



When Piety Becomes Painful: Gender Moderation in the Relationship between Religious Scrupulosity and Loneliness among Emerging Adults

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ABSTRACT

The present study was designed to explore the link between religious scrupulosity and loneliness in Pakistani university students, while specifically examining whether gender plays a moderating role in this relationship. A total of 400 university students (177 male, 233 female), ranging in age from 19 to 25 years ($M = 21.4$, $SD = 1.8$), took part in the study. Participants completed the Penn Inventory of Scrupulosity-Revised (PIOS-R) and the De Jong Gierveld Loneliness Scale. There was a hierarchical regression analysis with the use of PROCESS Macro (Model 1) to determine whether gender moderated the relationship between scrupulosity and loneliness. The result indicated that there was an important positive correlation between religious scrupulosity and loneliness in the whole sample ($r = .47$, $p < .001$). More importantly, gender emerged as a significant moderator of this relationship ($B = 0.15$, $SE = 0.05$, $t = 3.14$, $p = .002$, 95% CI [0.06, 0.24]). Female participants exhibited a much greater level of association ($B = 0.36$) as compared to their male counterparts ($B = 0.21$). Further breakdown indicated that females had much more loneliness at higher scrupulosity levels compared to males, but that the gender difference had little at less scrupulosity levels. Such results indicate that young women having religious obsessions can be particularly susceptible to social loneliness. This weakness can be related to the gendered religious expectations, social inspection, and pressure on culture, which collectivistic societies accentuate especially. The paper highlights the necessity to design gender-sensitive mental health support services within universities and create awareness about the religious scrupulosity as a possible predisposing factor of loneliness in the young adulthood.



Introduction

Scrupulosity has been termed in most cases as a religious obsessive-compulsive disorder (OCD), or scrupulosity is a debilitating manifestation of OCD consisting of compulsive behaviors, suspicions, and intrusive thoughts based on moral and religious concerns (Abramowitz et al., 2002). Scrupulous individuals might over pray, indulge in ritual washing or compulsory confession on the way to reducing anxiety over sin or divine punishment (Greenberg and Huppert, 2010). On one hand, although religious obsessions are the main dimension of

symptoms reported by about 5-6 percent of patients with OCD, scrupulosity is the aspect of the condition that has not been investigated in depth in comparison to other subtypes (Olatunji et al., 2007). The condition is more common among the members of religiously devoted populations because OCD is prone to cling to those things, which we deem highly important and make worship a source of suffering instead of salvation (Surles, 2025).

Scrupulosity and Its Implications: The researchers have shown that scrupulosity also correlates with high levels of psychological distress which involves high anxiety levels as well as depressed states together with poor quality of life (Abramowitz et al., 2002; Olatunji et al., 2007). Scrupulous people tend to feel strong sense of guilt and shame about their intrusive thoughts and regard them as a form of moral offence instead of other manifestations of a mental health disorder (Rachman, 1997; Shafran et al., 1996). This misunderstanding is called thought-action fusion in which people think that intrusion thoughts are moral as equivalent to performing the action related to the intrusion, further contributing to distress and avoidance habits (Shafran et al., 1996).

Another model that can be used to study scrupulosity is the cognitive-behavioral model of OCD (Salkovskis, 1985). As per this model, the misinterpretation of the normally intrusive thoughts as personally significant and threatening leads to the development of obsessional problems. Scrupulous persons are likely to perceive intrusive religious thoughts as a sign of moral deficiency or Godly retaliation and may act compulsively to counter the assessments of perceived risks (Rachman, 1997). Although this model has been popularly justified, it has not adequately explained the social implications of scrupulosity, especially when it comes to collectivist religious environments.

Scrupulosity and Loneliness: New studies have started to be done to explore the social implications of scrupulosity. Religious obsessions cause these individuals to separate themselves out of shame or lest they be judged or because they think that their intrusive thoughts are a result of a moral failure (Greenberg and Huppert, 2010). This avoidance tendency could be especially excessive in societies with high collectivism and in which the religious element is the main focal point of life in the community and belonging (Fatima et al., 2022). Research has revealed that people who experience greater religious anxiety have reported lower levels of social connectedness and higher levels of perceived loneliness (Khan, Watson and Chen 2012). In a recent study of Pakistani groups based on scrupulosity in clinical populations, the ideal was significantly correlated with psychological distress and poor functioning (Gondal and Malik, 2024).

Defined as the distressing state of perceived social isolation, loneliness has been widely researched as risk factor of poor mental health outcomes (Hawkley and Cacioppo, 2010). Adolescent aging (ages 19-25) is a crucial developmental progression towards loneliness as 19–25-year-olds explore and build relationships, and become less and less reliant on their parents and families (Arnett, 2000). In the case of students at a Pakistani university, where social engagement is inextricably linked with religious affiliation, scrupulosity can even lead to a negative effect on social integration (Fatima et al., 2022). Nevertheless, very little empirical research has investigated the particular association between scrupulosity and loneliness in non-clinical university students (Sanchis-Sanchis et al., 2026).

Gender and Religious Socialization: These differences in gender with regard to religious experience and psychological outcome are well documented. Muslims living in religiously conservative communities have a higher level of moral questioning and expectation of behavioral standards than men do (Bond and Lou, 2023). The religiosity of South Asian countries, such as Pakistan, is publicly assessed, and religious identity is tightly correlated with family honor and social status (Rozario, 2020). The level of religious anxiety can become more personal, with intrusive thoughts seen by women as moral offenses leading to shame-inducing feelings and social isolation (Khan et al., 2012).

A study conducted by Fatima et al. (2022) discovered that, in Muslim men and women in Pakistan, religious coping strategies have a different impact on psychological distress with women having higher religious anxiety and higher levels of psychological distress when facing religious conflicts. Equally, Gondal and Malik (2024) also found that thought-action fusion and scrupulosity were stronger related to negative outcomes among female emerging adults. Such results indicate that socialization based on gender could increase the distress linked with scrupulosity, especially when in a collectivist religious setting especially among women.

Rationale of the Present Study

Although the importance of scrupulosity as a mental health issue is increasingly acknowledged in the literature, the literature exhibits a few crucial gaps. To begin with, few studies have been conducted to determine the social impact of scrupulosity, especially loneliness within the context of emerging adults. Second, recent research on scrupulosity has obtained results with a Western, Christian population, and all the gaps in the knowledge of the disorder are open to study among non-Western, Muslim ones (Khan et al., 2012). Third, as much as studies have been able to find gender differences in religious experience and psychological distress (Lace et al., 2018; Fatima et al., 2022), none of them has used gender to mediate the scrupulosity-loneliness association. The knowledge of the difference in the social effects of scrupulosity between men and women has significant implications to the prevention and intervention strategies.

The current research work fills these gaps by investigating the connection existing between religious scrupulosity and loneliness in Pakistani university students with a particular emphasis on gender as a moderator. The population of students in universities between the ages of 19-25 years old is a critical development phase due to identity exploration, formation of relationships and growing independence (Arnett, 2000). The scrupulosity might be especially harmful to social affiliation in young adults in Pakistan, where religious belonging is intimately connected with social belonging (Fatima et al., 2022). Through the discussion of gender as a moderator, this paper will seek to determine whether men and women have social impacts of scrupulosity differences in this cultural setting.

Hypotheses

Based on the theoretical and empirical literature reviewed above, the present study tested the following hypotheses:

Hypothesis 1: Religious scrupulosity would be positively associated with loneliness in the full sample.

Hypothesis 2: Gender would moderate the relationship between religious scrupulosity and loneliness, such that the positive association would be significantly stronger for females than males.

Hypothesis 3: At high levels of scrupulosity, females would report significantly higher loneliness than males, whereas at low levels, the gender difference would be minimal.

Method

Research Design

The study took the form of a cross-sectional and correlational research design to determine the associations of religious scrupulosity, loneliness, and gender. This was a suitable design because the study was out to explore how gender plays a moderating role between religious scrupulosity and loneliness without controlling any of the variables. The research was quantitative in nature based on self-report data collections using questionnaires on the respondents at one point.

Participants

Four hundred university students (177 males, 233 females) participated in this study. Convenience sampling helped to recruit the participants; different universities in Pakistan were approached. The age range of participants was 19 to 25 years ($M = 21.4$, $SD = 1.8$). The sample consisted of all members of undergraduate degree courses or graduate programs, at the time of data collection. The following were the inclusion criteria: (a) age between 19 and 25 years, (b) being actually enrolled in a university and (c) self-identifying themselves as religiously affiliated. Those who had been previously diagnosed with a psychiatric disorder or undergoing any psychological therapy were not included in the study.

Sampling Technique

A non-probability convenience sampling technique was used to recruit participants. University of Gujrat, Pakistan recruited students in university classrooms, library and common areas. The choice of the sample was influenced by recommendations related to moderation analysis because they usually presuppose at least 200 participants to achieve moderate effects and have sufficient statistical power (Hayes, 2018). A total of 420 questionnaires were distributed to account potential incomplete responses and to establish sufficient power, 400 of them were considered as useful (response rate = 95.2%).

Measures

The Penn Inventory of Scrupulosity-Revised (PIOS-R; Olatunji et al., 2007) was used to measure religious scrupulosity. PIOS-R is a 19-item self-report scale that is utilized to identify religious obsessive-compulsive symptoms such as intrusive religious thoughts, compulsive religious behaviors and fear of committing religious transgressions. Respondents were asked to answer each item on a likert scale of 5-point with 0 (never) and 4 (always). The total is between 0 and 76 with a higher scale depicting a high religious scrupulosity. The PIOS-R has high psychometric qualities in a wide range of people, where in the past Cronbachs coefficients of alpha have been proved to be between .90 and .95 (Abramowitz et al., 2002; Olatunji et al., 2007). In the present research, there was a high internal consistency of the scale ($\alpha = .92$).

The De Jong Gierveld Loneliness Scale was used to measure loneliness (De Jong Gierveld, and Van Tilburg, 2006). The scale has 11 questions of the overall, emotional, and social loneliness. Respondents gave their answers on a 5--point Likert scale, where 1 (never) to 5 (very often). The possible total scores are between 11 and 55, the higher the score the more lonesome one is. The instrument has shown good psychometric properties in many cultural contexts with Cronbach alpha coefficients usually being between .80 and .89 (De Jong Gierveld and Van Tilburg, 2006; Toth-Kiraly et al., 2026). The scale used in this research had high internal consistency ($=.87$).

Included in the demographic information provided by the participants were their age, gender, academic year, and the university they belonged to. The gender was measured as a dichotomous (0 = Male, 1 = Female) variable.

Procedure

Paper and pencil surveys were used to collect data in classrooms of universities. Students were told of the purpose of the study in advance, of why the study was important to them, were guaranteed their confidentiality and anonymity of their responses, and told that they would not suffer any consequences in case they wished to withdraw at any time. The participants who offered their consent to participate gave written informed consent. The whole questionnaire required about 15-20 minutes to fill in.

Data Analysis Plan

All the statistical tests were done with SPSS Version 27.0. Before the analysis, data were filtered out on missing data, outliers and normality assumptions. All studies variables were computed to give descriptive statistics such as means, standard deviations, and frequencies. To evaluate the differences in gender in religious scrupulosity and loneliness, independent samples t-tests were used. Pearson product moment and other forms of correlation were undertaken to test the two variables of religious scrupulosity and loneliness to find out the bivariate correlation between the two variables in the entire sample and divided by the gender.

The moderating effect of gender was tested through hierarchical regression analysis via the Model 1 of the PROCESS macro of SPSS (Hayes, 2018). In Step 1, the following predictors of loneliness were typed in: religious scrupulosity (mean-centered) and gender (0 = Male, 1 = Female). the interaction term (PIOS-R $\times$ Gender) was introduced into the model in Step 2 to test a moderation. A large interaction would suggest that there is a gender difference in the relationship between religious scrupulosity and loneliness. Simple slopes were used to analyze the conditionality of religious scrupulosity to loneliness at both levels of gender (male and female). The moderating effect was plotted in an interaction plot. All analysis was set at $p < .05$ to have statistical significance.

Ethical Considerations

The informed consent was provided via written consent by all participants beforehand. The participants were assured that no one would get to know of the study or the extent of their contribution, and that they could opt out of it at any point without repercussions. No personal details were obtained and all the data were kept safely.

Results

Table 1: Descriptive Statistics and Independent Samples t-Test for Religious Scrupulosity and Loneliness by Gender (N = 400)

Variable	Total Sample M (SD)	Male (n = 177) M (SD)	Female (n = 233) M (SD)	t (398)	p	Cohen's d
Religious Scrupulosity	49.83 (11.72)	47.61 (10.84)	51.52 (12.03)	-3.39	.001	0.34
Loneliness	22.18 (5.84)	20.96 (5.42)	23.11 (5.93)	-3.75	< .001	0.37

Note. Higher scores on the PIOS-R indicate greater religious scrupulosity, whereas higher scores on the De Jong Gierveld Loneliness Scale indicate greater loneliness. Cohen's d values of 0.20, 0.50, and 0.80 represent small, medium, and large effect sizes, respectively.

Table 1 shows means, standard deviations, and gender differences of all the variables of the study. The mean score of religious scrupulosity was 49.83 (SD = 11.72) and the average score of loneliness was 22.18 (SD = 5.84). The female participants had a much higher religious scrupulosity than the male participants, $t(398) = -3.39$, $p = .001$ with a very small effect size ($d = 0.34$). On the same note, the females had absolute reported loneliness as compared to males where the $t(398) = -3.75$, $p < .001$, with the effect size being small (0.37). These results indicate that all emerging adults, but females, had higher degrees of religious scrupulosity and loneliness.

Table 2: Pearson Correlation Between Religious Scrupulosity and Loneliness by Gender

Sample	n	r	p
Full Sample	400	.47	< .001
Males	177	.34	< .001
Females	233	.61	< .001

Note. All correlations are significant at $*p* < .01$ (two-tailed).

The Table 2 provides Pearson product-moment correlations between scrupulosity of religion and loneliness. In the whole sample, there was a middle-level positive correlation that was significant, $r(398) = .47$, $p < .001$, meaning that those participants with more religious scrupulosity were more likely to report greater loneliness. When examined separately by gender, the correlation was stronger for females, $r(231) = .61$, $p < .001$, compared to males, $r(175) = .34$, $p < .001$. This large difference in magnitude of correlation offered initial findings that gender does or does not mediate the relationship to support the following moderation analysis.

A hierarchic regression analysis was done to establish whether gender moderated relationship between religious scrupulosity and loneliness. Mean-centering of PIOS-R scores were done prior to analysis to minimize multicollinearity. Gender was coded as dummy (0 = Male, 1 = Female). The table 3 presents the results.

In Step 1, both religious scrupulosity and gender were significant predictors of loneliness, with 26% of variance accounted, $R^2 = .26$, $F(2, 397) = 69.72$, $p < .001$. Both religious scrupulosity ($B = 0.28$, $SE = 0.03$, $t = 9.52$, $p < .001$) and gender ($B = 1.42$, $SE = 0.47$, $t = 3.02$, $p = .003$) emerged as significant predictors.

Table 3: Hierarchical Regression Analysis Examining Gender as a Moderator of the Relationship Between Religious Scrupulosity and Loneliness (N = 400)

Predictor	B	SE	β	t	p	95% CI
Step 1: Main Effects						
Constant	8.42	1.05	—	8.02	< .001	[6.36, 10.48]
Religious Scrupulosity (PIOS-R)	0.28	0.03	.45	9.52	< .001	[0.22, 0.34]
Gender (0 = Male, 1 = Female)	1.42	0.47	.14	3.02	.003	[0.49, 2.35]
Model Summary (Step 1)						
R	R ²	Adjusted R ²	F	p		
.51	.26	.25	69.72	p < .001		
Step 2 Interaction Model						
Predictor	B	SE	β	t	p	95% CI
Religious Scrupulosity (PIOS-R)	0.21	0.04	.34	5.98	< .001	[0.14, 0.28]
Gender	1.18	0.46	.11	2.57	.011	[0.28, 2.08]
PIOS-R × Gender	0.15	0.05	.18	3.14	.002	[0.06, 0.24]
Model Change						
ΔR^2	ΔF	p				
.03	9.86	.002				

Note. CI = confidence interval.

In Step 2, the interaction term (PIOS-R × Gender) was entered, which significantly improved the model, $\Delta R^2 = .03$, $\Delta F(1, 396) = 9.86$, $p = .002$. The significance of the interaction coefficient was high ($B = 0.15$, $SE = 0.05$, $t = 3.14$, $p = .002$, 95% CI [0.06, 0.24]) meaning that the positive relationship between religious scrupulosity and loneliness is much higher among female students than male students.

Table 4: Simple Slopes Analysis

Gender	B	SE	T	p	95% CI
Male	0.21	0.04	5.26	< .001	[0.13, 0.29]
Female	0.36	0.04	8.91	< .001	[0.28, 0.44]

Simple slopes analysis was conducted to examine the conditional effects of religious scrupulosity on loneliness at each level of gender. As shown in Table 4, the association between religious scrupulosity and loneliness was significant for both genders; however, the slope was considerably stronger for females ($B = 0.36$, $SE = 0.04$, $t = 8.91$, $p < .001$) compared to males ($B = 0.21$, $SE = 0.04$, $t = 5.26$, $p < .001$). The interaction plot (Figure 1) illustrates that at high levels of scrupulosity (+1 SD), females reported significantly higher loneliness than males, whereas at low levels (−1 SD), the gender difference was minimal.

Results Summary: The interaction term was significant ($B = 0.15$, $SE = 0.05$, $t = 3.14$, $p = .002$), indicating that gender moderated the relationship between religious scrupulosity and loneliness. Specifically, the positive association between religious scrupulosity and loneliness was significantly stronger for females than males. Simple slopes analysis further demonstrated that increases in religious scrupulosity were associated with greater loneliness for both genders; however, this relationship was considerably stronger among female students. These findings suggest that young women with elevated religious obsessions may experience greater social

isolation, potentially due to heightened moral perfectionism, increased self-scrutiny, and stronger perceived social expectations within religious contexts.

Figure 1: Interaction Between Religious Scrupulosity and Gender Predicting Loneliness

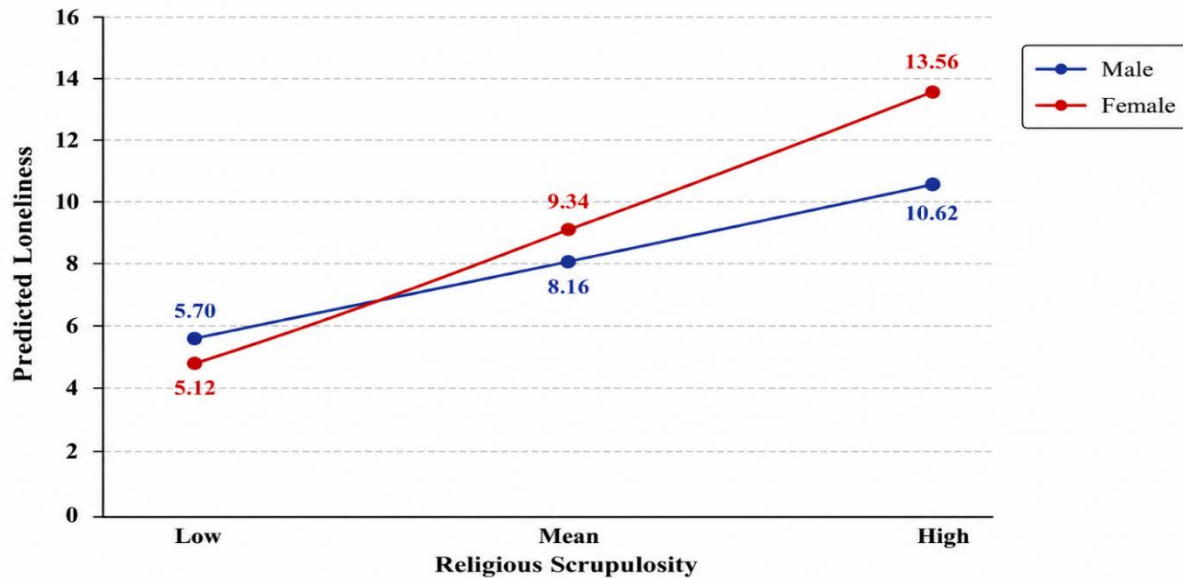


Figure 1. Interaction Between Religious Scrupulosity and Gender Predicting Loneliness. *Note.* PIOS scores were mean-centered. Low and high PIOS levels represent one standard deviation below and above the mean, respectively. The interaction was significant ($B = 0.15, p = .002$), indicating that the positive association between religious scrupulosity and loneliness was significantly stronger for females than males.

Discussion

In the current study, the researchers tested the hypothesis of moderation of the association between the religious scrupulosity and loneliness in emergent adults in Pakistan. All the three hypotheses were found to hold true, giving strong grounds that the religious scrupulosity is positively related with loneliness, and this is stronger among the females, especially where the scrupulosity is high.

Religious Scrupulosity and Loneliness: In line with Hypothesis 1, loneliness was positively correlated with religious scrupulosity in the total sample ($r = .47, p < .001$). This observation agrees with the prior studies that have found the obsessive-compulsive symptoms of religious overtures are associated with social withdrawal and social problems with others (Abramowitz et al., 2002; Olatunji et al., 2007). Scrupulous individuals can also develop intrusive religious thoughts that use up cognitive resources and generate extreme feelings of shame, which results in avoidance of religious communities that are the main social support systems (Greenberg and Huppert, 2010). Scrupulosity is also postulated to be related to the heightened levels of guilt and self-criticism that conditions may drive a withdrawal into social isolation (Miller and Hedges, 2008). Moreover, the idea that intrusive thoughts are ethically identical to acts (thought-action fusion) can lead to increasing distress and support avoidance behaviors (Siev et al., 2025). Withdrawal can lead to extreme social isolation in collectivistic societies such as Pakistan, where the religious domain plays the key role in the life of the community (Gondal et al., 2024; Fatima et al., 2022). Researchers have also indicated that people experiencing higher religious anxiety

experience reduced social connectedness and perceived more lonely (Khan et al., 2012; Sanchis-Sanchis et al., 2026).

Gender as a Moderator: Supporting Hypothesis 2, gender moderated this relationship, with the correlation being much stronger among females ($B = 0.36$) than among males ($B = 0.21$). This observation aligns with the study that implies that women in socially strict religions are more prone to this type of moral scrutiny and more stringent requirements of their behavior (Al Mamun & Hossen, 2025). Religious identity in the Pakistani culture is directly associated with the honor of the family and the social status, and, hence, the female religiosity is assessed publicly (Fatima et al., 2022). Intrusion of religious thought to women with such thoughts sometimes feels like a moral violation and incurs shame, which causes withdrawal. This understanding expands on cognitive-behavior model of OCD (Salkovskis, 1985) by showing how socialization under different gender influences individual appraisal and responding to symptoms of obsessions. It has been identified that scrupulosity correlates with increased distress among religiously committed persons and evidence indicates that gender may further increase such distress via social processes (Siev et al., 2025). Moreover, the literature has revealed that women who report religious conflicts and psychological distress because of that conflict are more likely to report a higher level compared to men (Fatima et al., 2022; Gondal and Malik, 2024). These differences may also be increased by the developmental background of emerging adulthood (ages 19–25) since, in this process of identity exploration, religious identity has more to do with social belonging amongst young women (Arnett, 2000; Sanchis-Sanchis et al., 2026). According to research by Hawkey and Cacioppo (2010), loneliness is especially harmful in emerging adulthood because identity development and wellbeing depends greatly on the social relationships.

Gender Gap at High Scrupulosity: Supporting Hypothesis 3, simple slopes analysis revealed that at high levels of scrupulosity (+1 SD), females reported significantly higher loneliness than males, whereas at low levels (−1 SD), the gender difference was minimal. This finding suggests that the gender gap in loneliness is most pronounced among individuals with elevated religious obsessions. This pattern aligns with research indicating that women are more likely to internalize distress and experience social consequences of psychological symptoms (Jones et al., 2023). The interaction plot (Figure 1) illustrates that as scrupulosity increases, loneliness rises more sharply for females than males, suggesting that young women with high religious obsessions are particularly vulnerable to social isolation. This finding is consistent with research by Fatima et al. (2022), who found that religious coping strategies differentially affect psychological distress for Muslim men and women in Pakistan. Similarly, Muller et al. (2023) reported that scrupulosity was associated with personality factors such as neuroticism, with gender contributing to these outcomes. These results underscore the importance of considering gender-specific pathways in understanding the social consequences of religious anxiety.

Implications

Our results are based on the cognitive-behavioral model of OCD (Salkovskis, 1985) which demonstrated that scrupulosity has a more serious responsibility on women, particularly when the symptoms are severe. More time-honored models emphasize such aspects as inflated responsibility and thought-action fusion (Rachman, 1997; Shafran et al., 1996) yet they fail to include a crucial element of how gender contributes to the experience of these symptoms. Our

research presumes that women, who tend to be more judged concerning religious behavior, may experience the distress associated with scrupulosity with a deep internalization, reaching a point of personal withdrawal and being lonely. In establishing scrupulosity as our emerging risk factor of social isolation, we influence researchers to go beyond the personal mind to think about social and cultural forces self-creating these experiences.

Practical implications: Mental health practitioners need to screen female patients presenting with anxiety or social withdrawal with symptoms of religious obsessive-compulsive symptoms, especially in a culturally religious background. Gender-sensitive interventions to female students with scrupulosity problems should be a consideration of university counseling centers such as peer support groups which deal with social and cultural pressures. By focusing on intrusive thoughts as mental health conditions and not spiritual failures, religious leaders can aid in soothing the stigma. Future studies need to utilize longitudinal designs, cross-cultural comparisons, and intervention designs to further investigate the gendered effects of religious scrupulosity to social isolation, as well as address protective factors, such as social support and self-compassion.

Limitations

A number of limitations are to be considered. To start with, the cross-sectional design does not allow making causal inferences; longitudinal studies are required to study the causal sequence. Second, self-reports are also vulnerable to social desirability bias especially when gauging sensitive religious issues. Third, the sample was confined to university students in Pakistan (ages 19-25), which may not be representative of non-student populations and other cultural backgrounds. Fourth, we have not evaluated religious salience and possible mediators (shame, guilt, perceived social rejection), and protective (social support, self-compassion) variables, but they need to be examined in future studies.

Conclusion

This study provides compelling evidence that gender moderates the relationship between religious scrupulosity and loneliness among emerging adults in Pakistan. The association between scrupulosity and loneliness is substantially stronger for females, and this gender gap widens at high levels of scrupulosity. These findings suggest that young women with religious obsessions are at particular risk for social isolation, potentially due to gendered religious socialization, heightened social scrutiny, and cultural pressures. This study highlights the need for gender-sensitive mental health interventions on university campuses and greater awareness of religious scrupulosity as a risk factor for loneliness.

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