ISSN (P): 2663-9211 (E): 2663-922X
https://doi.org/10.37605/pjhssr.v7i2.5

Date of Submission: 20th Oct, 2024
Date of Acceptance: 18th Nov, 2024
Date of Publication: Dec, 2024

IMPACT OF EMOTIONAL INTELLIGENCE ON SOCIAL ANXIETY AMONG UNIVERSITY STUDENTS: MODERATING ROLE OF MINDFULNESS

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Abstract

This study investigates the relationship between emotional intelligence and social anxiety among university students in Islamabad (Pakistan), while exploring the moderating roles of mindfulness and gender. A sample of 400 students (200 male, 200 female) was assessed using validated scales for emotional intelligence, mindfulness, and social anxiety. Findings revealed a significant negative relationship between emotional intelligence and social anxiety, indicating that students with higher emotional intelligence experienced less social anxiety. Mindfulness was found to moderate this relationship, particularly in the area of self-emotion appraisal, where individuals with greater mindfulness showed a stronger negative link between emotional intelligence and social anxiety. Gender differences also played a role, with emotional regulation showing different patterns of influence on social anxiety for male and female students. These results suggest that fostering emotional intelligence through mindfulness interventions may help reduce social anxiety, and tailored strategies could be developed for gender-specific needs. The findings add to existing studies on the topic. Overall, the results add to the expanding body of research on the benefits of emotional intelligence and mindfulness in addressing social anxiety among university students.

Keywords: *Emotional Intelligence, Social Anxiety, Mindfulness*

Introduction

Research has extended to study the multidimensional aspects of emotional intelligence (EI), investigating its various functions in enhancing communication (Brackett et al., 2019), leadership effectiveness (Antonakis et al., 2018), and decision-making processes (Lopes et al., 2016). Additionally, recent studies have shown EI's ability to predict job quality and organizational outcomes (Cherniss & Goleman, 2018), highlighting its growing importance. With technological advances, researchers are also exploring new methodologies, such as virtual reality simulations, to boost emotional intelligence skills (Santos et al., 2020). This fusion of technology and psychology creates new avenues for learning and intervention programs aimed at enhancing EI. Furthermore, recent research has focused on how EI

connects to mental health, stress management (Mikolajczak et al., 2019), and its potential role in buffering psychological distress (Kong & Mai, 2019).

Emotional Intelligence

Emotional intelligence has been studied across various cultural contexts, indicating potential differences in how it is perceived and expressed (Matsumoto et al., 2017). This cross-cultural perspective enriches our understanding of how EI operates in different settings. EI has played a pivotal role in emotional research, as noted by Ashkanasy et al. (2017). EI can be categorized into 3 types: self-report emotional intelligence, ability emotional intelligence and mixed emotional intelligence (Ashkanasy & Daus, 2005).

While many people have high IQs, they often struggle to achieve career success due to a lack of emotional intelligence. EI encompasses social skills that allow individuals can identify and differentiate their own emotions from those of others, allowing them to consider critically about these emotions and apply the knowledge to their actions (Mayer et al., 2000). Emotional intelligence is related to various personality traits, including empathy, aggression, and anger. Research shows that individuals with higher EI tend to have more empathy, which is crucial for building relationships. Likewise, emotional intelligence is associated with academic achievement (Paloma et al.).

The evolving paradigm of emotional intelligence is divided into two key areas: understanding emotions and their role in facilitating thought. The first involves categorizing emotions and understanding their shifts, while the second refers to integrating emotions into problem solving and decision making processes. The four-component model of Emotional Intelligence builds upon basic emotional knowledge, which forms the foundation for measuring emotional intelligence (Mayer & Salovey's, 1997).

Previously, emotional intelligence was conceptualized through mental ability and trait ability, with mental ability referring to reasoning with emotions and trait ability reflecting emotional behaviors. The adaptive use of emotions in reasoning is assessed in terms of mental capacity through maximum performance (Mayer et al., 2003). EI has also been linked to self-harm. Emotional intelligence traits can act as protective factors, helping individuals avoid harmful coping strategies by regulating their emotions more effectively (Jane & Hurry, 2002). This aligns with the idea that individuals who can comprehend and regulate their emotions will

experience more mental and social balance (Mayer & Barsade, 2008).

In the workplace, emotional intelligence is crucial, as many jobs require emotional regulation and interpersonal skills. Companies depend on these abilities to foster collaboration and achieve objectives, making EI a predictor of work success. Empirical studies support the connection between EI and career achievement (Cote et al., 2006; Goleman, 1995; Lam et al., 2002; Semadar et al., 2006).

Social Anxiety

Recent research has focused on how individuals with social anxiety (SA) evaluate positive social information. Social anxiety has been linked with the perception of potential risks in positive environments (Alden et al., 2008) and difficulties in accepting positive emotions from others (Vassilopoulos & Banerjee, 2010). Individuals with Social Anxiety Disorder (SAD) are more likely to negatively interpret positive situations compared to those with panic disorder or Generalized Anxiety Disorder (GAD) (Laposa et al., 2010). However, this trend was not seen in individuals with obsessive-compulsive disorder (OCD).

Socially anxious people negatively assessed enjoyable events, which correlated with increased interpersonal anxiety (Laposa et al. ,2010). Cognitive biases in processing positive social information can reduce positive affect in SA individuals, which is mentioned in further sections.

Simonds et al. (2007) investigated the relationship between interpersonal activities and attention management, discovering a negative association between children's attention control and social reactions. This is relevant for those with social anxiety, as they often struggle to regulate their emotions and behavior, which affects their social interactions and amplifies their fears of low social performance (Kashdan, 2007; Kashdan et al., 2011).

Amir and Bomyea (2011) used an operation span task to activate attentional control systems, lending credence to the theory that SA is linked to generalised attentional control deficiencies. Similarly, Moriya and Tanno (2008) discovered a negative correlation between attentional control and social anxiety, even after controlling for depression and state anxiety.

People with social anxiety often fear social situations, and this fear contributes to the disorder’s effects (Creed et al., 1995). Both clinical and non-clinical studies have long established a connection between social anxiety and poor interpersonal functioning (Jones &

Carpenter, 1998). Individuals with social anxiety are often unmarried, socially isolated, and have troubled relationships with friends and family (Norton et al., 1996; Schneier et al., 1994). Adolescents with social anxiety face difficulties in social interactions and find it challenging to meet adult expectations (Charmaraman et al., 2018). Social anxiety in adolescence is a major mental health issue with long-lasting effects (Zainal et al., 2010).

Mindfulness

Mindfulness, a state of conscious awareness that involves focusing on the present moment without judgment, is gaining attention as a valuable cognitive tool for managing stress. Research shows that mindfulness can help individuals cope with stress more effectively, reducing the impact of Adverse Childhood Experiences (ACEs) on mental health by offering a buffer against depression (Keng et al., 2011). Those who have experienced ACEs may find that mindfulness enhances their resilience and emotional regulation.

Mindfulness, which has its roots in Buddhist traditions, places a strong emphasis on accepting sensations as they arise. However, it has been demonstrated that traumatic experiences, such sexual assault, reduce awareness and have detrimental psychological effects (Kroska et al., 2018). Furthermore, ACEs and problematic behaviours like alcohol addiction may be mediated by mindfulness (Brett et al., 2018). Additionally, recent research indicates that psychological rigidity can act as a moderator in the relationship between ACEs and depression (Makriyianis et al., 2019).

Interestingly, some research has shown that individuals who experienced childhood sexual abuse and possess high mindfulness levels exhibit greater anxiety and anger compared to those without such trauma (Daigneault et al., 2016). Nevertheless, mindfulness is generally regarded as a protective factor against psychological distress, encompassed by anxiety, depression, and rumination (Kircaburun et al., 2019). Mindfulness practices have been linked to positive outcomes such as increased life satisfaction, cognitive functioning, and overall mental well-being (Baer et al., 2012; Keng et al., 2011; Maloney et al., 2016).

Additionally, mindfulness is linked to improved pain management, relationship happiness, and mental health (Brown et al., 2007). Because mindfulness fosters adaptive emotional functioning, research suggests a link between emotional intelligence and mindfulness (Baer et al., 2004; Brown & Ryan, 2003). People who practise mindfulness are encouraged to

remain in the here and now and accept their experiences without passing judgement (Brown & Ryan, 2003). According to Baer et al. (2008), trait mindfulness in psychology is frequently broken down into five components: observing, describing, acting with awareness, not judging, and not responding. Although short mindfulness sessions have been successful in lowering state anxiety and raising positive thoughts among socially anxious people who are not normally worried, mindfulness-based therapies for social anxiety have had inconsistent results (Vassilopoulos, 2008). These sessions also helped decrease negative self-perceptions related to autonomy (Vassilopoulos & Watkins, 2009).

Objectives of the Study

1. To examine the impact of emotional intelligence on social anxiety among university students.
2. To explore the moderating role of mindfulness between the relationship of emotional intelligence and social anxiety.
3. To Investigate the moderating role of gender between the relationship of emotional intelligence and social anxiety.
4. To Investigate the differences based on socio-demographic characteristics in terms of mindfulness, emotional intelligence and social anxiety among university students.

Hypotheses

H1: It is hypothesized that there will be a negative relationship between emotional intelligence and social anxiety among university students.

H2: It is hypothesized that mindfulness, as a moderator variable, will have an impact on the association between emotional intelligence and social anxiety among university students.

H3: It is hypothesized that gender, as a moderator variable, will have an impact on the association between emotional intelligence and social anxiety among university students.

H4: It is hypothesized that there will be differences based on socio-demographic factors in terms of mindfulness, emotional intelligence, and social anxiety among university students.

Conceptual Framework

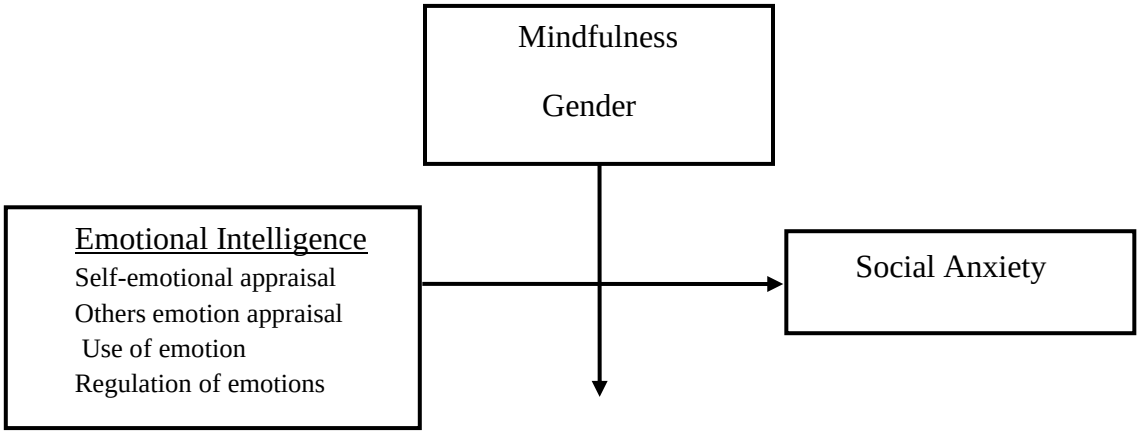


Figure. ***Simple Moderation Model***

Method

Design, Participants, and Procedure

Correlational research design was used. The research focused on the university population in Islamabad, Pakistan, as the study's target population. Sample of 400 participants were recruited using convenience sampling from nonprobability sampling methods, ensuring an equal distribution of 200 male and 200 female participants. To start, we carefully defined our sample, securing informed consent from participants who, as psychology students, were the focus of our research on emotional intelligence and social anxiety. We effectively encouraged them to participate willingly, telling them that the information they provided would be used exclusively for research purposes used, treated with the utmost confidentially, in accordance with ethical norms. Following this, participants were given a demographic sheet and a scale to complete. In cases where students found certain items challenging to understand, the researcher provided additional explanations, ensuring a thorough comprehension of the survey.

Instruments

Demographic Information Sheet

The demographic sheet contained information about age, gender, marital status, residence, and education.

Wong's Emotional Intelligence Scale (WEIS)

A Chinese respondents'-specific EI metric was created (Wong et al., 2007). This scale has been translated into Urdu by (Zahra et al., 2020). The author developed this scale to know about someone's emotional intelligence. Emotional intelligence kind of social skill that enables a person to recognize and distinguish between their own emotions and those of others, to think about those feelings, and to apply the knowledge gained in their actions (Mayer, Salovey, & Caruso, 2000). Wong's Emotional Intelligence Scale internal consistency score of (α=.89) (Bibi et al., 2015). Excellent construct validity of scales in the Indian hospitality industry is demonstrated by confirmatory factor analysis (Traymbak et al., 2022). The questionnaire consists 16 items, the answers to which are given on a 7-point Likert scale, 1 denoting strongly disagree and 7 denoting strongly agree. The sum of total score can vary from 16 to 112. It assesses the four skill dimensions listed in the EI domain:

(1) Appraisal & expression of emotional in the self
(2) Appraisal & recognition of emotions in others
(3) Regulation of emotion in the self
(4) Use of emotion to facilitate performance

Mindfulness Attention Awareness Scale (MAAS)

It is a 15-item scale developed by Brown and Ryan (2003) to measure open or receptive awareness and attention to the present moment. This scale utilizes a Likert scale ranging from 1 to 6 for responses. The MAAS is created to assess a key aspect of mindfulness of disposition, capturing individuals' ability to be mindful in their daily experiences. The scale has been translated into Urdu by Ajmal et al. (2020), making it applicable to Urdu-speaking populations. The MAAS is specifically linked to and predictive of various well-being and self-regulation variables. It measures an individual's dispositional mindfulness, indicating their habitual or general tendency to be mindful in various situations. The MAAS demonstrates excellent internal consistency, with a Cronbach's alpha coefficient of 0.92, as reported by Ruiz et al. (2016). The high-level internal consistency suggests that

the items on the scale are reliable and measure the same underlying construct of mindfulness. All items on the MAAS show sufficient adjusted item-total correlations, further supporting the reliability of the scale. The MAAS has been validated in undergraduates from Colombia by Ruiz et al. (2016). This indicates that the scale is effective in assessing mindfulness in this particular population. The total score on the MAAS can range from 15 to 90, reflecting the overall level of mindfulness. The completion of the test is relatively quick, taking no more than 10 minutes.

Social Interaction Anxiety Scale (SIAS)

It is a measurement tool developed by Mattick and Clark (1998) to address the need for assessing social anxiety in various feared social situations. This scale primarily focuses on evaluating the concept of social interaction anxiety and consists of 20 items. Each item is rated on a 5-point scale, with response options ranging from 0 (Never) to 4 (All of the time). The cumulative score, ranging from 0 to 80, provides an indication of the severity of social anxiety disorder, where higher scores reflect more pronounced symptoms. The SIAS exhibits excellent internal consistency, as indicated by a high Cronbach's alpha ranging from 0.88 to 0.93, as reported by de Berus et al. (2014). This demonstrates that the items within the scale steadily measure the same underlying construct of social interaction anxiety. Research, such as the study conducted by Heimberg et al. (1992), supports the validity of the SIAS. Convergent and discriminant validity are affirmed, indicating that the scale effectively measures the intended construct (convergent validity) and distinguishes it from unrelated constructs (discriminant validity).

Results

The data was examined by IBM SPSS software (Version 26). Frequencies, percentages and mean values were used as descriptive statistics for organizing and summarizing data. While in contrast, correlation, independent sample t-test, and moderation analysis were applied as inferential statistics to analyze the data and draw conclusions.

Table 1: Socio-demographic Characteristics of the Participants (n=400)

Characteristics	*N*	%
Gender		
Male	200	50
Female	200	50
Residence		
Rural	145	36.3
Urban	255	63.8
Education		
BS	259	64.8
MS	140	35.0
Relationship Status		
Single	346	86.5
Married	54	13.3

Table 1 revealed that number for male students and female student were same (n = 200, 50%). Higher number of students from urban areas (n = 255, 63.8%) as compared to students from rural areas (n = 145, 36.3). Similarly, greater number of students from BS level (n = 259, 64.8%) as compared to students from MS level (n = 140, 35.0). Moreover, a greater number of students from single status (n = 346, 86.5%) as compared to students from married status (n=54,13.3%).

Table 2: Psychometric Properties of the study Major Scales (n=400)

					Range			
Scale	K	A	M	SD	Potential	Actual	Skewness	Kurtosis
S-EA	4	.80	21.19	5.00	4-28	5-28	-.87	.35
O-EA	4	.74	21.64	4,17	4-28	7-28	-.63	.12
U-EA	4	.81	20.89	5.00	4-28	4-28	-.64	-.02
R-EA	4	.78	19.27	5.21	4-28	4-28	-.52	-.18
MF	15	.87	55.95	13.48	15-90	23-90	.30	-.64
S-A	20	.71	31.08	14.15	0-80	1-71	-.32	-.50

Note. S-EA = Self Emotion Appraisal; O-EA = Other Emotion Appraisal; U-EA = Use – Emotion Appraisal; R-EA = Regulation-Emotion Appraisal; MF= Mindfulness; S-A = Social Anxiety

Table 2 showed instruments for assessing psychological constructs. Notably, the Self Emotion Appraisal (S-EA) instrument exhibited acceptable reliability ($\alpha = .80$), with a mean

score (M) of 21.19. The Other Emotion Appraisal (O-EA) scale demonstrated adequate reliability (α = .74), with a mean score (M) of 21.64. The Use – Emotion Appraisal (U-EA) instrument displayed strong reliability (α = .81), with a mean score (M) of 20.89. The Regulation-Emotion Appraisal (R-EA) instrument had a reliability coefficient of α = .78, with a mean score (M) of 19.27. The Mindfulness (MF) instrument exhibited strong reliability (α = .87), with a mean score (M) of 55.95. The Social Anxiety (S-A) scale showed acceptable reliability (α = .71), with a mean score (M) of 31.08. These psychometric properties underscore the credibility of the measurements, enhancing the research's interpretational value.

Table 3: Correlations For Study Variables

Correlations For Study Variables (n=400)

Variables	1	2	3	4	5	6
1. S-EA	-					
2. O-EA	0.427***	-				
3. U-EA	0.504***	0.422***	-			
4. R-EA	0.430***	0.226***	456***	-		
5. MF	0.348***	0.282***	0.371***	315***	-	
6. S-A	-0.423***	-0.225***	-0.412***	-0.321***	-0.449***	-

Note. S-EA = Self Emotion Appraisal; O-EA = Other Emotion Appraisal; U-EA = Use – Emotion Appraisal; R-EA = Regulation-Emotion Appraisal; MF= Mindfulness; S-A = Social Anxiety

*** $p < .001$

The analysis highlighted several relationships between the variables. There was a pronounced positive relationship between Self-Emotion Appraisal and Other's Emotion Appraisal, as evidenced by a correlation coefficient of r = .427 (p < .001). This suggests that as one's ability to appraise their own emotions increases, their ability to appraise others' emotions also tends to rise. Additionally, an evident positive link was found between Self-Emotion Appraisal and Use of Emotion Regulation with a coefficient of r = .504 (p < .001). This indicates that those with a heightened ability to understand their own emotions are also better at using emotion regulation strategies. Similarly, a positive correlation of r = .430 (p < .001)

was observed, implying that individuals with a better grasp of their own emotions are more adept at regulating them. Another positive association was found between Self-Emotion Appraisal and Mindfulness, with a coefficient of r = .348 (p < .001). On the contrary, there was a negative correlation (r = -.423, p < .001) between Self-Emotion Appraisal and Social Anxiety, suggesting that those with a higher understanding of their own emotions tend to experience reduced social anxiety. Lastly, a positive relationship was identified between Self-Emotion Appraisal and Other's Emotion Appraisal, as indicated by r = .422 (p < .001).

Table 4: Moderation Effect of Mindfulness on Self-EA and Social Anxiety (n=400)

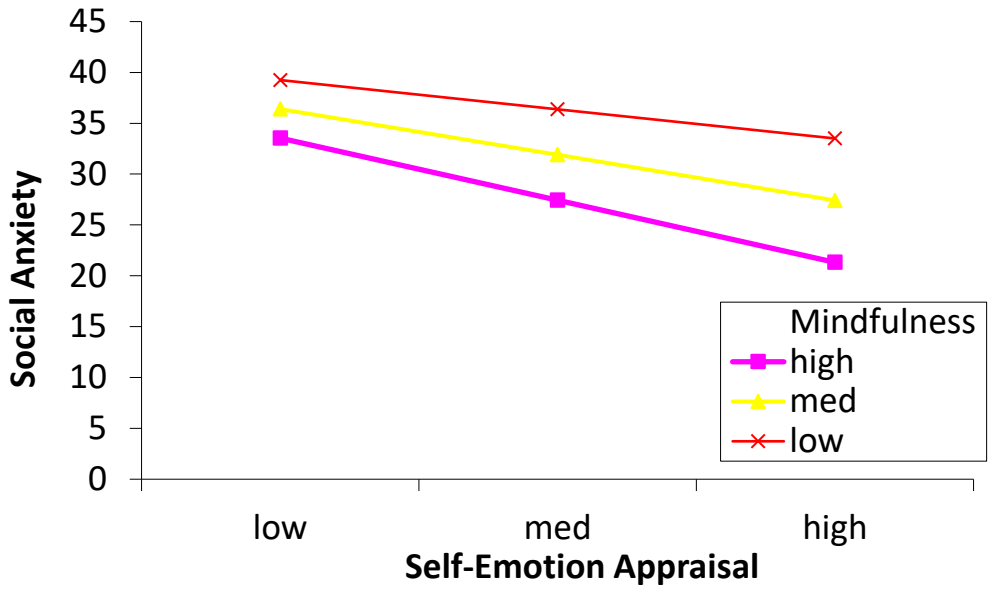
Variables	*B*	*SE*	*t*	*p*
Constant	40.72	11.44	3.55	<.01
Self-EA	.445	.516	.863	.38
Mindfulness	.194	.218	.891	.37
Self-EAx Mindfulness	-.023	.009	-2.60	<.01

Simple Slope Analysis

Low(-1sd)	-.606	.157	-3.799	.002
Average	-.940	.131	-7.167	.000
High(+1sd)	-1.274	.204	-6.230	.000

Note. S-EA = Self Emotion Appraisal

Figure 2: Mod-Graph with Moderating Effect of Mindfulness between Self-Emotion Appraisal and Social



The summary of moderation analysis Revealed. Moderation analysis was carried out using SPSS's Process macro (Hayes, 2013). The study assessed the moderating role of mindfulness on the relationship between self- emotion appraisal and social anxiety. The model explained a significant proportion of the variance in the response variable (R = .54, R-sq = .29, F (3, 396) = 55.07, p < .001). Furthermore, result revealed a negative significant moderating impact of mindfulness on the relationship between self- emotion appraisal and social anxiety (B = -.023, t = -2.60, *p*, < .01), indicating that the relationship between self-emotion appraisal and social anxiety was significantly moderated by mindfulness. Similarly, simple slope analysis revealed. At the "Low" level, the self-emotion appraisal corresponds to a decrease of approximately -.606 units in the social anxiety (p = .002). Similarly, at the "Average" level, the decrease is about -.940 units (p = .000), and at the "High" level, it's around -1.274 units (p = .000). These findings emphasize a consistent and impactful relationship between the self-emotion appraisal and social anxiety across varying levels of mindfulness. Furthermore, Figure 2 mod graph creates a clearer and more accurate picture of the links and interactions between variables.

Table 5: Moderation Effect of Gender on R-EA and Social Anxiety (n=400)

Variables	*B*	*SE*	*t*	*P*
Constant	64.88	8.27	7.79	< .001
R-EA	-1.72	.410	-4.20	< .001
Gender	-10.92	5.14	-2.12	.03
R-EA x Gender	.564	.257	2.18	.02
Simple Slope Analysis				
Male	-1.15	.184	-6.29	.000
Female	-.595	.180	-3.30	.011

Note. R-EA = Regulation-Emotion Appraisal

Figure 3: Mod-Graph with Moderating Effect of Gender between Regulation Emotion Appraisal and Social Anxiety

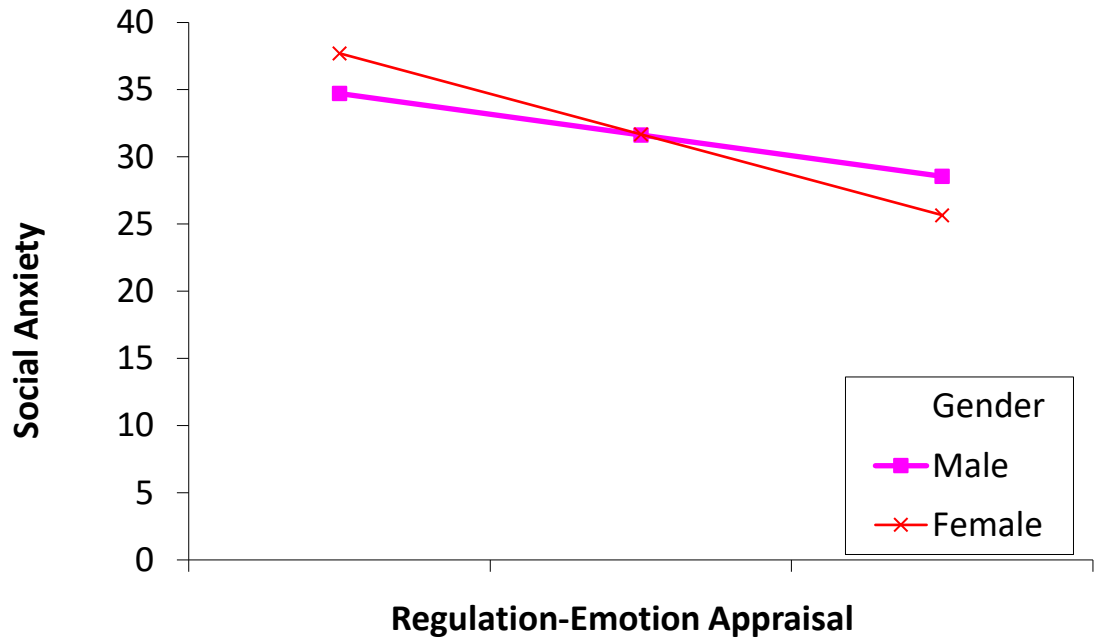


Table 5 revealed the summary of moderation analysis. Moderation analysis was conducted. The study assessed the moderating role of gender on the relationship between regulation-emotion appraisal and social anxiety. The model explained a significant proportion of the variance in the response variable (R = .33, R-sq = .11, F(3, 396) = 41.27, p < .001) The result

revealed significant moderating impact of gender on the relationship between regulation-emotion appraisal and social anxiety (B = .564, t = .257, *p*, < .05), indicating that the relationship between regulation-emotion appraisal and social anxiety was moderated by gender. The simple slope analysis reveals significant relationships. At the "Male" level, the predictor variable is associated with an approximate decrease of -1.15 units in the dependent variable. Similarly, at the "Female" level, the decrease is around -.595 units. Both relationships are statistically significant (p < .05), underlining the substantial impact of the predictor variable across moderator levels. Furthermore, Figure 3 mod graph creates a clearer and more accurate picture of the links and interactions between variables.

Table 6: Mean Comparison of Gender on Emotional Intelligence, Mindfulness, and Social Anxiety (n=400)

	Gender						
	Male		Female				
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	C*ohen's d*
Self-EA	21.51	4.95	20.86	5.05	1.29	.19	.13
Other-EA	21.48	3.93	21.80	4.40	-.778	.43	.08
Use-EA	20.74	5.07	21.04	4.94	-.609	.54	.05
Reg-EA	19.64	5.15	18.91	5.25	.354	.72	.14
Mindfulness	53.62	13.51	58.28	13.08	-.3.50	.001	.35
Social Anxiety	30.79	13.89	31.38	14.42	-.416	.67	.04

Note. S-EA = Self Emotion Appraisal; O-EA = Other Emotion Appraisal; U-EA = Use – Emotion Appraisal; R-EA = Regulation-Emotion Appraisal

Table 6 presents an independent-samples t-test, indicating no statistically significant mean-level differences in emotional intelligence between genders. Although a small effect size was observed, the results suggest no significant distinction. Conversely, the study reveals noteworthy mean differences in mindfulness (t = -3.50, p < .01) between male and female participants. Females exhibited higher scores on mindfulness (M = 58.63, SD = 13.08)

compared to males (M = 53.62, SD = 13.51). The associated Cohen's d value of 0.35 signifies a small effect size, highlighting the observed differences. Furthermore, other findings unveil non-significant mean differences in social anxiety (t = -0.416, p > .05) between genders. The Cohen's d value of 0.04, indicative of a small effect size.

Table 7: Mean Comparison of Residence on Emotional Intelligence, Mindfulness, and Social Anxiety (n=400)

	Residence						
	Rural		Urban				
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	C*ohen's d*
Self-EA	21.55	4.90	20.98	5.06	1.09	.27	.11
Other-EA	21.46	3.94	21.74	4.30	-.627	.53	.07
Use-EA	21.22	4.97	20.70	5.02	.988	.32	.10
Reg-EA	19.40	5.09	19.20	5.28	.354	.72	.03
Mindfulness	55.05	13.67	56.44	13.37	-.977	.32	.10
Social Anxiety	30.50	13.55	31.41	14.50	-.619	.53	.06

Note. S-EA = Self Emotion Appraisal; O-EA = Other Emotion Appraisal; U-EA = Use – Emotion Appraisal; R-EA = Regulation-Emotion Appraisal

Table 7 indicates no statistically significant mean differences in emotional intelligence levels between participants from rural and urban areas. Despite the small effect size, the results reveal a non-significant distinction. Similarly, the findings also demonstrate no significant mean differences in mindfulness (t = -.97, p > .05) between the two groups. The associated Cohen's d value of .10 suggests a small effect size, reinforcing the absence of a substantial distinction. Likewise, other findings reveal non-significant mean differences in social anxiety (t = -0.619, p > .05) between rural and urban participants. The Cohen's d value of .06, indicative of a small effect size, supports the conclusion that no significant difference exists in social anxiety between the two groups.

Table 8: Mean Comparison of Education on Emotional Intelligence, Mindfulness, and Social Anxiety (n=400)

	Education						
	BS		MS				
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	C*ohen's d*
Self-EA	20.45	5.35	22.56	3.98	-4.05	.000	.39
Other-EA	21.28	4.19	22.26	4.08	-2.24	.02	.24
Use-EA	20.40	5.13	21.77	4.66	-2.62	.009	.29
Reg-EA	19.08	5.31	19.67	4.98	-1.08	.28	.11
Mindfulness	54.25	13.16	59.12	13.59	-.3.48	.001	.36
Social Anxiety	32.68	14.05	28.00	13.88	3.18	.002	.33

Note. S-EA = Self Emotion Appraisal; O-EA = Other Emotion Appraisal; U-EA = Use – Emotion Appraisal; R-EA = Regulation-Emotion Appraisal

Table 8 revealed significant mean differences on emotional intelligence level except regulation emotion. Finding showed that MS students exhibited higher scores on emotional intelligence compared to the BS students. The effect size was small. Furthermore, result revealed significant mean differences on mindfulness with t = -3.48, p <. *01* showed that MS students scored higher mindfulness (M = 59.12, SD = 13.59*)* compared to the BS students (M = 54.25, SD = 13.16*)*. The value of Cohen's d was .36 (< 0.50) which indicate small effect size. Other finding revealed significant mean differences on social anxiety with t = 3.18, p < .01. Showed that MS students exhibited lower scores on social anxiety (M = 28.00, SD = 13.88*)* compared to the BS students (M = 32.68, SD = 14.05*)*. The value of Cohen's d was .33 (< .50) which indicate small effect size.

Table 9: Mean Comparison of Relationship Status on Emotional Intelligence, Mindfulness, and ocial Anxiety (n=400)

	Relationship Status						
	Single		Married				
Variables	*M*	*SD*	*M*	*SD*	*t*	*p*	C*ohen's d*
Self-EA	21.13	4.99	21.56	5.15	-.585	.55	.08
Other-EA	21.69	4.10	21.24	4.61	.732	.46	.11
Use-EA	20.80	5.02	21.49	4.97	-.929	.35	.13
Reg-EA	19.37	5.13	18.56	5.68	1.05	.29	.15
Mindfulness	55.50	13.16	59.16	13.59	-.1.85	.06	.26
Social Anxiety	31.60	14.14	27.20	13.49	3.18	.03	.31

Note. S-EA = Self Emotion Appraisal; O-EA = Other Emotion Appraisal; U-EA = Use – Emotion Appraisal; R-EA = Regulation-Emotion Appraisal

Table 9 presents an analysis of the mean differences in emotional intelligence levels between married and single individuals. The results indicate non-significant differences, and the effect size was deemed small. Similarly, the examination of mindfulness levels also revealed non-significant mean differences ($t = -1.85$, $p > .05$), with Cohen's d value of .26, indicative of a small effect size. Furthermore, the study found significant mean differences in social anxiety between the two groups ($t = 3.18$, $p < .05$). Specifically, the results indicated that single individuals scored higher on social anxiety ($M = 31.60$, $SD = 14.14$) compared to their married counterparts ($M = 27.20$, $SD = 13.49$). The associated Cohen's d value of .31 suggests a small effect size.

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Discussion

The current study investigated the moderating role of mindfulness and gender in the relationship between emotional intelligence and social anxiety among university students. Additionally, it aimed to assess demographic variations in the study variables. At the outset, scale reliability was ensured, with Cronbach's alpha for all scales ≥ .80, indicating high internal consistency (Coakes & Steed, 2003).

The first hypothesis, "emotional intelligence will be negatively correlated with social anxiety (H1)," was supported by the findings, revealing a significant negative relationship between emotional intelligence and social anxiety. This result aligns with previous studies, which found an inverse association between emotional intelligence and various types of anxiety, including social anxiety. For instance, Lopes et al. (2016) highlighted that individuals with higher emotional intelligence were less likely to exhibit social anxiety. These findings underscore the preventive role of emotional intelligence in managing anxiety, suggesting that improving EI skills may reduce social anxiety in students. Moreover, Martins et al. (2020) emphasized in their meta-analysis that emotional intelligence aids in adaptive emotional regulation, further supporting the findings of this study.

The second hypothesis, "Mindfulness as a moderator will impact the relationship between emotional intelligence and social anxiety (H2)," was partially supported. Mindfulness significantly moderated the connection between self-emotion appraisal and social anxiety, indicating that individuals with higher mindfulness and emotional intelligence can better manage emotions in social situations, reducing anxiety. This is consistent with past research showing mindfulness's role in reducing emotional reactivity (Brown & Ryan, 2003; Chambers et al., 2009). However, mindfulness did not significantly moderate the associations between other aspects of emotional intelligence (e.g., other-emotion appraisal, use-emotion appraisal, regulation-emotion appraisal) and social anxiety. This suggests that while mindfulness may buffer specific emotional reactions, its influence on social anxiety may be limited to certain emotional intelligence subscales, warranting further research.

The third hypothesis, "Gender will moderate the relationship between emotional intelligence and social anxiety (H3)," found mixed support. Gender significantly moderated the relationship between emotion regulation and social anxiety, with differing impacts on male and female students. This supports the idea that gender-specific emotional processes, such as emotion regulation, interact differently with social anxiety (James & Wood, 2018). However, no significant gender moderation was observed for other dimensions of emotional intelligence and social anxiety, indicating that the protective effect of emotional intelligence against social anxiety may be consistent across genders, as noted by Smith and Petrides (2018).

The study also explored demographic variations in emotional intelligence, mindfulness, and social anxiety (H4). Results indicated that education level influenced emotional intelligence, with students pursuing master's degrees scoring higher than those seeking bachelor's degrees. This finding supports the view that educational experiences enhance emotional awareness and control (Castillo et al., 2020). Additionally, gender differences were found in mindfulness, with female students demonstrating higher mindfulness levels, consistent with research by Shao and Skarlicki (2019), which suggested that women may have more developed mindfulness due to different cognitive and emotional processes.

Lastly, marital status was found to significantly influence social anxiety, with married individuals showing lower levels of social anxiety than their unmarried counterparts. This supports the idea that being in a committed relationship offers social support that may buffer against social anxiety (Maniam et al., 2016). Single respondents were more likely to have higher levels of social anxiety, possibly because of loneliness and a lack of emotional support, echoing findings from Dykstra et al. (2004).

Conclusion

The study aims to investigate the moderating influence of mindfulness on the link between emotional intelligence and social anxiety among university students, as well as demographic differences in these factors. A correlational study design was

used with a sample of 400 students from various universities in Islamabad. The findings revealed a significant inverse correlation between emotional intelligence and social anxiety, indicating that higher emotional intelligence is associated with lower social anxiety. Mindfulness played a moderating role in the relationship between self-emotion appraisal and social anxiety, enhancing emotional regulation in social settings. However, mindfulness did not significantly influence other emotional appraisals. Gender was found to moderate the relationship between emotion regulation and social anxiety, highlighting the complex role of gender in emotional processes. Additionally, higher education levels were linked to greater emotional intelligence, while gender impacted mindfulness, and marital status influenced social anxiety. These findings underscore the importance of enhancing emotional intelligence and mindfulness to reduce social anxiety, while also considering demographic factors in therapeutic interventions and future research.

Limitations

The present study has several limitations. Firstly, the survey method with a correlational design may reduce internal validity, suggesting future studies adopt a mixed-method approach. Second, all participants were from universities in Pakistan's capital, limiting diversity; future research should include institutions from other regions. Third, the small sample size from only a few Islamabad universities restricts the generalizability of the findings, warranting a larger sample in future studies. Lastly, reliance on self-reported data may have led to more favorable outcomes; future research should incorporate qualitative designs and experimental approaches to thoroughly examine emotional intelligence and social anxiety.

Implications of the Study

These findings have various applications. First, they highlight the significance of programs aiming at improving emotional intelligence abilities among university students, as these skills might serve as protective factors against social anxiety. Furthermore, encouraging mindfulness techniques might help students control

their emotional reactions and reduce anxiety-related suffering in social circumstances. Understanding the gender-specific effect on emotional regulation and its impact on social anxiety might lead to gender-specific therapies.

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