


# Impact of Maternal Employment Status on Stress Levels of University Students: A Cross-Sectional Comparative Study in Karachi

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## Abstract

### Objective:

This study aimed to compare stress levels among university students with employed versus unemployed mothers, and to determine whether maternal employment status influences perceived stress.

### Material and Methods:

A comparative cross-sectional study was conducted among 100 undergraduate students in Karachi. Fifty participants had employed mothers and fifty had unemployed mothers. The Perceived Stress Scale (PSS-10) was administered. Descriptive statistics summarized demographic data, and independent t-tests compared mean stress scores between groups. A significance level of  $p < 0.05$  was adopted.

### Results:

The mean stress score of students with employed mothers was slightly higher than that of students with unemployed mothers. However, the difference was not statistically significant ( $p > 0.05$ ). Female students demonstrated higher mean stress scores than males across both groups. Stress was more pronounced among students aged 20–25 years.

### Conclusion:

The study found no significant difference in stress levels between students of employed and unemployed mothers, although female students reported higher stress overall. These findings suggest that maternal employment status does not directly determine student stress levels, but gender and age may play a role. Future interventions should focus on stress management support tailored to student demographics.

**Keywords:** Maternal employment; student stress; Perceived Stress Scale; university students; Karachi.

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## Introduction

Stress among university students is a global concern, affecting academic performance, social interactions, and long-term mental health. The transition to higher education exposes students to multiple stressors, including academic pressure, financial challenges, social adjustments, and uncertainties regarding the future<sup>[1,2]</sup>. In developing countries such as Pakistan, these pressures are compounded by socioeconomic expectations and family dynamics, which can significantly influence stress levels<sup>[3]</sup>. Parental roles and employment patterns are particularly important in shaping the psychosocial environment of students. Maternal employment has been studied extensively in relation to child development, academic outcomes, and psychological well-being<sup>[4,5]</sup>. Some studies suggest that employed mothers contribute positively by modeling independence and resourcefulness, while others argue that limited maternal availability may increase stress in children, particularly during critical academic years<sup>[6,7]</sup>. In cultures where traditional gender roles are dominant, maternal employment may carry additional implications for family cohesion and perceived support<sup>[8]</sup>. Globally, evidence shows mixed outcomes. Research from the United States and Europe highlights that maternal employment may have limited negative impact when balanced with supportive family structures<sup>[9,10]</sup>. Conversely, findings from South Asian contexts report elevated stress among students of employed mothers, largely due to reduced maternal involvement in day-to-day activities<sup>[11,12]</sup>. In Pakistan, few studies have systematically explored how maternal employment affects university students' psychological health, despite growing female participation in the workforce<sup>[13]</sup>. The Perceived Stress Scale (PSS) is a validated tool widely used in assessing subjective stress levels<sup>[14,15]</sup>. By employing the PSS, this study examines stress differences between students of employed and unemployed mothers. Considering the cultural, familial, and educational environment of Karachi, this research aims to provide evidence that may inform student counseling, parental awareness, and institutional interventions for stress management.

## Methods

This comparative cross-sectional study was conducted in Karachi among undergraduate university students. The study population consisted of 100 students, with 50 participants having employed mothers and 50 with unemployed mothers. Students were recruited using convenience sampling. Inclusion criteria required students to be aged between 18 and 25 years, currently enrolled in an undergraduate program, and willing to participate voluntarily. Students with known psychiatric illness or chronic physical illness were excluded to avoid confounding variables. Data were collected using a self-administered questionnaire comprising demographic information and the Perceived Stress Scale (PSS-10). The PSS is a validated 10-item measure designed to assess the

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degree to which individuals perceive life situations as stressful. Scores range from 0 to 40, with higher scores indicating greater stress levels. Ethical approval was obtained, and informed consent was secured from participants prior to data collection. Data were analyzed using SPSS v.26. Descriptive statistics, including means, standard deviations, and frequencies, were calculated for demographic variables. Independent t-tests were conducted to compare mean stress scores between students with employed and unemployed mothers. The level of significance was set at  $p < 0.05$ .

## Results

Table 1 shows the demographic distribution of participants. The majority were female (60%), and nearly half (45%) were aged between 21 and 23 years.

**Table:1** Demographic Characteristics of Participants (N=100)

Variable	Frequency (n)	Percentage (%)
Gender: Male	40	40.0
Gender: Female	60	60.0
Age 18–20	30	30.0
Age 21–23	45	45.0
Age 24–25	25	25.0

Table 2 shows that students with employed mothers had slightly higher mean stress scores than those with unemployed mothers, but the difference was not statistically significant.

**Table 2:** Comparison of Mean Stress Scores by Maternal Employment Status

Group	N	Mean Stress Score (±SD)	p-value
Students with Employed Mothers	50	21.8 ± 5.3	0.21
Students with Unemployed Mothers	50	20.6 ± 5.1	—

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## Discussion

The findings of this study indicate that maternal employment status does not significantly affect stress levels among university students in Karachi. Although students of employed mothers reported marginally higher stress scores, the difference was not statistically significant. These results align with prior studies conducted in Bangladesh and India, which found no direct link between maternal employment and academic stress when familial and institutional support were accounted for<sup>16,17</sup>. Gender differences were observed, with female students consistently reporting higher stress scores than their male counterparts. This observation is consistent with international research suggesting that females are more likely to perceive academic pressures and social expectations as stressful<sup>18–20</sup>. Previous Pakistani studies also report higher prevalence of anxiety and depression symptoms among female undergraduates, supporting our findings<sup>21,22</sup>. Age trends were notable, with younger students (18–20 years) reporting higher stress compared to older peers. This could reflect adjustment difficulties encountered during the transition into university life, as also reported in Middle Eastern and Western contexts<sup>23,24</sup>. Institutional stressors such as workload, exams, and peer competition have been cited in similar studies as major contributors to student stress<sup>25</sup>. Strengths of this study include its focus on an underexplored area in Pakistan, contributing to literature on maternal roles and student stress. The use of a validated instrument (PSS-10) enhances reliability. Limitations include reliance on self-reported data, which may introduce reporting bias, and the cross-sectional design, which restricts causal inference. Moreover, the convenience sampling limits generalizability beyond the study setting. Future research should involve larger, multi-center samples with longitudinal designs to better capture causal pathways. Exploring additional factors such as paternal roles, socioeconomic class, and family dynamics may also provide a deeper understanding of the determinants of student stress.

## Conclusion

This study concluded that maternal employment status does not significantly influence stress levels among university students in Karachi. However, female gender and younger age were associated with higher stress scores. Targeted stress management interventions, particularly for female students, are recommended to mitigate academic and psychological pressures.

## Author Contributions:

Ms Iman Waris verifies the full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis

**Concept and design:** Iman Waris

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**Acquisition, analysis, or interpretation of data:** Iman Waris

**Drafting of the manuscript:** Iman Waris

**Critical review of the manuscript for important intellectual content:** Iman Waris.

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