BODY IMAGE IMPACTS SOCIAL ANXIETY: EXAMINE THE CHAIN MEDIATION OF FEAR OF NEGATIVE SELF EVALUATION AND EMOTIONAL SELF-REGULATION IN COLLEGE STUDENTS

Zeeshan Manzoor[1], Gulshan Ali[2], Uzma Nadeem[3], Syeda Manal Fatima[4*], Sana Sultan[5]

[1]MS Clinical Psychology, Department of Professional Psychology, Bahria University Lahore Campus, Pakistan.
[2]Clinical Psychologist, Punjab AIDS Control Program, Primary and Secondary Health Care Department, Pakistan.
[3]MS Clinical Psychology, Riphah Institute of Clinical and Professional Psychology, Riphah International University Lahore, Pakistan.
[4*]Ph.D. Clinical Psychology, Faculty of Humanities and Social Sciences, University of Central Punjab, Lahore, Pakistan.
[5]MS Clinical Psychology, Riphah Institute of Clinical and Professional Psychology, Riphah International University Lahore, Pakistan.

*Corresponding Author: Syeda Manal Fatima
*Email: manalfatima543@gmail.com

Abstract
Pakistani college students are facing immediate issues regarding social anxiety, which requires our attention. The aim of this study is to improve understanding of the contributing factors and mechanisms related to social anxiety by investigating how a poor physical self-image affects social anxiety, as well as the mediating effects of fear of negative evaluation and emotional self-regulation. In this investigation, 924 students from Pakistani colleges completed evaluations that measured negative physical self-image, fear of negative evaluation, emotional self-regulation, and social anxiety. SPSS 26.0 performed the statistical analysis, and we made use of the Bootstrap method to determine the importance of the mediating effects.

The findings showed a solid positive link between a poor physical self-image and social anxiety in college students. The relationship was found to have independent mediating effects from fear of negative evaluation and emotional self-regulation. In addition, these two conditions created a bidirectional chain mediation relationship between social anxiety and negative physical self-image.

This study offers important understanding of how negative body image affects social anxiety in Pakistani college students, showing that judgment fear and emotional self-regulation are key mediators. The findings supply a base for policymakers and educators to design special interventions that help reduce social anxiety among college students.

Keywords: Self-Image, Physical Appearance, Mediation, Emotional Health, College Students

Introduction

Body image, a multifaceted concept involving perceptions, thoughts, and attitudes about one's physical appearance, is a crucial factor influencing an individual's psychological well-being. Research has increasingly highlighted the connection between body image dissatisfaction and social anxiety, a condition characterized by intense fear of being negatively judged in social interactions (Schlenker & Leary, 1982). This anxiety can significantly impact social functioning, academic performance, and overall quality of life, particularly among college students, who often experience heightened body image concerns due to societal and peer pressures (Levinson & Rodebaugh, 2012).

In Pakistan, especially in Punjab, cultural expectations regarding physical appearance are deeply ingrained, influenced by traditional values, family dynamics, and the media's portrayal of idealized beauty standards (Farooq & Batool, 2020). College students in Punjab, navigating both modern and traditional societal norms, often experience elevated levels of self-consciousness and fear of negative evaluation based on their appearance. This fear of being judged, combined with the inability to manage emotional responses, may exacerbate social anxiety symptoms (Iqbal & Dar, 2021).

The aim of this study is to investigate the chain mediation effects of fear of negative self-evaluation and emotional self-regulation in the relationship between body image and social anxiety among college students in Punjab, Pakistan. Understanding these relationships is critical, as fear of negative self-evaluation and difficulties with emotional regulation are common in individuals with poor body image, which may contribute significantly to social anxiety (Hofmann, 2007). Despite the growing global attention to this issue, research exploring these factors in the specific cultural context of Pakistan remains limited. Therefore, this study addresses this gap by examining how body image concerns in college students are linked to social anxiety and mediated by fear of negative evaluation and emotional regulation deficits.

Literature Revie

Body Image and Social Anxiety

The relationship between body image and social anxiety has been extensively explored in various cultural contexts, suggesting a robust association between body dissatisfaction and elevated levels of social anxiety (Levinson & Rodebaugh, 2012). Social anxiety, which involves fear of negative evaluation and avoidance of social situations, is particularly influenced by concerns about physical appearance (Cash & Fleming, 2002). For college students, societal pressure to conform to certain beauty standards often exacerbates body dissatisfaction, making them more vulnerable to experiencing social anxiety (Schlenker & Leary, 1982). Studies conducted in different parts of the world have found that individuals who are dissatisfied with their appearance are more likely to exhibit symptoms of social anxiety (Levinson et al., 2013).

In the Pakistani context, research indicates that societal and familial expectations significantly influence body image concerns (Farooq & Batool, 2020). These pressures may be particularly intense in Punjab, where traditional and conservative views on beauty and appearance persist alongside increasing exposure to globalized beauty standards. Studies have shown that Pakistani youth, especially young women, are highly concerned with body image, often resulting in increased anxiety and depression (Iqbal & Dar, 2021). However, there is a lack of research specifically focusing on how these body image concerns translate into social anxiety in Pakistani college students, which this study aims to address.

Fear of Negative Evaluation as a Mediator

Fear of negative evaluation is a core feature of social anxiety and refers to an individual's apprehension about being judged unfavorably by others (Weeks et al., 2005). This fear is heightened in individuals with poor body image, as they may assume that their appearance will be critically evaluated by their peers. Several studies have identified fear of negative evaluation as a significant mediator between body image concerns and social anxiety (Reilly et al., 2019). Individuals with body dissatisfaction often experience heightened sensitivity to perceived judgment, which can amplify their

social anxiety symptoms (Rodebaugh et al., 2004). In Pakistani culture, where communal reputation and external judgments are of great importance, fear of negative evaluation may play an even more significant role in linking body image dissatisfaction with social anxiety (Farooq & Batool, 2020).

Emotional Self-Regulation as a Mediator

Emotional self-regulation, the ability to manage and control emotional responses to stressors, is another critical factor influencing social anxiety (Gross & John, 2003). Individuals with poor body image often experience difficulty in regulating negative emotions, which can increase their vulnerability to social anxiety (Aldao et al., 2010). Emotional self-regulation helps individuals manage anxiety-inducing situations, and deficits in this ability can lead to heightened anxiety and avoidance behaviors. Research has shown that individuals with social anxiety disorder often struggle with emotional regulation, particularly in social settings (Hofmann, 2007).

In the Pakistani context, emotional self-regulation may be further complicated by cultural norms that discourage the open expression of emotions, particularly in men (Iqbal & Dar, 2021). College students with body image concerns who struggle to regulate their emotions may therefore be more prone to developing social anxiety. This study will explore the mediating role of emotional self-regulation in the relationship between body image and social anxiety in college students in Punjab, adding to the existing literature on emotional regulation in different cultural contexts.

Research Gap

In summary, previous research highlights the strong connections between body image dissatisfaction, fear of negative evaluation, emotional self-regulation, and social anxiety. However, studies examining these relationships in the specific cultural context of Punjab, Pakistan, remain limited. The present study aims to fill this gap by exploring the chain mediation of fear of negative evaluation and emotional self-regulation in the link between body image and social anxiety among college students. This research will provide valuable insights for mental health professionals and educators to develop culturally relevant interventions aimed at reducing social anxiety in this population.

Hypotheses

1. **H1**: There is a positive relationship between poor body image and social anxiety in college students.
2. **H2**: Fear of negative self-evaluation mediates the relationship between poor body image and social anxiety in college students.
3. **H3**: Emotional self-regulation mediates the relationship between poor body image and social anxiety in college students.
4. **H4**: Fear of negative self-evaluation and emotional self-regulation form a chain mediation effect between poor body image and social anxiety, where poor body image increases fear of negative evaluation, which, in turn, negatively affects emotional self-regulation, leading to higher levels of social anxiety.

Methodology

This section outlines the methodology used in the present study, which aimed to investigate the relationship between poor physical self-image and social anxiety, as well as the mediating effects of fear of negative evaluation and emotional self-regulation, among Pakistani college students.

Participants

The study sample consisted of 924 college students from various educational institutions in Pakistan. Participants were selected using a convenience sampling method, ensuring representation across gender, age, and academic disciplines. The inclusion criteria required students to be currently enrolled in a college or university, be aged between 18 and 25, and have the ability to understand and respond to the questionnaires in either Urdu or English. Participants were informed of the study's objectives

and assured that their responses would be kept confidential. Informed consent was obtained from all participants prior to their involvement in the study.

Instruments

Four validated scales were administered to measure the variables of interest: negative physical self-image, fear of negative evaluation, emotional self-regulation, and social anxiety.

1. Negative Physical Self-Image: This was assessed using a self-report questionnaire designed to measure the degree of dissatisfaction with one's body. The items on this scale focused on individuals' perceptions and evaluations of their own physical appearance. A Likert-type response scale ranging from 1 (strongly disagree) to 5 (strongly agree) was employed.

2. Fear of Negative Evaluation Scale (FNE): Fear of negative evaluation was measured using the Fear of Negative Evaluation Scale (FNE), which consists of 12 items that assess the extent to which individuals fear being judged negatively by others (Watson & Friend, 1969). Participants responded on a 5-point Likert scale, where higher scores indicated a greater fear of negative evaluation.

3. Emotional Self-Regulation: Emotional self-regulation was assessed using the Emotional Regulation Questionnaire (ERQ), which measures individuals' ability to regulate and control their emotional responses (Gross & John, 2003). This scale includes items related to reappraisal and suppression strategies used to manage emotions, with responses rated on a 7-point Likert scale.

4. Social Anxiety: Social anxiety was measured using the Social Interaction Anxiety Scale (SIAS), a 20-item instrument that assesses the severity of social anxiety symptoms (Mattick & Clarke, 1998). Participants rated their responses on a 5-point scale, with higher scores indicating more severe social anxiety symptoms.

Procedure

Data collection took place over a period of three months. Participants were approached in their respective colleges, and after providing informed consent, they completed the questionnaire packets, which included all four scales mentioned above. The questionnaires were administered in both English and Urdu to accommodate participants' language preferences. Participants were given approximately 30 minutes to complete the questionnaires in a classroom or other quiet setting. To ensure anonymity, no identifying information was collected, and students were asked to place their completed surveys in sealed envelopes.

Statistical Analysis

The data were analyzed using IBM SPSS Statistics version 26.0. Descriptive statistics, including means and standard deviations, were calculated for all variables. Pearson correlation analysis was conducted to explore the relationships between poor physical self-image, fear of negative evaluation, emotional self-regulation, and social anxiety.

To test the mediation effects of fear of negative evaluation and emotional self-regulation, a Bootstrap method was applied using 5,000 resamples to determine the significance of indirect effects. Mediation analysis was performed using the PROCESS macro for SPSS (Hayes, 2013), which allows for the testing of multiple mediators in a single model. The total, direct, and indirect effects of poor physical self-image on social anxiety were examined, along with the mediating effects of fear of negative evaluation and emotional self-regulation.

A chain mediation model was also tested to examine whether fear of negative evaluation and emotional self-regulation had a bidirectional mediation effect on the relationship between body image and social anxiety. This model tested whether poor physical self-image influenced fear of negative evaluation, which in turn affected emotional self-regulation, ultimately leading to higher levels of social anxiety. Confidence intervals for the indirect effects were computed, and if they did not contain zero, the mediation was considered statistically significant.

Ethical Considerations

The study was conducted in accordance with the ethical guidelines outlined by the institutional review board (IRB) of the hosting university. Informed consent was obtained from all participants, and they were made aware of their right to withdraw from the study at any time without penalty. The privacy and confidentiality of participants were maintained by ensuring that no personal identifying information was collected, and data were stored securely. The potential risks of participating in the study were minimal, as the surveys were non-invasive and focused on general psychological constructs. However, participants were provided with contact information for counseling services should they experience any discomfort related to the study topics.

Results

Table 1 Descriptive Statistics (N= 924)

Variables	Mean	Standard Deviation
Body Image	3.12	0.87
Social Anxiety	4.21	0.92
Fear of Negative Evaluation	3.76	0.85
Emotional Self-Regulation	2.84	0.81

This table provides the descriptive statistics for the key variables in the study. The mean scores indicate that, on average, students reported moderately negative perceptions of their body image (Mean = 3.12), relatively high levels of social anxiety (Mean = 4.21), and moderate levels of fear of negative evaluation (Mean = 3.76). Emotional self-regulation, on average, was lower (Mean = 2.84), suggesting that participants generally had difficulties managing their emotions. These descriptive statistics set the stage for understanding how these variables relate to each other.

Table 2 Correlation Analysis

Variables	1	2	3	4
1. Body Image	-	0.58**	0.62**	-0.54**
2. Social Anxiety		-	0.58**	0.63**
3. Fear of Negative Evaluation			-	-0.48**
4. Emotional self-regulation				-

The correlation analysis reveals the strength and direction of the relationships between the variables. There is a significant positive correlation between poor body image and social anxiety (r = 0.58, p < 0.01), supporting H1 that negative perceptions of body image are associated with higher levels of social anxiety. Furthermore, body image is positively correlated with fear of negative evaluation (r = 0.62, p < 0.01) and negatively correlated with emotional self-regulation (r = -0.54, p < 0.01), indicating that students with poorer body image are more likely to fear negative judgment and have difficulties regulating emotions. Similarly, fear of negative evaluation and emotional self-regulation are strongly associated with social anxiety (r = 0.63, p < 0.01 and r = -0.59, p < 0.01, respectively), suggesting these variables play an important role in social anxiety.

Table 3 Mediation Analysis

Path	Indirect effect	p-value	LL	UL
Body Image -> Fear of Negative Evaluation -> Social Anxiety	0.26	.001	0.20	0.33
Body Image -> Emotional Self-Regulation -> Social Anxiety	0.18	.003	0.14	0.22

This table presents the mediation analysis, testing H2 and H3. Both mediators, fear of negative evaluation and emotional self-regulation, significantly mediate the relationship between poor body image and social anxiety. For H2, the indirect effect of poor body image on social anxiety via fear of negative evaluation is statistically significant (Indirect Effect = 0.26, p = 0.001), with a 95% confidence interval that does not include zero (CI = 0.20, 0.33), supporting the hypothesis that fear of negative evaluation mediates this relationship. For H3, the indirect effect of poor body image on social anxiety through emotional self-regulation is also significant (Indirect Effect = 0.18, p = 0.003), with a 95% confidence interval of (CI = 0.14, 0.22). This finding supports the hypothesis that emotional self-regulation mediates the relationship between body image and social anxiety.

Table 4 Chain Mediation Effect

Path	Indirect effect	p-value	LL	UL
Body Image -> Fear of Negative Evaluation -> Emotional Self-Regulation -> Social Anxiety	0.14	.002	0.09	0.20

The chain mediation analysis tests H4, which posits that fear of negative evaluation and emotional self-regulation form a sequential mediation pathway between poor body image and social anxiety. The results show a significant indirect effect (Indirect Effect = 0.14, p = 0.002), with a 95% confidence interval that does not include zero (CI = 0.09, 0.20). This finding supports the hypothesis that fear of negative evaluation leads to poorer emotional self-regulation, which then contributes to increased social anxiety. This chain mediation provides a more nuanced understanding of how these psychological factors interact to influence social anxiety in college students with poor body image.

Discussion
The current study aimed to explore the relationship between body image and social anxiety among college students in Pakistan, with a focus on the mediating effects of fear of negative evaluation and emotional self-regulation. The findings provide robust evidence supporting the hypothesis that poor body image is significantly associated with higher levels of social anxiety. Specifically, the analysis revealed that students with negative perceptions of their body image are more likely to experience social anxiety, which aligns with previous research that highlights the critical role of body image in mental health (Levinson & Rodebaugh, 2012). Furthermore, the mediation analysis confirmed that both fear of negative evaluation and emotional self-regulation significantly mediate this relationship. The positive correlation between body image and fear of negative evaluation suggests that individuals with poor body image are more likely to fear being judged unfavorably by their peers. This fear appears to exacerbate social anxiety symptoms, supporting earlier findings that indicate the importance of social evaluation concerns in the development of social anxiety (Weeks et al., 2005). The emotional self-regulation findings are particularly noteworthy. The negative correlation between body image and emotional self-regulation indicates that students with poor body image struggle to manage their emotional responses, leading to heightened anxiety in social situations. These insights emphasize the need for targeted interventions that enhance emotional regulation skills among students dealing with body image issues. Moreover, the chain mediation effect demonstrates the complexity of these relationships. The results suggest that fear of negative evaluation not only impacts social anxiety directly but also influences emotional self-regulation, which in turn contributes to social anxiety. This finding reinforces the idea that mental health interventions should address multiple psychological constructs simultaneously.

Recommendations
Based on the findings of this study, several recommendations are made:
1. Educational institutions should implement programs aimed at improving body image and reducing social anxiety among students. Workshops focusing on cognitive-behavioral strategies that enhance

emotional self-regulation and challenge negative self-evaluative thoughts could be particularly effective.

2. Colleges should bolster their counseling services, providing resources for students struggling with body image issues and social anxiety. Regular mental health screenings could help identify at-risk individuals early on.

3. Establishing peer support groups can create safe spaces for students to discuss body image concerns and social anxiety. Such programs could promote social connections and reduce feelings of isolation.

4. Awareness campaigns that highlight the importance of body positivity and mental health can help reduce stigma. These initiatives could educate students about the impacts of negative body image and encourage healthier self-perceptions.

5. Training programs for educators and staff on recognizing signs of social anxiety and body image issues can foster a supportive academic environment. This training can equip staff with tools to provide appropriate guidance and support.

Conclusion

In conclusion, this study provides valuable insights into the intricate relationships between body image, social anxiety, fear of negative evaluation, and emotional self-regulation among college students in Pakistan. The findings indicate that poor body image significantly contributes to increased social anxiety, with fear of negative evaluation and emotional self-regulation serving as crucial mediators in this relationship. Given the rising prevalence of social anxiety and body image concerns among youth, it is essential for educational institutions to prioritize mental health interventions that address these issues holistically. By fostering environments that promote healthy body image and effective emotional regulation, we can significantly enhance the overall well-being of college students. Future research should continue to explore these dynamics and evaluate the efficacy of various interventions aimed at mitigating social anxiety and improving body image in this population.

References

1. Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. Clinical Psychology Review, 30(2), 217-237. https://doi.org/10.1016/j.cpr.2009.11.004

2. Cash, T. F., & Fleming, E. C. (2002). The impact of body image experiences: Development of the body image quality of life inventory. International Journal of Eating Disorders, 31(4), 455-460. https://doi.org/10.1002/eat.10033

3. Cash, T. F., & Fleming, E. C. (2002). The impact of body image experiences: Development of the body image quality of life inventory. *International Journal of Eating Disorders, 31*(4), 455–460. https://doi.org/10.1002/eat.10033

4. Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.

5. Farooq, F., & Batool, I. (2020). The role of social media in shaping body image concerns among youth in Pakistan. Pakistan Journal of Psychological Research, 35(1), 12-24. https://doi.org/10.33824/PJPR.2020.35.1.12

6. Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. Journal of Personality and Social Psychology, 85(2), 348-362. https://doi.org/10.1037/0022-3514.85.2.348

7. Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348–362. https://doi.org/10.1037/0022-3514.85.2.348

8. Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

9. Hofmann, S. G. (2007). Cognitive factors that maintain social anxiety disorder: A comprehensive model and its treatment implications. Cognitive Behaviour Therapy, 36(4), 193-209. https://doi.org/10.1080/16506070701421313

10. IBM Corp. (2019). *IBM SPSS Statistics for Windows, Version 26.0.* Armonk, NY: IBM Corp.

11. Iqbal, H., & Dar, S. (2021). Emotional regulation and psychological well-being: An exploration among Pakistani youth. Journal of Behavioral Sciences, 31(2), 103-119.

12. Levinson, C. A., & Rodebaugh, T. L. (2012). Social anxiety and eating disorder comorbidity: The role of negative social evaluation fears. Eating Behaviors, 13(1), 27-35. https://doi.org/10.1016/j.eatbeh.2011.11.006

13. Mattick, R. P., & Clarke, J. C. (1998). Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. *Behaviour Research and Therapy, 36*(4), 455–470. https://doi.org/10.1016/s0005-7967(97)10031-6

14. Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879–891. https://doi.org/10.3758/BRM.40.3.879

15. Reilly, E. E., Rapp, A. M., & Levinson, C. A. (2019). Fear of negative evaluation and eating pathology: A meta-analysis and systematic review. Clinical Psychology Review, 70(1), 27-40. https://doi.org/10.1016/j.cpr.2019.04.003

16. Rodebaugh, T. L., Woods, C. M., & Heimberg, R. G. (2004). The dimensional structure of the fear of negative evaluation scale: A reevaluation. Journal of Anxiety Disorders, 18(5), 541-555. https://doi.org/10.1016/j.janxdis.2003.07.005

17. Schlenker, B. R., & Leary, M. R. (1982). Social anxiety and self-presentation: A conceptualization model. Psychological Bulletin, 92(3), 641-669. https://doi.org/10.1037/0033-2909.92.3.641

18. Watson, D., & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of Consulting and Clinical Psychology, 33*(4), 448–457. https://doi.org/10.1037/h0027806

19. Weeks, J. W., Heimberg, R. G., & Rodebaugh, T. L. (2005). The fear of positive evaluation scale: Assessing a proposed cognitive component of social anxiety disorder. Journal of Anxiety Disorders, 22(1), 44-55. https://doi.org/10.1016/j.janxdis.2007.08.002