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Relationship between Impostor Phenomenon, Rumination, and Burnout among University Students

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ABSTRACT

University students face considerable academic and psychological pressure that can affect their mental health and academic functioning. Among the psychological challenges reported in higher education, the impostor phenomenon, a persistent belief that one's achievements are undeserved, has been linked to ruminative thinking and emotional exhaustion. This study examined the relationships among the impostor phenomenon, rumination, and burnout among 309 university students in Pakistan using a quantitative cross-sectional design. The sample was selected by non-probability convenience sampling in private and government universities of Sialkot. The data were collected through standardized measures such as Clance Impostor Phenomenon Scale, Ruminative Responses Scale, Copenhagen Burnout Inventory. The analysis of the data was carried out descriptively and Pearson product-moment correlation analyses were conducted using IBM SPSS Statistics Version 21. Pearson product-moment correlation analysis revealed a significant positive relationship between the impostor phenomenon and rumination ($r = .54, p < .01$). However, neither the impostor phenomenon nor rumination showed a significant relationship with burnout. These findings suggest that cultural and social factors, particularly family co-residence and collectivist support structures common among Pakistani students, may buffer the progression from self-doubt and rumination toward burnout. The study contributes to the limited literature on student mental health in South Asian contexts and highlights impostor-related rumination as a meaningful target for university mental health interventions.

Keywords: Impostor Phenomenon, Rumination, Burnout, University Students, Pakistan, Mental Health

Introduction

Mental health challenges among university students have become a subject of growing concern in contemporary clinical and educational psychology. As students transition into



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higher education, they encounter an increasingly demanding academic environment characterized by intensified performance expectations, evaluative pressures, and competitive academic culture that collectively exert considerable strain on their psychological well-being (Eisenberg et al., 2009). The modern university setting, while offering opportunities for intellectual and personal growth, simultaneously exposes students to chronic stressors that can compromise their emotional functioning and academic engagement. In Pakistan, where higher education is often associated with significant familial investment, social status, and career aspirations, these pressures are further amplified by collectivist cultural norms and high parental expectations (Rasool et al., 2021). Within this context, several psychological constructs have emerged as particularly relevant to understanding student distress, among which the impostor phenomenon, rumination, and burnout have each received growing empirical attention. The present study seeks to examine these three constructs in an integrated framework, with specific focus on the associations among the impostor phenomenon, rumination, and burnout among university students.

Among these challenges, the impostor phenomenon, a persistent, privately held conviction that one's academic achievements are undeserved and attributable to external factors such as luck rather than genuine competence, has emerged as a significant psychological stressor in higher education settings (Clance & Imes, 1978). Students experiencing impostor feelings characteristically fear being exposed as intellectually fraudulent despite objective evidence of their success.

Closely linked to the impostor phenomenon is rumination, defined as a repetitive, passive focus on negative thoughts and feelings (Nolen-Hoeksema, 1991). Research suggests that self-doubt can activate cycles of ruminative thinking, which in turn may intensify psychological distress. Burnout, characterized by emotional exhaustion, reduced motivation, and diminished academic efficacy, represents a potential downstream outcome of chronic psychological stress in student populations (Maslach et al., 2001).

Academic burnout is increasingly prevalent among university students globally, driven by rising workloads, intensifying performance expectations, and the erosion of adequate coping resources (Salmela-Aro et al., 2009). Within Pakistani universities, Shah et al. (2022) documented significant levels of emotional exhaustion and academic disengagement among students, attributing these outcomes to excessive academic demands, limited institutional mental health support, familial performance pressures, and the absence of effective coping strategies.

Although these constructs have been studied extensively in Western contexts, limited attention has been paid to their interrelationships within South Asian higher education settings. Pakistani university students face distinctive pressures, including competitive grading systems, elevated parental expectations, and limited access to formal mental health resources, which may shape the psychological dynamics of impostorism, rumination, and burnout in culturally specific ways.

Cultural consideration

Cultural context plays a fundamental role in shaping the psychological experiences of university students, and the constructs of impostor phenomenon, rumination, and burnout are no exception. In collectivist societies such as Pakistan, where academic achievement is deeply intertwined with family honor, social identity, and communal expectations, the psychological burden placed upon students extends far beyond individual ambition (Hofstede, 1980). Understanding how these three constructs manifest within the Pakistani cultural framework is therefore essential for both the theoretical grounding and



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practical relevance of the present study.

Significance of the Current Study

The present study is significant because it examines the relationship between impostor phenomenon, rumination, and burnout among university students, three interrelated psychological constructs that are increasingly prevalent in higher education. In today's competitive academic environment, students often experience persistent self-doubt despite objective achievements, making the impostor phenomenon an important yet frequently overlooked contributor to reduced confidence and academic functioning (Clance & Imes, 1978; Sakulku & Alexander, 2011). The study further contributes to the literature by examining rumination as a cognitive correlate of impostor feelings and burnout. Repetitive negative thinking is known to intensify anxiety and depression (Nolen-Hoeksema, 2000), yet its role in linking impostor phenomenon with burnout among university students remains underexplored. Understanding these associations can inform interventions targeting maladaptive cognitive patterns to reduce emotional exhaustion and improve students' psychological well-being.

The study is particularly relevant in the Pakistani context, where empirical research on these variables remains limited despite cultural influences such as collectivism, high parental expectations, and societal achievement pressures that may intensify impostor feelings and stress. The findings can support the development of culturally relevant psychological practices, educational policies, and university counseling services by informing cognitive-behavioral interventions that address maladaptive thought patterns and promote adaptive coping (Beck, 1976). Moreover, by integrating Cognitive-Behavioral Theory and Response Styles Theory, the study provides a theoretical framework for understanding how cognitive distortions and maladaptive coping contribute to burnout. Overall, this research bridges an important gap in the literature and offers practical implications for promoting students' mental health, academic success, and overall well-being.

Research Question

The present study sought to (1) examine the relationship between the impostor phenomenon and rumination, (2) investigate the association between the impostor phenomenon and burnout, and (3) explore the relationship between rumination and burnout among university students in Pakistan.

Method

Research Design

A quantitative cross-sectional survey design was employed to examine the associations among the impostor phenomenon, rumination, and burnout at a single point in time. This approach allowed for simultaneous assessment of the three psychological variables through correlational analysis.

Participants

The sample comprised 309 university students (73.5% female; 26.5% male) recruited from Pakistani universities through convenience sampling. Participants ranged in age from 18 to 29 years. The majority were enrolled in undergraduate programs (82.8%), with 17.2% pursuing graduate degrees. Inclusion criteria required current enrollment in a degree program and willingness to participate voluntarily. Students under 18 years of age or those providing incomplete responses were excluded.



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Instruments

Clance Impostor Phenomenon Scale (CIPS). A 20-item self-report measure assessing impostor feelings on a 5-point Likert scale. Higher scores indicate stronger impostor tendencies ($\alpha = .834$). Ruminative Responses Scale (RRS). A 21-item scale assessing the tendency toward repetitive, passive focus on negative thoughts and feelings using Likert-type items ($\alpha = .869$). Copenhagen Burnout Inventory (CBI). The Personal Burnout subscale measures generalized physical and emotional exhaustion using six Likert-type items ($\alpha = .754$).

Procedure and Data Analysis

Data were collected via in-person and online questionnaires after obtaining written informed consent. Participants were assured of confidentiality and voluntary participation. Completed responses were entered into IBM SPSS Statistics for analysis. Pearson product-moment correlation analysis was used to examine the bivariate associations among the impostor phenomenon, rumination, and burnout.

Results

All three instruments exceeded the minimum reliability threshold of $\alpha \geq .70$. Table 1 presents the demographic characteristics of the sample, Table 2 presents the reliability coefficients for the study scales, and Table 3 presents the descriptive statistics and correlation matrix for the study variables.

Table 1

Frequencies and Percentages of the Demographic Variables (N = 309)

Demographic Variables	N	%
Gender		
Male	82	26.5
Female	227	73.5
Age		
18–20	115	37.2
21–24	182	58.9
25–29	12	3.9
Degree Program		
Undergraduate	256	82.8
Graduate	53	17.2
Department		
Psychology	159	51.5
Business Administration	62	20.1
Medical/Health Sciences	44	14.2
Arts/Humanities	23	7.4
Other	21	6.8
Residence		
With Family	293	94.8
Hostel	11	3.6
Other	5	1.6
Family System		
Nuclear	167	54.0
Joint	115	37.2



Note. n = frequency; % = percentage of total sample.

Table 2

Psychometric Properties of Variables

Psychometric properties of Study Variables (N = 309)

Scale	No. of Items	M	SD	Range	α
Imposter Phenomenon (IP)	20	62.72	11.99	31–97	.834
Rumination	21	55.50	11.24	25–88	.869
Burnout	6	15.79	4.22	6–28	.754

Note. M = Mean; SD = Standard Deviation; α = Cronbach's Alpha.

Table 2 presents the internal consistency estimates for all three scales used in the present study. The reliability of each scale was assessed using Cronbach's alpha (α), with the recommended minimum threshold of .70 as suggested by Nunnally (1978). The Imposter Phenomenon scale, comprising 20 items, demonstrated good internal consistency (α = .834).

Similarly, the Rumination scale, consisting of 21 items, yielded good reliability (α = .869). The Burnout scale, with 6 items, produced an acceptable reliability coefficient (α = .754). All three scales surpassed the minimum acceptable threshold, confirming that the measures used in this study are psychometrically sound and reliable for assessing their respective constructs within the current sample.

Table 3

Correlation Analysis among Imposter Phenomenon, Rumination, and Burnout (N = 309)



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Variable	M	SD	1	2	3
1. Impostor Phenomenon	62.72	55.50	—		
2. Rumination				—	
3. Burnout	11.99	11.24	.54**	—	—
	15.79	4.22	.024	-.002	

Results indicated that Imposter Phenomenon was significantly and positively correlated with Rumination ($r = .54, p < .01$), suggesting that higher levels of imposter feelings are associated with greater ruminative thinking. However, Imposter Phenomenon did not show a significant correlation with Burnout ($r = .024, p = .668$), and similarly, Rumination was not significantly correlated with Burnout ($r = -.002, p = .973$). These findings indicate that while imposter phenomenon and rumination share a meaningful relationship, their independent associations with burnout were not statistically significant in this sample.

Based on these results, the hypothesis that Imposter Phenomenon would positively predict Rumination was supported. However, the hypothesized relationships between Rumination and Burnout, and between Imposter Phenomenon and Burnout, were not supported by the data.

Discussion

The present study investigated the relationships among the impostor phenomenon, rumination, and burnout in a sample of 309 Pakistani university students. The most robust finding was a significant positive association between impostor feelings and rumination ($r = .54, p < .01$), consistent with Nolen-Hoeksema's (1991) Response Styles Theory. Students who persistently doubt the legitimacy of their achievements appear reliably disposed toward ruminative cognitive processing, a pattern that aligns with theoretical accounts of rumination as a maladaptive response style (Nolen-Hoeksema et al., 2008; Treynor et al., 2003).

The absence of significant relationships between the impostor phenomenon and burnout, and between rumination and burnout, represents a notable divergence from some findings in the broader literature on impostor feelings and student mental health (Cokley et al., 2013). The overwhelming majority of participants resided with family members (94.8%), situating them within collectivist social structures that may provide ongoing emotional buffering against the psychological sequelae of self-doubt. Communal support and the normalization of academic pressure within Pakistani educational culture may further attenuate the pathway from ruminative cognition to burnout.

The cross-sectional design of the study is inherently limited in capturing burnout relationships that may emerge only through the temporal accumulation of psychological strain. The brevity of the Personal Burnout subscale and the relatively young age of the sample may also have reduced sensitivity to burnout symptoms. These findings extend Response Styles Theory to a South Asian context and highlight the importance of cultural moderators in determining whether cognitive vulnerabilities translate into clinically meaningful psychological outcomes.

Future research should employ longitudinal designs and domain-specific burnout measures, such as the Maslach Burnout Inventory–Student Survey, and should explicitly assess social support and cultural appraisal processes, potentially including tests of mediation or moderation, to more fully capture the conditions under which the impostor phenomenon may contribute to burnout in Pakistani university populations.



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Conclusion

This study found that impostor feelings were significantly and positively associated with rumination among Pakistani university students, but neither impostor feelings nor rumination were significantly associated with burnout. These findings suggest that family co-residence and collectivist support structures may buffer Pakistani students against the burnout-related consequences of self-doubt and ruminative thinking, and they underscore impostor-related rumination as a meaningful, modifiable target for university mental health interventions.

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