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SOCIO-DEMOGRAPHIC FACTORS' RELATIONSHIP WITH PSYCHOLOGICAL DISTRESS OF UNDERGRADUATE UNIVERSITY STUDENTS OF PAKISTAN

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ABSTRACT

OBJECTIVE
To investigate the relationship of socio-demographic variables (gender, peer group size) with psychological distress in undergraduate university students in Pakistan.

STUDY DESIGN
Cross-sectional study

PLACE AND DURATION OF STUDY
The study was conducted at two public and private universities in Karachi, Pakistan from June to Aug 2022.

METHOD
A total of 300 students aged 19 to 25 years completed a demographic form and the Kessler Psychological Distress Scale (K10).

RESULTS
Females reported significantly higher psychological distress than males. Students with three or more friends demonstrated lower distress compared with those reporting no friends.

CONCLUSION
Gender and peer network size were significant predictors of distress, with males and students having larger peer groups reporting lower psychological distress.

KEYWORDS
Gender Differences; Mental Health; Peer Group; Psychological Distress; Social Support; Students; Universities.

INTRODUCTION
Mental and physical health are strongly shaped by how individuals interpret and regulate emotions, thoughts, and social interactions. Social environment, quality of socialisation, and strength of interpersonal relationships play a pivotal role in a person's mental wellbeing. Psychological distress develops when individuals perceive themselves as unable to meet emotional or social demands.[1,2]

Studies report multiple contributors to student distress, which include academic burden, gender, excessive technology use, and inequitable educational opportunities.[3] High levels of depression, anxiety, and stress have been recognised among university students in different countries, including Egypt, Saudi Arabia, and Pakistan.[4-9]

Gender-based discrepancies remain inconsistent, with some studies reporting higher distress in females, while others report no significant differences.[10,12] Socio-demographic influences such as rural residence, low literacy, and unemployment further increase distress, especially among women.[13,14] In Pakistan, psychological distress among university students remains substantial, ranging from 42% to 88%.[15-16]

Thus, the aim of this research was to link demographic variable i.e., gender and peer size, with psychological distress among undergraduate students, as limited data on the topic is available in the Pakistani context. The study hypothesised:

1. Female students will demonstrate higher psychological distress than male students.
2. Students with larger peer groups will report lower distress levels than those with no friends.

METHOD
Procedure
The study was initiated after ethical approval from the Advanced Studies Research Board, University of Karachi, Pakistan (ref. ASRB/No./05857/Ar., dated: 16-03-2021), and permission to collect data from the concerned institutional authorities Karachi, Pakistan, from June to August 2022. Participants were chosen through convenience sampling technique, and students were approached at their respective institutions and informed about the study's aims, confidentiality, voluntary participation, and potential risks and benefits.

After obtaining written informed consent, participants completed a demographic information form followed by the K10 scale. The Statistical Package for Social Sciences (SPSS version 22) was utilised for analysis of the data collected.

Participants

This correlational study included 300 undergraduate students aged 19–27 years from two major public and private universities in Karachi.

Participants were enrolled in full-time academic programs and reported no prior history of psychological or psychiatric illness.

Instruments

Data were collected using (i) a demographic information sheet and (ii) the Kessler Psychological Distress Scale (K10),[16] a 10-item screening tool assessing anxiety and depressive symptoms over the past 30 days. Items are scored on a 5-point Likert scale. Recommended cut-offs classify distress into low (10–15), moderate (16–21), high (22–29), and very high (30–50) levels.[17]

RESULTS

Table 1

Demographic Information of Participants (N=300).

Groups	N	Mean	SD	Max	Min	%
Gender		1.44	.497	2	1	
Male	168					55.8%
Female	132					43.9%
Birth order		2.01	.858	4	1	
First	99					32.9%
Middle	110					36.5%
Last	81					26.9%
Only born	10					3.3%
Marital status		1.04	.204	2	1	
Single	287					95.3%
Married	13					4.3%
Family system		1.30	.465	3	1	
Nuclear	212					70.4%
Joint	87					28.9%
Education		2.47	1.077	84	1	
First year	78					25.9%
Second year	60					19.9%
Third year	104					34.6%
Fourth year	58					19.3%
No of friends in university		2.55	.624	3	1	
No one	21					7.0%
One to three	93					30.9%
More than three	185					61.8%

Table 2

Descriptive Statistics and Univariate Normality of Variables.

Variables	Items	? ?	Mean	Standard error of mean	Standard deviation	Kurtosis	Skewness
Psychological distress	10	.87	27.78	.51	8.85	-.610	.150

Descriptive statistics and normality indicators for psychological distress are presented in Table 2. The skewness and kurtosis values lie within the acceptable range (±1), indicating that the variable was approximately normally distributed, allowing for the use of parametric tests.

Table 3

Frequency of Students' Psychological Distress Scores with respect to Gender.

	Frequency	Gender	Frequency
Low	22	Female	6
		Male	16
Moderate	61	Female	29
		Male	32
High	91	Female	39
		Male	51
Very high	135	Female	80
		Male	55

Table 3 categorises psychological distress levels by gender. A substantial proportion of students (75%) fell within the high or very-high psychological distress categories. Notably, 80 female students were classified in the very-high range, compared with 55 males, showing a significant gender trend toward elevated distress.

Table 4

Gender Difference with respect to Psychological Distress of University Students (N=300).

Variable	Female		Male		t(275.14)	p	Cohen's d
	M	SD	M	SD			
Psychological Distress	29.12	8.55	26.07	8.96	2.98	.003*	0.34

Independent samples t-test results (Table 4) showed that females (Mean = 29.12, SD = 8.55) reported significantly higher distress than males (Mean = 26.07, SD = 8.96), t(275.14) = 2.98, p = .003. The effect size (Cohen's d = 0.34) indicated a medium magnitude of gender influence on psychological distress.

Table 5

Mean, Standard Deviation and One-Way ANOVA of Psychological Distress in No Friend, One Or Three Friends Or More Than Three Friends Groups.

Variable	No friend	One to three friends	More than three friends	F(2 ,297) η^2	Post Hoc
	M(SD)	M(SD)	M(SD)		
Psychological Distress	32.38(10.68)	27.72(9.19)	27.29(8.34)	3.162(2,297) 0.02	1>2>3

ANOVA results (Table 5) revealed that peer group size significantly influenced distress levels, $F(2,297) = 3.16$, $p < .05$, with a small effect size ($\eta^2 = 0.02$). Post-hoc comparisons showed that students with no friends (Mean = 32.38, SD = 10.68) reported significantly higher psychological distress than students with more than three friends (Mean = 27.29, SD = 8.34). Students with one to three friends showed intermediate distress levels.

Therefore, the results indicate that female students experience significantly higher psychological distress than males, and students with larger peer groups report lower distress, highlighting the protective influence of social connectedness.

DISCUSSION

The present study examined the relationship of sociodemographic factors, such as gender differences and peer-group size in shaping psychological distress among undergraduate university students in Pakistan. Female students demonstrated significantly higher distress levels than males, a finding consistent with substantial international and regional evidence.[18,19] Existing literature indicates that women are more vulnerable to anxiety, depression, and emotional distress due to the interplay of biological sensitivity, psychological vulnerability, and socio-cultural pressures.[18]

In the South Asian context, numerous gender-specific factors may amplify psychological distress among female students, including restricted mobility, heightened academic expectations, household responsibilities, limited autonomy, and sociocultural norms that disproportionately burden women.[12,14] Consistent with the present findings, research in Pakistan has shown elevated levels of depression, anxiety, and stress among female university students compared with males.[7,9,15]

The study further revealed that peer group size significantly influenced psychological distress. Students with three or more friends reported notably lower distress than those with no friends. This supports the stress-buffering hypothesis, which suggests that social support alleviates the adverse psychological effects of stressors by enhancing coping capacity.[20] Friendships are a source of emotional reassurance, shared experiences, companionship, and problem-solving support, which are protective against psychological distress.

An extensive international study across 53 countries similarly demonstrated an inverse association between peer support and mental distress among adolescents.[21] Another research found that adolescents with stronger peer and family relationships experienced better health-related quality of life and emotional adjustment.[22] Haslam et al. also describe how strong social identities and a sense of group belonging generate psychological resources that promote resilience and wellbeing.[23] These findings reflect the shielding effect of peer relationships observed in the present study.

A significant observation was that nearly three-quarters of students fell within the high or very-high psychological distress categories. This aligns with previous Pakistani studies reporting notable psychological morbidity among university populations.[7,9,15,16] This may be attributed to academic pressure, competitive examination culture, financial burden, family expectations, and limited access to campus mental health support services. The transition into adulthood which often overlaps with university years, brings added uncertainty about identity, relationships, and future aspirations, hence increasing emotional strain.

Overall, the current study adds to the growing body of literature demonstrating the link between socio-demographic factors and psychological distress. By highlighting both gender disparities and the protective role of peer support, the findings offer critical insights for university administrators, policymakers, and mental health practitioners seeking to improve student wellbeing in Pakistan.

Limitations

This study has several limitations that should be acknowledged. First, all data were collected through self-report measures, which may be subject to recall bias. Second, the sample was confined to two universities in Karachi, limiting generalisability to other regions of Pakistan. Third, the cross-sectional study design prevents causal inferences regarding the association between gender, peer group size, and psychological distress.

CONCLUSION

The findings of this study demonstrate that both gender and peer group size are significant correlates of psychological distress among undergraduate university students in Pakistan. Female students frequently experienced higher levels of distress, indicating persistent gender-based disparities in mental health. Students with larger peer networks, particularly those with three or more friends, reported significantly lower psychological distress than those without peer support. This emphasises the importance of social integration and belonging as protective factors for student mental health.

Thus, there is a pressing need for universities to implement gender-sensitive mental health programmes, strengthen peer-support networks, and conduct routine screening for early identification of at-risk students. Addressing these issues may help foster healthier academic environments and promote overall psychological wellbeing.

Recommendations

Future research should employ longitudinal or mixed-method designs, include larger and more diverse samples, and examine additional psychosocial variables such as academic workload, socioeconomic status, and coping styles.

CONFLICT OF INTEREST

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DISCLOSURE

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