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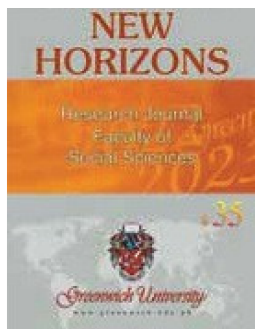


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Editorial Note

It is with great pleasure that we present Volume 19, Issue 2 (July–December 2025) of the *New Horizons* Research Journal of Greenwich University. This issue brings together a diverse collection of scholarly contributions that address contemporary challenges and emerging discourse across multiple academic domains.

The articles featured in this volume explore critical themes shaping contemporary psychological and educational discourse. These include “Association of Depression, Anxiety and Stress on Suicidal Ideation among Medical Aspirants in Hyderabad, Sindh”, a timely investigation into the mental health burden faced by pre-admission medical candidates; “The Impact of Cyberbullying Victimization on Suicidal Ideation, Depression, Anxiety, and Stress among Young Adolescents”, which examines the psychological toll of online victimization among youth; and “Performance Evaluations Systems in Higher Education Institutions in Pakistan: Faculty Perceptions and Perspectives”, offering an in-depth look at faculty assessment practices across Pakistani universities. Further enriching this issue, the article “Psychological Distress, Eating Styles, and Emotional Dysregulation Among Pakistani Psychology and Non-Psychology University Students” explores the interplay between distress, disordered eating, and emotion regulation among university students, while “Influence of Social Isolation on the Severity and Progression of Schizophrenia Among Young Adults” contributes an important clinical perspective on the role of social support in schizophrenia management.

We extend our sincere gratitude to our esteemed Chancellor, Dr. Seema Mughal, and Pro Vice-Chancellor, Dr. Naveed Ahmed Mughal, for their continuous guidance and commitment to advancing research excellence. Our heartfelt thanks to the Editorial Advisory Board for their dedicated efforts, and to all authors whose valuable scholarship has made this issue possible.

We hope this volume inspires further research, dialogue, and innovation within the academic community.

Dr. Ambreen Atiq

Editor

New Horizons

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Association of Depression, Anxiety and Stress on Suicidal Ideation among Medical Aspirants in Hyderabad, Sindh

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ABSTRACT

Medical aspirants preparing for competitive entrance examinations frequently experience intense academic pressure and psychological distress, increasing their vulnerability to suicidal ideation. Depression, anxiety, and stress have each been identified as significant contributors to suicidal risk through distinct psychological pathways. Depression elevates suicidal vulnerability through persistent hopelessness and negative self-perception that diminish the will to live. Anxiety contributes through chronic physiological arousal and psychological entrapment, the felt impossibility of escaping an aversive situation which research recognizes as a direct precursor to suicidal motivation. Stress, when perceived demands consistently exceed coping resources, produces emotional exhaustion that intensifies both depressive and anxious symptoms, further compounding suicidal risk. Despite growing literature on enrolled medical students, their combined effect among pre-admission candidates in Pakistan remains insufficiently examined. The present study therefore aimed to examine the association between depression, anxiety, stress, and suicidal ideation among medical aspirants; determine the prevalence of psychological distress; explore gender-based differences; and identify the strongest predictor of suicidal ideation. A quantitative cross-sectional design was adopted with data collected from 200 medical aspirants in Hyderabad, Sindh, using the DASS-21 and SIDAS. Non-parametric procedures were employed due to non-normal data distributions. Anxiety emerged as the most prevalent concern affecting 69% of participants, followed by depression at 44%. Spearman's correlation confirmed a significant positive association between combined psychological distress and suicidal ideation. Multiple regression identified anxiety as the strongest predictor, followed by depression, while stress showed a suppressed effect. The model explained 23.8% of variance in suicidal ideation, emphasizing the urgent need for early psychological screen-

ing and mental health interventions within preparatory institutions in Pakistan.

Keywords: *depression, anxiety, stress, suicidal ideation, medical aspirants, Pakistan*

Introduction

Mental health is a fundamental component of overall well-being that significantly influences academic performance, emotional stability, and social functioning. Students enrolled in highly competitive educational programs are particularly vulnerable to psychological distress due to academic pressure, performance expectations, and uncertainty regarding future careers. Among these groups, medical aspirants preparing for medical college entrance examinations experience exceptionally high levels of stress, as admission into medical institutions is intensely competitive and socially valued in Pakistan.

Depression has consistently been identified as a significant risk factor for suicidal ideation. Research demonstrates that individuals experiencing depressive symptoms including hopelessness, anhedonia, and feelings of worthlessness are at substantially elevated risk of suicidal thoughts (Naseem & Munaf, 2017; Bilal & Riaz, 2020). A 2024 Pakistani study of medical students across seven colleges in Peshawar similarly identified depression as a prevalent and clinically significant concern, with multiple risk factors compounding its severity in academically demanding environments (Gul et al., 2024). Among students, academic failure, prolonged uncertainty, and perceived incompetence are known to trigger depressive episodes that may escalate into suicidal ideation, particularly when social support is limited. Bilal and Riaz (2020) specifically established that depression mediates the relationship between academic stress and suicidal ideation among MDCAT repeaters, positioning it as a central psychological pathway through which environmental stressors translate into suicidal risk.

Anxiety, though frequently studied alongside depression, also independently predicts suicidal ideation. Persistent worry, physiological

arousal, and anticipatory fear core features of anxiety contribute to psychological entrapment and a sense of inescapability, which are among the most well-documented cognitive precursors to suicidal ideation (O'Connor & Kirtley, 2018). Students preparing for highly competitive examinations such as the MDCAT frequently experience performance anxiety that extends beyond ordinary academic nervousness, becoming chronic, functionally impairing, and difficult to manage without professional support. Several Pakistani studies report anxiety as more prevalent than depression in medical student populations (Alvi et al., 2010; Nadia & Tanvir, 2019), suggesting it may be the more immediate psychological threat in this context. A 2023 validation study of the DASS-21 among Pakistani frontline doctors similarly found markedly elevated anxiety levels relative to depression and stress, reinforcing the consistency of this pattern across different Pakistani healthcare-adjacent populations (Nadeem et al., 2023). Stress, as conceptualized within the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), arises when perceived environmental demands exceed an individual's perceived coping resources. For medical aspirants, stressors include prolonged study hours, fear of failure, parental expectations, and social comparison with peers. Chronic stress has been linked to emotional exhaustion and reduced problem-solving capacity, and when sustained over time, it may generate or worsen both depression and anxiety, thereby indirectly contributing to suicidal ideation.

A 2025 Pakistani study examining undergraduate medical students found that perceived stress was significantly associated with broader psychological distress, and that lifestyle and behavioral factors meaningfully influenced stress levels in this population, underscoring that stress in medical education contexts is shaped by a wide array of interacting factors (Ahmed et al., 2025). Understanding whether stress operates as a direct predictor or primarily through its effects on depression and anxiety is one of the central questions motivating the present study.

The co-occurrence of depression, anxiety, and stress creates a compounded psychological burden that may amplify suicidal risk beyond what any single variable can explain alone. The Integrated Motivational–

Volitional Model (O'Connor & Kirtley, 2018) theorizes that feelings of defeat, entrapment, and hopelessness outcomes of prolonged psychological distress serve as direct precursors to suicidal ideation. This theoretical framework provides a meaningful basis for examining how the confluence of these three variables contributes to suicidal thinking among academically stressed students, and for determining which variable exerts the most proximal influence. Recent Pakistani research has also begun to examine early-life contributors to this vulnerability; a 2025 study at a public sector medical university in Lahore found that adverse childhood experiences significantly predicted poorer mental health outcomes among medical students, while protective childhood factors buffered against this risk, suggesting that psychological vulnerability in medical education populations may have roots extending well before the academic pressures of entrance examinations even begin (Ali et al., 2025). Despite growing literature on mental health among medical students in Pakistan, limited research has specifically examined the interrelationship of depression, anxiety, and stress on suicidal ideation among medical aspirants preparing for entrance examinations. Most studies have focused on enrolled medical students rather than pre-admission candidates. This distinction is important because aspirants occupy a particularly vulnerable position, they bear the pressures of medical education without yet having access to the institutional support systems available to enrolled students. The present study therefore addresses a meaningful research gap by investigating the association of depression, anxiety, and stress on suicidal ideation among medical aspirants in Hyderabad, Sindh, while also identifying which of these three variables poses the greatest predictive risk.

Research Objectives

The objectives of the present study were:

1. To examine the association between combined levels of depression, anxiety, and stress and suicidal ideation among medical aspirants in Hyderabad, Sindh.

2. To determine the prevalence of moderate to severe levels of depression, anxiety, stress, and suicidal ideation in this population.
3. To explore gender-based differences in psychological distress and suicidal ideation among medical aspirants.
4. To identify the strongest psychological predictor of suicidal ideation among depression, anxiety, and stress.

Research Hypotheses

H₁: There will be a significant positive relationship between the combined levels of depression, anxiety, stress and suicidal ideation among medical aspirants.

H₂: There will be a high prevalence of moderate to severe levels of depression, anxiety, stress, and suicidal ideation among medical aspirants.

H₃: Female medical aspirants will report significantly higher levels of depression, anxiety, stress, and suicidal ideation compared to their male counterparts.

H₄: Anxiety will emerge as the strongest unique predictor of suicidal ideation in comparison to depression and stress.

Literature Review

Depression, anxiety, and stress are frequently documented psychological concerns among students pursuing medical careers, and each has been individually and collectively linked to suicidal ideation. However, the nature and relative strength of these relationships vary considerably across studies, and the literature reflects ongoing debate regarding which variable exerts the most direct influence on suicidal thoughts. This section reviews the evidence for each variable separately, drawing particularly on recent Pakistani research, before examining their combined effects and the theoretical frameworks that explain these relationships.

Depression and Suicidal Ideation

Depression has received the most consistent empirical support as a predictor of suicidal ideation. Arif et al. (2021) reported alarmingly high rates of depression among medical students in Pakistan, with 26.9% experiencing extremely severe symptoms, a finding that underscores the clinical significance of depressive disorders in academically demanding environments. This pattern has continued to be documented in more recent Pakistani research; Gul et al. (2024), in a conducted cross-sectional investigation across seven medical colleges in Peshawar, identified depression as a significant and prevalent concern among medical students and highlighted multiple compounding risk factors, including academic workload and limited institutional support, that intensify depressive symptomatology in this population. Bilal and Riaz (2020) specifically examined MD- CAT repeaters and found that depression significantly mediated the relationship between academic stress and suicidal ideation, suggesting that repeated academic failure does not directly produce suicidal thoughts but rather does so through the accumulation of depressive symptoms. This positions depression as the primary psychological pathway through which examination stress converts into suicidal risk. Furthermore, Mir et al. (2024) reported that depression was moderately prevalent among medical undergraduates and significantly associated with suicidal ideation, reinforcing the central role of depressive symptoms. Beck's (1979) cognitive model further explains this mechanism: students who interpret academic setbacks through the lens of permanence and personal inadequacy develop hopelessness, which is among the most proximal cognitive precursors to suicidal ideation.

Adding a developmental dimension to this picture, Ali et al. (2025), conducted study at a public sector medical university in Lahore, found that adverse childhood experiences significantly predicted poorer mental health outcomes among medical students, including elevated depressive symptoms, while the presence of protective childhood factors was associated with better outcomes. This finding suggests that depressive vulnerability among medical students and aspirants may not originate solely from the immediate academic environment but may instead be shaped

by earlier developmental experiences that interact with present-day academic stressors to produce the depression observed in cross-sectional studies such as the present one.

Anxiety and Suicidal Ideation

Anxiety presents a more complex and arguably more urgent picture. While some studies treat anxiety as secondary to depression in the prediction of suicidal ideation, others indicate it may be the more proximal risk factor in academic contexts. Alvi et al. (2010) found that 72.4% of medical students experienced anxiety compared to only 35.1% who reported depression a substantially higher prevalence and noted that anxiety was more strongly associated with immediate academic impairment and distress. This pattern of disproportionately elevated anxiety has been corroborated in more recent Pakistani work; Nadeem et al. (2023), in a 2023 study validating the DASS-21 among frontline doctors in Pakistan during the COVID-19 pandemic, found that 70.2% of respondents reported significant anxiety symptoms, with anxiety reaching severe levels even as depression and stress remained at comparatively moderate levels. Although conducted among practicing doctors rather than aspirants, this finding is notable because it confirms that anxiety tends to manifest more acutely than depression or stress within Pakistani medical and healthcare-adjacent populations under conditions of sustained professional or academic pressure, a pattern directly relevant to the present study's MDCAT aspirant sample. Unlike depression, anxiety is marked by hyperarousal and anticipatory fear rather than low mood and withdrawal. These symptoms can rapidly intensify suicidal crises by increasing feelings of uncontrollability. Nadia and Tanvir (2019) similarly found anxiety to be the most prevalent psychological concern among medical students, and at higher rates among female students. Naseem and Munaf (2017) further demonstrated that anxiety, when combined with depression and stress, was associated with the lowest life satisfaction and highest suicidal ideation scores across student groups. Taken together, the evidence suggests that anxiety may warrant greater clinical attention than depres-

sion as an immediate trigger of suicidal thoughts in examination-stressed populations.

Stress and Suicidal Ideation

Stress occupies a different and somewhat contested position in this literature. Most studies treat stress as an environmental antecedent or contextual amplifier rather than a direct psychological predictor of suicidal ideation. Mohi Ud Din et al. (2022) documented that academic and psychosocial stressors significantly elevated perceived stress among medical students, particularly among younger and female students; however, their study did not establish a direct pathway from stress to suicidal ideation independent of depression or anxiety. This interpretation is consistent with the Transactional Model (Lazarus & Folkman, 1984), which frames stress not as an intrinsic pathological condition but as a perceptual and transactional response that leads to other psychological states. A 2025 cross-sectional study of undergraduate medical students across several Pakistani medical colleges examined the relationship between physical activity, perceived stress, and broader mental health outcomes, finding that elevated stress levels were closely intertwined with depression and anxiety symptoms rather than operating as an isolated concern, and that behavioral interventions such as physical activity showed potential for reducing this combined psychological burden (Ahmed et al., 2025). This recent finding lends further support to the view that stress functions as an interconnected component of a broader psychological distress system rather than as an independent pathway to suicidal ideation. Hussain et al. (2021) further found that parental relationship quality moderated stress levels among medical students, suggesting that the home environment is a meaningful but underexamined contributor to psychological distress. Sarwar et al. (2024), in a study of 353 MBBS students, found that psychological distress and depression were the more proximal predictors of suicidal ideation, while general stress functioned more as a background condition. These findings collectively raise the question of whether stress retains unique predictive value for suicidal ideation once depression and anxiety are statistically accounted for.

Gender Differences in Psychological Distress

Gender differences in psychological distress have produced inconsistent findings across the literature. Nadia and Tanvir (2019) and Sarwar et al. (2024) both reported that female medical students experienced higher levels of depression, anxiety, and overall psychological distress compared to males. Mohi Ud Din et al. (2022) similarly found that female and younger students reported higher stress levels. However, Bilal and Riaz (2020) found that gender did not significantly moderate the relationship between academic stress and suicidal ideation, and Imran et al. (2022) noted that mental health intervention outcomes did not differ meaningfully by gender in Pakistani sample. This inconsistency in the literature makes gender comparison a necessary but carefully interpreted dimension of the present study.

Theoretical Integration and Research Gap

The theoretical frameworks reviewed above converge on a shared prediction: that the co-occurrence of depression, anxiety, and stress will produce suicidal ideation at a rate greater than any single variable alone. The IMV Model (O'Connor & Kirtley, 2018) maps defeat and hopelessness properties of depression onto the motivational origins of suicidal thought, while entrapment, a quality amplified by anxiety intensifies the desire to escape. Joiner's Interpersonal Theory of Suicide (Van Orden et al., 2010) further adds that perceived burdensomeness and thwarted belongingness both of which are psychologically probable in a student who fears disappointing their family, reinforce suicidal desire when combined with hopelessness. Ibrahim et al. (2013), in a systematic review of depression in university students worldwide, confirmed that academic populations globally carry elevated depressive symptom rates, making Pakistani aspirants part of a broader international pattern of academically driven psychological risk.

Despite this theoretical convergence and the growing body of recent Pakistani research from 2023 to 2025, no published study has examined all three variables simultaneously as predictors of suicidal ideation among pre-admission medical aspirants in Sindh, Pakistan specifically.

The existing literature, including the most recent studies reviewed above, has focused predominantly on enrolled medical students, practicing doctors, or general university populations, and has rarely used regression to isolate the independent contribution of each variable within the unique pre-admission examination context. The present study is designed to address this gap directly.

Research Methodology Research Design

A quantitative, cross-sectional research design was employed in the present study. This approach was selected because it allows standardized measurement of psychological variables across a large sample at a single point in time, making it both practical and appropriate for examining prevalence and associations in a defined population.

Sample and Sampling Technique

A total of 200 medical aspirants aged between 16 and 20 years were included in the study, comprising 100 males and 100 females. Participants were selected using a random sampling technique to ensure equal gender representation and to minimize selection bias. The target sample of 200 was guided by the requirements of multiple regression analysis with three predictors, where a minimum of 50 participants per predictor is considered adequate for stable regression estimates (Field, 2018), and an equal gender split was deliberately maintained to allow valid gender comparisons.

Participants were recruited from college-level preparatory academies and FSc pre-medical institutions in Hyderabad, Sindh; specifically, from institutions offering intermediate-level science education (Grades 11–12) and dedicated MD- CAT preparation programs. Both in-person and online data collection methods were employed. In-person recruitment allowed direct access to students attending physical academies, ensuring representativeness of those in structured preparatory environments. Online data collection via

Google Forms extended the reach to students who were self-studying or enrolled in digital preparatory platforms, capturing a broader segment

of the aspirant population that would otherwise have been excluded. This dual approach ensured the sample was not limited to a single mode of preparation and improved the diversity and representative-ness of the findings.

Inclusion and Exclusion Criteria

Participants were eligible for inclusion if they were between 16 and 20 years of age, were appearing for the MD- CAT for the first time, and were able to read and comprehend English. The restriction to first-time aspirants was deliberate: students who had already attempted and failed the MDCAT carry a substantially different psychological burden that of documented academic failure which would have introduced a confounding variable into the analysis and prevented clean generalization to the broader aspirant population.

Regarding the exclusion of individuals with pre-existing physical illness, diagnosed psychiatric disorders, or neurological conditions: this information was obtained through a direct self-report item on the Demographic Information Form, which asked participants whether they had any previously diagnosed medical or psychological condition. Participants who answered affirmatively were excluded from the final analysis. While this approach relies on self-disclosure rather than clinical verification a limitation acknowledged in the limitations section, it is consistent with standard practice in community-based psychological research where formal clinical screening is not feasible.

Research Instruments

Demographic Information Form.

A researcher constructed demographic questionnaire collected background information including age, gender, socioeconomic status, area of residence, family type, academic status, mode of MDCAT preparation, daily study hours, living arrangement, parental education level, history of diagnosed conditions, and prior experience of suicidal ideation. The final item was used for descriptive purposes only and was not included in inferential testing.

Depression, Anxiety, Stress Scale–21 (DASS-21). The

DASS-21 (Lovibond & Lovibond, 1995) is a 21-item self-report instrument assessing the severity of depression, anxiety, and stress symptoms over the preceding week. Each subscale contains seven items rated on a four-point Likert scale ranging from 0 (did not apply to me at all) to 3 (*applied to me very much or most of the time*). *The scale*

has demonstrated strong internal consistency and construct validity across clinical and non-clinical populations, and has been used extensively in Pakistani mental health research, facilitating meaningful comparison across studies (Bilal & Riaz, 2020; Naseem & Munaf, 2017; Arif et al., 2021). Although originally published in 1995, the DASS-21 has not been formally revised by its authors; however, its psychometric properties have been independently affirmed across more than two decades of international validation, justifying its continued use. The scale was administered in English, consistent with the study's language-based inclusion criterion, and no translation or structural modification was made.

Suicidal Ideation Attributes Scale (SIDAS). The SIDAS

(van Spijker et al., 2014) is a five-item self-report measure assessing suicidal ideation across five dimensions: frequency, controllability, closeness to an attempt, distress, and functional interference. Each item is rated on an 11-point scale (0–10), with higher scores indicating greater ideation severity. The SIDAS has demonstrated strong reliability and validity in community-based samples.

Procedure and Statistical Analysis

Following approval from the research supervisor and relevant institutional authorities, data were collected both in person at preparatory institutions in Hyderabad and on-line through Google Forms. Participants were informed of the study's purpose, and written informed consent was obtained prior to participation. Confidentiality and anonymity were strictly maintained throughout the data collection process.

Statistical analyses were performed using IBM SPSS Statistics Version 25. Normality was assessed using the Shapiro–Wilk and Kolmogorov–Smirnov tests, which returned significant results for all variables, indicat-

ing non-normal distributions. Non-parametric procedures were therefore employed: Spearman's rank-order correlation to examine associations, Mann-Whitney U tests for gender comparisons, and multiple regression analysis to identify unique predictors of suicidal ideation. Descriptive statistics and prevalence frequencies were also computed.

Ethical Considerations

This study was conducted in full accordance with the ethical standards of the American Psychological Association (APA, 2020). All participants received a written explanation of the study's aims, procedures, and voluntary nature before providing informed consent. Given the sensitive subject matter specifically the inclusion of questions about suicidal ideation particular care was taken to use clinically validated, non-alarmist instrument language throughout. Participants were free to withdraw at any point without consequence, and no personally identifying information was collected or retained. The study adhered throughout to the principles of beneficence, nonmaleficence, respect for autonomy, and justice.

Results

Demographic Analysis

Table 1 presents the demographic characteristics of the 200 participants. The majority (81%) were aged 16 to 18 years, with the remaining 19% between 19 and 20. The sample was equally divided by gender by design. Most participants came from middle-class backgrounds (83%) and resided in urban areas (70%). Notably, 25% of participants reported having experienced suicidal thoughts at some point in the past, underscoring the clinical relevance of this population.

Table 1*Descriptive Characteristics of Participants (N = 200)*

Variable	Category	<i>n</i>	%
Age	16–18 years	162	81.0
	19–20 years	38	19.0
Gender	Male	100	50.0
	Female	100	50.0
Socioeconomic status	Lower class	14	7.0
	Middle class	166	83.0
	Upper class	20	10.0
City of residence	Urban	140	70.0
	Rural	34	17.0
	Mixed	26	13.0
Prior suicidal ideation	Yes	50	25.0
	No	150	75.0
Total		200	100.0

Descriptive Statistics

Table 2 presents the means and standard deviations for all psychological variables. Anxiety recorded at the highest mean ($M = 4.59$, $SD = 0.67$), followed by depression ($M = 4.10$, $SD = 0.88$) and stress ($M = 3.37$, $SD = 1.33$). Suicidal ideation ($M = 1.18$, $SD = 0.41$) was comparatively lower but clinically meaningful given the population context.

Regarding age, the 16–18 year group showed slightly higher mean anxiety and stress scores than the 19–20 year group, consistent with findings by Mohi Ud Din et al. (2022), who reported that younger medical students tend to experience greater stress, possibly reflecting the relatively limited coping experience of younger aspirants. Given the unequal group sizes, this observation is offered descriptively rather than as an inferential finding.

Table 2

Descriptive Statistics of Psychological Variables (N = 200)

Variable	<i>M</i>	<i>SD</i>
Depression severity	4.10	0.88
Anxiety severity	4.59	0.67
Stress severity	3.37	1.33
Suicidal ideation severity	1.18	0.41

Hypothesis Testing

Hypothesis 1. A Spearman's rank-order correlation was computed between the total DASS-21 score and the total SIDAS score. Results revealed a statistically significant moderate positive association, $r(198) = .437$, $p < .001$ (Table 3), supporting H_1 . Higher combined levels of depression, anxiety, and stress were significantly associated with greater suicidal ideation severity among medical aspirants.

Table 3

Spearman's Rank-Order Correlation Between Psychological Distress and Suicidal Ideation (N = 200)

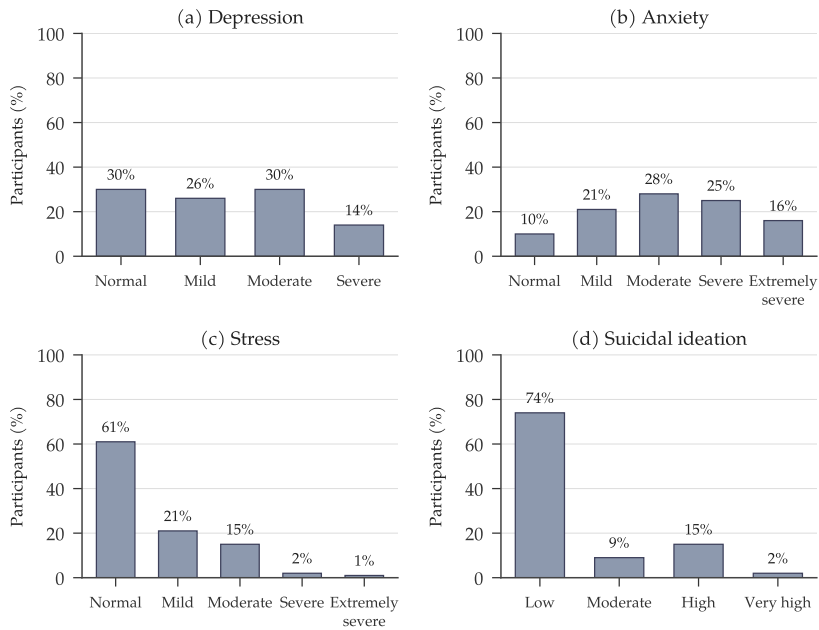
Variables	ρ	p (2-tailed)
Total DASS-21 $\times$ Total SIDAS	.437**	.000

Note. ρ = Spearman's rank correlation coefficient. ** $p < .01$.

Hypothesis 2. Prevalence analysis using DASS-21 severity cut-off scores revealed that 44% of participants experienced moderate to severe depression, 69% reported moderate to extremely severe anxiety, 18% experienced moderate to severe stress, and 26% reported moderate to very high suicidal ideation. Anxiety was the most widespread concern, affecting nearly seven in ten participants at a clinically significant level, thereby supporting H_2 . Prevalences are shown in Figure 1.

Figure 1

Prevalence of Depression, Anxiety, Stress and Suicidal Ideation Severity Levels (N = 200)



Hypothesis 3. Mann–Whitney U tests examined gender differences across all four variables. Female participants recorded higher mean ranks than males on all measures; however, differences in depression ($p = .193$), stress ($p = .147$), and suicidal ideation ($p = .305$) were not statistically significant. Anxiety approached significance ($p = .050$). H_3 is not supported. Results are presented in Table 4.

Table 4

*Mann–Whitney U Test Results for Gender Differences in Psychological Variables
(N = 200)*

Variable	Male mean rank	Female mean rank	<i>U</i>	<i>z</i>	<i>p</i>
Depression	95.20	105.80	4470.0	−1.30	.193
Anxiety	92.52	108.48	4202.0	−1.96	.050
Stress	94.58	106.42	4408.0	−1.45	.147
Suicidal ideation	97.18	103.82	4668.0	−1.03	.305

Note. Female participants recorded higher mean ranks on all variables; differences were non-significant except for anxiety, which approached significance.

Hypothesis 4. Multiple regression was conducted with anxiety, depression, and stress as predictors and SIDAS total score as the outcome. The overall model was significant, $F(3, 196) = 20.421, p < .001, R^2 = .238$, indicating that the three predictors together accounted for 23.8% of the variance in suicidal ideation. Anxiety was the strongest unique predictor ($\beta = .372, p < .001$), followed by depression ($\beta = .343, p = .002$). Stress contributed a significant but negative coefficient ($\beta = -.247, p = .022$) when anxiety and depression were statistically controlled, supporting H_4 . Results are presented in Table 5.

Table 5*Multiple Regression Coefficients for Predictors of Suicidal Ideation (N = 200)*

Predictor	β	p
Anxiety	0.372	< .001
Depression	0.343	.002
Stress	−0.247	.022

Note. $R = .488$, $R^2 = .238$; $F(3, 196) = 20.421$, $p < .001$. β = standardised regression coefficient.

Discussion

The present study examined the association of depression, anxiety, and stress with suicidal ideation among MDCAT aspirants in Hyderabad, Sindh. Overall, the findings provide a coherent understanding of psychological distress within this under-researched population and offer important implications for suicide prevention. The results also align with recent mental health research, positioning the study within current scholarly evidence.

The significant positive correlation between overall psychological distress and suicidal ideation ($r = .437$, $p < .001$) indicates that the combined presence of depression, anxiety, and stress substantially increases suicide risk. This finding is consistent with Bilal and Riaz (2020), Naseem and Munaf (2017), and Ahmed et al. (2025), all of whom reported that these psychological factors interact rather than operate independently. The findings also support the Integrated Motivational–Volitional Model (O'Connor & Kirtley, 2018), which proposes that prolonged experiences of defeat and entrapment contribute to the development of suicidal ideation.

Depression was a significant predictor of suicidal ideation ($\beta = .343$, $p = .002$), with 44% of participants reporting moderate-to-severe depressive symptoms. This finding is consistent with previous Pakistani studies reporting high rates of depression among medical students (Arif et al., 2021; Sarwar et al., 2024; Gul et al., 2024). Ali et al. (2025) further sug-

gest that adverse childhood experiences may contribute to depression, indicating that depressive symptoms among MDCAT aspirants may reflect both current academic stress and earlier developmental experiences. Beck's Cognitive Theory (1979) provides a useful explanation, proposing that negative interpretations of academic setbacks foster hopelessness, a well-established precursor of suicidal ideation.

Anxiety emerged as the strongest predictor of suicidal ideation ($\beta = .372, p < .001$), with 69% of participants reporting moderate-to-extremely severe anxiety. This prevalence exceeded depression and was consistent with previous Pakistani studies (Alvi et al., 2010; Nadia & Tanvir, 2019; Nadeem et al., 2023). These findings suggest that anxiety is particularly pronounced in high-stakes academic environments. Unlike depression, anxiety is characterized by persistent threat perception and hyperarousal, which may intensify feelings of entrapment and increase suicidal risk. This finding further supports the Integrated Motivational-Volitional Model, as the continuous demands of MDCAT preparation may leave students feeling unable to escape academic pressure.

Stress demonstrated a negative standardized coefficient after controlling for anxiety and depression ($\beta = -.247, p = .022$), reflecting a statistical suppression effect rather than a protective influence. Once anxiety and depression were accounted for, stress no longer independently predicted suicidal ideation. This finding is consistent with the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), which conceptualizes stress as a process that contributes to downstream emotional responses. Similarly, Ahmed et al. (2025) found that stress operates within a broader network of psychological distress rather than as an independent risk factor. These findings suggest that interventions targeting stress alone are unlikely to reduce suicidal risk unless they simultaneously address anxiety and depression.

Female participants reported higher mean scores across all psychological variables, although these differences were not statistically significant. This finding is consistent with Bilal and Riaz (2020), while remaining directionally similar to studies reporting greater psychological distress among female medical students (Nadia & Tanvir, 2019; Sarwar et al.,

2024). The lack of significant gender differences may reflect the shared academic demands and similar examination pressures experienced by all participants during MDCAT preparation.

Conclusion

This study examined the relationship between depression, anxiety, stress, and suicidal ideation among MDCAT aspirants in Hyderabad, Sindh. The findings demonstrated that combined psychological distress was significantly associated with suicidal ideation ($r = .437, p < .001$), confirming that depression, anxiety, and stress collectively increase suicide risk. Anxiety emerged as the strongest predictor of suicidal ideation, followed by depression, while stress showed a suppression effect after controlling the other variables. Psychological distress was highly prevalent, with 69% of participants reporting moderate-to-extremely severe anxiety, 44% reporting moderate-to-severe depression, and 26% experiencing clinically significant suicidal ideation. Gender differences were not statistically significant, suggesting that both male and female aspirants experience comparable levels of psychological distress during MDCAT preparation.

Despite employing validated instruments and appropriate statistical analyses, the study has several limitations. The cross-sectional design limits causal inference, the exclusion of participants with psychiatric conditions relied on self-report, and the findings are limited to aspirants from Hyderabad, reducing generalizability. In addition, important factors such as parental pressure, coping strategies, social support, and previous academic performance were not examined. Future research should employ longitudinal, multi-site, and mixed-methods designs while incorporating broader psychosocial and developmental factors.

Overall, the findings highlight that MDCAT aspirants represent a psychologically vulnerable population, with anxiety constituting the most prominent risk factor for suicidal ideation. These results underscore the need for routine mental health screening, accessible counseling services, and evidence-based psychoeducational interventions within preparatory

institutions to support students' psychological well-being and reduce suicide risk during high-stakes academic preparation.

Recommendations

Preparatory institutions and MDCAT academies should introduce routine psychological screening at the beginning of each preparation cycle to identify students at elevated risk before distress reaches crisis levels. Counseling services should be established within these institutions, not only at universities and should be explicitly framed as confidential and non-stigmatizing to encourage uptake among young people who may fear judgment. Given the central role of anxiety identified in this study, workshops specifically addressing examination anxiety, cognitive restructuring, and stress tolerance should be integrated into preparatory curricula rather than offered as optional supplements. Parents and guardians should be included in mental health awareness programs, as the evidence consistently indicates that parental expectations and family dynamics shape aspirants' psychological experiences in powerful and often underestimated ways. At the policy level, the structural conditions created by the MDCAT examination system specifically the concentration of an entire medical career trajectory onto a single examination for very young students with very limited support merit scrutiny from health and education policymakers. Future research should examine additional variables including academic self-efficacy, social support, coping strategies, and family communication patterns, using longitudinal and mixed-methods designs to build a more complete picture of risk and resilience in this population.

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The Impact of Cyberbullying Victimization on Suicidal Ideation, Depression, Anxiety, and Stress among Young Adolescents

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ABSTRACT

The present study sought to investigate the relationship between cyberbullying victimization and suicidal ideation, depression, anxiety and stress of youth in Pakistan. A quantitative correlational research design was used with a sample of 50 adolescents who were drawn using convenience sampling techniques from some schools of Hyderabad and Jamshoro. The Cyberbullying Victimization Scale (CVS), Depression Anxiety Stress Scale (DASS-21), and the Suicidal Ideation Questionnaire (SIQ-A) were used to gather data. The statistical analysis comprised descriptive statistics, Pearson correlation and independent samples t-test in SPSS version 26. The results showed that there were strong positive correlations among cyberbullying victimization, depression, anxiety and stress.

However, there was no significant correlation between victimization by cyberbullying and suicidal thinking. Gender differences identified male adolescents had significantly higher depression scores, while no significant difference was found in cyberbullying victimization, thoughts of suicide, anxiety and stress. The study underscores the psychological effects of cyberbullying and the need for preventive measures, digital awareness, counseling, and parental guidance to safeguard the mental health of adolescents. Keywords: Cyberbullying, Adolescents, Depression, Anxiety, Stress, Suicidal Ideation

Introduction

Adolescents' social lives have been dramatically changed by the quick development of digital communication technologies and social networking sites around the world. Facebook, Instagram, TikTok, Snapchat and WhatsApp are now core ways for young people to communicate with

each other. These technologies offer avenues for communication, learning and social connection, but also have helped to create cyberbullying as a serious psychological and social problem.

Cyberbullying is defined as repeated and deliberate aggressive behavior that is done using electronic technologies with the intent to harm, humiliate or threaten someone. Cyberbullying may happen constantly and anonymously via the internet, making it easier for the target to not be able to get away from the bully. This is especially the case for adolescents, as they are deeply into digital communication and social networking.

Cyberbullying is a growing phenomenon that has triggered psychological issues to be a major concern in psychological research. Cyberbullying may cause emotional distress, social isolation, low self-esteem, fear, and psychological maladjustment in the victim(s). Research has linked cyberbullying victimization to depression, anxiety, stress and suicidal ideation in the lives of adolescents. Long-term exposure to bullying in the online environment could have negative effects on emotional health and disrupt healthy psychological growth.

Pakistan is experiencing a smartphone revolution and internet access among the adolescent population, which has intensified adolescents' exposure to online risks, such as cyberbullying. Although cyberbullying is becoming increasingly common, there is limited empirical research that examines the psychological effects of cyberbullying on adolescents.

In the Pakistani sociocultural scenario. Adolescents may experience and react to online victimization in ways shaped by their culture, family, religious beliefs and social norms. This study was conducted to explore the association between cyberbullying victimization and mental health outcomes (suicidal ideation, depression, anxiety and stress) among youth aged 13 to 16 years. The gender differences were also analyzed.

An understanding of the psychological impact of cyberbullying could help to create mental health services in schools, awareness-raising initiatives and strategies to prevent cyberbullying.

Literature Review

Cyberbullying has become one of the most important psychosocial problems among adolescents in the digital era. Cyberbullying is currently defined by researchers as an act of aggression that uses digital technology to harass, threaten, embarrass or socially exclude a person using on-line communication.

Hinduja and Patchin (2010) revealed that teenagers who suffer from cyberbullying are more likely to report emotional distress and ideas of suicide than teens who do not report cyberbullying.

In a similar fashion, Bauman et al. (2013) found strong correlations between bullying, cyberbullying and suicidal behaviors among high school students.

Cyber-bullying can have a significant impact on adolescent mental health, as noted by Nixon (2014), victims may suffer from depression, hopelessness, low self-esteem, and emotional instability. Campbell et al. (2012) also reported that cyberbullying,

One of the common reactions of victims is anxiety and fear because of the threat of further harassment. According to Kowalski, et al., (2014) research found that youth cyberbullying is related to several emotional dysfunctions. Likewise, Livingstone and Smith (2014) concluded that online dangers and digital aggression have a significant impact on adolescents' psychological health.

In Pakistan, the study conducted by Ilyas et al (2020) revealed that there was a significant relationship between cyberbullying and depression among the adolescents and self-esteem acts as a moderating variable. Waqas et al. (2019) also cited that adolescents of both genders in Pakistan are at risk of online harassment.

The current research is based upon two fundamental psychology theories. The first is General Strain Theory (Agnew, 1992) that states that negative or stressful events can cause emotional stress, which can result in psychological issues including depression and stress. Cyberbullying victimization can thus be a continuous source of emotional stress for adolescents.

The other theoretical approach is the Interpersonal Theory of Suicide of Joiner (2005). This theory is that suicidal ideation occurs as a result of perceived burdensomeness and thwarted belongingness. In some instances, the emotional isolation and social rejection that can result from cyberbullying can lead to suicidal thoughts.

While there has been a lot of research on cyberbullying and its consequences on mental health internationally, there is sparse research that focuses on these variables specifically regarding Pakistani adolescents.

Research Methodology Research Design

The study adopted a quantitative correlational research design to examine psychological outcomes and the relationship between cyberbullying victimization and psychological outcomes among adolescents.

Participants

A total of 50 adolescents from schools of Hyderabad and Jamshoro were sampled by convenience sampling techniques. Both men and women students participated.

Demographic Characteristics

Of the participants, 52% were boys and 48% were girls. The sample included middle-class socioeconomic status most of the participants. Most participants were in the 10th grade of study.

Cyberbullying victims indicated that they had been targeted on various social media platforms, such as Snapchat, WhatsApp, Facebook, Instagram, TikTok, and other online apps.

Instruments

Cyberbullying Victimization Scale (CVS)

Adolescent cyberbullying victimization was measured using a scale, the Cyberbullying Victimization Scale.

Depression Anxiety Stress Scale (DASS-21)

Adolescent depression, anxiety and stress symptoms were assessed using the DASS-21.

Suicidal Ideation Questionnaire (SIQ-A)

A self-reported instrument (SIQ-A) was used to evaluate suicidal ideation in participants.

Procedure

Data collection was carried out with permission from all the relevant school authorities. The purpose of the research and confidentiality of responses was explained to the participants. Informed consent was obtained before administration of questionnaires.

The Demographic form and the psychological scales were filled in at classroom level. The data were gathered and analyzed in SPSS program (version 26).

Statistical Analysis

The data obtained was analyzed by descriptive statistics, Pearson product-moment correlation coefficient and independent samples t-test. The level of $p < .05$ was used to determine statistical significance.

Results

Demographic Information

A sample of 50 adolescents, 26 boys, and 24 girls, was used. Most of the participants were from middle socioeconomic status and attending 10th grade.

Social networking apps were reported as the most common platforms for cyberbullying experiences, followed by Snapchat and WhatsApp, Facebook, Instagram, and other social networking apps.

Table 1*Demographic Characteristics of Participants (N = 50)*

Variable	Category	Frequency	%
Gender	Boys	26	52
	Girls	24	48
Grade level	8th grade	6	12
	10th grade	44	88
Socioeconomic status	Lower middle class	6	12
	Middle class	44	88

Table 2*Platforms on Which Participants Experienced Cyberbullying (N = 50)*

Platform	Frequency	%
Facebook	6	12
Instagram	6	12
Snapchat	14	28
TikTok	6	12
WhatsApp	14	28
Other social networking apps	4	8
Total	50	100

Note. The label for the final category was missing in the manuscript and has been supplied from the accompanying text; percentages are calculated on $N = 50$.

Relationship between Cyberbullying, Victimization and Suicidal Ideation

The Pearson correlation analysis showed that there was no strong and statistically significant relationship between cyberbullying victimization and suicidal ideation ($r = -.149, p = .303$). The results indicated that there was no significant relationship between cyberbullying victimization and suicide ideation among the adolescents of the current study.

Relationship between Cyberbullying, Victimization and Depression

The results showed that there was a positive statistical correlation between victimization of cyberbullying and depression ($r = .315, p = .026$). Those who were cyberbullied more in adolescence had more depressive symptoms. Relationship between Cyberbullying Victimization and Anxiety

The results showed that there was a significant positive relationship between cyberbullying victimization and anxiety ($r = .456, p = .001$). This suggests that teens who were exposed to cyberbullying did have a higher rate of anxiety symptoms.

Stress

There was a positive association between cyberbullying victimization and stress that was statistically significant ($r = .338, p = .016$). Adolescents experienced more stress when they were involved in cyberbullying victimization at a higher level.

Table 3

Correlations Between Cyberbullying Victimization and Psychological Variables (N = 50)

Variables	1	2	3	4	5
1. Cyberbullying victimization	—				
2. Suicidal ideation	-.149	—			
3. Depression	.315*		—		
4. Anxiety	.456**			—	
5. Stress	.338*				—

Note. Only correlations with cyberbullying victimization were computed; remaining cells were not reported in the original analysis. * $p < .05$. ** $p < .01$.

Gender Differences in Cyberbullying Victimization

Pearson correlation analysis showed that there was a weak negative correlation, but it was not statistically significant, between cyberbullying victimization and suicidal ideation ($r = -.149$, $p = .303$). Findings showed that, in this group, being a cyberbully victim was not significantly associated with suicidal ideation.

Gender Differences in Suicidal Ideation

There was no statistically significant difference between gender in suicidal ideation, $t(48) = -1.620$, $p = .112$. Women adolescent reported slightly higher suicidal ideation scores, but this was not statistically significant.

Gender Differences in Depression

The level of depression was found to differ between the genders with a statistically significant $t(48) = 2.447$.

$p = .018$. Depression symptoms were higher among male adolescents than female adolescents.

Gender Differences in Anxiety

The analysis showed that anxiety level did not differ between the genders, $t(48) = 1.846, p = .071$.

Gender Differences in Stress

There was no statistically significant difference between levels of stress for the genders, $t(48) = -0.208, p = .836$. The level of stress was similar among girls and boys in adolescence.

Table 4

Gender Differences in Psychological Variables (N = 50)

Variable	Male mean	Female mean	<i>t</i>	<i>p</i>
Cyberbullying victimization	35.61	33.83	0.640	.525
Suicidal ideation	79.15	84.91	-1.620	.112
Depression	17.38	14.75	2.447	.018
Anxiety	17.61	15.67	1.846	.071
Stress	15.00	—	-0.208	.836

Note. $df = 48$ for all comparisons. The female mean for stress was not reported in the manuscript; the *t* and *p* values for stress are those given in the text.

Discussion

The current study explored the association between cyberbullying victimization and suicidal ideation, depression, anxiety and stress among youth in grade 10. The results give valuable insights into the psychological effects of cyberbullying in Pakistan's context.

There was no significant relationship between cyberbullying victimization and suicidal ideation in the study. While various international studies have found important links between cyberbullying and suicidal ideation, the present results raise the possibility that cultural and social protective factors can impact the reactions of adolescents to experiences

of cyber victimization. However, due to the strong family support systems, religious beliefs, and collective social structure within the Pakistani society, it may decrease the chances of suicidal thoughts even if cyberbullying experiences happen.

There was a large positive association between cyberbullying victimization and depression. Increased levels of depressive symptoms were reported among adolescents who were exposed to online harassment. This is similar to previous research showing that cyberbullying contributes to adolescents feeling sad, hopeless, emotionally withdrawn, and low in self-esteem.

The results also showed that anxiety was significantly positively associated with cyberbullying victimization. Adolescents who reported more cyberbullying had more symptoms of anxiety. Ongoing exposure to cyber-aggression can contribute to fear, feelings of insecurity and emotional distress for victims.

Similarly, cyberbullying victimization was significantly associated with stress. Repeated online harassment caused adolescents to have higher levels of psychological stress. Cyberbullying can happen at any time, using digital technologies, which can cause on-going emotional pressure and psychological strain to victims.

The results on gender differences showed no significant differences between the male and female adolescents in terms of cyberbullying victimization, suicidal ideation, anxiety and stress. Male teens, however, had significantly higher rates of depression than female teens. This discovery could be attributed to the sociocultural norms that discourage boys from expressing emotions openly in Pakistani society.

The results corroborate the assumptions of the General Strain Theory, which argues that the negative effects of stressful experiences on emotional maladjustment and psychological distress. Cyberbullying may then be regarded as a long-term cause of psychological stress that can result in depression, anxiety and stress in adolescents.

The Interpersonal Theory of Suicide is another theory that can give insight into the relationship between cyberbullying and suicidal ideation. The authors of the current study did not see a connection between these

variables and suicidal risk, but the process of through-going humiliation and rejection may still be a risk factor for suicidal risk in more extreme cases.

In general, the results reflect that cyberbullying is a prominent psychological concern that has to be taken seriously in order for the mental health of adolescents to be protected. The findings also emphasize the need for a proactive approach, digital education initiatives, and psychological assistance to minimize the negative impact of cyberbullying.

Conclusion

The present research examined how cyberbullying victimization affected suicidal ideation, depression, anxiety and stress for young adolescents. The findings showed that cyberbullying victimization is a significant factor that increases the levels of depression, anxiety, and stress among adolescents. But there was no significant association between cyberbullying victimization and ideation of suicide. There were also some differences in psychological outcomes between men and women that were examined. No significant gender differences were found in cyberbullying victimization, suicidal ideation, anxiety, or stress, but males' adolescents reported significantly higher depression levels.

The findings highlight that cyberbullying is not only a digital or social problem, but also a significant psychological problem impacting on adolescents' emotional health. The study helps to contribute to the rising body of theory and research on cyberbullying and adolescent mental health in the context of Pakistan and emphasizes the need for prevention and awareness of mental health issues.

Recommendations

The following recommendations are made based on the results of the study:

1. Schools should implement digital safety education and anti-cyberbullying awareness education for teens.

2. Schools should provide counselling support to students who are psychologically affected by cyberbullying.
3. Parents need to stay open to talking with adolescents about their online activity and social media.
4. Intervention programs by mental health professionals that address emotional regulation, coping and awareness of cyberbullying should be developed.
5. Policy makers and educational authorities should enhance policies on cyber harassment and young people's on-line safety.
6. Larger and more representative samples from other areas in Pakistan should be included in future studies to enhance the generalizability of the results.
7. The long-term psychological effects of cyberbullying should be studied using longitudinal and mixed method research designs.

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Performance Evaluations Systems in Higher Education Institutions in Pakistan: Faculty Perceptions and Perspectives

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ABSTRACT

At higher education institutions, faculty members are considered significant, as their roles suggest direct influence on the economy, student output as well as industry. This is the reason that institutes at tertiary level have continuously been pressurized for quality assurance and governance structures for performance evaluations. In this respect, faculty evaluation become both need of the time as well as integral to bring in necessary changes. Although teacher evaluations have been in practice since long, its influence and use at higher education sector is not without challenges. In Pakistan, institutes of higher education have come a long way and there has been evidences of mandatory practices that are directed by higher education commission to standardized teacher professional standard and overall institutional performance. In this respect, various tools and sources of input are in place at HEIs. For this study, faculty perceptions and perspectives regarding faculty performance evaluation practices within HEIs in Pakistan were analysed using input from faculty themselves, heads of departments, quality assurance representatives and content analysis of policy documents. It was found that multiple sources for faculty performance are being used within HEIs in Pakistan with relatively positive attitude towards implementation of practices and the overall implication of the process. In addition, there were some reflections with respect to institutional goal alignment and limited resources. It was suggested, therefore, to have flexible, comprehensive as well as more inclusive evaluation process rather than rigid and a mere formal exercise within institutes. The study was a small-scale effort to identify core tools and sources of input being practiced within HEIs in terms of faculty evaluations and recommendations are hoped to support academic, management as well as quality assurance decisions.

Keywords: *Performance Evaluation System, Higher Education Institutes, Faculty Performance, Faculty perceptions, Faculty evaluation and tools*

Introduction

Performance evaluation is widely recognized as a systematic process to assess employee performance against predefined standards or prior achievements (Erdogan, 2002; Huynh & Sajjad, 2018). It remains a critical tool for measuring employee productivity, competencies, and supporting managerial decision-making (Mirza & Sherjeel, 2018). In higher education institutions, particularly universities, performance evaluation plays a vital role in guiding faculty development, institutional planning, and allocation of academic resources (Shagrir, 2012; Goe et al., 2012).

In the Pakistani higher education context, performance evaluation has become increasingly structured due to the regulatory role of the Higher Education Commission (HEC), which has introduced formal quality assurance mechanisms such as Institutional Performance Evaluation (IPE) and Quality Enhancement Cells (QECs) to ensure accountability and continuous improvement (Higher Education Commission [HEC], 2023). Recent policy reforms, including the Undergraduate Education Policy 2023 and ongoing digital transformation initiatives, highlight the growing emphasis on measurable academic outcomes and institutional ranking systems (HEC, 2023; Khan et al., 2024). However, empirical studies (2024–2025) indicate that performance evaluation practices in Pakistani universities still face significant challenges. These include over-reliance on quantitative indicators such as publications and impact factors, limited consideration of teaching quality and community engagement, and concerns regarding procedural transparency (Ahmed & Raza, 2024; Khan et al., 2024). Furthermore, issues related to governance, inconsistent implementation of evaluation criteria, and lack of standardized feedback mechanisms reduce the effectiveness and credibility of appraisal systems (Ali et al., 2023).

Despite its importance, effective implementation of performance evaluation requires transparency, fairness, and employee trust (Cokins, 2004). In practice, many university appraisal systems remain confidential, with insufficient feedback provided to faculty members, leading to perceptions of bias and limited developmental impact (Huynh & Sajjad,

2018; Ali et al., 2023). Additionally, performance evaluations are often conducted as annual, summative exercises, which restrict opportunities for continuous professional growth (Alboushra et al., 2015). Contemporary research therefore emphasizes the need for more formative, participatory, and continuous evaluation approaches to enhance faculty performance and institutional quality in Pakistan's evolving higher education landscape.

Like any other organizations, Higher Education Institutions (HEIs) are responsible for effective implementation of management processes, student development as well as quality academic practices (Abro & Rashidi, 2012). In this respect, role and performance of faculty members are significant (Shakir & Adeeb, 2014). There is an increasing focus on teacher evaluation and rewarding them based on their performance (Khan et al, 2017). However, according to the World Bank Group, evaluation of teaching and learning is weak (IEG, 2017; Akram & Zepeda, 2013). In Pakistan, National Educational Policy, 2010 was initiated to improve the quality of teacher education, both in terms of teacher education institution as well programs (Shakir & Adeeb, 2014). However, activities performed by faculty at higher education level include complex tasks which may be difficult to quantify and therefore, evaluation pro-

The evaluation processes for faculty performance should not be oversimplified (Harrison, 2002; Hounsell, 2009; Little et al., 2009). This suggests that involving faculty in defining the evaluation process can foster a sense of ownership and enhance institutional quality (Khan et al., 2017; Alexander, 2000).

While individual faculty evaluation practices can significantly influence a university's overall performance, funding opportunities, and the perceived quality of education offered (Luskova & Hudakova, 2013), these evaluation systems are often not taken seriously, inadequately communicated to faculty members, and consequently become futile exercises within institutions (Aslam, 2013). Furthermore, academic evaluation practices in Pakistan are viewed as unstructured and disorganized, with notable disparities between public and private institutions (Hyun & Sajjad, 2018; Al-Ashqar, 2017).

This study aims to analyze perceptions regarding faculty performance evaluation processes in higher education institutions (HEIs) in Pakistan. Building upon existing contributions, this research seeks to amplify the voices of faculty members (Abro & Rashidi, 2012) at HEIs in determining effective performance management mechanisms. The findings may inform the development of integrated performance evaluation systems based on the critical areas identified by faculty, departmental heads, and quality assurance representatives as key stakeholders in the process.

The overall objectives of the study are as follows:

To explore faculty awareness of the performance evaluation practices implemented at HEIs.

To identify the current sources or criteria utilized for faculty evaluations at their respective HEIs.

To analyze perceptions regarding faculty performance evaluation practices and their implications within HEIs in Pakistan.

- To identify sources or criteria for input that faculty members suggest to be included in the performance evaluation processes at HEIs.

LITERATURE REVIEW Faculty performance evaluation at Higher Education institutions in Pakistan

Pakistan's higher education sector has expanded considerably in recent years. According to the Higher Education Commission (HEC) of Pakistan, the country currently has more than 240 recognized universities and degree-awarding institutions, including around 150 public-sector and 90 private-sector institutions. These institutions accommodate over 2.1 million students at undergraduate and postgraduate levels, with approximately 70,000 faculty members contributing to teaching and research activities (HEC, 2025). With education institutes as major contributors in economic growth of the country, it has been a pressure on the government and civil society to bring in equality as well as access to higher education through institutes which fulfil benchmark of quality and international repute (Stengos & Aurangzeb, 2008; Khushik & Diemer, 2010). For this purpose, Pakistan's education system has adopted national policy for quality assurance as well as teacher educa-

tion (professional) standards (Shakir & Adeeb, 2014). HEC defines and governs roles and criteria for institutional performance evaluation and Quality assurance. The initiative requires performance evaluation for institutions, programs as well as faculty (Hyun & Sajjad, 2018).

Since, competent teachers are backbone for quality education, a national level guidance for teacher assessment is also a key to promote accountability (Fancy & Razzaq, 2017). Within this initiative, faculty evaluation is significant (Shakir & Adeeb, 2014). Faculty evaluation by student, peers as well as courses are inbuilt in self-assessment manuals as well as external evaluation manuals provided by HEC's QA guidance (HEC, 2019). This reflects importance the commission holds for the faculty evaluation within broader institutional performance (ibid) and for this reasons, quality Enhancement Cells have been established for effective implementation of quality assurance and evaluation policies at respective universities (Hina & Ajmal, 2016).

At HEIs, evaluations of course, faculty, program as well as overall institution are implemented at priority basis through various internal and external mechanisms (Usmani & Khatoon, 2013; Alboushra et al, 2015). Each institute practices may be different, however, there are concerns over triangulation of results for process and quality enhancement as well as its implementation structure and organization (Usmani & Khatoon, 2013). Most of the time, the process is top down and implemented at a limited extend within institutes (ibid). According to Hina and Ajmal (2016), faculty members are seldom aware of quality assurance policy and framework. Overall, its implementation is often claimed to be difficult to obtain and practiced to a certain extend amongst public sector institutes in Pakistan (Usmani & Khatoon, 2013; Usmani et al, 2012). Even more so, since the practice is relatively new to the system, its acceptance and usage for continuous improvement is yet to be observed (Islam, 2011 in Al-Ashqar, 2017). This means that, establishment of QECs for the core purpose of evaluation and feedback has a long way to go and would require structured implementation and institutional ownership.

According to HEC's Self-Assessment Manual, faculty members are to be evaluated by students for integrating students voice in the improve-

ment of teaching and learning processes within the institutes in Pakistan as part of the guidelines (HEC, 2019; Sarwar et al, 2017). Evaluation of teacher by their students may claim to be biased and related to student achievement (Akram & Zepeda, 2013; Akram, 2012). For example, Sarwar et al (2017) concluded that those students who achieve greater marks in subjects tend to rate their faculty higher in their respective faculty evaluations survey. Furthermore, faculty members have no opportunity to share their concerns, attain feedback and communicate their opinion in the process (Ali & Hussain, 2018). This makes the process relatively less accommodative and procedural.

Apart from student input for faculty evaluations, in Pakistan other forms of evaluations include input from peer, teacher portfolios and evaluation by heads. According to Ali & Hussain in the figure given in Ali and Hussain (2018, p. 453), although such practices are in place, document analysis of the universities in Pakistan shows that most of the institute still lack clear guidelines and criteria for evaluation. Moreover, teacher evaluation by peers and heads are used as criteria for best teacher award nominations by HEC. This means that the evaluation of such kind are not regular, continuous and applied to all university teachers but those fulfilling the eligibility criteria (Ali & Hussain, 2018). Even more so, teacher portfolios are used just by two universities that too as an internal tool for teacher evaluation because HEC's guidelines are not mandatory in this respect (ibid). In addition, self-evaluation and assessment of Teaching and learning were found to be absent from the system (ibid).

The concerns and criteria for teacher evaluations points towards purposes for evaluation. Most of the time, teacher evaluations are being implemented within HEIs in the country as a requirement of HEC's QA guidelines or best teacher award and its implementation and use just limits to the reporting and ranking (Ali & Hussain, 2018). Only few examples are evident of use of teacher evaluations for developmental, performance improvements and continuous professional growth (ibid). Although its use for appraisal, recruitment and promotion decisions may be observed, the very purpose for process improvement is in limited scope. It may be said that acceptance of performance evaluation is not a trend

amongst Pakistan HEIs (Abbas & Ahmed, 2012). Moreover, there are various concerns regarding evaluation systems being a routine exercise that is devoid of proper measurement of success or failure towards achievement of the desired goals and maintenance of status quo is the congruent factor of this phenomenon (Khan, 2009).

According to Aslam(a) (2013), there is lack of communication between faculty and administration for their evaluations. Moreover, faculty input is seldom encouraged. Even when performance evaluations are in practice at institutes in Pakistan, faculty members are seldom informed or provided feedback (Aslam(a), 2013; Armstrong, 2006). This holds true for both public and private institutes (Islam, 2011 in Al-Ashqar, 2017). In addition, there is lack of diversity in such practices (Ali & Hussain, 2018; HEC, 2019). Most of the universities implement faculty evaluations as a result of these QA guidelines.

Research Methodology

For this particular study, a mixed approach was used that involved both qualitative as well as quantitative input. A mixed research design assists researcher in triangulating collected data through both qualitative and quantitative methods (Denscombe, 2007; Silva, 2017). In analyzing perceptions and perspectives for faculty performance evaluation at higher education institutes in Pakistan, mixed approach proved to be helpful in identifying perspectives as well as perceptions towards faculty evaluation practices (Cottrell & McKenzie, 2011).

Data Collection Tools

Survey research technique helped in descriptive analysis of both qualitative as well as quantitative data. The data collection tools included questionnaires, structured interviews and document/content analysis.

Overall process of data collection involved following steps:

1. Initial content analysis of the existing frameworks of faculty evaluation as outlined by HEC as regulatory body for Higher Education.

2. Secondary research about performance evaluation processes at higher education institutes.
3. Online questionnaire and structured interview tool developed for input.
4. Using snowball referencing, the questionnaire was distributed to referee faculty members and the same were asked to forward it within their institutes for appropriate number of responses.
5. Data compilation and analysis for findings and discussion

Table 1

Reliability Statistics for the Survey Instrument

Statistic	Value
Cronbach's alpha	.909
Cronbach's alpha based on standardised items	.913
Number of items	12

Cronbach alpha was used to test the reliability of data collected through questionnaire that is for quantitative data. The coefficient is a measure of internal consistency and for the said study the Cronbach alpha was calculated to be 0.909.

Ethical Considerations and Limitations

Most common ethical consideration for the research is sharing the results as they are (Robson, 2002). First, Respondents were informed about the purpose and nature of information required (ibid). Then it was ensured that tools developed were not leading and uniform across the region. For the study, centralized link for the relevant questionnaire and structured interview questionnaire was used and managed independently. Additionally, to avoid researcher's bias and opinion that may cloud the actual responses participation was voluntary. Since the study involved faculty members who are subject to evaluation themselves to share their perceptions about the same, it was a fear that many might not participate as expected. In this respect, the research study was completely

anonymous and confidentiality of the HEIs and the person is maintained. Pseudonyms or generalized terms for quotation marks for respondents' views would be used to avoid any conflict of interest.

Results

The key purpose of the study was to analyze perceptions and perspectives for faculty performance evaluation practices being implemented at Higher Education Institutes in Pakistan. In this respect, efforts were made to collect representative sample response from faculty members, heads of the departments as well as QEC staff members through survey and interview questionnaires circulated on-line. The study also analyzed HEC QA mechanism and assessment manual to integrate current practices with faculty responses. Brief summary of respondents' demographic diversity together with the perceptions compared with QA mechanism is given below. These responses are summarized into following sections

1. Respondent's summary
2. Awareness of performance evaluation processes at their HEIs
3. Input criteria and sources currently being used for faculty evaluations
4. Faculty perceptions about purposes and implications for teacher evaluation practices at HEIs
5. Suggested teacher evaluation sources and input criteria (as perceived by faculty members)

Summary of Respondents

For questionnaire, 247 responses were gathered through an online survey. Out of which 177 were male and 68 female respondents making the response ratio based on gender to be approximately 3:1. When summarizing response summary based on university status, majority of the respondent belong to public sector university, comprising of more than 56%. Around 70% of the responded had qualification MS/MPhil or PhD and 41% have worked more than 5 years at their current institute. Ta-

ble 2 below summarises the respondents' profile based on gender, status of university, designation, experience and employment status of faculty member. It also summarizes department-wise break up as well as teaching level, faculty members are teaching at.

Table 2

Profile of Survey Respondents (N = 247)

Qualification	<i>n</i>	%
Bachelors	11	4.5
Masters	62	25.1
MS/MPhil	89	36.0
PhD	85	34.4
Gender		
Male	177	71.7
Female	68	27.5
Prefer not to share	2	0.8
Current experience		
Less than 1 year	23	9.3
2–5 years	123	49.8
6–10 years	59	23.9
11–15 years	29	11.7
16–20 years	7	2.8
More than 20 years	6	2.4

University status	<i>n</i>	%
Public	140	56.7
Private	92	37.2
Semi-govt.	5	2.0
Other	9	3.6
Age		
Under 30 years	73	29.6
30–45 years	139	56.3
45–60 years	33	13.4
Over 60 years	5	2.0
Designation		
Lecturer	89	36.0
Assistant Professor	94	38.1
Associate Professor	10	4.0
Professor	15	6.1
Visiting faculty	26	10.5
Other	13	5.3

Department	<i>n</i>	%	Level of teaching	<i>n</i>	%
Business, management, accounting and finance	70	28.3	Graduate and postgraduate	9	3.6
Computer science, IT and software	38	15.4	Graduate level	30	12.1
Language, education, humanities and social sciences	36	14.6	Leave for study	2	0.8
Mathematics, engineering and manufacturing	61	24.7	Postgraduate level	2	0.8
Media, art, architecture, design and communication	19	7.7	Undergraduate level	106	42.9
Medicine, dentistry and pharmacy	18	7.3	Undergraduate, graduate and postgraduate	23	9.3
Other	5	2.0	Undergraduate and postgraduate	5	2.0
			Undergraduate and graduate	70	28.3

Note. Percentages are of the 247 survey respondents. Category counts for university status and age do not sum exactly to 247 in the original data.

In addition, interview questionnaires were circulated amongst university chairpersons, heads of the department and representatives from Quality Enhancement Cell. Out of these representatives, responses received were from fourteen representatives (seven each). Although willing-

ness for participation was lower, gathered responses gave insight into their perspective about faculty evaluations.

Table 3

Profile of Interview Respondents (N = 14)

Qualification	<i>n</i>	%	University status	<i>n</i>	%
MS/MPhil	7	50.0	Public	12	85.7
PhD	7	50.0	Private	2	14.3
Gender			Age		
Male	11	78.6	30–45 years	11	78.6
Female	2	14.3	45–60 years	2	14.3
Prefer not to share	1	7.1	Over 60 years	1	7.1
Current experience					
	<i>n</i>	%			
Less than 1 year	1	7.1			
2–5 years	2	14.3			
6–10 years	6	42.9			
11–15 years	2	14.3			
16–20 years	1	7.1			
More than 20 years	2	14.3			

Awareness of performance evaluation processes at their HEIs

When survey inquired about whether faculty members are aware of performance evaluation system being implemented at their HEIs, around 62% faculty members were found to be aware of it and around 38% were either not sure about any such process being implemented or were not aware of the same at all. Table 4 provides an overall awareness summary:

Table 4

Awareness of Faculty Performance Evaluation Processes (N = 247)

Response	No	Not sure	Yes	Total
Count	52	41	154	247
Percentage	21.1	16.6	62.3	100.0

For this study, being aware of the evaluation practices is considered as the first step towards effective implementation of such practices within HEIs in Pakistan. Awareness of the performance benchmark and indica-

tors are said to be helpful preparing faculty members to measure their own performance (Armstrong, 2006). It also helps them to set goals for their individual development and align teaching and research goals with that of institutional vision (Kyeremeh & Pimpong, 2018). In this respect, a little more than half of the sample respondents from Pakistani HEIs were found to be aware of the practices within HEIs. Furthermore, associations between designation, years of experience at current institute and university status were analyzed with awareness of performance evaluation practices within their respective institutions. Other demographic information (for e.g. qualification, gender, teaching level, department, and age), were not analyzed for this study and may be further studied in order to identify dynamics and awareness about performance evaluation procedures at HEIs.

Table 5 provides a summary of the three variables and awareness counts:

Table 5

Awareness of Evaluation Processes by Designation (N = 247)

Designation	No	Not sure	Yes	Total
Lecturer	19 (.21)	24 (.27)	46 (.52)	89
Assistant Professor	25 (.27)	11 (.12)	58 (.62)	94
Associate Professor	3 (.30)	1 (.10)	6 (.60)	10
Professor	1 (.07)	1 (.07)	13 (.87)	15
Visiting faculty	1 (.04)	1 (.04)	24 (.92)	26
Other	3 (.23)	3 (.23)	7 (.54)	13
Total	52	41	154	247

Note. Row proportions in parentheses.

Table 6

Awareness of Evaluation Processes by Years of Experience and University Status
(N = 247)

Years of experience	No	Not sure	Yes	Total
Less than 1 year	2 (.09)	4 (.17)	17 (.74)	23
1–5 years	25 (.20)	22 (.18)	76 (.62)	123
6–10 years	16 (.27)	6 (.10)	37 (.63)	59
11–15 years	8 (.28)	4 (.14)	17 (.59)	29
15–20 years	1 (.14)	3 (.43)	3 (.43)	7
More than 20 years	0 (.00)	2 (.33)	4 (.67)	6
Total	52	41	154	247

University status	No	Not sure	Yes	Total
Public sector	32 (.23)	28 (.20)	80 (.57)	140
Private sector	18 (.19)	12 (.13)	63 (.68)	93
Semi-government/NGO	1 (.20)	0 (.00)	4 (.80)	5
Other	1 (.11)	1 (.11)	7 (.78)	9
Total	52	41	154	247

Note. Row proportions in parentheses. The private-sector total of 93 in this cross-tabulation differs by one from the figure of 92 reported in Table 2.

Although, majority of the respondents were aware of the process, there were some differing observations too when analyzed the demographics in detail. Among the designation category, around 48% of all lecturers that responded to the survey were either not aware or not sure of any such process whereas 52% responded in favor of them being aware of the processes. In all other designations, faculty responses in favor of their awareness towards any faculty evaluation processes being implemented at their institute were greater than 60%.

The above variables were analyzed through Chi-square to identify any association between these variables and awareness. Chi-square tests are applied when there are categorical variables in a single set and associations are to be found with the dependent variable (Bordens & Abbott,

2011). From the chi-square test, it was found that only association between designation and awareness is observed (0.005 is less than the significance level 0.05) whereas there is no significant observed relationship between university status and years of experience (0.52 and 0.32 respectively). From the results it may be said that the university is public or private sector or no matter how long faculty member has served the institute, awareness about practices of Performance evaluation mechanisms may not be associated (Table 7).

This was confirmed with the Cramer's V test of measure of association. Cramer's V is used after chi-square test of association to determine strengths of association. Value closer to 1 determines stronger association. For designation this value is more than Experience and University Status test results (0.22, 0.15 and 0.10 respectively; see Table 7) thereby confirming the nature of relationship between awareness and designation

Table 7

Tests of Association Between Awareness of Evaluation Processes and Respondent Characteristics

Variable	χ^2	df	p	Cramér's V
Designation	25.017	10	.005	.225
Years of experience	11.402	10	.327	.152
University status	5.139	6	.526	.102

Note. Only designation is significantly associated with awareness at the .05 level.

Current Input Criteria and Sources

Higher Education Institutions (HEIs) in Pakistan utilize a variety of tools and inputs for faculty evaluations and performance assessments (Usmani et al., 2012). The Higher Education

Commission (HEC) recommends focusing on three key evaluation areas: Faculty, Program, and Course evaluations. The HEC's IPE manual emphasizes that institutions should establish a defined system for faculty development and improvement as part of best practice criteria. Specifically, the following areas of intervention, highlighted in the Quality

Assurance (QA) manual, require HEIs to report on the extent to which these guidelines are utilized, reviewed, and implemented within their frameworks:

Classroom Observations: Are there written reports detailing the implementation status within departments and their impact on evaluation and faculty improvement?

Student Course Evaluations: Who is responsible for collecting these evaluations, and how are they utilized in decisions regarding faculty promotion or merit pay? Alternative Evaluation Methods: What additional means are HEIs employing to assess and enhance teaching effectiveness?

Documentation of Service Contributions: How is faculty involvement in service activities recorded, and in what manner is this documentation used in promotion or merit pay decisions?

Peer Review Processes: How are peer reviews conducted, and what role do they play in reporting teaching effectiveness?

Moreover, semester guidelines by HEC and one of the accreditation criteria for programs include self-assessment and teacher portfolio as mandatory requirement (HEC, 2019)

For this study, 130 full time faculty members (were aware of any performance evaluation being practiced within their institution), therefore, were asked to select amongst all the input criteria (that us Self, student and peer evaluations, classroom observations, research and publication, behavior and attitudes as well as service domains) that are being used at their respective institutes. Table 8 provides a summary of the input criteria and sources used for faculty evaluations and faculty responses:

Table 8

Sources of Input Currently Used for Faculty Evaluation, as Reported by Faculty (n = 130)

Source of input	No		Yes	
	<i>n</i>	%	<i>n</i>	%
Self-evaluation	48	37	82	63
Student evaluation	11	8	119	92
Peer evaluation	88	68	42	32
Classroom observations	67	52	63	48
Teacher portfolio	33	25	97	75
Operational contribution	17	13	113	87
Research and publication	22	17	108	83
Behaviour and attitude	61	47	69	53

Note. Responses from the 130 faculty members who reported being aware of a performance evaluation process at their institution.

Self-evaluations are used only said yes by 63% of faculty members, Student evaluations 92%, peer evaluations 32%, classroom observations 48%, teacher dossier or portfolios 75%, departmental and operational input 87%, Behavior & Attitude 53% and research & publication 83%. This suggest that in most of the HEIs, students input, teacher portfolios, operational responsibilities and research and publication are the most used criteria or sources of input against which faculty members are evaluated (constituting more than 75% of responses). Furthermore, around 18% of the respondents suggest that all the sources of input (i.e., Self, student, peer, observations and portfolios) are used within their institutes and this percentage goes up to 56% where only self and student evaluations are used. Around 48% responded in favor of Research, operations as well as behavior domains to be part of their faculty evaluation processes; which goes up to 76% where operations and research domains are used as evaluation criteria within HEIs.

From the earlier researches that the researcher managed to review, it was observed that the most used evaluation criteria is by student (Sar-

war et al, 2017), since this is the widely reported tool in QA mechanism deemed mandatory by HEC. This study is consistent with the results where more than 90% of the respondent agreed with the use of student evaluations.

Table 9 summarises responses against each criterion based on university status:

Table 9

Sources of Input Currently Used, by University Status (n = 130)

Source of input	Public (71)	Private (52)	Semi-govt. (4)	Other (3)	Total (130)
Self-evaluation	42 / 59.2	35 / 67.3	3 / 75.0	2 / 66.7	82 / 63.1
Peer evaluation	22 / 31.0	17 / 32.7	3 / 75.0	0 / 0.0	42 / 32.3
Student evaluation	62 / 87.3	50 / 96.2	4 / 100	3 / 100	119 / 91.5
Classroom observations	31 / 43.7	28 / 53.8	3 / 75.0	1 / 33.3	63 / 48.5
Teacher portfolio	48 / 67.6	45 / 86.5	3 / 75.0	1 / 33.3	97 / 74.6
Operational contribution	59 / 83.1	48 / 92.3	4 / 100	2 / 66.7	113 / 86.9
Research and publication	55 / 77.5	46 / 88.5	4 / 100	3 / 100	108 / 83.1
Behaviour and attitude	32 / 45.1	33 / 63.5	2 / 50.0	2 / 66.7	69 / 53.1

Note. Cells show the count of respondents using that source, followed by the percentage within its university-status group. Group sizes are given in the column heads.

According to Harman (2011), student input, peer evaluation and teacher portfolios are the tools that are often used for assessment of teaching quality. Although such process of evaluation involves individual judgements (ibid), it would be better if consistent objective tool with proper feedback be provided; it is then that the process would be beneficial for improvement in performance (Cheng, 2017; Armstrong, 2006).

According to Ellahi (2018) and Raza & Irfan (2018), student input, being the easiest although are implemented as part of Quality Assurance Criteria but their input is often distorted and may not be considered true reflective of teaching within the classroom. In Pakistan, its usage reflects mandatory requirement by HEC's QA mechanism and hence most commonly used evaluation tool for faculty members. Course dossiers or teacher portfolios, peer evaluations, classroom observations are not

amongst the most emphasized input and therefore not observed to be most commonly used in most of the responses.

Heads of the department and QEC representatives' responses regarding what tools and sources are being used for faculty evaluations at HEIs in Pakistan are found to be similar. For example, all of the 13 respondents (one respondent was found to be not aware of faculty evaluation being used at his HEIs) mentioned student input being used as the most common response. Although, most of them selected multiple sources for evaluation used within their institutes, least used criteria were found to be self and peer evaluations.

Research publications and service related activities was another major criterion for faculty evaluations (Research: 77% by Heads and 83% by faculty; Service: 69% heads and 89% faculty). This suggest that most of the representative HEIs are found to be putting emphasis on research and service activities by faculty than teaching and learning. Significance of research output and publication is observed in many of the institutes' evaluation systems (Bai et al, 2014; Blair, 2018). Specifically, research output are most used criteria for faculty decisions then teaching and service (Cadez et al, 2017). However, emphasis should be made to evaluate how researches can in turn support teaching (Blair, 2018). Hence, use of various sources must triangulate faculty performance such that faculty commitment and their complex activities are reflected entirely.

Table 10 provides a summary of the input criteria as provided by HODs and QEC representatives.

Table 10

Sources of Input Currently Used, as Reported by Heads of Department and QEC Representatives (n = 13)

Source of input	No		Yes	
	n	%	n	%
Self-evaluation	10	77	3	23
Student evaluation	0	0	13	100
Peer evaluation	9	69	4	31
Classroom observations	5	38	8	62
Teacher portfolio	5	38	8	62
Operational contribution	4	31	9	69
Research and publication	3	23	10	77
Behaviour and attitude	4	31	9	69

Note. Thirteen of the fourteen interview respondents were aware of a faculty evaluation process at their institution.

Faculty Perceptions and Perspectives

HEC's Institutional Performance Evaluation manual suggest that

"The institution regularly evaluates its actions and achievements in conformity with its mission and goals. The evaluation results provide a fair and systematic set of information to help in institutional improvement with emphasis on academic programs...the results of the evaluation inform about the institutional planning effectiveness in relation to resource allocation programs and learning outcomes as well as future development" (p. 16)

In this respect various purposes and uses of faculty evaluation processes were reviewed in literature. These may include results being used for either summative decisions like incentives, bonuses, promotions or layoff or formative improvements including training and development. This may also include results being used for self-reflection purposes. In this study, responses from faculty members were sought against uses of teacher evaluation results in the context of

HEIs in Pakistan. Perceptions and perspective regarding faculty evaluation processes reflect that most of the faculty members agree or strongly agree that performance evaluation process is used for self-reflection (68%), to plan faculty roles and responsibility (66%), set and measure academic goals (64%), facilitate compensation, increment or promotion decisions (63%) and determine training and development needs (59%).

However, performance evaluation processes are often claimed to be a formality within the institute where it becomes a redundant exercise and not valued by relevant stakeholders (Aslam(b), 2013). From the survey it was found that around 68% agree or strongly agree that the performance evaluation processes or results are taken seriously by the stakeholders. Moreover, only 30% agree or strongly agree with the fact that it does not mean anything to them as individuals.

Table 11 summarises the survey responses:

Table 11

Faculty Perceptions of the Results of the Performance Management Process (%)

	SA	A	N	D	SD
<i>"I believe that results of the performance management process at my institute..."</i>					
are used to set and measure academic goals for the university	24	40	21	11	5
are used to plan various roles and responsibilities for faculty members	22	44	15	14	5
are taken seriously by stakeholders (faculty, management, HoDs/HR)	25	43	15	11	6
are used to determine individual training and development needs	19	40	16	16	9
are used to facilitate decisions on pay increases, promotions and layoffs	18	45	18	11	8
are used by teachers for self-reflection and improvement	21	47	15	10	6
do not mean anything to me	14	16	16	36	18
are communicated to the faculty members	27	42	14	11	6
are compared with the previous year's performance	18	33	27	12	9
are measured and reviewed in a timely manner	18	43	19	13	6
are interpreted justly by management	16	45	25	10	5
are kept secret from teachers	16	32	25	21	6

Note. Values are percentages of respondents. SA = strongly agree; A = agree; N = neither agree nor disagree; D = disagree; SD = strongly disagree. Rows may not total 100% because of rounding in the original data.

Table 12*Descriptive Statistics for Faculty Perception Items*

Item	Mean	Std. deviation	Variance	Skewness	
				Statistic	Std. error
are used to set and measure academic goals for the university	3.68	1.096	1.201	-.683	.195
are used to plan various roles and responsibilities for faculty members	3.65	1.112	1.236	-.716	.195
are taken seriously by stakeholders (faculty, management, HoDs/HR)	3.68	1.153	1.329	-.829	.195
are used to determine individual training and development needs	3.44	1.231	1.516	-.555	.195
are used to facilitate decisions on pay increases, promotions and layoffs	3.53	1.161	1.349	-.765	.195
are used by teachers for self-reflection and improvement	3.66	1.122	1.258	-.878	.195
do not mean anything to me	2.71	1.312	1.722	.420	.195
are communicated to the faculty members	3.74	1.148	1.318	-.868	.195
are compared with the previous year's performance	3.39	1.184	1.403	-.462	.195
are measured and reviewed in a timely manner	3.53	1.127	1.270	-.665	.195
are interpreted justly by management	3.58	1.021	1.042	-.699	.195
are kept secret from teachers	3.32	1.148	1.319	-.244	.195

Note. Items were rated on a five-point scale. In the original manuscript this table was misaligned, with item labels detached from their statistics; rows have been reassembled by matching each item to the response distribution shown in Table 11.

The data highlights that faculty evaluations are considered integral tool for improvement in faculty performance with means greater than 3 in all of the areas (except one). One of the faculty member in the comments mentioned that "I am

very impressed with the system of my institute. This should be employed in every institute and universities.” Similarly,

some of the QEC and departmental representatives were of the view that: “Teachers take it as an improvement exercise”

and that

“we made it an improvement activity rather than punishment. We associated reward and training opportunities with results”

Also

“they (teachers) mostly think good (about the process) ...”

And

“results (of evaluations) are used for future planning” In

addition

“it (faculty evaluation) plays very important role for the award, scholarships, incentives and promotion”

The above comments reflect faculty survey responses that faculty performance evaluations at HEIs in Pakistan are mostly taken as constructive where they are used for planning, promotions as well as taken seriously by stakeholders including teachers themselves. The study complies with observations by Mirza & Sherjeel (2018), which suggest that employees have confidence in performance evaluation systems which will help managers in bringing in improved processes. However, it was also found that *“It’s just done for the sake of activity”*

And that

The main aim of performance evaluation should be the long term human resource development in any organization. Unfortunately, it is use for just a formality and most of the time to punish faculty in universities by sending show case notice/warning letters etc.

Even more so

“its just done for the sake of activity and very rarely action taken”

And

“the results are not used for decision making. Its only used for pressurizing faculty”

According to Stronge (2006) and Santiago & Benavides (2009), there may be a risk of redundancy with implementation of teacher evaluations

for which its integration with overall culture of the institution and assessment by experienced assessors are required. In addition, simpler processes and evaluation for development is a must. This means that evaluations for performance should not be a process where faculty feels threatened (Aguinis, 2013). In this respect, teacher evaluation may be altered to be more collaborative, realistic in implementation and a practice for bringing improvement (Makhubela et al, 2016).

Positive reinforcements may be through faculty development and motivation decisions including professional development or for promotion (Aguinis, 2013; Brefo-Manuh et al, 2017). It is important to realize that with positive enforcement and institutional emphasis given to the process play a key role. For instance, one of the respondents said that,

"it plays very important role for the award, scholarships, incentives and promotions"

In addition, there were responses which claimed evaluation processes to be 'not optimistic', 'negative', 'not effective', 'useless practice' or 'counterproductive'. Nonetheless, it

may seem that faculty evaluations are considered lucrative but one should not be misled, as the process is also found to be "Good & Constructive" by most of the faculty members. According to Sarwar et al, 2010, new teachers might feel threatened by evaluation practices because of challenges of transparency and unclear processes. However, it was also suggested that for better implementation, comprehensive stakeholders' input and training should be provided (ibid). This means that faculty members are not against the system, but need proper guidance, open communication and understanding of faculty roles.

Feedback and open communication for faculty evaluations prior to and post evaluation is a healthy exercise whereby faculty members do not become subject of assessment but become part of the process and take ownership of their performance (Sarwar et al, 2010). Moreover, the results may need to reviewed and measured timely. Survey found that around 69% of the faculty members agree or strongly agree with the fact that the results are communicated back to the faculty members and around 61% said that faculty evaluation results are measured and re-

viewed timely. Lastly, perception that a fair and just evaluation are done is also a key determinant of positive perception towards faculty evaluation processes. In this respect, around 61% agree or strongly agree that in their perception results are interpreted justly by the managers or reviewers.

Process Improvement Recommendations

The research study also brought about certain measures as suggested by faculty members and heads of departments for bringing improvement in faculty evaluation processes. Faculty evaluation process is suggested to be integrated and constructive. They need to be owned by faculty members and to be considered worthy to bring in necessary change that institutions aim (Sarwar et al, 2010; Kyeremeh & Pimpong, 2018; Mirza & Sherjeel, 2018).

Faculty members from the study suggested that:

"I need flexible environment to further improve my self And

that

"Counselling session (should be) held after evaluations results being shared with heads and faculty members"

According to HODs and QEC representatives, following may be some of the initiatives that can be taken to implement/initiate Faculty evaluation processes at HEIs:

"Through awareness workshops"

"Regular interaction with the faculty on the subject matter" "It is possible only by visionary leadership in public and private universities."

"HR should have a more inclusive approach for evaluation"

HEC (2019, p. 50) guidelines also recommend that

"Collaboration between faculty and university administration for the purpose of facilitating each other in goals achievement at both levels"

This means that effective implementation of faculty evaluations can be through quality academic environment, acceptance amongst stakeholders, visionary leadership as well as continuous collaboration (Sherwani, 2014). This also means that it should be multi decision making process

and must have faculty members voice as part of the decision making process (Abro & Rashidi, 2012; Aslam(a), 2013).

Recommended Teacher Evaluation Instruments and Processes at HEIs

In the last section of survey questionnaire, faculty members and heads of departments and QEC representatives were to suggest input sources which they believe should be part of faculty evaluation criteria within their HEIs. Most of the faculty members were found to preferred self and student evaluation (approximately 71%) but there is 51:49 ratio against and favor for peer evaluations. Furthermore, 35% faculty members suggested including all three stakeholders' input that is self, student and peers. Amongst the most preferred input criteria or source of evaluation (that is student input, self-evaluation, portfolio, operational activities & research publication), approximately 36% of faculty members were found to be in favor of all (as discussed below). Moreover, in suggesting instruments for teacher evaluation most of the teachers suggested teacher portfolio, research, service to departmental and admin operations (> 72%). Only 54% recommended classroom observation of teaching practice as means to evaluation faculty performance. For professional behavior and attitude, approximately 66% recommended this to be included in the faculty evaluation criteria.

In all, the findings suggest that although faculty members prefer multiple sources of input, but openness for peer evaluations and classroom observations is amongst the least. This may be because of the perceived sense of judgement associated with it. According to Greenberg (2004) teachers value independence in teaching practice and that any external observation would mean questioning their expertise and subject knowledge. However, despite minimum preference, from the study it was found that most of the faculty members suggested the use of 4 or more tools.

Study also analyzed tools suggested by HODs and QEC representatives. Least preferred input was portfolio or curriculum dossiers as means for teacher evaluations. However, top preferred sources include

Self-evaluations, Student-evaluations, Peer evaluations and service or operational (64%) domains to be evaluated. Whereas research operations and behavior components remain at 57%. Unlike faculty responses, least preferred sources of input involved portfolio assessment. Only 50% were found to be in favor of having portfolio or teacher dossier as part of faculty performance evaluation processes. According to English & Lachlan-Haché (2015), teacher portfolios where on one hand provide evidence for teaching and learning in addition to classroom observations or where classroom observations limit the evaluation results; on the other hand, are resource intense and lack standardize evaluation controls. This may be the reason that heads of the departments who also are administrative heads within HEIs do not prefer portfolios as assessment tool. Since it would be time consuming and difficult to monitor growth (English & Lachlan-Haché, 2015).

Table 13 summarises the responses received from heads of department and QEC representatives:

Table 13

Sources of Input Suggested by Heads of Department and QEC Representatives (n = 14)

Suggested source	No		Yes	
	<i>n</i>	%	<i>n</i>	%
Self-evaluation	5	36	9	64
Student evaluation	5	36	9	64
Peer evaluation	5	36	9	64
Classroom observations	6	43	8	57
Teacher portfolio	7	50	7	50
Operational contribution	5	36	9	64
Research and publication	6	43	8	57
Behaviour and attitude	6	43	8	57

Conclusion and Recommendation

In Pakistan, various faculty evaluation practices are in place at HEIs as per the requirement of Quality Assurance Agency at Higher Education Commission. HEC has recommended implementation of courses, program and faculty evaluation throughout HEIs, be it public or private, as part of QEC self-assessment, accreditation processes and overall Institutional performance evaluations. Such guidance is reflective of the significance of faculty evaluations practices as part of overall institutional effectiveness and perceived quality. However, the implementation and acceptance of evaluation practices are not without challenges. Faculty evaluations may say to be taken as a formality, mere annual practice, involve no communication and may not be valued by stakeholders. This is because of the judgements and rewards associated with the same which may hinder faculty morale, organizational commitment and motivation to develop and improve. In this respect, faculty evaluation processes are required to be holistic, reflective of complex faculty work, provide for open communication as well as reflective of organizational goals. Moreover,

purposes and use of results are recommended to be for both summative and formative decisions; that is rewards and training respectively. In addition, current demands of institute's improvements call upon processes that promote mutual decision making, team development and consensus-based policies (Aleamoni, 2015). Therefore, it is recommended that such practices are integrated in the evaluation process that may bring positive effects on teaching and student outcomes (Akram & Zepeda, 2013). From the study it was found that faculty evaluations are commonly practiced in most of the HEIs irrespective of the status of the institute (ie. Public or Private Sector) and that most of the faculty members were aware of the processes being used within their HEIs. Furthermore, student evaluations are found to be most used input and peer evaluations, and classroom evaluations are amongst the least used practices in HEIs in Pakistan. Since, criteria for evaluation and sources of input are to be defined and integrated towards faculty decisions, the use of the same within HEIs must be carefully planned. From the study it was found that most used criteria and source of input for performance are mostly those that are recommended by the HEC self-assessment manual that is student evaluation. Since weightage of the same is greater in the institutional assessment and scoring, it seems that HEIs in Pakistan have implemented the same. However, when asked what criteria or input in faculty opinion must be part of performance evaluation practices, it was found that self-evaluations, student evaluations and input based on research publication, operational activities (service), behavioral aspects must be part of overall faculty evaluation process.

Furthermore, it was found that faculty evaluations are taken seriously by the stakeholders within respective HEIs, used by faculty for self-reflection as well as are communicated to faculty members. from the interview as well as questionnaire, although faculty members highlighted that sometimes evaluations practices are mere activity within their institute or are counterproductive. It may be said that perceptions were a mixed of both positive and negative where qualitative input are considered. Furthermore, evaluation results were also found to be used for

reward, layoffs and promotion decisions in addition to its use in identification of training needs and professional development.

The study also aimed at presenting recommendation for HEIs in Pakistan such that evaluation practices may be used to support quality improvement. From the study it may be suggested that faculty evaluations to be maintained confidentiality yet open for communication. Faculty performance and its evaluation be aligned with the organizational goals and objective. Multiple sources of input for faculty evaluations must be used. However, the choice and purpose for which these mechanism or tools must be used should be reflective of their specific context and shared with stakeholders to increase commitment, responsibility and accountability.

For faculty members to understand the processes and to integrate their role and opinion within the system, evaluation systems must be flexible, backed by awareness and counselling workshops and be of more inclusive approach. This suggest that no faculty member was found to be against implementation of performance evaluation, but all it is required is to have clarity of purpose and it be meaningful. Lastly, integration of classroom observations as well as peer evaluations as part of overall faculty evaluation need to be looked at. Reasons for its unpopularity as well as benefits of the same when implemented at HEIs must be further studied. It may be said that faculty, managers as well as HEC must be vigilant towards more qualitative approaches and must also put more weightage of rest of the instruments for faculty evaluations. Nonetheless, it is to say that HEIs have come a long way and there are hopes for its future competitiveness.

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Psychological Distress, Eating Styles, and Emotional Dysregulation Among Pakistani Psychology and Non-Psychology University Students

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ABSTRACT

Background: In developing countries like Pakistan, psychological challenges significantly affect university students (Zada et al., 2021); distress may disrupt eating behaviors and produce emotional, uncontrolled, or restrictive patterns (Shukri et al., 2017), with emotional dysregulation potentially exacerbating these tendencies (Lavender et al., 2015). Academic background can also play a role: psychology students are presumed to benefit from psychoeducation (Hulme et al., 2015), though evidence is mixed (Abdellatif et al., 2025; Ahmadi & Vogel, 2023). There is comparatively a dearth of relevant Pakistani literature (Naeem et al., 2022; Husain, 2020)

Objectives: The study aimed to examine correlations between psychological distress and eating styles, with emotional dysregulation as a moderator, and to compare Psychology and Non-Psychology students.

Methodology: A correlational, quantitative, cross-sectional method was used with quota sampling to collect questionnaire data from undergraduate and graduate students ($N = 812$), aged 18–29. Measures included demographics, the Kessler Psychological Distress Scale, the Three-Factor Eating Questionnaire, and the Difficulties in Emotion Regulation Scale; reliability was moderate to high. Findings: Psychological distress showed weak but significant correlations with all eating styles; further regression analyses indicated significant associations though emotional dysregulation did not moderate these relationships. Group comparisons revealed no major differences between Psychology and Non-Psychology students, except a small but significant lower score for Psychology students on Uncontrolled Eating ($d = -0.16$).

Implications: That interventions should target reducing distress directly and in transforming psychological education into practical coping skills and insight.

Keywords: *psychological distress, eating styles, emotional dysregulation*

Introduction

In recent years, mental health issues have received increasing attention due to their far-reaching impact on daily life, especially in developing countries like Pakistan, where university students are particularly affected (Zada et al., 2021) in many aspects of their life. One major concern is psychological distress, which has become a key indicator of both emotional and behavioral difficulties in this group (Khan et al., 2021), with an estimate of the overall prevalence of depressive symptoms recorded at 42.66% in one Pakistani research (Khan et al., 2021), indicating a significant portion of the population in question, that is, university students, experiencing emotional distress. The same trend has been identified in other research across Pakistani universities, with another reporting moderate to extremely severe levels of anxiety and stress (Asif et al., 2020). Psychological distress can be defined as emotional discomfort or suffering, often presenting as anxiety, sadness, and irritability (Kessler et al., 2003). Trends have shown that psychological distress has consistently been on the rise over the years (Jackson et al., 2023; Enticott et al., 2022; Knapstad et al., 2019), especially in young people (Butterworth et al., 2020), notably within the last decade, and globally (Daly & Macchia, 2023).

But psychological distress doesn't just affect emotions and mental well-being; it can also influence eating styles and behaviors in significant ways, which is one of the seldomly explored but increasingly relevant consequences. Even considering eating habits in university students in general, studies show that an increasing number of students tend to have maladaptive eating behaviors due to a variety of predictors, some of which are stress and an inability to cope with external conditions (Almoraie et al., 2024)

A central variable in understanding these dynamics could potentially be emotional dysregulation, which refers to challenges in effectively reg-

ulating, interpreting, and reacting to emotional experiences in a balanced and adaptable manner (Gratz & Roemer, 2004).

An additional layer to this multiple-variable relationship is the role of academic background, particularly students' exposure to mental health knowledge and coping frameworks. The Theory of Psychological Literacy (Hulme et al., 2015) emphasizes that psychology education should equip students not just with academic knowledge, but with the ability to apply psychological principles across life. In fact, according to Xu (2022), quality psychological education is linked with increasingly positive mental health outcomes. This may act as a protective factor against the negative behavioral outcomes of psychological distress and emotional dysregulation.

There is evidence to the contrary as well; with Psychology students showing worse outcomes and coping methods in certain cases, likely due to the heightened awareness of their symptoms as a result of their psychological education (Ngo-Thi et al., 2021); as seen in a Pakistani research highlighting the high levels of psychological distress and low levels of well-being in university students (Haqqani et al., 2024).

This research thesis seeks to examine how psychological distress influences different maladaptive eating styles among university students, and whether emotional dysregulation moderates this relationship. Furthermore, it will be investigated whether these effects differ between Psychology and Non-Psychology majors. Essentially, the study aims to contribute to the understanding of how mental health influences behavior, here specifically psychological distress and eating styles, and how studying psychology may affect the maladaptive outcomes, while also seeing how one's ability of emotional regulation plays a moderating role. These findings may have practical and future implications for designing mental health interventions based on various student populations' needs.

Literature Review

Previous research conducted in Finland (Kun et al., 2021) examined the psychological links between eating disorders and high psychological distress as well as exercise addiction in

1790 adults aged 18 to 60, with emotional dysregulation playing a mediating role. It supported that poor impulse control and other measured factors contributed to maladaptive behaviors; such as being at risk for eating disorders, with women at twice the risk of men. Studies suggested that neurological deficits in inhibition and reward processing (Huang et al., 2019) may worsen affect regulation problems seen in addictive behaviors.

Similarly, Pino et al. (2024) explored the impact of psychological distress on eating behaviors and body composition in 86 university students in Chile aged 18 to 30, highlighting the influence of academic stress, social pressures, and lifestyle changes. Psychological distress affected ninety percent of students, with higher scores than the general population, raising concerns about its long-term effects, including chronic stress and disease risk.

Findings supported a link between emotional eating and increased body fat percentage, with distress positively correlated with emotional eating and body mass index, especially in males. Stress-related eating behaviors led to higher intake of fat and sugar, contributing to weight gain and obesity risks.

A study on perceived stress, emotional eating, and healthy eating patterns in Saudi university students (Shatwan & Alzharani, 2024), reviewed that in college students showing higher perceived stress was associated with emotional eating and poorer dietary patterns; this student-specific investigation also supported that perceived stress predicted emotional eating and other health-compromising dietary behaviors in college samples, highlighting the vulnerability of university populations to stress-driven eating patterns. Additionally, another study (Zheng et al., 2024) examined the link between disordered eating behaviors and psychological distress among 932 nursing students in China. Findings

showed that fear of negative evaluation increased social anxiety and psychological distress.

Nursing students fearing negative evaluation were more likely to engage in disordered eating behaviors, including emotional eating and uncontrolled eating, as a coping mechanism, further exacerbating anxiety and stress.

The study confirmed a strong correlation between psychological distress and unhealthy eating patterns, reinforcing the self-medication theory.

This relationship was further strengthened by Depboylu and Findik (2024), who studied the association between psychological distress and disordered eating behaviors in 1,609 Turkish adolescents aged 14 to 18, focusing on emotional eating, cognitive restraint, and uncontrolled eating. Data revealed that psychological distress was strongly associated with emotional eating and uncontrolled eating, reinforcing the negative impact of distress on food choices and mediating the relationship between emotional eating and uncontrolled eating, suggesting that higher levels of distress increased dysfunctional eating patterns.

A particular study (Laghi et al., 2020) examined emotional dysregulation as a moderator for psychological distress, and a certain kind of disorder eating; drunkorexia (defined as compensating for substance use by avoiding consuming calories through food) in 402 Italian adolescents, aged 15 to 21. Results showed that psychological distress significantly predicted drunkorexia behaviors, and emotional dysregulation further strengthened this relationship at moderate and high levels.

A study on eating behaviours and mental health as well as weight change over time in 18–34 year olds in the UK and Australia (Whatnall et al., 2022), uncovered that disordered eating behaviors were associated with weight gain, and also linked to substance use disorders, depression, and anxiety. A sample of 600 Italian young adults aged 20 to 35 were recruited online in a study that examined the relationship between emotion dysregulation, psychological distress, and emotional eating (Usubini et al., 2023), emphasizing how difficulty managing emotions contributes to stress-driven overeating.

Moreover researchers try to identify whether studying Psychology truly results in more positive mental health outcomes. Psychological literacy comprises a set of attributes that enable students to apply psychology-specific knowledge to problem-solving, a study investigating the perception of psychological literacy across academic fields examined responses from

296 undergraduate students studying Psychology, Non- Psychology Science and Humanities disciplines (Pownall et al., 2022). Findings revealed that Psychology students perceived psychological literacy as significantly more prominent in their coursework compared to their peers, suggesting that psychological literacy is largely unique to Psychology students, that is, specifically, Psychology students exhibit distinct strengths in behavioral knowledge, research methodologies, ethical principles, and socio-cultural awareness.

Sonthalia (2023) found that in a sample of 100 Indian students aged 18 to 25 years, results indicated that coping, optimism, and patience are closely linked, and that comparisons between Psychology students and their peers from other disciplines demonstrated notable differences in coping and patience when managing routine problems. Psychology students exhibited significantly higher levels of coping and patience than their non-psychology counterparts.

Another study (Mathew, 2023) explored differences in emotional intelligence and stress levels between 140 18- to 25-year-old Indian Psychology students and those from other disciplines, results showed that Psychology students exhibited higher emotional intelligence compared to their non-psychology peers. Interestingly, despite their emotional adaptability, Psychology students experienced greater academic stress than those studying other subjects. However, their ability to understand events and utilize effective coping mechanisms enabled them to navigate challenges more efficiently, and with marked resilience in academic settings, according to the findings. Even so, those who have studied Psychology have also been seen in prior literature to have significantly adverse outcomes in terms of psychological distress and coping mechanisms (Haqqani et al., 2024)

When it comes to Pakistan-specific research over the past few years, a study examined the relationship between eating behaviors and BMI among medical students in Rawalpindi and Islamabad, (Arif et al., 2022), results indicated a positive correlation between rigid control and BMI across the sample, with females showing a stronger association with rigid control and males with disinhibition. Another Pakistani study (Zuhair et al., 2024) examined the eating habits, lifestyle choices, and physical activity of medical students to understand their impact on health. It included 328 medical and dental students. More female students engaged in low to moderate activity, whereas males were more likely to participate in intense physical activity. The findings suggested that poor eating habits and low physical activity levels among medical students increased their risk for obesity and other health issues.

A study on eating disorders and disordered eating behaviors in Pakistani undergraduate students (Nasrullah et al., 2024) highlighted the prevalence and patterns of disordered eating among Pakistani undergraduates. Regionally, Pakistani data indicated the presence of disordered eating attitudes and behaviors among undergraduates, not only demonstrating the importance of locally grounded research but also documenting notable rates of disordered eating and unhealthy dietary patterns among students; evidence that lends urgency to studies focused on Pakistani university samples and the mechanisms that lie beneath these behaviors.

In conclusion, there is some evidence to put forth the premise that the variables of psychological distress and eating styles have a potential link that may be moderated by emotional dysregulation and that may vary across different educational fields due to the nature of the education. Therefore, the following hypotheses were constructed on the basis of the literature review:

Research Hypotheses

RH1: Psychological distress will have a relationship with eating styles in university students.

RH2: Emotional dysregulation will moderate the effect of psychological distress on eating styles in university students.

RH3: Non-Psychology university students will demonstrate higher levels of psychological distress and emotional dysregulation compared to Psychology university students.

RH4: Non-Psychology university students' eating style outcomes will differ from Psychology university students.

Research Methodology

The current research was a cross-sectional, quantitative, descriptive, correlational study. Psychological distress was the predicting variable, with eating style being the response or criterion variable and emotional dysregulation being the moderating variable between the two. The main comparative variable was academic background, the Faculty of Psychology compared with Non-Psychology Faculties. Data collection was through standardized and previously validated and reliable questionnaires and non-probability quota sampling was used. The data were collected in person through questionnaires manually answered by university students in the city of Karachi, Pakistan.

Participants

The participants were a sample of Pakistani university students. The sample size of accepted responses was ($N = 812$), with Psychology students ($n = 406$), and non-psychology students ($n = 406$).

Inclusion Criteria

- Currently enrolled in a Pakistani university undergraduate or graduate program
 - Ages 18 to 29 and can give informed consent
 - No professionally diagnosed psychological problems or under psychiatric medication.
 - English literacy as required for answering scales.

- Gender, race, religion, ethnicity, socioeconomic status, marital status, all unconditionally included.

Exclusion Criteria

- Above the age of 18 who were never, or are not currently, attending university were excluded.
 - University-going minors and other groups that cannot give informed consent were not included either; nor were those above the age of 29.
 - Programs apart from the undergraduate or graduate level; like PhD, post-doctoral or diploma positions were also excluded.
 - Individuals with previously diagnosed psychological conditions, those on strong medication or otherwise using mind-altering substances at the time of the study.
- No students studying abroad in non-Pakistani programmes were included.

Measures Consent Form

Prior to participation, informed consent was obtained from all potential participants, outlining the nature of the research, specific details about the researchers and participants' right to confidentiality and withdrawal from research as required.

Demographic Information Form

The demographic information form contained basic information about the participants as well as categorical information that was used for comparative analysis. Age was inquired about to ensure that the participants were old enough to take part in the research and met the inclusion criteria. Asking about the university degree program and educational level were also important aspects being the main comparative factor and another point in the inclusion criteria respectively. Questions regarding psychological conditions and psychiatric medication were too in line with the inclusion and exclusion criteria. Other sociodemographic variables, including marital and occupational status, were excluded from the form and the analysis as they fell outside the defined scope of this study and

were deemed not immediately relevant in accordance with supervisory guidance.

Kessler Psychological Distress Scale (K10)

The Kessler Psychological Distress Scale (K10) was developed by Kessler et al., (2003). It has 10 items and no sub-scales, was developed in English; each of the 10 items is rated on a five-point scale ranging from 'none of the time' to 'all of the time,' yielding a total score between 10 and 50, where higher scores indicate greater psychological distress.

Three-Factor Eating Questionnaire — Revised, 18-Item Version 2 (TFEQ-R18V2)

The Three-Factor Eating Questionnaire — Revised, 18-Item Version 2 (TFEQ-R18V2) English, India, was developed by Cappelleri et al. (2009). It has 18 items and 3 sub-scales with a 4-point response format, Cognitive Restraint (3 items), Uncontrolled Eating (9 items) and Emotional Eating (6 items).

The Uncontrolled Eating scale measures loss of control over food intake due to hunger or external cues. The Cognitive Restraint scale assesses intentional food restriction to manage weight and body shape and the Emotional Eating scale evaluates overeating triggered by negative emotions like loneliness, anxiety, or depression.

Difficulties in Emotion Regulation Scale — 16-Item Version (DERS-16)

The Difficulties in Emotion Regulation Scale — 16-Item Version (DERS-16) was developed by Bjureberg et al. (2016). It has 16 items, adapted from the DERS-36 (Gratz & Roemer, 2004), and focuses on five aspects of emotion regulation in terms of its subscales.

It assesses difficulty accepting emotions (Nonacceptance of Emotional Responses), struggles with staying focused on tasks (Difficulties Engaging in Goal-Directed Behavior), impulse control challenges, (Impulse Control Difficulties), limited access to effective coping strategies (Lim-

ited Access to Emotion Regulation Strategies) and uncertainty in identifying emotions (Lack of Emotional Clarity).

Procedure

The research began by obtaining formal permission from the developers of the scales for their use and from the concerned universities' administrations for data collection. Participants were selected using non-probability quota sampling, ensuring balanced representation across the Psychology and Non-Psychology domains. Before participation, students received detailed information about the study's purpose, risks, and benefits. The researchers provided consent forms for participants to read and sign, ensuring voluntary participation and confidentiality. Participants were informed that they could withdraw at any time. Data were gathered through structured questionnaires, including the: Demographic Information Sheet, Kessler Psychological Distress Scale (K10) (Kessler et al., 2003), the Three-Factor Eating Questionnaire — Revised, 18-Item Version 2 (TFEQ-R18V2) (Cappelleri et al., 2009), and the Difficulties in Emotion Regulation Scale — 16-Item Version (DERS-16) (Bjureberg et al., 2016)

Participants completed these surveys manually and the research team supervised the data collection process. Data were collected from a total of 1153 participants. Forms from N = 812 students were accepted, with 406 students from each comparative group (Psychology, Non-

Psychology). The forms of 341 students had to be discarded due to being incomplete with missing items, having items marked with more than one option, not fitting in the inclusion criteria or a combination of these factors, with the former two being requirements of the questionnaires as set by the developers. Afterwards, the data was securely stored and processed using the Statistical Package for Social Sciences, SPSS V21. The resulting data was interpreted and discussed in the light of existing literature on the subject, and conclusions were finally drawn.

Ethical Considerations

For ethical research considerations, the study was conducted in accordance with the ethical standards prescribed by the American Psycho-

logical Association (APA) (American Psychological Association, 2020). Informed consent was obtained from all participants after clearly explaining the purpose, procedures, risks, and their right to withdraw at any stage without any consequences. Participant confidentiality and anonymity was strictly maintained, and all data was utilized solely for research purposes. As the study involved sensitive variables such as psychological distress and eating behaviors, participants were informed and encouraged to make use of available psychological support resources should any distress arise. Recruitment emphasized voluntary participation without coercion. Additionally, all scales and research materials used directly or indirectly have been appropriately cited.

Results

Table 1

Frequencies and Percentages of Demographic Variables (N = 812)

Variable	Category	<i>n</i>	%
Gender	Male	208	25.6
	Female	604	74.4
Current education level	Undergraduate	712	87.7
	Graduate	100	12.3
University programme	Psychology	406	50.0
	Non-Psychology	406	50.0
Psychological condition	No	812	100.0
	Yes	0	0.0
Psychiatric medication	No	812	100.0
	Yes	0	0.0

Note. The original table repeated the university-programme breakdown under the heading “Degree”; the duplicate row has been removed.

Table 1 highlights some of the dimensions of the relevant participant demographics collected within the current research; aimed to be representative of the population in question. Around a quarter of the sam-

ple ($n = 208$) was male (25.6%), with the rest being female (74.4%; $n = 604$). Additionally, around 87.7% of the sample consisted of undergraduate university students ($n = 712$) while 12.3% were graduate students ($n = 100$).

An important variable under consideration for comparison, the academic discipline or university degree program was well-balanced, with both Psychology ($n = 406$) and Non- Psychology ($n = 406$) samples being 50% of the sample each. Finally, as per the inclusion and exclusion criteria; only individuals without a diagnosed psychological condition or those that had not taken any psychiatric medication within the previous two weeks were selected to be a part of the study.

Table 2

Descriptive Statistics, Alpha Reliability Coefficients and Univariate Normality of Study Variables (N = 812)

Variable	Items	α	M	SD	SK	K	Range	
							Actual	Potential
PD	10	0.87	24.25	7.77	0.34	-0.47	10-50	10-50
DERS	16	0.92	40.00	13.24	0.41	-0.50	16-76	16-80
NOA	3	0.77	7.48	3.09	0.48	-0.55	3-15	3-15
GOS	3	0.81	8.11	2.90	0.32	-0.62	3-15	3-15
IMP	3	0.84	6.46	3.03	0.82	-0.07	3-15	3-15
STR	5	0.83	12.38	4.71	0.51	-0.49	5-25	5-25
CLR	2	0.84	5.10	2.17	0.55	-0.62	2-10	2-10
UE	9	0.67	37.90	20.60	0.37	-0.18	0-100	0-100
CR	3	0.85	30.38	29.84	0.66	-0.71	0-100	0-100
EE	6	0.90	33.86	27.19	0.52	-0.62	0-100	0-100

Note. α = Cronbach's alpha; M = mean; SD = standard deviation; SK = skewness; K = kurtosis. PD = Psychological Distress; DERS = Difficulties in Emotion Regulation Scale; NOA = Non-acceptance; GOS = Goals; IMP = Impulse; STR = Strategies; CLR = Clarity; UE = Uncontrolled Eating; CR = Cognitive Restraint; EE = Emotional Eating.

According to Table 2, the listed values of the mean, standard deviation, skewness and kurtosis (being within the range of -2 and +2) signify that the data can be considered normally distributed (Gravetter et

al., 2021; Gravetter & Wallnau, 2014). Additionally, the reliability of each scale and subscale was found to be high as per Cronbach's Alpha; with only the Uncontrolled Eating (UE) subscale of the Three Factor Eating Questionnaire Revised 18-Item Version 2 (TFEQ-R18V2) showing moderate reliability, within the acceptable range (Nunnally & Bernstein, 1994; Cronbach, 1943).

Table 3

Pearson Product-Moment Correlations of Psychological Distress with Eating Styles (N = 812)

Variables	PD	UE	CR	EE
PD	1	0.265**	0.159**	0.278**
UE		1	0.218**	0.615**
CR			1	0.232**
EE				1

Note. ** $p < 0.01$. PD = Psychological Distress; UE = Uncontrolled Eating; CR = Cognitive Restraint; EE = Emotional Eating.

As per Table 3, the correlational analysis showed that Psychological Distress had a weak but significant positive relationship with Uncontrolled Eating ($r = 0.265$, $p < 0.01$), Cognitive Restraint ($r = 0.159$, $p < 0.01$) and Emotional Eating ($r = 0.278$, $p < 0.01$). This meant that an increase in the level of Psychological Distress was significantly associated with higher levels of Uncontrolled Eating, Cognitive Restraint and Emotional Eating in the participants, though the weakness of the relationship signified that it was not a highly or strongly consistent relationship, though it was present. The analysis was significant at the

0.01 level, meaning that the probability of the null hypothesis being true in this case was less than 1%.

Table 4

Simple Linear Regression Analysis Showing Psychological Distress as a Predictor of Uncontrolled Eating (N = 812)

Predictor	R	R ²	ΔR ²	β	t	p
Psychological distress	0.265	0.070	0.069	0.265	7.810	0.000

Note. Criterion variable: Uncontrolled Eating. β = standardised beta; R² = R-squared; ΔR² = adjusted R-squared.

According to Table 4, the simple linear regression analysis conducted between Psychological Distress and Uncontrolled Eating signified that Psychological Distress was a significant predictor of Uncontrolled Eating; with a unit change in Psychological Distress resulting in 7% predictive change in the criterion variable, Uncontrolled Eating (R² = 0.070, β = 0.265, t = 7.810, p = 0.000).

Table 5

Simple Linear Regression Analysis Showing Psychological Distress as a Predictor of Cognitive Restraint (N = 812)

Predictor	R	R ²	ΔR ²	β	t	p
Psychological distress	0.159	0.025	0.024	0.159	4.574	0.000

Note. Criterion variable: Cognitive Restraint. β = standardised beta; R² = R-squared; ΔR² = adjusted R-squared.

As per Table 5, the simple linear regression analysis conducted between Psychological Distress and Cognitive Restraint signified that Psychological Distress was a significant predictor of Cognitive Restraint; with a unit change in Psychological Distress resulting in 2.5% predictive change in the criterion variable, Cognitive Restraint (R² = 0.025, β = 0.159, t = 4.574, p = 0.000).

Table 6

Simple Linear Regression Analysis Showing Psychological Distress as a Predictor of Emotional Eating (N = 812)

Predictor	R	R²	ΔR²	β	t	p
Psychological distress	0.278	0.078	0.076	0.278	8.253	0.000

Note. Criterion variable: Emotional Eating. β = standardised beta; R^2 = R-squared; ΔR^2 = adjusted R-squared.

Table 6 highlights the simple linear regression analysis conducted between Psychological Distress and Emotional Eating signified that Psychological Distress was a significant predictor of Emotional Eating; with a unit change in Psychological Distress resulting in 7.8% predictive change in the criterion variable, Emotional Eating ($R^2 = 0.078$, $\beta = 0.278$, $t = 8.253$, $p = 0.000$).

Table 7

Moderation Analysis of Emotional Dysregulation Moderating Psychological Distress on Uncontrolled Eating (N = 812)

Predictor	<i>p</i>	95% CI	
		LL	UL
Constant	0.00	36.45	39.59
PD	0.63	−0.18	0.30
DERS	0.00	0.40	0.68
PD × DERS	0.79	−0.01	0.01

Note. CI = confidence interval; LL = lower limit; UL = upper limit; PD = Psychological Distress; DERS = Difficulties in Emotion Regulation Scale.

According to Table 7, the moderating analysis showed that Emotional Dysregulation did not have a significant moderating effect on Psychological Distress and Uncontrolled Eating, with the interaction yielding a *p*-value far above 0.05 ($p = 0.79$).

Subscale-level moderation was not pursued, as the study's scope prioritized overall emotion regulation difficulties rather than specific facets as was in line with the research hypotheses and in accordance with supervisory guidance.

Table 8

Moderation Analysis of Emotional Dysregulation Moderating Psychological Distress on Cognitive Restraint (N = 812)

Predictor	<i>p</i>	95% CI	
		LL	UL
Constant	0.00	28.46	33.28
PD	0.03	0.03	0.76
DERS	0.08	−0.02	0.41
PD × DERS	0.46	−0.03	0.01

Note. CI = confidence interval; LL = lower limit; UL = upper limit; PD = Psychological Distress; DERS = Difficulties in Emotion Regulation Scale.

As per Table 8, the moderating analysis showed that Emotional Dysregulation did not have a significant moderate effect on Psychological Distress and Cognitive Restraint, with the interaction yielding a *p*-value far above 0.05 (*p* = 0.46).

Table 9

Moderation Analysis of Emotional Dysregulation Moderating Psychological Distress on Emotional Eating (N = 812)

Predictor	<i>p</i>	95% CI	
		LL	UL
Constant	0.00	32.36	36.55
PD	0.06	−0.02	0.62
DERS	0.00	0.40	0.77
PD × DERS	0.30	−0.02	0.01

Note. CI = confidence interval; LL = lower limit; UL = upper limit; PD = Psychological Distress; DERS = Difficulties in Emotion Regulation Scale.

Table 10

Means, Standard Deviations and t Values for Academic Discipline in Psychological Distress, Emotional Dysregulation and Eating Styles (N = 812)

Variable	Psychology (n = 406)		Non-Psychology (n = 406)		t	p	d
	M	SD	M	SD			
Psychological distress	23.93	7.64	24.57	7.89	-1.18	.24	-0.08
Emotional dysregulation	40.09	12.74	39.90	13.74	0.20	.85	0.01
Non-acceptance	7.44	2.99	7.52	3.19	-0.36	.71	-0.03
Goals	8.23	2.81	8.00	2.98	1.11	.27	0.08
Impulse	6.27	2.88	6.66	3.17	-1.85	.06	-0.13
Strategies	12.58	4.70	12.19	4.72	1.16	.25	0.08
Clarity	5.11	2.11	5.09	2.23	0.11	.91	0.01
Uncontrolled eating	36.24	20.67	39.56	20.42	-2.30	.02	-0.16*
Cognitive restraint	29.17	29.81	31.58	29.85	-1.15	.25	-0.08
Emotional eating	34.26	25.92	33.46	28.43	0.42	.67	0.03

Note. * $p < .05$. M = mean; SD = standard deviation; t = independent-samples t test; d = Cohen's effect size.

As per Table 10, the Independent Samples t -test conducted to compare Psychological Distress levels between Psychology and Non-Psychology students yielded no significant difference.

The Independent Samples t -test conducted to compare Emotional Dysregulation levels between Psychology and Non-Psychology students yielded no significant difference. Finally, the Independent Samples t -test conducted to compare different Eating Styles and their levels between Psychology and Non-Psychology students yielded no significant difference, except for Uncontrolled Eating that resulted in a small but significant difference between Psychology and Non-Psychology students ($r = -0.16$), meaning that Psychology students ($M = 36.24$) showed slightly lesser inclinations for Uncontrolled Eating than non-psychology students ($M = 39.56$), as seen by the average value for both.

Discussion

The present study set out to examine whether psychological distress predicted maladaptive eating styles among Pakistani university students, whether emotional dysregulation moderated this relationship, and whether Psychology students significantly differed from their non-psychology peers in their outcomes. The findings showed that psychological distress was significantly associated with uncontrolled eating, emotional eating, and cognitive restraint, though the strength of these correlations was weak. Further, regression analyses confirmed distress as a significant but weak predictor of these eating styles, but moderation analyses revealed that emotional dysregulation did not significantly affect these associations. Comparisons between Psychology and Non-Psychology students, too, showed no major differences, except for a small but significant lower score on uncontrolled eating among Psychology students. These results partially support the hypotheses. The first hypothesis was confirmed, as distress did show significant associations with eating styles, consistent with prior work linking stress and maladaptive eating behaviors in student populations (Shatwan & Alzharani, 2024; Depboylu & Findik, 2024). However, the weak effect sizes suggest that distress alone may not be a strong driver of these behaviors, and that other cultural, social, or lifestyle factors likely play a role (Pino et al., 2024).

The second hypothesis, that emotional dysregulation would moderate these relationships, was not supported. This finding diverges from prior studies (Laghi et al., 2020; Usubini et al., 2023) where dysregulation did amplify distress-related eating behaviors. One explanation is this: the DERS-16, while reliable, captures broad regulation difficulties but omits certain facets (e.g., awareness in the longer version of the DERS) that may be more directly tied to eating-specific regulation (Larsson et al., 2025; Bjureberg et al., 2016).

Another explanation is sample homogeneity; distress and dysregulation scores in this study were relatively similar across participants, with both means falling near the middle of their respective ranges, leaving limited variability for the detection of moderation effects.

Recent profile analyses confirm that university student populations often cluster into broadly similar regulation profiles, thereby reducing potential differentiation (Larsson et al., 2025; Romo et al., 2025).

In addition, research conducted by Zhou et al. (2025) concluded that the relationship between emotional dysregulation and eating styles may be primarily direct rather than dependent on other variables like body mass or stress level, suggesting that emotional dysregulation might exert its influence independently rather than moderating the effect of distress on eating behaviors, which may be another reason for the nature of the current findings.

The third hypothesis, predicting higher distress and dysregulation among

Non-Psychology students was also not supported. Both groups reported similar levels, suggesting that psychology education, as delivered currently, may not provide a protective effect in this context. The fourth hypothesis was partially supported, as Psychology students scored slightly lower on uncontrolled eating, though differences in other eating styles were not significant.

The three potential outcomes possible for the third and fourth hypotheses could have been Psychology students having better, worse or indistinguishable scores compared to

Non-Psychology students, each having their own supporting literature. The assumption that distress and dysregulation scores would be significantly different in Psychology students was based on the Psychological Literacy Theory (Hulme et al., 2015) in that the Psychology students fare better, or the Theory of Psychological Parameters of Physical Symptoms (Pennebaker & Skelton, 1978) in that Psychology students fare worse.

However, as per the results, Psychology students have negligible differences with

Non-Psychology students in terms of psychological distress and emotional dysregulation. The Knowing-Doing Gap, also known as the Experience Trap Theory (Ahmadi & Vogel, 2023), posits that while individuals often equate knowledge with action, they rarely translate what they

know into consistent practice in their daily lives beyond their professional requirements.

This disconnect is largely attributed to the nature of educational delivery, where universities emphasize academic and research pursuits over the practical integration, internalization, and cognitive embodiment of knowledge (Hughes et al., 2008). This is one notable reason that could explain the current results.

On the whole, the lack of moderation effects and group differences raise important questions. It is possible that emotional dysregulation does not universally exacerbate distress-related eating behaviors, but instead interacts with specific contexts or subscales, such as impulse control or emotional clarity, which is an avenue for further research. It is also possible that cultural factors unique to Pakistani students, including academic pressures, family expectations, and dietary norms, override the potential benefits of psychological literacy (Naeem et al., 2022; Husain, 2020).

Previous studies have shown mixed outcomes for Psychology students, with some reporting greater coping skills (Mathew, 2023; Sonthalia, 2023) and others finding heightened distress due to symptom awareness (Haqqani et al., 2024). The small difference in uncontrolled eating observed here may reflect limited translation of psychoeducational knowledge into behavior and is in turn another implication of this research.

Even though most results were weaker than expected at the beginning of the study, they remain meaningful. As per (Mehler et al., 2019) this null finding still holds value because in psychological research, non-significant results can offer important insights by challenging assumptions and helping refine or even rule out theoretical models and publishing such outcomes contributes to a more balanced and transparent scientific record, reducing the bias toward only reporting significant effects.

Conclusion

In conclusion, this research supported a significant but weak link between psychological distress and maladaptive eating behaviors among university students, while challenging assumptions about the moderating role of emotional dysregulation and the protective effects of psychology education. The findings were important because they implied the need for interventions that target distress directly, rather than relying on emotional regulation or academic exposure as buffers.

Recommendations

One implication of this research is to focus on moving undergraduate Psychology curriculum away from mere graduate school preparation and towards learning how to apply what they learn in real life situations. Collaborations between mental health professionals, educators, and students themselves could help co-create programs that are both effective in this area. Research in this area could be used to determine whether the lack of significant difference between those who study Psychology and those who don't, is because of the way psychological education is delivered, and if this is not supported, this opens further areas for study.

Another one of the most immediate recommendations is to replicate this study using a longitudinal design. The current cross-sectional approach, while informative, captures only a snapshot in time. A longitudinal study would allow researchers to track changes in psychological distress, emotional regulation, and eating behaviors over time, offering a clearer picture of how these variables evolve and interact throughout the university experience. This would be especially useful in understanding whether distress-related eating behaviors intensify, stabilize, or diminish as students' progress through their academic journey.

In addition, future studies should consider employing probability-based sampling methods. The use of quota sampling in this research, while practical, limited generalizability. A more randomized approach would help ensure that findings are representative of the broader stu-

dent population, capturing a wider range of experiences and reducing sampling bias (Gravetter et al., 2021).

Another important recommendation is to expand the academic scope beyond the binary of Psychology versus Non- Psychology students. While this comparison was useful, it grouped a diverse array of disciplines into a single “Non- Psychology” category, potentially masking important differences. Future research could explore how students in fields like medicine, engineering, business, or the arts differ in their experiences of distress, emotional regulation, and eating behaviors. Each discipline comes with its own stressors, cultural norms, and coping mechanisms, which may influence outcomes in unique ways (Haqqani et al., 2024).

A particularly promising avenue would be to track Psychology students specifically over time, using the same variables explored in this study. This would help determine whether prolonged exposure to psychological education leads to measurable improvements in emotional regulation and coping behaviors, or whether the Knowing- Doing Gap (Ahmadi & Vogel, 2023; Hughes et al., 2008) continues to persist despite increased academic knowledge. Such a study could also explore whether certain pedagogical approaches, such as experiential learning or reflective practice, are more effective in bridging this gap.

Finally, future research could examine the moderation effects of different measures and facets of emotion regulation to determine whether or not any significant relationships exist, and thereby clarify the distinct potential contributions of each subscale to the link between psychological distress and maladaptive eating styles.

From a practical standpoint, the findings suggest a need to rethink how psychological education is delivered. Rather than focusing solely on preparing students for graduate school or research careers, undergraduate programs should place greater emphasis on applying psychological principles to real-life situations. This includes integrating emotional regulation strategies, stress management techniques, and self-awareness exercises into the curriculum in a way that encourages personal growth alongside academic development (Hulme et al., 2015).

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Influence of Social Isolation on the Severity and Progression of Schizophrenia Among Young Adults

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ABSTRACT

Schizophrenia is a severe psychological disorder associated with disturbances in cognition, perception, emotional functioning, and social behavior. Social isolation is commonly experienced among individuals with schizophrenia and may contribute to worsening symptoms and impaired psychosocial functioning. The present study examined the influence of social isolation on schizophrenia symptom severity and functional impairment among young adults diagnosed with schizophrenia. The moderating role of perceived social support and participation in structured interventions was also explored. A cross-sectional correlational research design was employed. The sample consisted of 80 inpatient and outpatient individuals diagnosed with schizophrenia selected through purposive sampling. Data were collected using the Positive and Negative Syndrome Scale, UCLA Loneliness Scale, Multidimensional Scale of Perceived Social Support, and WHO Disability Assessment Schedule 2.0 with caregiver assistance where required. As the data significantly deviated from normality according to the Shapiro Wilk test, non-parametric analyses including Spearman's rank order correlation, Mann Whitney U test, and hierarchical regression analysis were conducted using SPSS Version 26. Results indicated that higher social isolation was associated with greater symptom severity and functional impairment. Social support moderated the relationship between isolation and symptom severity, while participants involved in structured interventions demonstrated better psychosocial functioning.

The findings emphasize the importance of social support and psychosocial rehabilitation in schizophrenia management.

Keywords: Schizophrenia, Social Isolation, Social Support, Functional Impairment, PANSS, WHODAS 2.0

Introduction

Schizophrenia is a chronic and severe mental disorder characterized by disturbances in thought processes, emotional regulation, perception, and behavior. Individuals diagnosed with schizophrenia often experience hallucinations, delusions, disorganized thinking, reduced emotional expression, impaired cognition, and substantial difficulties in social and occupational functioning. Beyond biological and cognitive impairments, schizophrenia is strongly associated with social difficulties that negatively influence recovery and quality of life.

The social environment plays a significant role in shaping mental health outcomes among individuals diagnosed with schizophrenia. Social withdrawal, loneliness, stigma, and impaired interpersonal relationships may contribute to worsening symptoms and reduced psychosocial functioning. Understanding the role of social isolation in schizophrenia is therefore important for developing effective rehabilitation and intervention strategies.

The present study aimed to examine the influence of social isolation on schizophrenia symptom severity and progression among young adults diagnosed with schizophrenia. The study also explored the role of perceived social support and participation in structured community interventions in improving psychosocial outcomes.

Literature Review

Previous research has consistently emphasized the relationship between social isolation and adverse psychological outcomes among individuals diagnosed with schizophrenia. Social isolation has been associated with increased psychological distress, impaired coping abilities, poor treatment adherence, and reduced quality of life (Bucci et al., 2022).

Research further suggests that loneliness contributes significantly to worsening psychotic symptoms and emotional dysregulation among individuals experiencing schizophrenia spectrum disorders (Lim et al., 2018). Individuals who experience persistent social disconnection may

demonstrate heightened symptom severity and reduced psychosocial functioning.

Studies examining psychosocial functioning have also highlighted that functional disability among individuals diagnosed with schizophrenia is influenced by both cognitive impairments and social environmental factors (Harvey & Strassnig, 2012). Reduced social interaction limits opportunities for emotional expression, behavioral engagement, and adaptive coping.

Social support has consistently emerged as a protective factor in schizophrenia recovery. Supportive relationships may reduce emotional distress, improve resilience, and enhance treatment outcomes (Berry & Bucci, 2021). The buffering hypothesis proposes that social support reduces the negative effects of stressors such as loneliness and isolation.

Community based interventions and psychosocial rehabilitation programs have also demonstrated positive outcomes among individuals diagnosed with schizophrenia. Structured social participation, occupational engagement, and social skills training may contribute to lower symptom severity and improved psychosocial adjustment (Lehman, 1995).

Despite growing evidence regarding psychosocial influences in schizophrenia, limited local research has comprehensively examined the combined influence of social isolation, social support, functional impairment, and structured social interventions among young adults diagnosed with schizophrenia.

The study proposed the following hypotheses:

1. Higher levels of social isolation would be associated with greater severity of schizophrenia symptoms.
2. Higher levels of social isolation would be associated with greater functional impairment.
3. Social support would moderate the relationship between social isolation and schizophrenia symptom severity.

4. Individuals participating in structured social or community-based interventions would exhibit lower symptom severity and better psychosocial functioning compared to non-participants.

Research Methodology

Research Design

The present study employed a cross-sectional correlational research design to examine the relationships among social isolation, social support, schizophrenia symptom severity, and functional impairment.

Participants

The sample consisted of 80 young adults diagnosed with schizophrenia, including both inpatient and outpatient individuals. Equal representation was maintained across treatment settings, with 40 participants recruited from inpatient settings and 40 from outpatient settings. The sample also included equal gender representation, comprising 40 male and 40 female participants. Most participants were between 26 and 30 years of age.

Sampling Technique

Purposive sampling was utilized to recruit participants who met the inclusion criteria for schizophrenia diagnosis and treatment status.

Instruments

Positive and Negative Syndrome Scale

The Positive and Negative Syndrome Scale was used to assess schizophrenia symptom severity. The scale measures positive symptoms, negative symptoms, and general psychopathology associated with schizophrenia.

UCLA Loneliness Scale

The UCLA Loneliness Scale was administered to measure levels of social isolation and loneliness experienced by participants.

Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support was used to assess participants' perceived social support from family, friends, and significant others.

WHO Disability Assessment Schedule 2.0

The WHO Disability Assessment Schedule 2.0 was used to evaluate functional disability and psychosocial functioning across daily life domains.

Procedure

Data were collected from two psychiatric hospitals in Hyderabad, namely Civil Hospital Hyderabad and the C.J. Institute of Psychiatry Hyderabad. Prior to data collection, each participant and their primary caregiver were briefed regarding the purpose, procedures, and confidentiality of the study. Informed consent was obtained from both the participants and their caregivers before the administration of the assessment measures. Due to limited insight and communication difficulties commonly experienced among individuals diagnosed with schizophrenia, caregivers assisted the researcher during the assessment process in the presence of the participants to ensure the accuracy and reliability of responses. The assessment measures were administered individually under appropriate ethical considerations within the clinical settings.

Ethical Considerations

Participants and their caregivers were informed regarding the purpose, procedures, and confidentiality of the study prior to data collection. Participation was voluntary, and informed consent was obtained before administration of the assessment measures. Confidentiality and anonymity of responses were maintained throughout the research process, and participants were assured that the collected information would be used solely for academic purposes.

Statistical Analysis

Data analysis was conducted using Statistical Package for the Social Sciences Version 26. Data screening procedures confirmed that no missing values were present in the dataset. The assumption of normality was tested using the Shapiro Wilk test. Results indicated that all major variables significantly deviated from normal distribution. Therefore, non-parametric statistical tests were applied. Spearman's rank order correlation was used to examine relationships among social isolation, symptom severity, social support, and functional impairment. Mann Whitney U tests were conducted to compare participants based on involvement in structured social or community interventions. Hierarchical regression analyses were also conducted to examine predictive and moderating relationships.

Results and Discussion

Demographic Characteristics

The sample consisted of 80 participants diagnosed with schizophrenia. Gender distribution was equal, with 50% male and 50% female participants. Most participants belonged to the 26 to 30 years age group. The majority were receiving antipsychotic medication, and many had experienced at least one psychiatric hospitalization. Participants were almost equally distributed between those who participated in structured social or community interventions and those who did not.

Descriptive Statistics

Participants demonstrated moderate schizophrenia symptom severity and functional disability, along with relatively high levels of social isolation and moderate perceived social support.

The mean score for schizophrenia symptom severity measured through PANSS was 73.42 with a standard deviation of 12.61. The mean score for social isolation measured through the UCLA

Loneliness Scale was 52.85 with a standard deviation of 10.24. The mean score for perceived social support measured through MSPSS was

41.63 with a standard deviation of 9.88. Functional disability measured through WHODAS 2.0 demonstrated a mean score of 38.21 with a standard deviation of 11.35.

Hypothesis 1

The first hypothesis proposed that higher levels of social isolation would be associated with greater schizophrenia symptom severity.

Spearman's rank order correlation analysis demonstrated a significant positive relationship between social isolation and schizophrenia symptom severity, $\rho = .25$, $p = .024$. Participants reporting greater loneliness also demonstrated more severe clinical symptoms on the PANSS scale. These findings supported the first hypothesis and indicated that increased social isolation is associated with worsening schizophrenic symptoms.

Hypothesis 2

The second hypothesis proposed that higher levels of social isolation would be associated with greater functional impairment.

Spearman's rank order correlation demonstrated a significant positive relationship between social isolation and functional impairment, $\rho = .35$, $p = .002$. Participants reporting higher loneliness also demonstrated greater disability on WHODAS 2.0.

A hierarchical multiple regression analysis was conducted to determine whether social isolation predicted functional impairment after controlling for illness related variables. The first model indicated that duration since diagnosis and hospitalization history explained 59.8% of the variance in functional impairment. When social isolation was added in the second model, the explained variance increased to 65.7%.

Social isolation significantly predicted functional impairment, $B = 0.84$, $\beta = .25$, $p = .001$, indicating that loneliness independently contributed to higher disability levels even after controlling for illness related factors.

The findings supported the second hypothesis.

Hypothesis 3

The third hypothesis proposed that social support would moderate the relationship between social isolation and schizophrenia symptom severity.

Hierarchical regression analysis was conducted to test the moderating role of social support. Results demonstrated that social support significantly moderated the relationship between isolation and symptom severity. The interaction term was statistically significant, $\beta = .12$, $p = .04$.

The findings indicated that individuals with high levels of social isolation, but stronger perceived social support demonstrated lower symptom severity compared to individuals with low support.

These results supported the buffering role of social support in reducing the negative effects of isolation.

Hypothesis 4

The fourth hypothesis proposed that individuals participating in structured social or community-based interventions would demonstrate lower symptom severity and improved psychosocial functioning.

Mann Whitney U tests revealed significant differences between participants involved in structured interventions and those who did not participate.

Participants involved in structured interventions demonstrated significantly lower symptom severity on PANSS, $U = 485.50$, $Z = -3.03$, $p = .002$. Similarly, participants engaged in interventions demonstrated better psychosocial functioning with lower WHODAS scores, $U = 429.50$, $Z = -3.58$, $p < .001$.

These findings supported the fourth hypothesis and highlighted the positive impact of structured social and community participation.

Discussion

The present study examined the influence of social isolation on schizophrenia symptom severity and psychosocial functioning among

young adults diagnosed with schizophrenia. The findings consistently demonstrated that social isolation is strongly associated with poorer clinical and functional outcomes.

The first hypothesis revealed a significant positive relationship between social isolation and schizophrenia symptom severity. Participants who reported greater loneliness demonstrated more severe symptoms on the PANSS scale. These findings suggest that social isolation may intensify emotional distress, reduce coping capacity, and contribute to worsening psychotic symptoms.

The second hypothesis demonstrated that social isolation was significantly associated with functional impairment. Participants experiencing higher levels of loneliness also demonstrated greater disability in daily functioning. Regression analyses further indicated that social isolation independently predicted functional impairment even after accounting for illness related factors. These findings suggest that social isolation contributes uniquely to psychosocial decline and reduced independence.

The third hypothesis confirmed the moderating role of social support. Individuals experiencing greater isolation, but stronger social support demonstrated comparatively lower symptom severity. This finding highlights the protective and buffering role of supportive relationships in schizophrenia. Emotional support, family involvement, and positive interpersonal connections may reduce stress and improve resilience among individuals experiencing social withdrawal.

The fourth hypothesis demonstrated that participation in structured social or community-based interventions was associated with lower symptom severity and improved psychosocial functioning. Individuals involved in social or rehabilitation activities demonstrated better outcomes compared to non-participants. These findings emphasize the importance of psychosocial rehabilitation and community engagement in schizophrenia management.

The involvement of caregivers during the assessment process enhanced the reliability and clarity of responses among participants experiencing impaired insight and communication difficulties commonly asso-

ciated with schizophrenia. This procedure strengthened the accuracy of data collection within the clinical settings.

The findings of the present study align with theoretical perspectives emphasizing the importance of social environments in mental health outcomes. The results support the understanding that schizophrenia is influenced not only by biological factors but also by psychosocial and environmental experiences (Kendler, 2020).

The results further support previous findings indicating that loneliness and social disconnection are associated with greater emotional distress and symptom severity among individuals diagnosed with psychosis and schizophrenia (Bucci et al., 2022; Lim et al., 2018). Similarly, research has consistently demonstrated that social support contributes positively to recovery and psychosocial adjustment (Berry & Bucci, 2021).

Table 1

Demographic Characteristics of Participants (N = 80)

Variable	Category	Frequency	%
Gender	Male	40	50.0
	Female	40	50.0
Treatment setting	Inpatients	40	50.0
	Outpatients	40	50.0
Structured interventions	Participants	41	51.2
	Non-participants	39	48.8

Note. Category groupings have been added for clarity; frequencies are unchanged.

Table 2*Spearman Correlation Analysis Among Major Variables (N = 80)*

Variables	ρ	p
Social isolation and PANSS scores	.25	.024
Social isolation and WHODAS scores	.35	.002

Practical Implications

The findings of the present study offer important implications for clinical practice and psychosocial rehabilitation. Routine assessment of social isolation should be integrated into psychological and psychiatric evaluations for individuals diagnosed with schizophrenia. Identifying loneliness and social withdrawal may assist mental health professionals in recognizing individuals at greater risk for symptom deterioration and functional decline.

Mental health interventions should also focus on strengthening social support systems. Family involvement, peer support programs, psychoeducation, and supportive community relationships may improve emotional well-being and reduce symptom severity.

The significant role of structured social and community interventions further highlights the value of psychosocial rehabilitation approaches such as group therapy, occupational therapy, social skills training, and community engagement activities.

Limitations

The present study has several limitations. The cross-sectional design limited the ability to establish causal relationships among the study variables. The use of purposive sampling restricted the generalizability of findings beyond similar clinical populations. The study primarily focused on young adults diagnosed with schizophrenia, limiting the applicability of findings to other age groups. Although standardized psychological instruments were used, some responses were dependent on participant

insight and caregiver assisted reporting, which may have influenced response accuracy.

Recommendations

Future research should employ longitudinal designs to examine changes in social isolation and symptom severity over time. Inclusion of qualitative approaches may provide deeper insight into participants' lived experiences of loneliness and social support. Future studies should also examine broader age groups and evaluate the effectiveness of specific psychosocial rehabilitation programs.

Conclusion

The findings of the present study highlight the significant role of social isolation in influencing schizophrenia symptom severity and psychosocial functioning. Greater loneliness was associated with more severe symptoms and increased functional impairment. In contrast, social support emerged as a protective factor that reduced the negative effects of isolation. Participation in structured social and community-based interventions was associated with lower symptom severity and better psychosocial functioning. The study emphasizes that schizophrenia should not be understood solely as a biomedical disorder but also as a condition deeply influenced by social experiences and environmental factors. Enhancing social connectedness, strengthening support systems, and promoting psychosocial rehabilitation may contribute substantially to improved recovery and quality of life among individuals living with schizophrenia.

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