

Intolerance of Uncertainty, Social Anxiety, and Psychological Wellbeing Among University Students

Laiba Shaukat ¹, Shaista Jabeen ^{*2}

¹MS (Clinical Psychology), Department of Psychology, Forman Christian College (A Chartered University), Lahore, Pakistan.

^{2*} Associate Professor, Department of Psychology, Forman Christian College (A Chartered University), Lahore, Pakistan.

Corresponding author: shaistajabeen@fccollege.edu.pk

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Intolerance of uncertainty is associated with negative cognitive, emotional and behavioral responses. The aim of the present study was to investigate the relationship between intolerance of uncertainty, social anxiety and psychological well-being among university students. Studying these relationships will help to understand the association between variables which influence individual well-being in different social contexts. A cross-sectional study was conducted, using purposive sampling technique. Data was collected from 280 university students using validated scales e.g., Intolerance of Uncertainty (IUS), Social Interaction Anxiety Scale (SIAS) and Psychological Well-Being Scale (PWBS). Descriptive and inferential statistics were used to analyze the results. Intolerance of uncertainty was positively correlated with social anxiety ($r = 0.40$; $p < 0.001$) and negatively correlated with psychological well-being ($r = -0.25$; $p < 0.001$). Social anxiety also showed a negative correlation with psychological well-being ($r = -0.35$; $p < 0.001$). Intolerance of uncertainty and social anxiety were strong negative predictors of psychological well-being among university students. Social anxiety is associated with intolerance of uncertainty. Therefore, to avoid social anxiety it is important to avoid uncertainty. These variables can reduce psychological wellbeing of the individual.

1. Introduction

Intolerance of uncertainty (IU), Social anxiety (SA), and psychological well-being (PWB) are universal phenomena (Uzun et al., 2025). The Response of different individuals to uncertain and ambiguous situations can be different (Lin et al., 2024). The connection between intolerance of uncertainty and various anxiety disorders has been studied, emphasizing a significant impact on mental health (Zemestani et al., 2023). Intolerance of uncertainty is associated with high levels of social anxiety. The individuals who struggle to cope with uncertain situations are more likely to experience fear and avoidance in social contexts (Boelen & Reijntjes, 2009). Intolerance of uncertainty escalates the negative emotional states and decreases the positive ones, like joy and excitement. (Morriss et al., 2023). Further, intolerance of uncertainty has predicted high levels of anxiety symptoms in individuals (Saraff et al., 2023).

Social anxiety negatively affects the quality of life and psychological well-being (Safaei et al., 2023). Social anxiety disturbs social functioning and reduces psychological well-being in young adults, making it difficult to understand and address its broader impacts (Noureen *et al.*, 2022). Social anxiety has a negative effect on psychological well-being of university students too, which is making it an important factor to study it along with other variables (Ye et al., 2021). Social anxiety is linked to reduced communication, lower engagement in social interactions, and poor socio-emotional functioning among university students, which highlights its impact on the psychological well-being of university students (Archbell et al., 2022). University students often experience stress and anxiety, which are negatively associated with psychological well-being and life satisfaction, mostly under uncertain conditions (Lopes & Nihei, 2021).

Psychological well-being was found to play a mediating role between inhibitory anxiety and academics and life satisfaction of university students (Akkoç et al., 2025). Among international university students, high levels of intolerance of uncertainty have been associated with low levels of psychological well-being (Mufokozana & Kondal, 2025).

This study aimed to investigate the relationship among intolerance of uncertainty, social anxiety, and psychological well-being among university students and to identify predictors of psychological well-being. Later, this can be helpful to introduce strategies to work on these predictors to enhance psychological wellbeing.

2. Literature Review

This section is about previous literature which is related with the topic and the hypotheses of the study.

2.1 Relationship of Intolerance of Uncertainty with Psychological Well-Being

The connection between intolerance of uncertainty and various anxiety disorders has been studied, emphasizing a significant impact of this phenomenon on mental health (Zemestani et al., 2023). Intolerance of uncertainty escalated negative emotional states and decreased positive ones, like joy and excitement (Morriss et al., 2023). Further, intolerance of uncertainty has predicted

high levels of anxiety symptoms in individuals (Saraff et al., 2023). The individuals who struggle to cope with uncertain situations are more likely to experience fear and avoidance in social contexts (Boelen & Reijntjes, 2009). Different research carried out outside Pakistan has examined that intolerance of uncertainty has negative impact on psychological well-being (Çevik & Yağmur, 2018; Saleem et al., 2023). On the basis of these facts current study proposes a hypothesis given below:

H1: Intolerance of uncertainty has negative impact on psychological well-being

2.2 Relationship of Social Anxiety with Psychological Well-Being

Social anxiety negatively impacts the quality of life and psychological well-being in university students (Safaei et al., 2023; Ye et al., 2021). Social anxiety disturbs social functioning and reduces psychological well-being in young adults, making it difficult to understand and address its broader impacts (Noureen et al., 2022). Social anxiety is linked with reduced communication, lower engagement, and poor socio-emotional functioning among university students, which highlights its impact on the psychological well-being of university students (Archbell et al., 2022). University students often experience stress and anxiety, which are negatively associated with psychological well-being and life satisfaction, mostly under uncertain conditions (Lopes & Nihei, 2021). This persistent phenomenon can affect their performance in the productive years, and they can be left behind their peers in competition which again can lead to even more anxiety forming a vicious circle.

Psychological well-being was found to play a mediating role between inhibitory anxiety and academics and life satisfaction of university students (Akkoç et al., 2025). Ryff and Keyes theoretical framework highlights the early experiences and personality traits of individuals well being (Ryff et al., 1995). Among international university students, high levels of intolerance of uncertainty have been associated with low levels of psychological well-being (Mufokozana & Kondal, 2025). Significant gender differences in intolerance of uncertainty have been reported (Geçgin & Sahranç, 2017b). Different research examined that social anxiety has negative impact on psychological well-being (Khosroshahi & Hashemi, 2012; Mousavi & Haghayegh, 2019). On the basis of these facts current study proposes the following hypothesis:

H2: Social Anxiety has negative impact on psychological well-being

3. Method

The study included a sample of 280 university students from different departments determined through G-power analysis (Faul et al., 2009). A purposive sampling strategy was used for data collection.

3.1 Measures

Two hundred and eighty students (F=140, M=140) were recruited from public and private universities using a purposive sampling technique. Age of the sample ranged between 18 to 25 years (M=21.28, SD=2.0).

3.1.1 Social Interaction Anxiety Scale (SIAS)

The SIAS was developed by Mattick and Clarke (1998). It is a 20-item scale that is a self-report measure assessing anxiety in social interactions. Originally, the reliability of the scale was around .90. Reliability of the scale for the current study was ($\alpha = .79$).

3.1.2 Psychological well-being scale (PWB)

The PWB scale was developed by Ryff and Keyes (1995). It is a 42-item scale which is a self-report measure assessing multiple dimensions of well-being on a 0-6 Likert scale. Originally, the reliability of the scale was reported around .80 to .88. For the current study, the reliability of the scale high reliability ($\alpha=.88$).

3.1.3 Intolerance of uncertainty scale-12 (IUS-12)

The IUS-12 was developed by Buhr and Dugas (2002). It is a self-report measure assessing discomfort with uncertainty and related anxiety on a 1-5 Likert scale. Originally the reliability of the scale was reported around .77 to .87. Reliability for the current study was ($\alpha=.88$).

3.2 Ethical Considerations

Ethical considerations (American Psychological Association, 2017) were taken care of during the research.

4. Results

Table No 1: Descriptive Information of the Study Variables (N=280).

Variables	Frequency	Percentages
Gender		
Male	140	50
Female	140	50
Marital status		
Single	260	92.9
Engaged	11	3.9
Married	9	3.2
Divorced	0	0
Other	0	0
Family		
Joint	111	39.6
Nuclear	169	60.4
University		
Private	173	61.8
Public	107	38.2
Field of study		
Health sciences	138	49.3
Non-health sciences	351	50.7

Table No 2: Descriptive Statistics and Correlation of IU, SA and PWB

Variables	M	SD	1	2	3
1.Intolerance of uncertainty	34.41	7.30	-		
2.Social anxiety	35.64	15.36	.41**	-	
3.Psychological well being	167.71	22.03	-.25**	-.35**	-

Note. M= Mean, SD= Standard Deviation

4.1 Multiple Regression

Table No 3: Multiple Linear Regression for analysis of predictors of Psychological Well-Being (N=280)

Variable	Psychological wellbeing				
	B	SE	t	P	95% CI
IU	-.30	.08	-4.99	.00	[-.61,-.26]
SA	-.12	.18	-2.11	.03	[-.75,-.03]

Note. CI = confidence interval. * $p < .05$.

Intolerance of uncertainty and social anxiety came out as strong negative predictors of psychological well-being.

5. Discussion & Conclusion

Purpose of the research was to discover the importance of understanding how intolerance of uncertainty and social anxiety interact and impact on psychological well-being of university students. The purpose of this research was to explore the association between intolerance of uncertainty, social anxiety, and psychological well-being among university students.

The results indicated that both the hypotheses were proved. Findings of the current study showed a significant positive relationship between two variables, e.g., intolerance of uncertainty (IU) and social anxiety (SA). The findings align with both previous and existing literature that higher level of IU is associated with greater social anxiety among university students (Shen et al., 2024).

An inverse relationship between intolerance of uncertainty and psychological well-being (PWB) was found. This inverse link emphasizes how IU affects students' mental health. This is consistent with the previous literature which shows high levels of IU increases levels of stress and are associated with low levels of PWB (Geçgin & Sahranç, 2017a).

The findings confirmed the negative impact of SA on students' wellbeing. This is consistent with the findings of Saraff and his colleagues (2023), showing SA to be a major cause of psychological suffering and a decline in life satisfaction of undergraduate students. The study also confirmed that IU and SA are strong negative predictors of the PWB of university students. This

reinforces the need for targeted strategies to manage social anxiety as a result to increase psychological well-being among students.

Intolerance of uncertainty emerged as a significant cognitive tendency influencing the psychological well-being of university students. The results of the current study validate the existing literature, indicating that the higher levels of IU are associated with increased anxiety, reduced PWB, and tension. (O'Bryan *et al.*, 2022; Saleem *et al.*, 2023)().

Social anxiety and psychological wellbeing were both negatively correlated with psychological well-being. This finding is consistent with previous literature, which found that individuals who have elevated social anxiety have low levels of psychological well-being (Noureen *et al.*, 2022).

The findings are consistent with previous research which identifies IU as the central cognitive factor to a wide range of psychological difficulties, including anxiety disorders (Boelen & Reijntjes, 2009). The findings also align with previous literature that SA is a negative predictor of PWB among young adults in Pakistan, confirming the determined effect of the heightened anxiety on mental health (Noureen *et al.*, 2022). By confirming the predictive link between IU, SA, and PWB, the current study adds to the growing body of evidence suggesting that interventions that target IU may alleviate social anxiety symptoms and promote better mental health among university students. Unlike the demographic factors such as gender or marital status, which weren't significant in the current study, the cognitive tendencies appear to play a more important role in determining psychological well-being.

The cultural context of Pakistan provides additional insight into the interpretation of these results. Understanding how intolerance of uncertainty (IU), social anxiety, and psychological well-being can offer profound insights applicable to Pakistani culture. Firstly, intolerance of uncertainty, as identified in the study, may manifest uniquely in Pakistan due to cultural norms emphasizing collectivism, familial obligations, and societal expectations. Elevated IU levels may have specific impacts on mental health, requiring treatments that are in line with cultural norms and coping strategies based on social support or religious beliefs.

Since relationships are fundamental to cultural norms, social anxiety negatively affects psychological health leading to a significant problem in Pakistani society. Culturally relevant therapies, such as group therapy keeping in mind collectivist principles and social skills training that adheres to community norms, are examples of culturally sensitive therapies for Pakistani students.

Family dynamics, social roles, and religious beliefs have an impact on psychological well-being in Pakistani society. The study findings, which showed a negative link between IU and social anxiety, highlight the importance of comprehensive approaches that incorporate traditional practices and techniques like mindfulness from Islamic teachings or mental health education in educational settings. Interventions that address these three variables within the context of Pakistani culture can effectively improve the psychological well-being of university students in Pakistan.S

The study's non-significant gender differences indicated that IU and SA affect both males and females in Pakistani culture. This showed that in addition to cultural differences, interventions to improve psychological wellbeing should incorporate universal strategies.

Understanding the impact of cultural norms on mental health outcomes is very important and crucial for effectively applying the study findings in the Pakistani context. Interventions tailored to address IU, SA, and PWB while taking into consideration, cultural sensitivities can be very valuable in improving the mental health of Pakistani university students. Also, studying the impact of these three variables with other constructs will help researchers to work on better interventions and identifying coping skills and strategies to deal with this problem. Using different psychological therapies can not only help university students but also the individuals working in different professions.

5.1 Limitations

The study findings should be interpreted with some caution as there were some limitations to the study given below:

- The study's sample may not be representative of all university students in Pakistan, limiting the generalizability of the findings to other educational settings.
- The study may not account for cultural differences in the expression and perception of uncertainty and anxiety, which could affect the applicability of the results in different cultural contexts.
- Other potential factors influencing psychological well-being, such as personality traits, support systems, or life stressors, were not accounted for in the study.

5.2 Future Direction

- Further investigations should involve demographic factors that may influence intolerance of uncertainty and social anxiety, such as socioeconomic status, urban and rural background, and employment status.
- Future interventions should be tailored to individual needs and cultural contexts for better acceptance and effectiveness.
- Resilience building strategies should be initiated in Pakistani religious and cultural context.

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