Social Connectedness

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The COVID-19 pandemic and sudden economic decline led to a drastic surge in suicidal ideation rates among the young population, warranting prevention before its progression to behavior. The current body of research has not yet adequately captured the underlying mechanism between psychological strain and suicidal ideation and the protective role of social determinants in preventing suicidal ideation. This study aimed to explore the mitigating roles of religious orientation and social connectedness between psychological strain and suicidal ideation among Muslim youth during the COVID-19 outbreak between May 2020 and August 2020. This study also explored the moderating role of social connectedness in the mediation of depression between psychological strain and suicidal ideation. University students selected using convenience sampling (N = 400) completed an online questionnaire. Intrinsic religious orientation ($\beta = -.006$, $p < 0.05$) and social connectedness ($\beta = -.002$, $p < 0.05$) significantly mitigated the impact of psychological strain on suicidal ideation. The paths between psychological strain and depression ($\beta = -.002$, $p < 0.001$), and between depression and suicidal ideation were significantly moderated by social connectedness ($\beta = -.0053$, $p < 0.05$). Protective factors, such as intrinsic religious orientation (i.e., having an inward expression of religious beliefs, in which people use religion as the framework for their lives) and a perceived sense of connectedness must be taken into account when devising intervention programs against depression and suicidal ideation. This study underscores the importance of prevention programs against suicide to protect the youth living with strains and debilitating thoughts of ending their lives.

Keywords

Young adults • psychological strain • suicidal ideation • social connectedness • Pakistan

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1. Introduction

Suicide is the third leading cause of death among youth aged 15–29 years. Seventy-three percent of global suicides occur in low- and middle-income countries (LMICs), with Pakistan being among them. For every suicidal death, there are many more contemplating suicide or attempting to end their lives (World Health Organization [WHO], 2025). Most Muslim-majority countries, like Pakistan, fall into LMICs (Arafat et al., 2022). Due to legal and religious prohibitions on suicide within Muslim-majority countries, data on suicide is seldom collected and statistically reported to the World Health Organization (WHO) (Arafat et al., 2021; Eskin et al., 2021; Lew et al., 2022). Even when reported, the numbers in are likely significantly lower than the rates quoted by some studies conducted in such areas. Probable suicidal deaths can be attributed to other external causes of death, and therefore suicide can go unidentified (Lew et al., 2022; Pritchard et al., 2020; Pritchard & Amanullah, 2007). Likewise, in Pakistan, official statistics on suicide are not reported or published in morbidity surveys due to administrative and legal concerns. Consequently, due to religious and social stigma, suicidal cases can be either reported as accidents or as other causes of death (Asad et al., 2022).

Suicide is an act of taking one's own life, whereas suicidal ideation (SI) is defined as having thoughts, ideas, and the desire to end one's own life (Harmer et al., 2024). Suicidal ideation is on a spectrum of intensity, ranging from a general desire die, progressing to having a dedicated plan and intent to end one's life. These thoughts are a substantial pathway to suicide attempts (Herba et al., 2007; Klonsky et al., 2016) and remain one of the strongest predictors of future suicide (Harmer et al., 2024). The idea of a prompt suicidal act without ideation seems improbable, as a recent study highlights that 90% of individuals who die by suicide suffer from a psychiatric illness (Mann et al., 2021). Understanding the intricacies of SI, its etiology, and protective factors is a crucial step in early intervention and reducing the likelihood of suicide (Harmer et al., 2024). The prevalence rate for SI (11.5%) is much higher than that of attempts (3.1%) (Borges et al., 2008), yet most of the literature is dedicated to suicidal behavior, inadequately addressing ideation, attempt, and behavior combined (Castellví et al., 2017; Miranda-Mendizábal et al., 2017). Given the global rise in suicide rates, especially during the pandemic, a comprehensive understanding and effective management of SI is imperative for timely intervention against suicide (Yan et al., 2023).

Xiong and colleagues (2020) reported unprecedentedly high rates of mental disorders during COVID-19 globally, with young people at the highest risk. The suicide-related consequences of the pandemic are expected to be worse in countries facing economic decline with insufficient welfare support, like Pakistan (Gunnell et al., 2020). Uncertainty and panic elicited by COVID-19 exacerbate the risk of SI, with social isolation making the situation worse (Sher, 2020). A recent systematic review and meta-analysis conducted among Muslim-majority countries indicated that the prevalence of lifetime SI was highest in Southeast Asia, but the 12-month prevalence of SI among university students is highest (16.8%) in the Eastern Mediterranean region, which includes Pakistan (Arafat et al., 2023).

The suicidal crisis in Pakistan is no different than the crisis present globally, as an increase in suicide rates has been observed among Pakistani youth, who constitute 64% of the total population (Imran et al., 2022; Naveed et al., 2023; Yousafzai et al., 2022). Most of these cases were reported to be individuals under the age of 30 years, warranting the need for preventive strategies and programs for youth (Naveed et al., 2023).

The recent amendment to Section 325 of the Pakistan Penal Code, which decriminalized suicide attempts in Pakistan, represents a progressive step toward improving suicide reporting. However, suicide remains an under-researched topic in the country (Khan & Ali Hyder, 2006). The existing literature has not sufficiently explored effective prevention strategies or protective factors that can mitigate suicide at the ideation stage, preventing its progression to behavior (Muneeb & Hassan, 2023b; Eman et al., 2025). Against this backdrop, the present study seeks to address SI by examining its risk factors and protective mechanisms.

To prevent SI, it is crucial to understand the pathway that underlies it and to inhibit it before its progression (Khan et al., 2008). The Strain Theory of Suicide (STS) identifies psychological strain (PS) as a consistent and significant predictor of a suicidal mindset (Zhang, 2019). Psychological Strain is described as the “mental anguish of a person deciding on two correspondingly significant, however contradictory, social facts, which pull an individual in opposite directions” (Zhang et al., 2011). To escape from mental agony and attain psychological balance, to some, dying may appear more rewarding than continuing to live. In the form of inward release, it results in suicidal thoughts. Though the association between PS and SI has been established theoretically and empirically (Zhang et al., 2017; Zhao & Zhang, 2018), the underlying pathway is yet to be explored (Sun et al., 2020). An understanding of these mechanisms and earlier intervention is crucial for its effective management against suicide.

The pathways of PS involve mental disorders mediating the path between PS and SI, whereas social and moral factors can protect against SI. The excess or inadequacy of social integration and moral regulation is deemed a predictor of suicide (Zhang, 2019). Depression among mental disorders is the strongest predictor of SI (Ran et al., 2015). Psychological Strain was found to be significantly associated with SI and depression (Zhang et al., 2011; Zhang & Lv, 2014), but the increase in PS and depression may not necessarily predict an increase in SI (Zhao & Zhang, 2018). Similarly, only a specific combination of strain and depression predicted SI beyond demographics in other studies (Zhang et al., 2016; Zhao & Zhang, 2018). This illustrates that despite PS being a predictor of depression and SI, the path might be contingent upon other moral and social factors (Zhang, 2019), like religious orientation (RO) and social connectedness (SC). It is found that depression can mediate the relationship between PS and SI (Muneeb & Hassan, 2023a; Sun et al., 2020), but it is not clear from empirical evidence whether the level of SC can confound this relationship. It is hypothesized that the mediation might be contingent upon other factors (Zhang, 2019) that buffer the impact of PS and depression on SI, such as SC and RO.

2. Role of Social Connectedness as a Moderator between Psychological Strain and Suicidal Ideation

2.1 *Social connectedness*

Social connectedness (SC) is “how one views oneself with the external world.” (Lee & Robbins, 1995). It includes all dimensions of social relations, including domestic, peer networks, and the community in general. Daily interactions are also included in one’s sense of SC (Townsend & McWhirter, 2005). It can be defined as having a lasting and pervasive sense of relational intimacy with the social world (Lee & Robbins, 1995). This sense of connectedness matures from

adolescence to adulthood as one gradually builds trust in social relationships and gets comfortable in roles like a partner, parent, or colleague. Alternatively, a person who does not feel connected most likely struggles in social relationships (Lee et al., 2001).

2.2 Psychological Strain and Social Connectedness

The STS relates suicide to social integration, as excessive social integration may lead to deprivation strain. Frequent social interactions can stimulate comparison, where one may feel less than others or relatively deprived. Contrarily, the inadequacy of social integration can lead to coping strain, as facing ordeals may seem more taxing when facing them alone rather than with social or personal relations (Zhang, 2019).

To our knowledge, the role of SC as a moderator in the relationship between PS and SI has not been previously addressed. A moderated mediation model was tested in which psychological pain mediated the association of bullying and SI. Family togetherness and peer support moderated the mediation among middle and high school students (Bao et al., 2020). Another study provided evidence for social support mitigating the effects of PS on suicidal behavior among professionals in China (Lew et al., 2020). This study aims to address SC as an overarching construct of connectedness (Williams & Galliher, 2006).

2.3 Social Connectedness and Suicidal Ideation

An individual's level of SC guides their feelings, thinking, and behavior in various social settings. The perception of low-connected people of their environment might be cold and negative, as opposed to that of high-connected people, which might be positive and welcoming (Lee et al., 2001). Perceived low levels of connectedness may lead to frustration and loss of sense of belongingness, resulting in chronic loneliness, lower self-worth, and social mistrust (Lee & Robbins, 1998). Problems with SC elucidate a more tenacious, global incapacity to connect with the social world (Williams & Galliher, 2006). Chronic isolation can be traumatic, affecting areas of functioning and development (Lee & Robbins, 1995). It directly leads to feelings of loneliness, which has been a strong predictor of SI in both men and women (McClelland et al., 2020; Stravynski & Boyer, 2001).

As mentioned earlier, a large body of literature on suicide focuses on reactivity rather than prevention. The primary focus is on risk elements when, in fact, protective elements, if powerful enough, can mitigate the impact of risk factors (Sánchez-Teruel & Robles-Bello, 2014). As protective elements against SI, both SC and social support (SS) have significance in the literature. In terms of relative importance, SC (17.6% variance) has a far greater protective role than SS (0.5% variance) against SI (Reyes, 2020). Empirical evidence exists to support that teacher, peer, familial, and school connectedness are protective factors against suicide (Whitlock et al., 2014). Parental connectedness significantly predicted a decrease in suicide (Gunn et al., 2018). School connectedness and community connectedness negatively predicted SI in cross-sectional studies and meta-analyses (Foster et al., 2017; Marraccini & Brier, 2017). Social connectedness was positively related to self-esteem, especially among females in Pakistan (Fatima et al., 2017). Respondents hailing from single-parent families had persistently higher rates of SI (68.3%) than those from two-parent families (33.3%) (Ghazanfar et al., 2015). These studies have indirectly alluded to SS and its constituents, but no study has addressed SC as a construct in Pakistan or its mitigating effects upon SI.

3. Role of Religious Orientation as a Moderator between Strain and Suicidal Ideation

3.1 *Psychological Strain and Religious Orientation*

Religious orientation is “the degree of one’s involvement and personal significance attached to a sacred system” (Bjarnason, 2007). Extrinsic religious orientation (ERO) is a way of acquiring some self-serving end, where religion is utilized as an instrument that endorses social support, comfort, and self-esteem. Intrinsic religious orientation (IRO) is described as religion being an ultimate end in itself. Intrinsically religious people are exhilarated by a promise for personal spiritual development and a deeper, more meaningful relationship with God. (Bjarnason, 2007; Darvyri et al., 2014). People with IRO internalize their beliefs and use them as a framework to view their life, its purpose, and their contributions to it (King et al., 2020; Liang & Ketcham, 2017).

The STS regards excess or inadequacy of social integration and moral regulation as predictors of suicide. Excessive moral regulation can lead to value strain, whereas inadequate moral regulation can lead to aspiration strain (Zhang, 2019). Psychological strain is not studied with religious orientation, despite being an important determinant of depression and SI (Zhang et al., 2016, 2017; Zhao & Zhang, 2018). In a few studies, psychological distress and pressure were assessed with RO among Muslim students, elucidating a significant negative association (Butt, 2014; Kidwai et al., 2014). However, these studies referred to unidirectional stress and not strain. For it to be considered a strain, two contradicting social facts need to be pulling an individual in the opposite directions, making it more detrimental, exacerbating, and frightening for an individual (Zhang, 2019).

Religious orientation was addressed with PS among studies conducted in rural China, but the inquiry remained limited to a single question of individuals being either religious or not religious (Zhang & Lv, 2014; Zhao & Zhang, 2018). Contrary to the Western sample, among Chinese students, those reported to believe in religion or were religious had higher levels of depression and SI as compared to those who were not. Among the Chinese sample, RO was a risk factor for SI (Zhang et al., 2016). Non-religious students were less likely to be depressed (Lew et al., 2020), though a single item limits the reliability of the findings. Overcoming this limitation in a psychological autopsy study, RO was studied using four items with dichotomous responses. The comparison was made between completed suicides and living controls, where religious orientation was found to be stronger for suicides as compared to controls (Zhang et al., 2011). As most of these studies were conducted in China, which is declared an atheist country, where prayer or going to church is considered to be deviant behavior (Zhang et al., 2011), religion may not be a protective factor against psychopathology, mental disorder, and suicidality (Zhang et al., 2024). Psychological strain in these cases may be experienced as a result of going against the norm (Zhang et al., 2011).

3.2 *Religious Orientation and Suicidal Ideation*

The protective role of religion against suicide has been a frequent debate in the literature across many religions (Cook, 2014). Although religion can play a protective role against suicide, the role might be conditional on culture-related implications and on association with a specific religion (Lawrence et al., 2016). Similarly, religious attendance significantly predicted decreased

suicide attempts among those suffering from mental illnesses, even after controlling for social support (Rasic et al., 2009). A meta-analysis indicated that religion played a significant defensive role against suicide in both Western and old cultures, but not in Eastern countries (Wu et al., 2015). Likewise, in a cross-cultural study, religiosity was strong in Brazil and South Africa, but not in India and Vietnam (Sisask et al., 2010). This posits that the association between RO and suicide can vary based on cultural settings and affiliation with a particular religion. The available empirical evidence for suicidal behavior underscores the exclusive importance of SI, and the number of studies discretely focusing on ideation is rare. The levels of SI were found to be higher among depressed patients who regarded religion as more important and those who attended religious services (Lawrence et al., 2016).

In a country like Pakistan, where 96% of the population is Muslim (USCIRF, 2022), there is a need to explore whether RO acts as a risk or protective element regarding SI, by studying the moderating role of RO between PS and SI among young Muslim students.

3.3 The Present Study

This study extends previous research in several aspects. First, it focused exclusively on SI among young Muslim students aged 18 to 30. Second, the process-oriented approach was used to explore the moderating mechanisms between PS and SI. As shown in **Figure 1**, this study explored the moderating role of SC and RO in the association between PS and SI. In addition, it explored the moderated mediation of SC between PS and SI among students.

4. Methods

4.1 Participants and Procedure

To collect data from a large sample during the lockdown, the survey method was deemed appropriate. A convenience sampling technique was used to collect data from different universities in Rawalpindi and Islamabad, Pakistan. Four hundred undergraduate, graduate, and doctoral students aged 18 to 30 years participated in the study. The data collection process commenced after formal approval from the Institutional Review Board. The data was collected online using a convenience sampling technique, during the COVID-19 lockdown between May 2020 and August 2020. The sampling population was students of the age range of 18 to 30 years from

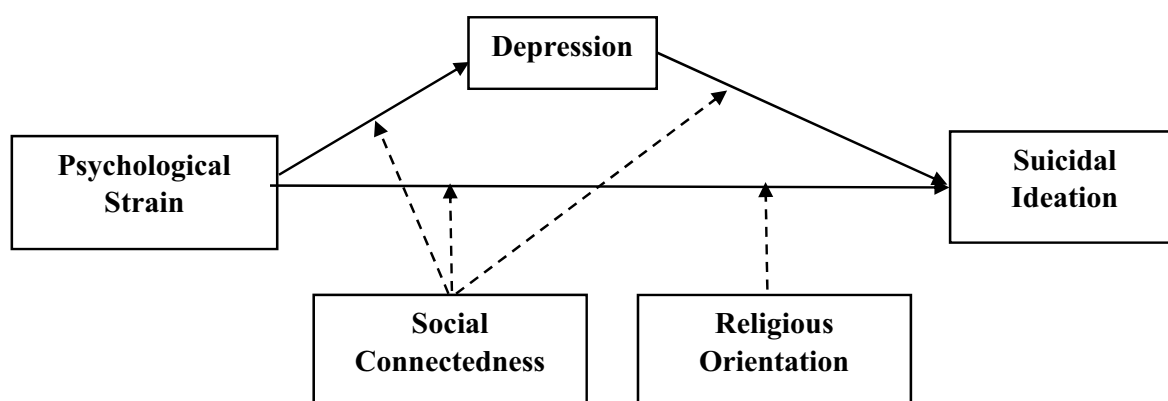


Figure 1. Conceptual framework indicating the hypothesized relationships between the variables.

universities in Rawalpindi and Islamabad. The sample size was calculated using a sample size calculator. Informed consent was obtained from all participants. They were debriefed on the rationale of the study, their prospective inputs, and their right to withdraw from the study at any point. The survey information was kept confidential, and the personal information of participants was concealed. The survey was conducted using a self-report questionnaire comprising five categories: a socio-demographic section followed by scales to assess SI, PS, SC, depression, and RO.

4.2 Measures

4.2.1 Suicidal Ideation

The Suicide Ideation Scale (Beck et al., 1979) was administered to assess the intensity and severity of SI of participants over the past week. This is a 10-item self-report measure that has been tested and validated among Pakistani students (Ijaz & Ahmed, 2018).

4.2.2 Psychological Strain

The Psychological Strain Scale (PSS-40) was administered to assess value, deprivation, aspiration, and coping strain. The scale consists of 40 items with a 5-point Likert scale. The scale is a valid and reliable measure to assess strain among students in Pakistan (Muneeb & Hassan, 2023a).

4.2.3 Depression

Beck's Depression Inventory was administered to assess the symptoms of depression. It is a self-report 4-point Likert-type scale, tested and validated among students in Pakistan (Aqeel et al., 2020).

4.2.4 Social Connectedness

The updated Social Connectedness Scale (Lee et al., 2001) was administered. The instrument consists of 20 items on a 6-point Likert-type scale ranging from 1 to 6. The instrument was found to be a reliable measure for the Pakistani population (Fatima et al., 2017).

4.2.5. Religious Orientation

The updated version of the extrinsic and intrinsic Religious Orientation Scale (Allport & Ross, 1967; Gorsuch & McPherson, 1989) was administered. The scale consists of 14 items, with 8 items for IRO and 6 items for ERO. The scale has been validated and tested among Muslim students (Rahman et al., 2021).

4.3 Data Analysis

Statistical Package for the Social Sciences software (version 23) and Hayes' PROCESS macro (version 3.5.2) were used for data analysis. Pearson's Product-Moment Correlation was conducted for bivariate analysis. The statistical significance level was set at $p < .05$. For moderation analysis, model 1 was used while model 58 was used for moderated mediation, with a bootstrap method with 5000 replications (Hayes, 2017).

5. Results

Initially, the data were collected from 400 university students. The final sample, after excluding outliers and those meeting inclusion criteria, comprised 372 participants. The respondents ranged in age from 18 to 30 years ($M_{age} = 22.25$, $SD = 2.40$), and 77.7% of the participants were female. The demographic profile of the participants is mentioned in **Table 1**. Further details regarding the sample are mentioned in the primary study (Muneeb & Hassan, 2023a).

5.1 Descriptive Statistics and Bivariate Correlations

Pearson product-moment correlation, means, standard deviations, and internal reliability for the scale scores were computed. PS ($r = .57$, $p < .01$) and depression ($r = .58$, $p < .01$) are significantly and positively related to SI, whereas social connectedness ($r = -.25$, $p < .01$) and intrinsic religious orientation ($r = -.25$, $p < .01$) are significantly and negatively related to SI. There is no significant relationship between ERO and SI ($r = -.033$, $n = 372$, $p = .52$).

5.2 Moderating Role of SC in the Association between PS and SI

As shown in **Table 2**, the interaction between PS and SC was negative and statistically significant ($\beta = -.002$, $p < 0.05$). This identified SC as a moderator in the association between PS and SI, though the interaction value is small (See **Figure 2**). The conditional direct effect showed corresponding results, being positively and significantly different from zero. The subsequent slope analysis is shown in **Figure 3**.

Table 1. Background characteristics of the participants based on their age, gender and level of education.

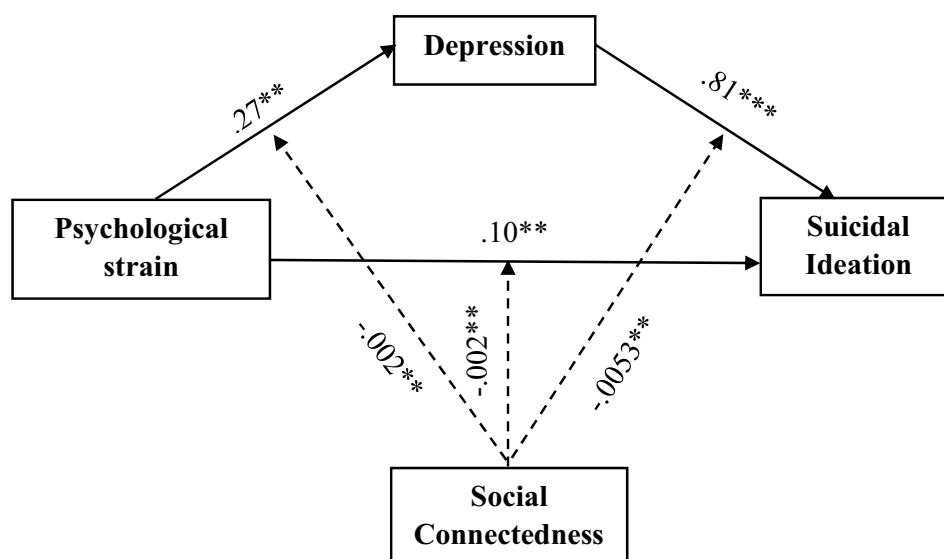
| Variable | <i>f</i> | % |
|----------------------|----------|------|
| Gender | | |
| Male | 83 | 22.3 |
| Female | 289 | 77.7 |
| Age (years) | | |
| 18–22 | 159 | 42.7 |
| 23–26 | 110 | 29.6 |
| 27–30 | 103 | 27.7 |
| Education | | |
| Bachelor's | 263 | 70.7 |
| Master's | 104 | 28 |
| PhD | 5 | 1.3 |
| Family income | | |
| Average | 103 | 27.7 |
| Above average | 259 | 72.3 |

Table 2. The Mediator Variable Model and Dependent Variable Model.

| | B | SE | <i>p</i> | LLCI | ULCI |
|--|---------|-------|----------|--------|--------|
| Mediator variable model (Depression) | | | | | |
| Constant | -8.50 | 3.05 | .005 | -14.50 | -2.49 |
| Age | -.07 | .36 | .05 | -1.40 | .017 |
| Gender | .06 | .75 | .12 | -.32 | 2.64 |
| Average family income | .11** | .67 | .006 | .51 | 3.17 |
| Psychological Strain | .27*** | .04 | .000 | .19 | .36 |
| Social Connectedness | .07 | .06 | .20 | -.04 | .20 |
| PS X SC | -.002** | .0006 | .000 | -.0031 | -.0009 |
| $R^2 = .49^{***}$, $F = 121.37$, ΔR^2 (After adding interaction 1) = 0.016^{***} | | | | | |
| Dependent Variable Model (Suicidal Ideation) | | | | | |
| Constant | 5.37 | 3.57 | .13 | -1.65 | 12.39 |
| Age | .005 | .42 | .88 | -.76 | .88 |
| Gender | -.009 | .87 | .82 | -1.91 | 1.52 |
| Average family income | -.019 | .79 | .64 | -1.91 | 1.19 |
| Psychological Strain | .10*** | .01 | .000 | .07 | .13 |
| Depression | .81*** | .18 | .000 | .44 | 1.18 |
| Social Connectedness | .10*** | .03 | .004 | .03 | .17 |
| PS X SC (Interaction 1) | -.002** | .0006 | .000 | -.0031 | -.0009 |
| Depression X SC (Interaction 2) | -.0053* | .002 | .04 | -.01 | -.0001 |
| $R^2 = .42^{***}$, $F = 66.97$, ΔR^2 (After adding interaction 2) = $.006^{**}$ | | | | | |

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

PS: Psychological strain, SC: Social connectedness.

**Figure 2.** Illustration of the Statistical Model of the Study.

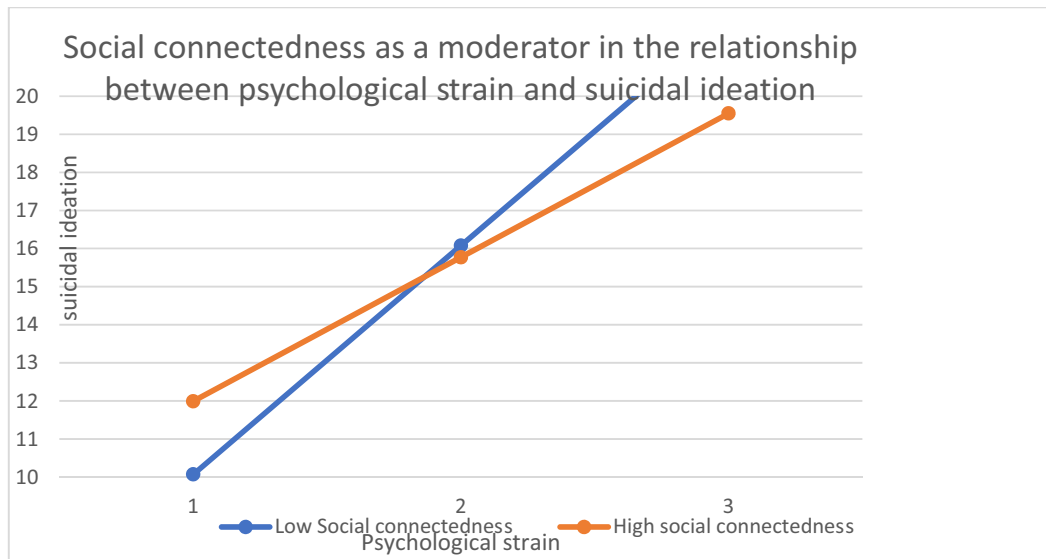


Figure 3. Social connectedness as a moderator in the relationship between PS and SI, indicating that at higher level of connectedness, less PS and less ideation is experienced.

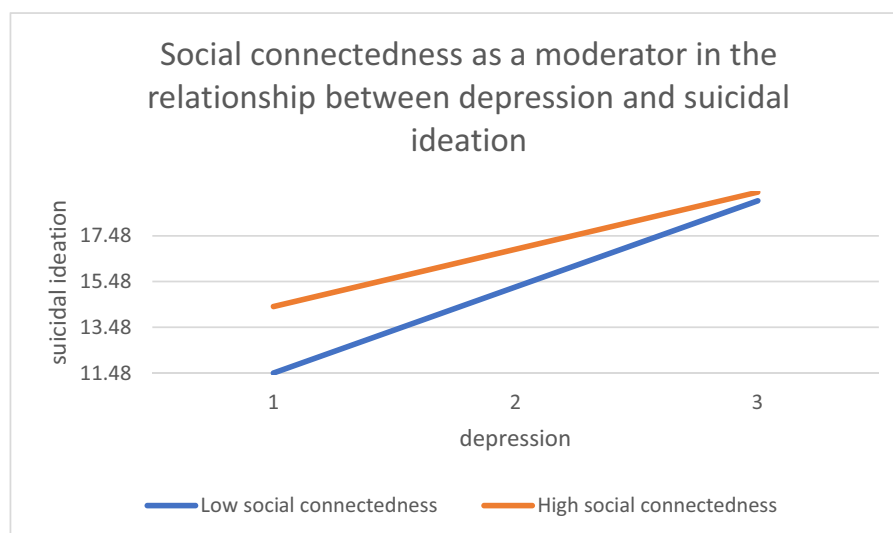


Figure 4. Social connectedness as a moderator in the relationship between depression and suicidal ideation, showing reduced suicidal ideation at higher levels of connectedness.

5.3 Moderation of SC in the Association between PS and SI via Depression

As shown in **Table 2**, after controlling for covariates, PS positively predicted depression ($\beta = .27$, $p < 0.001$). In addition, PS ($\beta = 0.10$, $p < 0.001$) and depression ($\beta = 0.81$, $p < 0.001$) positively predicted SI. The paths between PS and depression ($\beta = -.002$, $p < 0.001$) and between depression and SI ($\beta = -.0053$, $p < 0.05$) were significantly moderated by SC. All three conditional direct effects were positively and significantly different from zero, indicating significant moderation of SC on SI. Subsequent simple slope analyses are shown (see **Figure 4**). No index of moderated mediation is produced in Model 58, but the pairwise contrasts of indirect effect were all significant, indicating that the indirect effects were conditional on the level of the moderator.

5.4 Moderating Role of IRO in the Association between PS and SI

As shown in **Table 3a**, the interaction between PS and IRO was negative and statistically significant ($\beta = -.002$, $p < 0.05$). This identified IRO as a moderator in the association between PS and SI, though the interaction value is small (See **Figure 5a**). The conditional direct effect showed corresponding results (See **Table 3b**), positively and significantly different from zero. The subsequent slope analysis is shown in **Figure 5b**.

Table 3a. Intrinsic Religiosity as a Moderator in the Relationship between Psychological Strain and Suicidal Ideation.

| | B | SE | <i>p</i> | LLCI | ULCI |
|---|--------|------|----------|--------|-------|
| Dependent Variable Model (Suicidal Ideation) | | | | | |
| Constant | -11.73 | 9.12 | .19 | -29.68 | 6.22 |
| Age | -.26 | .60 | .66 | -1.45 | .92 |
| Gender | .73 | .92 | .42 | -1.08 | 2.55 |
| Average family income | .40 | .82 | .62 | -1.22 | 2.02 |
| Psychological Strain | .35** | .07 | .000 | .19 | .50 |
| Intrinsic religiosity | .44 | .27 | .10 | -.09 | .98 |
| PS X IR | -.006* | .002 | .01 | -.011 | -.001 |
| $R^2 = .37^{**}$, $F = 19.26$, ΔR^2 after adding interaction $1 = 0.01^*$ | | | | | |

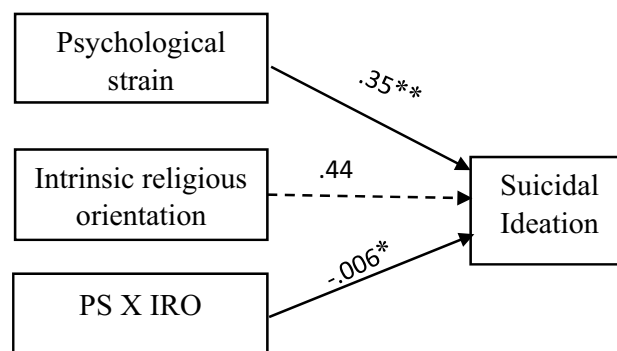


Figure 5a. Statistical Model of Intrinsic Religiosity as a Moderator between Psychological Strain and Suicidal Ideation.

Table 3b. Conditional direct effect analysis indicating significant moderation of IR with SI.

| Conditional direct effect analysis at IR = M ± SD | B | SE | LLCI | ULCI |
|--|----------|-----------|-------------|-------------|
| M- 1SD (24.89) | .18** | .01 | .15 | .22 |
| M (29.87) | .15** | .01 | .13 | .18 |
| M+ 1SD (34.85) | .12** | .01 | .08 | .15 |

Confidence Interval 95% was adopted. IR = Intrinsic Religiosity.

CI = Confidence Interval, LL = Lower Limit, UL = Upper limit, ** $p < .01$.

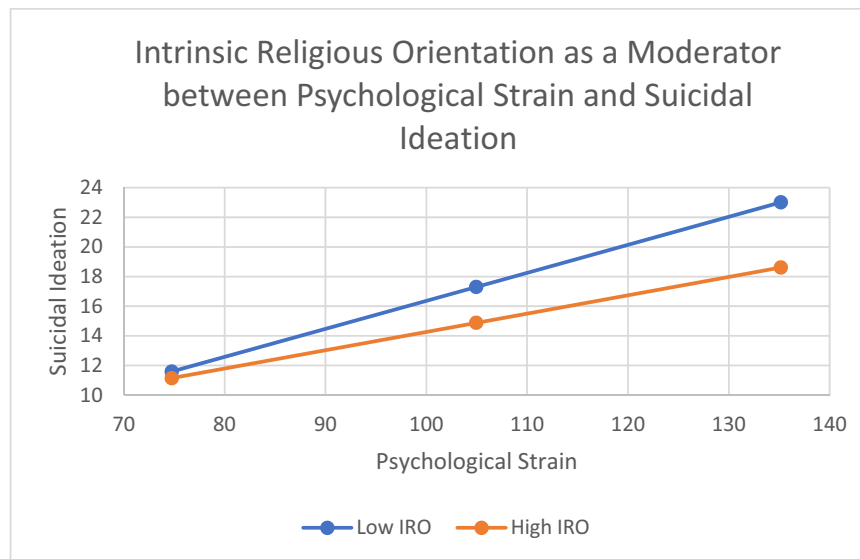


Figure 5b. Intrinsic Religious Orientation as a Moderator between Psychological Strain and Suicidal Ideation indicating RO mitigating the impact of PS on SI.

6. Discussion

Pakistan ranks as the fifth most populous country in the world with a population of more than 241 million, with the largest number of people (64%) under 30 (Pakistan Bureau of Statistics, 2023). Unfortunately, most of the suicides in Pakistan occur under the age of 30. The suicide mortality rate of Pakistan is 9.77 per 100,000 population (WHO, 2020), yet the figure is largely underestimated due to underreporting tied to the pervasive societal stigma against suicide. There is a paucity of literature dedicated to suicide in Pakistan, and even less on prevention and protective factors. Our study aims to bridge the knowledge gaps and explore the underlying mechanisms behind SI to make a case for early intervention before its progression to suicide.

6.1 Bivariate analysis

Social determinants, like SC, play a significant role in preventing suicidal thoughts and behavior. Our findings reveal that SC was negatively and significantly related to SI, indicating that an increase in connectedness is associated with a decrease in suicidal thoughts. As the perception of connectedness increases in a young individual, the chance of thinking about ending one's life decreases. Hence, the hypothesis is supported. Loss of sense of connectedness and chronic isolation can be traumatic (Lee & Robbins, 1995, 1998; Wickramaratne et al., 2022), facilitating an individual toward suicidal thoughts (Zhang, 2019). The findings are empirically supported by related studies conducted in Pakistan, as disrupted social networks (Shekhani et al., 2018) and poor interaction with family (Ghazanfar et al., 2015) played a critical role in predicting SI. Similarly, social isolation, exposure to family violence, and loss or separation of parents were found as significant risk factors for suicide (Tharwani et al., 2023). Hence, SC significantly influences an individual's intent to live, be it with peers, parents, or school.

Another noteworthy social determinant of SI, in the context of Pakistan being a Muslim-majority country, is IRO. Findings reveal that IRO has a significant negative but small association with SI, supporting our hypothesis that an increase in IRO is related to a decrease in SI. Young adults who find meaning in religion and follow it as an ultimate end are less likely

to think about ending their lives. The findings of the study are in line with the literature and theory that people who are religiously involved are more likely to be protected from suicide (De Berardis et al., 2020; Lawrence et al., 2016).

Contrarily, there is no significant relationship between ERO and SI, and the hypothesis was not supported. Findings suggest that changes in the level of ERO will not be related to SI. The nature of RO might be the reason behind the relationship. When RO is intended to serve as an instrument for social recognition or self-esteem, it might not be related to a decrease in SI. In literature, ERO is seen as less indicative of mental health as compared to the IRO due to their nature and intention (Allport & Ross, 1967; García-Alandete & Bernabé-Valero, 2013). Even in China, university students with high IRO and low personality-oriented ERO intend to have lower suicidality (Lew et al., 2018). IRO embodied positive outcomes, whereas ERO embodied negative outcomes. Findings are supported by similar conclusions, where religious attendance only mitigated distress when experiencing high spirituality (Kidwai et al., 2014). Empirical and theoretical evidence reinforces the above-stated results that intrinsically oriented religious people have better mental health as compared to extrinsically oriented religious, and are less likely to suffer from suicidal thoughts (Allport & Ross, 1967; García-Alandete & Bernabé-Valero, 2013).

6.2 Moderation analysis

A moderation analysis was carried out to study the role of SC in the association between PS and SI. A moderated mediation model was tested to explore the role of SC as a moderator in the mediation of depression between PS and SI. Also, a moderation analysis was carried out to study the role of IRO in the association between PS and SI. The findings revealed that SC and IRO buffer the effect of PS on SI. Also, depression may not mediate between PS and SI when a young person has a high sense of connectedness.

6.2.1 Moderating Role of SC in the Association between PS and SI

A young Muslim student experiencing PS is less likely to have suicidal thoughts when socially connected. A lack of SC will not cause the person to think about suicide, but can facilitate SI in the presence of other strains (Zhang, 2019). Low-connected individuals perceive their environment as cold and negative, eventually leading to isolation and frustration (Lee et al., 2001; Lee & Robbins, 1998). This isolation and feelings of loneliness predict SI (McClelland et al., 2020; Stravynski & Boyer, 2001). The impact of PS on SI was greater among low-connected young adults than those with a high level of SC. Young adults who perceive themselves as more socially connected are less likely to contemplate ending their lives when suffering from strain as compared to those who perceive themselves as less connected. Also, for highly connected individuals, SC will reverse the effect of strains and eventually prevent SI. Hence, the hypothesis is supported. Protective elements can avert the impact of risk factors against SI, whereas loneliness strongly predicts SI (Sánchez-Teruel & Robles-Bello, 2014; Wang et al., 2025). Family togetherness and peer support are found as buffering agents against SI even among bullying victims (Arango et al., 2019). Promoting connectedness can be a prospective target of interventions against high-risk youth, as it can act as a protective factor (Wang et al., 2025). The current findings are in line with the literature, as for an individual who has suicide in mind, SC can reduce the level of SI by acting as a buffering agent, even when PS is present (Zhang, 2019).

6.2.3 Moderation of SC in the Association between PS and SI via Depression

As the level of PS increases in young students, they are more likely to look for an escape and contemplate ending their lives. The discrepancies in real and ideal life, aspiration and reality, relative deprivation, and the lack of coping abilities frustrate youth, driving them to get rid of the mental torment by exploring the option of ending their lives (Zhang, 2019). Similarly, an increase in depressive symptoms is related to an escalation in suicidal thoughts among university students. Depression is the strongest predictor of SI (Mustaffa et al., 2014; Ran et al., 2015), making youth suffering from depression vulnerable to SI. Similarly, depression was found to be a mediator between coping strain and SI (Tauqeer et al., 2024).

Depression is the most debilitating mental disorder, with global prevalence rates of depression as 4.4% (WHO, 2017). In Pakistan, the prevalence of depression is estimated to range from 22% to 67% (Altaf, 2015). Preventive strategies must be employed, as the country has one of the lowest psychiatrist-to-population ratios worldwide (WHO, 2020). More than 90% of individuals who die by suicide suffer from psychiatric illness, so recognizing SI in patients presents a crucial opportunity to evaluate and intervene (Mann et al., 2021). Talking to someone trustworthy (59.5%) and praying to God (56.5%) were regarded as the best treatments for depression by patients (Nisar et al., 2019), hence reinforcing our findings, which suggest intervention against SI and depression with protective factors such as SC and RO. Young Pakistani students might find themselves stuck between the values of two generations (value strain); they may feel they are not rewarded the way they deserve (aspiration strain); or they may feel that others are rewarded more with the same effort (deprivation strain); or they may feel that their situation is way beyond their abilities to cope (coping strain). The inherent sense of belongingness with parents, peers, and the social world can prevent them from thinking of death as an ultimate solution to their problems. Their overall high sense of attachment to the community would buffer the impact of strains faced in life (Zhang, 2019).

Our study indicated that both direct and indirect effects of PS on SI are moderated by SC. Social connectedness will buffer the impact of PS on depression and the impact of depression on SI. In other words, the mediation of depression in the association between PS and SI is conditional upon the individual's levels of connectedness. This indicates that even in the presence of PS, a connection with a social world can help to avoid symptoms of depression, and thoughts of suicide can be prevented. Highly connected people may attempt to escape the vicious cycle of strains, which lead to depressive symptoms and eventually to suicidal thoughts via their inherent pervasive sense of intimacy with their social relationships. Contrarily, with a low sense of connectedness, symptoms of depression may be exacerbated due to strains in life, and may lead one to contemplate suicide. The findings of this study are empirically supported as low-connected individuals tend to perceive their environment as cold and negative, eventually leading to isolation and frustration (Lee et al., 2001; Lee & Robbins, 1998), which predict SI (Stravynski & Boyer, 2001; Zhang, 2019). Empirically, SC protects from depressive symptoms and disorders across diverse settings and populations (Wickramaratne et al., 2022). It also predicts social well-being and high achievement among university students (HM, 2021).

As the COVID-19 pandemic had a colossal impact on the social and psychological health of Pakistani students, it was found that concerns regarding performance, semester completion, and online teaching were further damaging the mental health of students (Baloch et al., 2021). Another study found that SC obtained through online sources can help students develop more social skills and feel increased levels of connectedness and contentment (Sultan et al., 2020).

6.2.4 Moderation of IRO in the Association between PS and SI

An intrinsically oriented religious person is less likely to think about suicide when faced with PS. When religion serves as a foundation of choices and meaning in life for an individual, it acts as a buffering agent against strains. For an IRO, religion is an ultimate end in itself, acting as a protective agent against psychological strains and suicidal thoughts. A person who is suffering from relative deprivation, value strain, aspiration, or coping strain may find hope in religion. For IRO, values and lives are established by and for religion, and hence their aspirations and deprivations may be defined by religion. Intrinsically oriented people benefit more from a religious identity because religion can give them purpose and can frame their experiences (Andrus, 2022). They are exhilarated by the promise of spiritual development and a deeper relationship with God, which may help them cope better with situations (Hills et al., 2004; Hunter & Merrill, 2013). People who are religiously involved are more likely to be protected from suicide (Durkheim, 1897; Allport, 1963). This is in line with literature, as RO buffers against psychological distress (Butt, 2014; Laher, 2007).

The conditional direct effect of PS on SI showed that there will be less impact of PS on SI for a young adult who is more intrinsically religious as compared to one who is less. When religion is viewed as an ultimate end, it is less likely that the person thinks about ending their life in the presence of PS. Lack of RO can act as a risk factor for SI in the presence of PS (Durkheim, 1897). Similar findings were reported in other studies in which RO was negatively related to stress (Butt, 2014; Laher, 2007). As with PS, religion was found as a risk element among the Chinese sample (Zhang et al., 2011; Zhang, et al., 2016), which might be attributed to the Chinese culture being officially an atheist country and where religious practices are considered deviant behavior (Zhang, 2010; Zhang & Xu, 2007). By contrast, the protective role of religion and spirituality has been indicated in systemic reviews and other studies of many religions, such as Judaism, Christianity, Hinduism, and Islam (Abdollahi et al., 2015; Gearing & Alonzo, 2009; Koenig et al., 2005).

Another interesting insight was provided by a prospective nationwide survey, which highlighted that participation in religious activities and not mere religious affiliation has a protective role against suicidal death (Kleiman & Liu, 2018). Active involvement in religious activities and seeking spiritual benefits has a protective role. Buzdar et al. (2020) reported that IRO and not ERO is protective against disordered social media use among young Muslim students. Rather, the higher ERO is related to an increase in disordered social media usage. One of the reasons for this might be that, among the educated Muslim sample, religion is adopted in its conventional way, with no room for skepticism or questioning. People in Pakistan are a Muslim majority, and they support the transmission of intrinsic religion rather than inquisitive teaching and learning of religion (Buzdar et al., 2019, Nadeem et al., 2019).

6.3 Implications

With more than 64% of the population of Pakistan highly vulnerable to suicide, a poor mental healthcare system, and the impacts of the COVID-19 outbreak, interventions against SI are crucial to prevent ideation. Without timely intervention, our young students might succumb to SI.

Unfortunately, the country does not have an integrated strategic policy framework for suicide prevention at the national, provincial, or local levels. Mental health action plans are available, but implementation is lacking at both the national and provincial levels, with mere replication of mental health acts. This study underscores the importance of preventive strategies at the national level, with radical steps for policy change and implementation.

Mental health awareness campaigns must be introduced to educate youth, encourage help-seeking behavior, and mitigate the societal stigma and discrimination against mental disorders and suicidality. Public health initiatives can prevent SI by implementing multifaceted interventions. State and humanitarian agencies must facilitate digital services after COVID-19 to ensure scalable and accessible mental health care. Institutions must establish online platforms to provide counseling and SS for students' mental and social well-being. Services like internet-based cognitive behavioral therapy might be introduced with data protection protocols to ensure help-seeking against depression and suicide without worrying about the associated stigma.

The present study has clinical implications for suicide prevention among young Muslim students. Historically, religion and psychotherapy were segregated, and psychotherapists were not considered prepared to address spiritual issues in psychotherapy (Pargament & Saunders, 2007). In the Islamic Republic of Pakistan, religion guides the way of life and IRO has a protective role against SI among university students. The Royal College of Psychiatrists (Cook, 2013) upholds the significance of addressing religion in clinical practice. A psychologist cannot inculcate religion, but for someone whose lifestyle is guided by religion, their religious conflicts and strains need to be addressed. If patients report being religious during history-taking and are comfortable in discussing their religious concerns, mental health practitioners must be open to addressing such issues or refer the patient to another practitioner who is equipped to meet their needs (VanderWeele et al., 2017). In the last two decades, there has been a shift in the realm of psychotherapy, where psychotherapists are prepared to address religious concerns in treatment (Post & Wade, 2009). Hence, therapy must be tailored to fit the client's spiritual and social needs without imposing any practice (Worthington & Aten, 2009), to facilitate well-being by using these resources in their favor (Ghafoor et al., 2022) with the help of professionals.

6.4 Limitations and Recommendations

This study aimed to address SI while suicide attempts and suicidal behavior remained unaddressed. Future studies can aim to study the mechanisms that lead to suicide ideation, attempt, and behavior. Since self-report measures were administered, social desirability and biases in reporting could be observed. Future studies can employ other methods for data collection, such as interviews, focus group discussions, etc. The correlational design of the study prevents causal inferences; hence, definitive conclusions must therefore be avoided. This study only offers one exploration of the pathway to SI, presenting the plausible association between variables. In the future, prospective studies may help to determine causal inferences and suggest comprehensive insight into other pathways. As the study employed a convenience sampling technique, it mandates a cautious interpretation of the findings. Though the study addressed certain psychosocial factors regarding SI, other pathways are yet to be explored. Lastly, as this study was carried out during the COVID-19 outbreak among Muslim students, and the findings must be assessed against other samples without the impact of the pandemic.

7. Conclusion

This study's findings underscore the universal importance of protective factors like SC and RO in mitigating suicidal risk. It helps to make a case for policymakers to collaborate and intervene against suicide at the ideation phase and prevent it before its progression to behavior.

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Data Availability Statement

Data and materials for the present study have not been made publicly available due to privacy concerns. Data analyzed in the current study are available on request from the corresponding author via email at dr.sumara@s3h.nust.edu.pk

Ethical Approval

This study was conducted in accordance with the ethical guidelines provided by the American Psychological Association and the ethical committee of the National University of Sciences and Technology (Ref: 0801/02/fac-offr/s3h). The anonymity of participants was maintained, and their confidentiality was ensured. Participants had the right to withdraw at any stage of the research process without any consequences.

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Informed Consent

Written informed consent was obtained from all individual participants included in the study.

Consent for Publication

The authors have agreed upon the publication of this manuscript.

References

- Abdollahi, A., Talib, M. A., Yaacob, S. N., & Ismail, Z. (2015). The role of hardiness in decreasing stress and suicidal ideation in a sample of undergraduate students. *Journal of Humanistic Psychology, 55*(2), 202–222. <https://doi.org/10.1177/0022167814543952>
- Allport, G. W. (1963). Behavioral science, religion, and mental health. *Journal of Religion and Health, 2*, 187–197.
- Allport, G. W., & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology, 5*(4), 432–443. <https://doi.org/10.1037/h0021212>

- Altaf, A. (2015). Sociodemographic Pattern of Depression in Urban Settlement of Karachi, Pakistan. *Journal of Clinical and Diagnostic Research*, 9(6). <https://doi.org/10.7860/JCDR/2015/12611.6093>
- Andrus, L. (2022). Intrinsic and Extrinsic Religious Orientations and the Development of Emerging Adults. *Family Perspectives*, 3(1). <https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=1071&context=familyperspectives>
- Aqeel, M., Shuja, K. H., Abbas, J., Rehna, T., & Ziapour, A. (2020). *The Influence of Illness Perception, Anxiety and Depression Disorders on Students Mental Health during COVID-19 Outbreak in Pakistan: A Web-Based Cross-Sectional Survey*. <https://doi.org/10.21203/rs.3.rs-30128/v1>
- Arafat, S. M. Y., Baminiwatta, A., Menon, V., Singh, R., Varadharajan, N., Guhathakurta, S., Mahesar, R. A., & Rezaeian, M. (2023). Prevalence of suicidal behaviour among students living in Muslim-majority countries: systematic review and meta-analysis. *BJPsych Open*, 9(3), e67. <https://doi.org/10.1192/bjo.2023.48>
- Arafat, S. M. Y., Khan, M. M., Menon, V., Ali, S. A., Rezaeian, M., & Shoib, S. (2021). Psychological autopsy study and risk factors for suicide in Muslim countries. *Health Science Reports*, 4(4). <https://doi.org/10.1002/hsr2.414>
- Arafat, S. M. Y., Marthoenis, M., Khan, M. M., & Rezaeian, M. (2022). Association between Suicide Rate and Human Development Index, Income, and the Political System in 46 Muslim-Majority Countries: An Ecological Study. *European Journal of Investigation in Health, Psychology and Education*, 12(7), 754–764. <https://doi.org/10.3390/ejihpe12070055>
- Arango, A., Cole-Lewis, Y., Lindsay, R., Yeguez, C. E., Clark, M., & King, C. (2019). The Protective Role of Connectedness on Depression and Suicidal Ideation Among Bully Victimized Youth. *Journal of Clinical Child & Adolescent Psychology*, 48(5), 728–739. <https://doi.org/10.1080/15374416.2018.1443456>
- Asad, N., Pirani, S., Tariq, S., Qureshi, A., Zaman, M., Aslam, M., Mirza, F., & Khan, M. M. (2022). Patterns of suicide and self-harm in Pakistan: a retrospective descriptive study protocol. *BMJ Open*, 12(11), e064535. <https://doi.org/10.1136/bmjopen-2022-064535>
- Baloch, G. M., Sundarasan, S., Chinna, K., Nurunnabi, M., Kamaludin, K., Khoshaim, H. B., Hossain, S. F. A., & AlSukayt, A. (2021). COVID-19: exploring impacts of the pandemic and lockdown on mental health of Pakistani students. *PeerJ*, 9, e10612. <https://doi.org/10.7717/peerj.10612>
- Bao, J., Li, H., Song, W., & Jiang, S. (2020). Being bullied, psychological pain and suicidal ideation among Chinese adolescents: A moderated mediation model. *Children and Youth Services Review*, 109, 104744. <https://doi.org/10.1016/j.childyouth.2020.104744>
- Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The Scale for Suicide Ideation. *Journal of Consulting and Clinical Psychology*, 47(2), 343–352. <https://doi.org/10.1037/0022-006X.47.2.343>
- Bjarnason, D. (2007). Concept Analysis of Religiosity. *Home Health Care Management & Practice*, 19(5), 350–355. <https://doi.org/10.1177/1084822307300883>
- Borges, G., Benjet, C., Medina-Mora, M. E., Orozco, R., & Nock, M. (2008). Suicide Ideation, Plan, and Attempt in the Mexican Adolescent Mental Health Survey. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(1), 41–52. <https://doi.org/10.1097/chi.0b013e31815896ad>
- Butt, F. M. (2014). Emotional Intelligence, Religious Orientation, and Mental Health Among University Students. *Pakistan Journal of Psychological Research*, 29(1), 1–19. <https://pjpr.scione.com/cms/abstract.php?id=267>

- Buzdar, M. A., Nadeem, M., Fatima, T., & Naoreen, B. (2020). Effects of Religious Orientations on the Prevalence of Social Media Disorder Among Muslim University Students in Pakistan. *Journal of Religion and Health, 59*(6), 3247–3256. <https://doi.org/10.1007/s10943-019-00915-6>
- Buzdar, M. A., Tariq, R. U. H., Jalal, H., & Nadeem, M. (2019). Does Religiosity Reduce Narcissistic Personality Disorder? Examining the Case of Muslim University Students. *Journal of Religion and Health, 58*(5), 1463–1470. <https://doi.org/10.1007/s10943-018-0628-9>
- Castellví, P., Lucas-Romero, E., Miranda-Mendizábal, A., Parés-Badell, O., Almenara, J., Alonso, I., Blasco, M. J., Cebrià, A., Gabilondo, A., Gili, M., Lagares, C., Piqueras, J. A., Roca, M., Rodríguez-Marín, J., Rodríguez-Jimenez, T., Soto-Sanz, V., & Alonso, J. (2017). Longitudinal association between self-injurious thoughts and behaviors and suicidal behavior in adolescents and young adults: A systematic review with meta-analysis. *Journal of Affective Disorders, 215*, 37–48. <https://doi.org/10.1016/j.jad.2017.03.035>
- Cook, C. C. H. (2013). Recommendations for psychiatrists on spirituality and religion. In *Royal College of Psychiatrists, London*. Royal College of Psychiatrists, London.
- Cook, C. C. H. (2014). Suicide and religion. *British Journal of Psychiatry, 204*(4), 254–255. <https://doi.org/10.1192/bjp.bp.113.136069>
- Darvyri, P., Galanakis, M., Avgoustidis, A. G., Pateraki, N., Vasdekis, S., & Darviri, C. (2014). The Revised Intrinsic/Extrinsic Religious Orientation Scale in a Sample of Attica's Inhabitants. *Psychology, 05*(13), 1557–1567. <https://doi.org/10.4236/psych.2014.513166>
- De Berardis, D., Olivieri, L., Rapini, G., Serroni, N., Fornaro, M., Valchera, A., Carano, A., Vellante, F., Bustini, M., Serafini, G., Pompili, M., Ventriglio, A., Perna, G., Fraticelli, S., Martinotti, G., & Di Giannantonio, M. (2020). Religious Coping, Hopelessness, and Suicide Ideation in Subjects with First-Episode Major Depression: An Exploratory Study in the Real World Clinical Practice. *Brain Sciences, 10*(12), 912. <https://doi.org/10.3390/brainsci10120912>
- Eman, A., Tauqeer, A., Ul Hassan, S. M., Bakhteyar, A. A., & Arif, L. (2025). Pathways from Bullying To Suicidal Ideation in Adolescents: A Serial Mediation Approach. *Child and Adolescent Social Work Journal, 1*–11. <https://doi.org/10.1007/s10560-025-01015-z>
- Eskin, M., Baydar, N., Harlak, H., Hamdan, M., Mechri, A., Isayeva, U., Abdel-Khalek, A. M., Rezaeian, M., Asad, N., El-Nayal, M., Buhairan, F. Al, Noor, I. M., Khader, Y., Khan, A., Sayyari, A. Al, Khader, A., Behzadi, B., Öztürk, C. Ş., Agha, H., ... & Khan, M. M. (2021). Cultural and interpersonal risk factors for suicide ideation and suicide attempts among Muslim college students from 11 nations. *Journal of Affective Disorders, 294*, 366–374. <https://doi.org/10.1016/j.jad.2021.07.050>
- Fatima, M., Niazi, S., & Ghayas, S. (2017). Relationship between Self-Esteem and Social Anxiety: Role of Social Connectedness as a Mediator. *Pakistan Journal of Social and Clinical Psychology, 15*(2), 12–17. Available at: <https://gcu.edu.pk/pages/gcupress/pjscp/volumes/pjscp20172-2.pdf>
- Foster, C. E., Horwitz, A., Thomas, A., Opperman, K., Gipson, P., Burnside, A., Stone, D. M., & King, C. A. (2017). Connectedness to family, school, peers, and community in socially vulnerable adolescents. *Children and Youth Services Review, 81*, 321–331. <https://doi.org/10.1016/j.childyouth.2017.08.011>
- García-Alandete, J., & Bernabé-Valero, G. (2013). Religious Orientation and Psychological Well-Being among Spanish Undergraduates [Orientaciones religiosas y bienestar psicológico de los estudiantes universitarios españoles]. *Acción Psicológica, 10*(1), 135–148. <https://doi.org/10.5944/ap.10.1.7040>

- Gearing, R. E., & Lizardi, D. (2009). Religion and suicide. *Journal of Religion and Health, 48*(3), 332–341. <https://doi.org/10.1007/s10943-008-9181-2>
- Ghafoor, H., Nordbeck, P., Ritter, O., Pauli, P., & Schulz, S. M. (2022). Can Religiosity and Social Support Explain Effects of Trait Emotional Intelligence on Health-Related Quality of Life: A Cross-Cultural Study. *Journal of Religion and Health, 61*(1), 158–174. <https://doi.org/10.1007/s10943-020-01163-9>
- Ghazanfar, H., Hameed, S., Ghazanfar, A., Bhatti, J. R. A., ... & Haq, I. U. (2015). Suicidal Ideation among Pakistani medical students. *Rawal Med J, 40*(4), 458–462. Available at: <https://www.rmj.org.pk/fulltext/27-1430497412.pdf>
- Gorsuch, R. L., & McPherson, S. E. (1989). Intrinsic/Extrinsic Measurement: I/E-Revised and Single-Item Scales. *Journal for the Scientific Study of Religion, 28*(3), 348. <https://doi.org/10.2307/1386745>
- Gunn, J. F., Goldstein, S. E., & Gager, C. T. (2018). A longitudinal examination of social connectedness and suicidal thoughts and behaviors among adolescents. *Child and Adolescent Mental Health, 23*(4), 341–350. <https://doi.org/10.1111/camh.12281>
- Gunnell, D., Appleby, L., Arensman, E., Hawton, K., John, A., Kapur, N., Khan, M., O'Connor, R. C., Pirkis, J., Appleby, L., Arensman, E., Caine, E. D., Chan, L. F., Chang, S.-S., Chen, Y.-Y., Christensen, H., Dandona, R., Eddleston, M., Erlangsen, A., ... & Yip, P. S. (2020). Suicide risk and prevention during the COVID-19 pandemic. *The Lancet Psychiatry, 7*(6), 468–471. [https://doi.org/10.1016/S2215-0366\(20\)30171-1](https://doi.org/10.1016/S2215-0366(20)30171-1)
- Harmer, B., Lee, S., Rizvi, A., & Saadabadi, A. (2024). *Suicidal Ideation*. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; (ed.). <https://www.ncbi.nlm.nih.gov/books/NBK565877/>
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Publications.
- Herba, C. M., Ferdinand, R. F., van der Ende, J., & Verhulst, F. C. (2007). Long-Term Associations of Childhood Suicide Ideation. *Journal of the American Academy of Child & Adolescent Psychiatry, 46*(11), 1473–1481. <https://doi.org/10.1097/chi.0b013e318149e66f>
- HM, A. B. (2021). Cultural Pluralism and Social Connectedness as Predictors of Immigrant Students' Social Wellbeing and Achievements. *Journal of Ethnic and Cultural Studies, 8*(4), 154–170. <https://doi.org/10.29333/ejecs/917>
- Hunter, B. D., & Merrill, R. M. (2013). Religious orientation and health among active older adults in the United States. *Journal of Religion and Health, 52*(3), 851–863. <https://doi.org/10.1007/s10943-011-9530-4>
- Ijaz, A., & Ahmed, S. (2018). “Suicidal Ideation and Burnout among University students.” *Proceedings of International Academic Conferences* 8108969. International Institute of Social and Economic Sciences.
- Imran, N., Naveed, S., Rafiq, B., Tahir, S. M., Ayub, M., & Haider, I. I. (2022). Pattern of Adolescent Suicides in Pakistan: A content analysis of Newspaper reports of two years. *Pakistan Journal of Medical Sciences, 39*(1). <https://doi.org/10.12669/pjms.39.1.6851>
- Khan, M. M., & Ali Hyder, A. (2006). Suicides in the Developing World: Case Study from Pakistan. *Suicide and Life-Threatening Behavior, 36*(1), 76–81. <https://doi.org/10.1521/suli.2006.36.1.76>
- Khan, M. M., Naqvi, H., Thaver, D., & Prince, M. (2008). Epidemiology of Suicide in Pakistan: Determining Rates in Six Cities. *Archives of Suicide Research, 12*(2), 155–160. <https://doi.org/10.1080/13811110701857517>

- Kidwai, R., Mancha, B. E., Brown, Q. L., & Eaton, W. W. (2014). The effect of spirituality and religious attendance on the relationship between psychological distress and negative life events. *Social Psychiatry and Psychiatric Epidemiology*, *49*(3), 487–497. <https://doi.org/10.1007/s00127-013-0723-x>
- King, P. E., Vaughn, J. M., Yoo, Y., Tirrell, J. M., Dowling, E. M., Lerner, R. M., Geldhof, G. J., Lerner, J. V., Iraheta, G., Williams, K., & Sim, A. T. R. (2020). Exploring Religiousness and Hope: Examining the Roles of Spirituality and Social Connections among Salvadoran Youth. *Religions*, *11*(2), 75. <https://doi.org/10.3390/rel11020075>
- Kleiman, E. M., & Liu, R. T. (2018). An examination of the prospective association between religious service attendance and suicide: Explanatory factors and period effects. *Journal of affective disorders*, *225*, 618–623. <https://doi.org/10.1016/j.jad.2017.08.083>
- Klonsky, E. D., May, A. M., & Saffer, B. Y. (2016). Suicide, Suicide Attempts, and Suicidal Ideation. *Annual Review of Clinical Psychology*, *12*(1), 307–330. <https://doi.org/10.1146/annurev-clinpsy-021815-093204>
- Koenig, H. G. (2005). *Faith and mental health: Religious resources for healing*. Templeton Foundation Press. <https://psycnet.apa.org/record/2005-07679-000>
- Lawrence, R. E., Oquendo, M. A., & Stanley, B. (2016). Religion and Suicide Risk: A Systematic Review. *Archives of Suicide Research*, *20*(1), 1–21. <https://doi.org/10.1080/13811118.2015.1004494>
- Lee, R. M., Draper, M., & Lee, S. (2001). Social connectedness, dysfunctional interpersonal behaviors, and psychological distress: Testing a mediator model. *Journal of Counseling Psychology*, *48*(3), 310–318. <https://doi.org/10.1037/0022-0167.48.3.310>
- Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: The Social Connectedness and the Social Assurance scales. *Journal of Counseling Psychology*, *42*(2), 232–241. <https://doi.org/10.1037/0022-0167.42.2.232>
- Lee, R. M., & Robbins, S. B. (1998). The relationship between social connectedness and anxiety, self-esteem, and social identity. *Journal of Counseling Psychology*, *45*(3), 338–345. <https://doi.org/10.1037/0022-0167.45.3.338>
- Lew, B., Chistopolskaya, K., Liu, Y., Talib, M. A., Mitina, O., & Zhang, J. (2020). Testing the Strain Theory of Suicide – The Moderating Role of Social Support. *Crisis*, *41*(2), 82–88. <https://doi.org/10.1027/0227-5910/a000604>
- Lew, B., Huen, J., Yuan, L., Stack, S., Maniam, T., Yip, P., Zhang, J., & Jia, C. (2018). Religious Orientation and Its Relationship to Suicidality: A Study in One of the Least Religious Countries. *Religions*, *9*(1), 15. <https://doi.org/10.3390/rel9010015>
- Lew, B., Lester, D., Kölves, K., Yip, P. S. F., Chen, Y.-Y., Chen, W. S., Hasan, M. T., Koenig, H. G., Wang, Z. Z., Fariduddin, M. N., Zeyrek-Rios, E. Y., Chan, C. M. H., Mustapha, F., Fitriana, M., Dolo, H., Gönültaş, B. M., Dadfar, M., Davoudi, M., Abdel-Khalek, A. M., ... & Ibrahim, N. (2022). An analysis of age-standardized suicide rates in Muslim-majority countries in 2000–2019. *BMC Public Health*, *22*(1), 882. <https://doi.org/10.1186/s12889-022-13101-3>
- Liang, B., & Ketcham, S. G. (2017). Emerging adults' perceptions of their faith-related purpose. *Psychology of Religion and Spirituality*, *9*(Suppl 1), S22–S31. <https://doi.org/10.1037/rel0000116>
- Mann, J. J., Michel, C. A., & Auerbach, R. P. (2021). Improving Suicide Prevention Through Evidence-Based Strategies: A Systematic Review. *American Journal of Psychiatry*, *178*(7), 611–624. <https://doi.org/10.1176/appi.ajp.2020.20060864>

- Marraccini, M. E., & Brier, Z. M. F. (2017). School connectedness and suicidal thoughts and behaviors: A systematic meta-analysis. *School Psychology Quarterly*, 32(1), 5–21. <https://doi.org/10.1037/spq0000192>
- McClelland, H., Evans, J. J., Nowland, R., Ferguson, E., & O'Connor, R. C. (2020). Loneliness as a predictor of suicidal ideation and behaviour: a systematic review and meta-analysis of prospective studies. *Journal of Affective Disorders*, 274, 880–896. <https://doi.org/10.1016/j.jad.2020.05.004>
- Miranda-Mendizábal, A., Castellví, P., Parés-Badell, O., Almenara, J., Alonso, I., Blasco, M. J., Cebrià, A., Gabilondo, A., Gili, M., Lagares, C., Piqueras, J. A., Roca, M., Rodríguez-Marín, J., Rodríguez-Jiménez, T., Soto-Sanz, V., Vilagut, G., & Alonso, J. (2017). Sexual orientation and suicidal behaviour in adolescents and young adults: systematic review and meta-analysis. *British Journal of Psychiatry*, 211(2), 77–87. <https://doi.org/10.1192/bjp.bp.116.196345>
- Muneeb, N. U. A., & Hassan, S. M. U. (2023a). Psychological strain and suicidal ideation in young university students during Covid-19 outbreak: the mediating roles of rumination and depression. *Current Psychology*, 42(27), 23731–23742. <https://doi.org/10.1007/s12144-022-03551-8>
- Muneeb, N. U. A., & Hassan, S. M. U. (2023b). Risk and Protective Factors of Suicidal Ideation among Eastern and Western Countries: A Systematic Review. *Foundation University Journal of Psychology*, 7(2), 58–72. <https://doi.org/10.33897/fujp.v7i2.639>
- Mustaffa, S., Aziz, R., Mahmood, M. N., & Shuib, S. (2014). Depression and Suicidal Ideation among University Students. *Procedia – Social and Behavioral Sciences*, 116, 4205–4208. <https://doi.org/10.1016/j.sbspro.2014.01.917>
- Nadeem, M., Buzdar, M. A., Shakir, M., & Naseer, S. (2019). The Association Between Muslim Religiosity and Internet Addiction Among Young Adult College Students. *Journal of Religion and Health*, 58(6), 1953–1960. <https://doi.org/10.1007/s10943-018-0697-9>
- Naveed, S., Tahir, S. M., Imran, N., Rafiq, B., Ayub, M., Haider, I. I., & Khan, M. M. (2023). Sociodemographic Characteristics and Patterns of Suicide in Pakistan: An Analysis of Current Trends. *Community Mental Health Journal*, 59(6), 1064–1070. <https://doi.org/10.1007/s10597-022-01086-7>
- Nisar, M., Mohammad, R. M., Fatima, S., Shaikh, P. R., & Rehman, M. (2019). Perceptions Pertaining to Clinical Depression in Karachi, Pakistan. *Cureus*. <https://doi.org/10.7759/cureus.5094>
- Pakistan Bureau of Statistics, M. G. of P. (2023). *7th Population and Housing Census. Key Findings Report*. https://www.pbs.gov.pk/sites/default/files/population/2023/Key_Findings_Report.pdf
- Pargament, K. I., & Saunders, S. M. (2007). Introduction to the special issue on spirituality and psychotherapy. *Journal of Clinical Psychology*, 63(10), 903–907. <https://doi.org/10.1002/jclp.20405>
- Post, B. C., & Wade, N. G. (2009). Religion and spirituality in psychotherapy: a practice-friendly review of research. *Journal of Clinical Psychology*, 65(2), 131–146. <https://doi.org/10.1002/jclp.20563>
- Pritchard, C., & Amanullah, S. (2007). An analysis of suicide and undetermined deaths in 17 predominantly Islamic countries contrasted with the UK. *Psychological Medicine*, 37(03), 421. <https://doi.org/10.1017/S0033291706009159>
- Pritchard, C., Iqbal, W., & Dray, R. (2020). Undetermined and accidental mortality rates as possible sources of underreported suicides: population-based study comparing Islamic countries and traditionally religious Western countries. *BJPsych Open*, 6(4), e56. <https://doi.org/10.1192/bjo.2020.38>
- Rahman, K., Khalily, M. T., & Akram, M. (2021). The Adaptation and Validation of the New Indices of Religious Orientation Revised Scale. *Foundation University Journal of Psychology*, 5(1), 126–135. <https://doi.org/10.33897/fujp.v5i1.298>

- Ran, M.-S., Zhang, Z., Fan, M., Li, R.-H., Li, Y.-H., Ou, G. J., Jiang, Z., Tong, Y.-Z., & Fang, D.-Z. (2015). Risk factors of suicidal ideation among adolescents after Wenchuan earthquake in China. *Asian Journal of Psychiatry, 13*, 66–71. <https://doi.org/10.1016/j.ajp.2014.06.016>
- Rasic, D. T., Belik, S.-L., Elias, B., Katz, L. Y., Enns, M., & Sareen, J. (2009). Spirituality, religion and suicidal behavior in a nationally representative sample. *Journal of Affective Disorders, 114*(1–3), 32–40. <https://doi.org/10.1016/j.jad.2008.08.007>
- Reyes, M. E. S. (2020). Relative Importance of Social Support and Social Connectedness as Protective Factors of Suicidal Ideation Among Selected Filipino Late Adolescents. *Suicidology Online, 11*(1).
- Sánchez-Teruel, D., & Robles-Bello. (2014). Protective factors promoting resilience to suicide in young people and adolescents. *Papeles Del Psicólogo, 35*(2), 181–192.
- Shekhani, S. S., Perveen, S., Hashmi, D.-S., Akbar, K., Bachani, S., & Khan, M. M. (2018). Suicide and deliberate self-harm in Pakistan: a scoping review. *BMC Psychiatry, 18*(1), 44. <https://doi.org/10.1186/s12888-017-1586-6>
- Sher, L. (2020). An infectious disease pandemic and increased suicide risk. *Brazilian Journal of Psychiatry, 42*(3), 239–240. <https://doi.org/10.1590/1516-4446-2020-0989>
- Sisask, M., Värnik, A., K[otilde]lves, K., Bertolote, J. M., Bolhari, J., Botega, N. J., Fleischmann, A., Vijayakumar, L., & Wasserman, D. (2010). Is Religiosity a Protective Factor Against Attempted Suicide: A Cross-Cultural Case-Control Study. *Archives of Suicide Research, 14*(1), 44–55. <https://doi.org/10.1080/13811110903479052>
- Stravynski, A., & Boyer, R. (2001). Loneliness in Relation to Suicide Ideation and Parasuicide: A Population-Wide Study. *Suicide and Life-Threatening Behavior, 31*(1), 32–40. <https://doi.org/10.1521/suli.31.1.32.21312>
- Sultan, S., Hussain, I., & Fatima, S. (2020). Social Connectedness, Life Contentment, and Learning Achievement of Undergraduate University Students—Does the Use of Internet Matter? *Bulletin of Education and Research, 42*(1), 111–125. <https://eric.ed.gov/?id=EJ1258052>
- Sun, G., Zhao, J., Tian, S., Zhang, L., & Jia, C. (2020). Psychological Strain and Suicidal Ideation in Athletes: The Multiple Mediating Effects of Hopelessness and Depression. *International Journal of Environmental Research and Public Health, 17*(21), 8087. <https://doi.org/10.3390/ijerph17218087>
- Tauqeer, A., Eman, A., Arif, L., Bakhteyar, A. A., & Hassan, S. M. U. (2024). Coping Strain and Suicidal Ideation Among Pakistani adolescents: A Moderated Mediation Model of Depression and Parental Connectedness. *Pakistan Journal of Psychological Research, 39*(4), 851–873. <https://doi.org/10.33824/PJPR.2024.39.4.46>
- Tharwani, Z. H., Jawed, A., Adeel Riaz, M. M., & Malikzai, A. (2023). Factors influencing suicidal incidents in Pakistan: challenges and recommendations. *International Journal of Surgery: Global Health, 6*(4), e0218. <https://doi.org/10.1097/GH9.0000000000000218>
- Townsend, K. C., & McWhirter, B. T. (2005). Connectedness: A Review of the Literature With Implications for Counseling, Assessment, and Research. *Journal of Counseling & Development, 83*(2), 191–201. <https://doi.org/10.1002/j.1556-6678.2005.tb00596.x>
- USCIRF. (2022). *United States Commission on International Religious Freedom. Country Profile: Pakistan. Religious Freedom in Pakistan in 2022*. <https://www.uscirf.gov/sites/default/files/2022-08/2022PakistanCountryUpdate.pdf>
- VanderWeele, T. J., Balboni, T. A., & Koh, H. K. (2017). Health and Spirituality. *JAMA, 318*(6), 519. <https://doi.org/10.1001/jama.2017.8136>

- Wang, J., Yang, Y., Chen, Y., Lin, H., Wang, T., Wang, Z., Chen, X., & Fu, C. (2025). Loneliness, Internalizing and Externalizing Problems, and Suicidal Ideation Among Chinese Adolescents: A Longitudinal Mediation Analysis. *Journal of Adolescent Health, 76*(1), 96–104. <https://doi.org/10.1016/j.jadohealth.2024.08.010>
- Whitlock, J., Wyman, P. A., & Moore, S. R. (2014). Connectedness and Suicide Prevention in Adolescents: Pathways and Implications. *Suicide and Life-Threatening Behavior, 44*(3), 246–272. <https://doi.org/10.1111/sltb.12071>
- Wickramaratne, P. J., Yangchen, T., Lepow, L., Patra, B. G., Glicksburg, B., Talati, A., Adekkanattu, P., Ryu, E., Biernacka, J. M., Charney, A., Mann, J. J., Pathak, J., Olfson, M., & Weissman, M. M. (2022). Social connectedness as a determinant of mental health: A scoping review. *PLOS ONE, 17*(10), e0275004. <https://doi.org/10.1371/journal.pone.0275004>
- Williams, K. L., & Galliher, R. V. (2006). Predicting depression and self-esteem from social connectedness, support, and competence. *Journal of Social and Clinical Psychology, 25*(8), 855–874. <https://doi.org/10.1521/jscp.2006.25.8.855>
- World Health Organization. (2017). *Depression and Other Common Mental Disorders*. <https://www.who.int/publications/i/item/depression-global-health-estimates>
- World Health Organization. (2020). *Mental Health Atlas, member state profile, Pakistan*. https://cdn.who.int/media/docs/default-source/mental-health/mental-health-atlas-2020-country-profiles/pak.pdf?sfvrsn=62378896_6&download=true
- World Health Organization. (2025). *Suicide*. <https://www.who.int/news-room/fact-sheets/detail/suicide>
- Worthington, E. L., & Aten, J. D. (2009). Psychotherapy with religious and spiritual clients: an introduction. *Journal of Clinical Psychology, 65*(2), 123–130. <https://doi.org/10.1002/jclp.20561>
- Wu, A., Wang, J.-Y., & Jia, C.-X. (2015). Religion and Completed Suicide: a Meta-Analysis. *PLOS ONE, 10*(6), e0131715. <https://doi.org/10.1371/journal.pone.0131715>
- Xiong, J., Lipsitz, O., Nasri, F., Lui, L. M. W., Gill, H., Phan, L., Chen-Li, D., Iacobucci, M., Ho, R., Majeed, A., & McIntyre, R. S. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders, 277*, 55–64. <https://doi.org/10.1016/j.jad.2020.08.001>
- Yan, Y., Hou, J., Li, Q., & Yu, N. X. (2023). Suicide before and during the COVID-19 Pandemic: A Systematic Review with Meta-Analysis. *International Journal of Environmental Research and Public Health, 20*(4), 3346. <https://doi.org/10.3390/ijerph20043346>
- Yousafzai, A. W., Khan, S. A., Bano, S., & Khan, M. M. (2022). Exploring the phenomenon of suicidal behaviour (SB): An explanatory, mixed-method study in rural Pakistan. *International Journal of Social Psychiatry, 68*(8), 1629–1635. <https://doi.org/10.1177/00207640211045414>
- Zhang, J. (2019). The strain theory of suicide. *Journal of Pacific Rim Psychology, 13*. <https://doi.org/10.1017/prp.2019.19>
- Zhang, J., Lew, B., Liu, Y., Chistopolskaya, K., & Zhao, S. (2024). Religion, Psychological Strain, and Suicidality in China: A Preliminary Study. *OMEGA - Journal of Death and Dying, 89*(1), 275–291. <https://doi.org/10.1177/00302228211072985>
- Zhang, J., Liu, Y., & Hennessy, D. (2016). Effects of Psychological Strains on Chinese College Students Depression and Suicidal Ideation. *Journal of Forensic Psychology, 01*(02). <https://doi.org/10.4172/2475-319X.1000106>

- Zhang, J., Liu, Y., & Sun, L. (2017). Psychological strain and suicidal ideation: A comparison between Chinese and US college students. *Psychiatry Research*, 255, 256–262. <https://doi.org/10.1016/j.psychres.2017.05.046>
- Zhang, J., & Lv, J. (2014). Psychological strains and depression in Chinese rural populations. *Psychology, Health & Medicine*, 19(3), 365–373. <https://doi.org/10.1080/13548506.2013.808752>
- Zhang, J., Wiczorek, W. F., Conwell, Y., & Tu, X. M. (2011). Psychological strains and youth suicide in rural China. *Social Science & Medicine*, 72(12), 2003–2010. <https://doi.org/10.1016/j.socscimed.2011.03.048>
- Zhao, S., & Zhang, J. (2018). The Association Between Depression, Suicidal Ideation and Psychological Strains in College Students: A Cross-National Study. *Culture, Medicine, and Psychiatry*, 42(4), 914–928. <https://doi.org/10.1007/s11013-018-9591-x>