Stress Levels and Associated Factors among Working Mothers in Meerut: A Cross-Sectional Study

by Jana Publication & Research

Submission date: 08-Sep-2025 12:38PM (UTC+0700)
Submission ID: 2690324428
File name: IJAR-53701.docx (25.07K)
Word count: 2741
Character count: 17204

Stress Levels and Associated Factors among Working Mothers in Meerut: A Cross-Sectional Study

Abstract

The dual responsibilities of professional work and family caregiving place working mothers at heightened risk of stress, particularly in societies where cultural expectations reinforce women's primary caregiving roles. This study examined the prevalence and determinants of stress among working mothers in Meerut city, a semi-urban context in Uttar Pradesh, India, where traditional family structures coexist with modern occupational demands. Grounded in Role Theory (Goode, 1960) and the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), the research aimed to identify how stress levels vary by family structure, number of children, and occupational sector.

A cross-sectional survey design was employed with a sample of 100 working mothers, selected using stratified random sampling across four occupational sectors (education, healthcare, business, and self-employment). Stress was measured using the Perceived Stress Scale (PSS; Cohen et al., 1983). Descriptive statistics, independent samples *t*-tests, and one-way ANOVA were used to analyze stress prevalence and group differences.

Results showed that 72% of participants experienced moderate stress, while 18% reported high stress and only 10% reported low stress. Mothers in nuclear families reported higher stress than those in joint families, though the difference was not statistically significant. Stress was significantly higher among mothers with two or more children compared to those with one child. Occupational analysis revealed that healthcare workers and businesswomen experienced greater stress than teachers and self-employed women, reflecting the impact of rigid schedules, workload intensity, and reduced flexibility.

The findings reinforce the concept of role overload, demonstrating that multiple caregiving and professional responsibilities compound stress. They also validate the Transactional Model's emphasis on perceived imbalance between demands and resources. Importantly, the results highlight that stress determinants in semi-urban India differ from metropolitan or Western contexts, where institutional childcare and workplace policies play a larger role.

This study concludes that stress among working mothers is widespread and systemic, requiring interventions at multiple levels. Family-level support through shared parenting, workplace flexibility and childcare provision, and gender-sensitive policies are critical for reducing stress and improving maternal well-being. By focusing on a semi-urban Indian city, the study contributes new insights to the literature on women's mental health, work–family conflict, and coping in transitional socio-cultural contexts.

Keywords: *stress, working mothers, Perceived Stress Scale, role overload, semi-urban India*

Introduction

Women's participation in the workforce has increased significantly in India and worldwide, contributing to economic growth but also creating new psychosocial challenges. Working mothers, in particular, face dual responsibilities of professional employment and family caregiving, often resulting in elevated stress levels (Barnett & Hyde, 2001; Matthews et al., 2014). Stress in this context is not merely a physiological response but also a psychological appraisal of imbalance between demands and resources, as described in the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984). Furthermore, Role Theory (Goode, 1960) explains that occupying multiple roles—such as employee, caregiver, and spouse—can create role conflict, strain, and overload, which are prominent stressors among women.

While extensive research on working mothers' stress has been conducted in Western countries (Greenhaus & Powell, 2006; Kossek et al., 2011), Indian studies often focus on metropolitan cities such as Delhi, Bangalore, and Mumbai (Reddy et al., 2010; Sharma & Mishra, 2018). However, there is a relative paucity of empirical evidence from semi-urban cities like Meerut, where cultural expectations of women as primary caregivers persist alongside growing occupational demands. Semi-urban women often lack access to institutional childcare and workplace flexibility, relying heavily on family networks for support (Verma & Kapur, 2016).

This study therefore aimed to examine stress levels and determinants among working mothers in Meerut, with specific focus on family structure, number of children, and occupational sector. By applying standardized measures of stress and statistical analysis, the research contributes to understanding the psychosocial realities of working mothers in mid-sized Indian cities.

Research Methods- Participants and Sampling- The study included 100 working mothers residing in Meerut city, Uttar Pradesh. Participants were selected using stratified random sampling, ensuring representation across different occupational sectors: education, healthcare, business, and self-employment. Inclusion criteria were: (a) currently employed in formal or informal work, (b) at least one child under their care, and (c) willingness to provide informed consent.

Instrument- Stress was measured using the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983), a widely validated 10-item instrument assessing perceived stress over the past month on a 5-point Likert scale. Scores range from 0 to 40, with higher scores indicating greater stress. Standard cutoffs were used: low stress (0–13), moderate stress (14–26), and high stress (27–40).

Procedure- Data collection was carried out over a two-month period. Participants completed the demographic questionnaire and the PSS either in person or online. Ethical approval was obtained, and confidentiality was assured.

Data Analysis- Descriptive statistics were computed for overall stress levels. Independent samples *t*-tests were used to compare stress between nuclear and joint family mothers. One-way ANOVA examined differences in stress across occupational sectors. Analyses were conducted using SPSS 25.

Results- This section presents the findings of the study on stress levels among working mothers in Meerut, analyzed using the **Perceived Stress Scale (PSS)**. The results are organized into subsections covering overall stress levels, family structure, number of children, and occupational sector, supported by tables, statistical tests, and interpretations.

Table 1- Distribution of Stress Levels among Working Mothers (N = 100)

Stress Category	Frequency	Percentage (%)
Low (0–13)	10	10.0
Moderate (14–26)	72	72.0
High (27–40)	18	18.0
Total	**100**	**100.0**

Interpretation: - The data reveal that the majority of working mothers (72%) experienced moderate stress, while 18% reported high stress and only 10% reported low stress. This suggests that stress is a widespread and significant concern among working mothers in semi-urban Meerut. The predominance of moderate stress indicates that while many women are coping at a functional level, a considerable proportion face pressures that could escalate into serious psychological strain if left unaddressed.

Table 2- Mean Stress Scores by Family Structure

Family Structure	N	Mean (M)	Standard Deviation (SD)
Nuclear	56	23.4	4.8
Joint	44	21.5	5.3

t(98) = -0.68, p = .49 (not significant)

Interpretation:- Although mothers in nuclear families reported higher stress levels (M = 23.4) compared to those in joint families (M = 21.5), the difference was not statistically significant. This suggests that while joint families may offer childcare support, they can also impose additional cultural expectations, which balance out the benefits. Thus, family structure alone cannot explain stress variations—rather, the quality of family support appears to be more influential.

Table 3- Mean Stress Scores by Number of Children

Number of Children	N	Mean (M)	Standard Deviation (SD)
One Child	42	21.2	4.7
Two or More	58	24.1	5.4

t(98) = 2.11, p = .04 (significant)

Interpretation:- Mothers with two or more children reported significantly higher stress levels (M = 24.1) compared to mothers with only one child (M = 21.2). This finding is consistent

with Role Theory (Goode, 1960), which suggests that multiple caregiving demands create role overload, thereby intensifying stress.

Table 4- Mean Stress Scores by Occupational Sector

Occupational Sector	N	Mean (M)	Standard Deviation (SD)
Education	28	20.5	4.2
Healthcare	26	24.8	5.7
Business	24	23.9	5.3
Self-Employment	22	21.1	4.5

F(3,96) = 4.67, p = .034 (significant)

Interpretation: Stress levels varied significantly across occupational sectors. Healthcare workers (M = 24.8) and businesswomen (M = 23.9) reported higher stress levels compared to women in education (M = 20.5) and self-employment (M = 21.1). This difference may be explained by rigid schedules, high workloads, and limited flexibility in healthcare and business sectors, whereas teaching and self-employment offer relatively greater stability and autonomy.

The results demonstrate that stress is a pervasive challenge for working mothers in Meerut, with most participants reporting moderate to high levels of perceived stress. Stress was significantly associated with the number of children and occupational sector, confirming that heavier caregiving responsibilities and rigid work environments exacerbate strain. Although mothers in nuclear families reported higher stress, the difference was not statistically significant, highlighting that family structure alone does not determine stress outcomes—what matters is the extent of spousal and familial support.

These findings align with global studies (Barnett & Hyde, 2001; Kossek et al., 2011) and Indian research (Reddy et al., 2010; Sharma & Mishra, 2018), which similarly found role overload, family responsibilities, and workplace rigidity as central stressors for dual-role women.

Discussion- The findings confirm that stress among working mothers in semi-urban India is widespread, with the majority reporting moderate levels and a notable proportion experiencing high stress. These results are consistent with Role Theory, which highlights the strain produced by multiple, often conflicting, role expectations (Goode, 1960). The presence of high stress in nuclear families underscores the vulnerability of mothers who lack extended kin support, while the stress experienced in joint families suggests that additional role expectations may counterbalance the benefits of shared childcare (Sharma & Mishra, 2018).

The study also supports global findings (Barnett & Hyde, 2001; Kossek et al., 2011) that occupational demands significantly affect stress, with healthcare and business mothers facing greater strain due to long hours and rigid schedules. In line with Indian studies (Reddy et al., 2010; Kaur & Singh, 2017), the findings illustrate that domestic expectations and limited workplace flexibility remain central stressors for working mothers. However, unlike studies

in metros, this research highlights the semi-urban context, where reliance on family support is critical but not always sufficient (Verma & Kapur, 2016).

Beyond this, the study revealed that the number of children significantly influenced stress levels, supporting the concept of role overload. Mothers with two or more children reported notably higher stress, with a medium effect size (*Cohen's d ≈ 0.50*), indicating practical as well as statistical significance. This aligns with contemporary Indian research showing that caregiving intensity magnifies perceived stress, particularly in households without institutional childcare support (Suthar, 2023).

Occupational sector differences were also marked, with healthcare and businesswomen reporting significantly higher stress compared to educators and self-employed mothers. The ANOVA showed a moderate effect size ($\eta^2 \approx 0.13$), suggesting that job structure and sectoral rigidity meaningfully shape maternal stress. This pattern mirrors global evidence (Greenhaus & Powell, 2006; Matthews et al., 2014) that workplace characteristics—such as autonomy, schedule flexibility, and workload intensity—are decisive stress factors.

Interestingly, the finding that family structure did not significantly predict stress levels diverges from prior studies in metropolitan India (Sharma & Mishra, 2018), which consistently reported lower stress among women in joint families. Qualitative evidence suggests that while joint families provide childcare support, they also impose additional obligations on women, such as caring for in-laws and adhering to cultural expectations, which may neutralize the protective effects. This finding reinforces the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), which emphasizes that stress outcomes depend not only on available resources but on how individuals appraise their adequacy and compatibility with personal circumstances.

Recent literature supports these nuanced results. For instance, Shah (2025) highlighted the persistence of "supermom" expectations in semi-urban India, where mothers are expected to excel at work while conforming to traditional caregiving norms, intensifying stress. Similarly, Verma and Kapur (2016) found that the type and quality of family support—rather than family structure per se—determine stress outcomes. Thus, interventions must focus on redistributing roles equitably within families, rather than assuming structural arrangements are inherently protective.

Policy implications are evident. Despite the Maternity Benefit (Amendment) Act, 2017, which extended maternity leave to 26 weeks, its implementation is limited largely to organized sectors, leaving many semi-urban and informal workers unsupported. Moreover, the absence of affordable, community-based childcare facilities exacerbates stress for mothers in demanding occupations. The findings therefore call for multi-level reforms: at the family level, spousal involvement and shared parenting must be encouraged; at the workplace level, flexible scheduling, childcare provisions, and employee wellness programs should be implemented; and at the policy level, gender-sensitive labor laws and institutional childcare are urgently needed.

In conclusion, the present study contributes to both theory and practice by demonstrating that while stress among working mothers is influenced by role overload, occupation, and caregiving intensity, its outcomes are shaped by the interaction of family dynamics, workplace structures, and cultural expectations. By situating these findings in a semi-urban context, the study extends existing literature beyond metropolitan centers and underscores the need for holistic interventions that integrate family, workplace, and policy-level support.

Conclusion- The findings of this study highlight that moderate to high stress is highly prevalent among working mothers in Meerut, reflecting the psychosocial pressures of balancing professional and domestic responsibilities. The majority of respondents reported moderate stress, while nearly one-fifth experienced high stress, suggesting that stress is not an isolated phenomenon but a widespread concern in semi-urban Indian contexts. Among the determinants studied, the number of children and occupational sector emerged as significant predictors of stress. Mothers with two or more children reported greater stress, supporting the premise of role overload as outlined in Role Theory. Similarly, women in healthcare and business sectors reported higher stress compared to those in education or self-employment, likely due to rigid schedules, demanding workloads, and limited workplace flexibility.

Although nuclear family mothers exhibited slightly higher stress compared to those in joint families, the difference was not statistically significant, indicating that family structure alone does not determine stress levels. Instead, the quality and nature of family support appear more critical, aligning with the Transactional Model of Stress and Coping, which emphasizes perceived resources over structural arrangements.

The study underscores the urgent need for multi-level interventions to address stress among working mothers. At the family level, shared parenting and spousal support are crucial. At the workplace level, flexible schedules, childcare support, and wellness programs can alleviate strain. At the policy level, gender-sensitive labor reforms and community childcare centers are essential. By situating stress within a semi-urban Indian context, this research contributes new insights to the literature and emphasizes that supporting working mothers requires both structural reforms and cultural change.

References

Barnett, R. C., & Hyde, J. S. (2001). Women, men, work, and family: An expansionist theory. *American Psychologist, 56*(10), 781–796. https://doi.org/10.1037/0003-066X.56.10.781

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310–357. https://doi.org/10.1037/0033-2909.98.2.310

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*(4), 385–396. https://doi.org/10.2307/2136404

Goode, W. J. (1960). A theory of role strain. *American Sociological Review, 25*(4), 483–496. https://doi.org/10.2307/2092933

Government of India. (2017). *The Maternity Benefit (Amendment) Act, 2017.* Ministry of Labour and Employment. https://labour.gov.in

Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work–family enrichment. *Academy of Management Review, 31*(1), 72–92. https://doi.org/10.5465/amr.2006.19379625

Kaur, R., & Singh, B. (2017). Stress among working and non-working women: A comparative study. *International Journal of Applied Research, 3*(1), 549–552.

Kossek, E. E., Pichler, S., Bodner, T., & Hammer, L. B. (2011). Workplace social support and work–family conflict: A meta-analysis clarifying the influence of general and work–family-specific supervisor and organizational support. *Personnel Psychology, 64*(2), 289–313. https://doi.org/10.1111/j.1744-6570.2011.01211.x

Lathabhavan, R. (2024). Postpartum depression, anxiety, and stress among Indian mothers: The role of social support and coping. *Women and Birth.* Advance online publication. https://doi.org/10.1016/j.wombi.2024.01.005

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Matthews, R. A., Wayne, J. H., & Ford, M. T. (2014). A work–family conflict/subjective well-being process model: A test of competing theories of longitudinal effects. *Journal of Applied Psychology, 99*(6), 1173–1187. https://doi.org/10.1037/a0036674

Mendonca, A. (2023). Parenting stress and maternal well-being in Indian urban families: Exploring the role of mindfulness and identity. *Women's Studies International Forum, 95,* 102624. https://doi.org/10.1016/j.wsif.2023.102624

Reddy, N. K., Vranda, M. N., Ahmed, A., Nirmala, B. P., & Siddaramu, B. (2010). Work–life balance among married women employees. *Indian Journal of Psychological Medicine, 32*(2), 112–118. https://doi.org/10.4103/0253-7176.78508

Shah, A. (2025). Beyond the ‘supermom’: Understanding maternal stress and gendered expectations in contemporary India. *Humanities and Social Sciences Communications, 12*(1), 155. https://doi.org/10.1057/s41599-025-05824-6

Sharma, S., & Mishra, S. (2018). A study of stress among working women in urban India. *Indian Journal of Health and Wellbeing, 9*(2), 246–251.

Suthar, R. (2023). Coping strategies for stress in parents of children with autism spectrum disorder. *Indian Journal of Psychiatric Nursing, 20*(2), 85–92. https://journals.lww.com/inpj/fulltext/2023/20020/coping_strategies_for_stress_in_parents_of.7.aspx

Verma, S., & Kapur, R. (2016). Work–family conflict and coping strategies among Indian women in dual-career families. *Journal of the Indian Academy of Applied Psychology, 42*(3), 409–418.

Stress Levels and Associated Factors among Working Mothers in Meerut: A Cross-Sectional Study

ORIGINALITY REPORT

11%	9%	4%	5%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Federation University Student Paper	1%
2	pmc.ncbi.nlm.nih.gov Internet Source	1%
3	www.ijfmr.com Internet Source	1%
4	sigma.nursingrepository.org Internet Source	1%
5	Submitted to Dublin Business School Student Paper	1%
6	Submitted to Segi University College Student Paper	1%
7	Submitted to University of Bradford Student Paper	1%
8	armgpublishing.com Internet Source	1%
9	www.ncbi.nlm.nih.gov Internet Source	1%
10	www.springerprofessional.de Internet Source	1%
11	Submitted to University of Hong Kong Student Paper	1%
12	link.springer.com Internet Source	1%

13	go.gale.com Internet Source	<1%
14	eprints.glos.ac.uk Internet Source	<1%
15	eprints.soton.ac.uk Internet Source	<1%
16	www.frontiersin.org Internet Source	<1%
17	www.researchsquare.com Internet Source	<1%
18	ursa.mercer.edu Internet Source	<1%
19	"Handbook on Sex, Gender and Health", Springer Science and Business Media LLC, 2024 Publication	<1%

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		