

Research Paper

A Comparative Study of Occupational Stress Dimensions Among Male and Female Technical Teachers

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ABSTRACT

The present study examined gender differences in occupational stress dimensions among technical teachers in Jalgaon District, Maharashtra (India). The objective was to compare male and female technical teachers across nine dimensions of occupational stress: workload, role ambiguity, groupism and external pressure, responsibility, powerlessness, work relationships, working conditions, personal inadequacy, and lack of motivation. A purposive sample of 100 full-time technical teachers (50 males and 50 females) with a minimum of one year of teaching experience was selected from technical colleges in the district. Occupational stress was measured using the Teacher's Occupational Stress Scale (TOSS; Sharma & Kaur, 2018), a 30-item instrument with reported internal consistency ($\alpha = .801$). Descriptive statistics (means and standard deviations) were computed, and independent-samples t tests were applied to test gender differences for each stress dimension. Results indicated that female teachers reported significantly higher stress than male teachers on workload, $t(98) = 5.68$, role ambiguity, $t(98) = 2.19$, responsibility, $t(98) = 2.99$, powerlessness, $t(98) = 6.27$, and lack of motivation, $t(98) = 3.84$ (all $p < .05$). In contrast, male teachers scored significantly higher on groupism and external pressure, $t(98) = 2.89$ ($p < .01$). No significant gender differences were observed for work relationships, working conditions, or personal inadequacy. The findings suggest that occupational stress among technical teachers is multidimensional and varies by gender, indicating a need for targeted institutional strategies such as workload rationalization, role clarification, supportive leadership, and participative decision-making to reduce stress and promote teacher well-being.

Keywords: Occupational stress, technical teachers, gender differences, workload, role ambiguity, powerlessness, Jalgaon District

Occupational stress is a persistent concern in the teaching profession because instructional work combines high cognitive demands, continuous interpersonal interaction, and accountability pressures that often extend beyond scheduled work hours. Teacher stress has been defined as the experience of unpleasant negative emotions (e.g., tension, frustration, anxiety, depression) arising from aspects of one's work as a teacher (Kyriacou, 2001). In line with transactional perspectives, stress is also understood as occurring when perceived environmental demands exceed an individual's perceived coping

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resources (Lazarus & Folkman, 1984). Together, these views underscore that teacher stress is both context-dependent and shaped by individual appraisal and coping.

In technical education contexts, occupational stress may be amplified by the dual responsibility of delivering theoretical content and managing practice-oriented instruction (e.g., laboratories, workshops, equipment use, and safety oversight). Technical teachers may also face rapidly evolving curricula, industry-aligned competency expectations, and pressures to integrate new technologies into instruction. Such conditions can increase the likelihood that teachers experience strain across multiple domains rather than as a single, uniform construct. Accordingly, contemporary teacher research commonly conceptualizes stress as multidimensional, including workload-related stressors, classroom and student-behavior stressors, role-related stressors, and organizational climate and support factors (Collie, Shapka, & Perry, 2012). Examining these dimensions separately is important because different stress domains may have different antecedents and may require different organizational responses.

Occupational stress is consequential not only for teacher well-being but also for key work outcomes. Evidence indicates that stressful working conditions are associated with reduced job satisfaction and increased indicators of strain and exhaustion (Collie et al., 2012). Related research similarly demonstrates meaningful associations among teacher stress, efficacy beliefs, and job satisfaction, highlighting the practical importance of identifying specific stressors that may undermine professional functioning (Klassen & Chiu, 2010). These relationships suggest that targeted stress-reduction strategies such as workload management, classroom support, and improved organizational resources may have downstream benefits for morale and retention.

Gender is frequently examined in occupational stress research because male and female teachers may face different role expectations, patterns of emotional labor, and work–family interface demands. For example, evidence from teacher samples indicates that emotional labor processes and perceived support can be meaningfully related to well-being and job attitudes (Kinman, Wray, & Strange, 2011). Large-sample analyses have reported gender-linked differences in certain stress domains, including workload and classroom-related stress, as well as differences in related professional beliefs (Klassen & Chiu, 2010). Gender differences are not expected to be universal; they can vary by institutional context, job design, and the specific stress dimension under consideration. For this reason, context-specific empirical examination remains essential.

Against this background, the present study compares occupational stress dimensions among male and female technical teachers. By focusing on distinct stress domains rather than only an overall stress score, the study aims to clarify whether gender differences are concentrated in particular aspects of work (e.g., workload, classroom demands, organizational support) and to identify practical targets for institutional intervention. Such evidence can inform more precise, equity-sensitive strategies to support technical teachers' occupational well-being and sustain teaching quality within technical education institutions.

REVIEW LITERATURE

Mijakoski et al. (2022) conducted a systematic review of longitudinal studies to identify determinants of teacher burnout (especially emotional exhaustion). The study objective was explanatory; no explicit hypotheses were set, but the review assumed that work,

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organizational, and individual factors predict burnout onset. Using a PROSPERO-based protocol, they screened literature and included 33 longitudinal studies, synthesizing 61 determinants. They standardized regression coefficients and conducted quantitative plotting in R to classify detrimental vs. protective effects. Results showed statistically significant detrimental determinants including job satisfaction, work climate/pressure, teacher self-efficacy, neuroticism, perceived collective exhaustion, and classroom disruption. They concluded prevention should prioritize these modifiable determinants.

Tsubono et al. (2024) examined gender differences in teachers' occupational stress using the New Brief Job Stress Questionnaire (New BJSQ) in a large cross-sectional sample of 1,825 Japanese elementary and junior high school teachers. They tested explicit hypotheses that female teachers show stronger stress reactions, that family/friend support matters more for women. That job demands/resources differentially relate to negative vs. positive outcomes. Using multiple regression analyses, they found female teachers reported significantly higher psychological/physical stress reactions and lower perceived job resources than males; family/friend support showed stronger associations with women's mental health outcomes. Job demands were strongly related to stress reactions, while job resources were more strongly related to work engagement and workplace social capital.

Calderón-García et al. (2024) investigated gender differences in autonomic (HRV) and psychological stress among educators using a cross-sectional design. The objective was comparative; the study tested gender-linked differences in stress-related indicators using heart rate variability (HRV) plus psychological measures. The sample included 80 educators (41 women). Statistical analyses used independent-samples t-tests, chi-square tests, Spearman correlations, and multiple linear regression to examine predictors and group differences. Results indicated men reported lower anxiety, fatigue, perceived stress, and burnout than women, while women showed higher social support and engagement. The authors concluded that educator stress has measurable physiological and psychological components and that gender-sensitive prevention and organizational supports are warranted. Zhou, Slemp, and Vella-Brodrick (2024) conducted a PRISMA-guided meta-analysis to quantify factors associated with teacher wellbeing using Job Demands–Resources theory as the organizing framework. The aim was cumulative synthesis rather than hypothesis testing. Their search yielded 173 eligible studies ($N = 89,876$). Using meta-analytic aggregation and moderator analyses, they estimated relative strengths of antecedents, consequences, and correlates. Results identified hope, autonomous motivation, psychological capital, and job competencies as the most potent positive predictors, while neuroticism and disengagement coping were the most potent negative predictors. For outcomes, occupational commitment was the strongest positive consequence and turnover intentions the strongest negative consequence; key correlates included burnout and work engagement. They concluded teacher wellbeing interventions should target both individual resources and job design.

Shi, Omar, and Ismail (2025) conducted a systematic review and meta-analysis on the relationship between job stress and burnout among university lecturers. Their objective was to resolve inconsistent findings; no a priori directional hypothesis was required, but they expected a positive association. They searched Scopus, Web of Science, PubMed, and Google Scholar, quality-appraised cross-sectional studies using JBI, and included 20 articles. The meta-analysis yielded a combined correlation of $r = 0.452$ (95% CI [0.380, 0.519]), with $Z = 10.911$, $p < .001$, indicating a moderate-to-high association. Gender was not significant in regression, but subgroup analyses indicated moderation by cultural

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background and measurement tools. They concluded targeted institutional interventions should reduce stressors to mitigate lecturer burnout.

Objectives of the Study

1. To examine the occupational stress dimensions among male and female technical teachers.

Hypotheses

1. There is no significant occupational stress dimensions among male and female technical teachers.

RESEARCH METHODOLOGY

Sample

The sample comprised 100 technical teachers recruited from selected technical colleges in Jalgaon District, Maharashtra (India). Using purposive sampling, the study included equal representation by gender: 50 male teachers and 50 female teachers. Eligible participants were full-time technical teachers with at least one year of teaching experience and a willingness to participate. Teachers with incomplete questionnaires were excluded from analysis. All participants provided informed consent, and responses were coded anonymously to ensure confidentiality and support unbiased statistical analysis.

Tools Used

1. Teacher's Occupational Stress Scale (TOSS) – Sharma & Kaur (2018)

The *Teacher's Occupational Stress Scale (TOSS)*, developed by Dr Meenakshi Sharma and Dr Satvinderpal Kaur (2018), is designed to assess occupational stress among professionals. The scale measures nine dimensions: workload, role ambiguity, groupism and external pressure, responsibility, powerlessness, work relationships, working conditions, personal inadequacy, and lack of motivation. It consists of 30 items rated on a five-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." The reliability coefficient of the scale is 0.801, indicating high internal consistency. Higher scores represent greater occupational stress. The tool provides a valid framework for identifying stressors affecting job performance and mental well-being.

Statistical Techniques for Data Analysis:

t test was used.

STATISTICAL ANALYSIS AND DISCUSSION

Table No-1 Mean, standard deviation, t-value of occupational stress dimensions among male and female technical teachers.

Occupational Stress Dimensions	Male Teachers (N=50)		Female Teachers (N=50)		df	't'
	Mean	SD	Mean	SD		
Workload	15.01	2.45	17.63	2.15	98	5.68**
Role Ambiguity	9.14	2.03	10.07	2.22	98	2.19*
Groupism and external pressure	9.89	2.47	8.45	2.51	98	2.89**
Responsibility	10.74	3.03	12.45	2.68	98	2.99**
Powerlessness	11.55	2.50	14.45	2.11	98	6.27**
Work Relationships	10.45	2.35	9.68	2.24	98	1.68 ^{NS}
Working Conditions	11.09	2.47	10.74	2.48	98	0.71 ^{NS}

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Occupational Stress Dimensions	Male Teachers (N=50)		Female Teachers (N=50)		df	't'
	Mean	SD	Mean	SD		
Personal inadequacy	10.57	2.36	10.45	2.30	98	0.26 ^{NS}
Lack of Motivation	8.02	2.45	9.95	2.58	98	3.84 ^{NS}

Sig – 0.05* = 1.96, 0.01=2.62**

Independent-samples *t* tests compared male ($n = 50$) and female ($n = 50$) technical teachers on nine occupational-stress dimensions. Female teachers scored significantly higher than male teachers on Workload, $t(98) = 5.68, p < .001, d = 1.14$; Role Ambiguity, $t(98) = 2.19, p = .031, d = 0.44$; Responsibility, $t(98) = 2.99, p = .004, d = 0.60$; Powerlessness, $t(98) = 6.27, p < .001, d = 1.25$; and Lack of Motivation, $t(98) = 3.84, p < .001, d = 0.77$. In contrast, male teachers reported higher Groupism and External Pressure, $t(98) = 2.89, p = .005, d = 0.58$. No statistically significant gender differences emerged for Work Relationships, $t(98) = 1.68, p = .096$; Working Conditions, $t(98) = 0.71, p = .479$; or Personal Inadequacy, $t(98) = 0.26, p = .795$.

These findings align with broader evidence that teacher stress is multi-source and can differ across demographic groups and job conditions. Higher female scores on workload, responsibility, and powerlessness may reflect differential task allocation, administrative expectations, or perceived decision latitude within institutions; higher male scores on external pressure may reflect greater exposure to external stakeholder demands. Overall, the pattern supports targeted, dimension-specific stress-management interventions rather than generic approaches.

CONCLUSION

Gender differences were evident in occupational stress dimensions among technical teachers, with females showing higher stress on workload, role ambiguity, responsibility, powerlessness, and lack of motivation. At the same time, males reported higher groupism/external pressure.

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Conflict of Interest

The author(s) declared no conflict of interest.

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