

OCCUPATIONAL STRESS AMONG SCHOOL TEACHERS AT DIFFERENT LEVELS OF ADJUSTMENT: A COMPARATIVE STUDY WITH REFERENCE TO GENDER, LOCALE, AND ORGANIZATIONAL SETUP

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ABSTRACT:

This study examined occupational stress among school teachers at low, average, and high levels of adjustment and compared stress with reference to gender, locale, and organizational setup. A quantitative, cross-sectional, comparative survey design was used with a sample of 256 teachers from recognized government and private schools in Punjab, India. Occupational stress was measured through the 46-item Occupational Stress Index, while adjustment was measured through the 70-item Mangal Teacher Adjustment Inventory. IBM SPSS Statistics 26 was used for descriptive statistics, independent-samples t-tests, one-way analysis of variance, Tukey comparisons, and factorial analysis of variance using Type III sums of squares. The analysis showed a strong graded pattern: teachers with low adjustment recorded the highest stress ($M = 169.95$), followed by average-adjustment teachers ($M = 153.64$) and high-adjustment teachers ($M = 137.00$). Organizational setup produced a significant difference, with private-school teachers reporting higher stress than government-school teachers. Overall gender and locale differences were nonsignificant, although a gender difference appeared within the average-adjustment group. The results indicate that adjustment is a major protective resource and that institutional conditions may intensify or reduce occupational demands. The study supports school-level well-being screening, workload rationalization, supportive leadership, confidential counselling, and differentiated interventions for teachers with weak adjustment resources.

Keywords: occupational stress; teacher adjustment; gender; rural-urban locale; government and private schools; teacher well-being

1. INTRODUCTION

1.1 Background and Context

Teaching is a relational and cognitively demanding occupation in which professional performance depends on sustained attention, emotional regulation, classroom decision-making, and continuous interaction with students, parents, colleagues, and administrators. Occupational stress develops when teachers perceive that work demands exceed the personal, social, or organizational resources available for meeting them. The construct therefore includes more than temporary pressure. It reflects recurring role overload, ambiguity, accountability demands, inadequate participation, strained relationships, limited autonomy, and working conditions that threaten professional well-being. Early evidence showed that approximately one-fifth of teachers described teaching as very or extremely stressful, with pupil attitudes, maintaining standards, and covering absent colleagues among the prominent sources (Kyriacou & Sutcliffe, 1978). Later synthesis confirmed that teacher stress has diverse organizational and personal antecedents and is associated with burnout, reduced

satisfaction, poorer health, and weaker occupational functioning (Montgomery & Rupp, 2005).

The contemporary educational environment has expanded these demands. Teachers are expected to deliver curriculum, assess learning, maintain discipline, respond to inclusion and mental-health needs, use digital systems, document performance, communicate with families, and complete administrative duties. Earlier research identified time pressure, workload, student-related difficulties, and limited support as important sources of teacher strain, while school resources and self-efficacy were associated with lower perceived job stressors and burnout (Betoret, 2009; Skaalvik & Skaalvik, 2017). These pressures matter because international projections indicated that almost 69 million additional primary and secondary teachers would be needed globally by 2030 to achieve universal education goals (UNESCO Institute for Statistics, 2016). Teacher well-being is consequently not only an individual health issue; it is also a workforce, quality, and educational-equity issue.

Adjustment provides an important psychological lens for understanding why similar demands do not produce identical stress responses. Teacher adjustment refers to the capacity to maintain functional balance across personal, emotional, social, school, and occupational domains. A well-adjusted teacher can appraise demands realistically, regulate emotion, seek assistance, adapt behaviour, and preserve role effectiveness. A poorly adjusted teacher may experience the same workload as more threatening, possess fewer coping resources, or find it harder to recover after demanding events. Person-centred research has demonstrated that teachers form distinct profiles of stress, coping, self-efficacy, and burnout, and that the most adaptive profiles are associated with better classroom and student outcomes (Herman et al., 2018). Similarly, evidence from India has shown a significant relationship between occupational stress and teacher adjustment, supporting the need to examine adjustment not merely as an outcome but as a differentiating condition (Baruah & Gogoi, 2017).

Teacher stress may also vary across gender, rural-urban locale, and organizational setup. Gendered work and family expectations may influence exposure, recovery time, and access to support, although empirical findings are inconsistent. Locale can alter class size, infrastructure, community expectations, transport, staffing, and professional isolation. Organizational setup may affect salary security, workload, administrative control, performance monitoring, promotion, and participation in decision-making. A Punjab study of college teachers reported substantial occupational and personal stress with consequences for burnout and health, illustrating the relevance of the issue within the regional context (Rana & Soodan, 2019). The present study therefore treats adjustment level as the principal comparative factor while examining whether gender, locale, and government-private organizational conditions create additional variation in occupational stress.

1.2 Literature Gap

Existing research has established that teacher stress is associated with workload, classroom demands, school resources, burnout, and job satisfaction. Indian studies have also compared gender, locality, and government-private school groups. However, most studies examine these demographic variables separately, use modest convenience samples, or correlate total adjustment with stress without comparing stress across clearly defined adjustment levels. Limited evidence jointly examines low-, average-, and high-adjustment teachers while retaining gender, rural-urban locale, and organizational setup in the same proportionately stratified design. This restricts understanding of whether institutional differences persist across adjustment levels and whether adjustment changes the pattern of subgroup disparities.

1.3 Problem Statement

School teachers perform under simultaneous instructional, administrative, emotional, and accountability pressures. Persistent exposure can impair concentration, health, classroom management, professional commitment, and willingness to remain in teaching. Yet stress is not distributed uniformly. Some teachers maintain occupational functioning despite high demands, whereas others experience pronounced strain under similar conditions. The uneven response suggests that adjustment may be a central personal resource, but the comparative magnitude of occupational stress at different adjustment levels remains insufficiently documented in the Punjab school context. It is also unclear whether male and female teachers, rural and urban teachers, and government and private school teachers display the same stress pattern after adjustment level is considered. Studies that report only an overall gender or sector difference may conceal differences that arise within low-, average-, or high-adjustment groups. Conversely, apparent demographic differences may primarily reflect unequal adjustment resources rather than the demographic characteristic itself. The specific problem addressed by this paper is therefore the absence of an integrated comparative assessment of occupational stress across teacher adjustment levels, gender, locale, and organizational setup within a distributed school-teacher sample. Such evidence is needed to distinguish personal vulnerability from contextual pressure and to support appropriately targeted institutional responses.

1.4 Purpose and Objectives

The purpose of the study was to determine whether occupational stress differed among school teachers at low, average, and high levels of adjustment and whether the observed pattern varied by gender, locale, and organizational setup. The objectives were: (1) to assess the occupational stress of school teachers; (2) to compare occupational stress by gender, rural-urban locale, and government-private organizational setup; (3) to compare occupational stress across low, average, and high adjustment levels; and (4) to examine gender, locale, and organizational differences in occupational stress within each adjustment level.

1.5 Significance of the Study

The study contributes theoretically by integrating occupational stress with teacher adjustment. Stress research often emphasizes demands, whereas adjustment research emphasizes the individual's capacity to maintain balance across personal and professional roles. Comparing defined adjustment groups makes it possible to test whether stronger adjustment is associated with systematically lower occupational stress and whether this protective pattern is consistent across demographic and institutional categories. The resulting evidence can refine demand-resource explanations by showing that occupational conditions and personal adaptation operate together rather than as competing explanations.

The study also has practical value for school leadership and human-resource management. Overall stress averages alone do not identify which teachers need intensive support. Adjustment-based classification can help schools distinguish universal measures, such as workload review and role clarification, from targeted measures, such as counselling, mentoring, coping-skills training, and return-to-work support. Comparisons between government and private schools can indicate whether contractual conditions, administrative control, recognition, or performance pressure require sector-specific interventions. Rural-urban analysis can guide resource allocation, professional networks, and access to psychological services, while gender analysis can inform equitable workload and support arrangements without assuming that all male or female teachers experience stress in the same manner.

The findings are also relevant to policy. Teacher stress influences retention, absenteeism, instructional continuity, and the capacity of schools to implement reform. Jennings and Greenberg (2009) linked teachers' social-emotional competence and well-being with supportive teacher-student relationships, effective classroom management, and positive classroom outcomes, while Herman et al. (2018) found that maladaptive teacher stress and burnout profiles were associated with weaker classroom practices and less favourable student outcomes. A Punjab-specific comparative study can therefore support departmental well-being standards, periodic psychosocial risk assessment, rational allocation of non-teaching duties, confidential employee assistance, and leadership accountability for staff climate. By using a proportionately stratified design and reporting effect sizes alongside significance tests, the study also provides a clearer basis for deciding which differences are statistically reliable and which are large enough to justify intervention.

2. LITERATURE REVIEW

The literature review critically examines four themes aligned with the study objectives: the development and consequences of teacher occupational stress; adjustment, coping, and personal resources; gender and rural-urban variation; and organizational setup and school context. The thematic organization traces how the field has moved from identifying stress prevalence to explaining why teachers differ in their capacity to manage comparable demands.

2.1 Occupational Demands and Consequences

Foundational research established teaching as an occupation in which stress arises through the interaction of professional demands and individual appraisal. Kyriacou and Sutcliffe (1978) surveyed 257 teachers from 16 schools and found that about one-fifth regarded teaching as very or extremely stressful. Pupil attitudes, maintenance of professional standards, and the need to cover absent colleagues were prominent stressors. The study was important because it separated sources and symptoms of stress and showed that stress could not be explained adequately by biographical characteristics alone. (Kyriacou, 2001) later synthesized the field and emphasized that teacher stress should be interpreted through workload, classroom management, role expectations, organizational relationships, and coping responses. This progression shifted attention from whether teachers experience stress to how demands are appraised and managed.

A broader quantitative synthesis strengthened the evidence base. Montgomery and Rupp (2005) conducted a meta-analysis of 65 studies and organized teacher stress around environmental demands, emotional responses, coping mechanisms, and occupational outcomes. Their findings showed that stress is not a single event but a process connecting difficult working conditions with negative affect and behavioural consequences. Klassen and Chiu (2010) analysed 1,430 practising teachers through factor analysis and structural modelling. Workload and classroom stress were associated with lower job satisfaction and weaker self-efficacy, while gender and experience contributed to more complex patterns. These findings indicated that occupational stress affects both how teachers feel about work and how capable they believe themselves to be in performing it.

Earlier evidence has connected teacher stress directly with instructional quality and system performance. Herman et al. (2018) used latent profile analysis with 121 teachers and 1,817 students and found that teachers in the most maladaptive stress-burnout profile showed weaker classroom practices and less favourable student outcomes. Rana and Soodan (2019) surveyed 412 college teachers in Punjab and documented substantial occupational and personal stress associated with job satisfaction, burnout, and health. In addition, Skaalvik and

Skaalvik (2017) studied 1,145 teachers and found that time pressure was the strongest predictor of emotional exhaustion among the school stressors examined. Together, these studies support assessment of occupational stress as a central condition of teaching effectiveness rather than a peripheral personal difficulty.

2.2 Adjustment, Coping, and Personal Resources

Adjustment research explains why teachers exposed to similar pressures may experience different levels of occupational stress. Betoret (2009) tested a structural equation model among Spanish primary and secondary teachers and found that school resources and teacher self-efficacy reduced perceived job stressors and burnout. The methodology was significant because it examined external and internal coping resources simultaneously. The findings implied that adjustment is not simply a stable personality characteristic; it is supported by confidence, classroom-management capacity, and access to institutional resources. Skaalvik and Skaalvik (2015) used semi-structured interviews with working and retired teachers and found that job satisfaction often coexisted with severe stress and exhaustion. Teachers described workload, time pressure, student needs, limited autonomy, and difficult cooperation as major demands. Their accounts showed that professional commitment can remain high even when adaptation is strained.

Person-centred studies have further demonstrated that adjustment is multidimensional. Herman et al. (2018) applied latent profile analysis to 121 teachers and linked the profiles to outcomes for 1,817 students. Only a small group displayed a well-adjusted profile with low stress and burnout and strong coping and self-efficacy. Other profiles combined high stress with either effective or ineffective coping. Teachers in the most maladaptive profile showed weaker classroom practices and less favourable student outcomes. Austin et al. (2005) investigated teachers' stress symptoms and the coping strategies used to reduce stress, reinforcing the importance of coping responses in the management of occupational strain. These studies justify comparing teachers across adjustment levels rather than treating the workforce as psychologically uniform.

Indian evidence specifically supports the stress-adjustment relationship. Baruah and Gogoi (2017) studied 300 secondary school teachers in Dibrugarh using a teacher occupational-stress measure and the Mangal Teacher Adjustment Inventory. Most respondents had low occupational stress, but stress and adjustment were significantly related. Nikhat (2018) studied 100 secondary-school teachers in Hyderabad and found workload to be a major source of work stress; greater use of coping strategies was associated with lower occupational stress. Although such studies established association, they offered limited evidence on how mean stress differs across low-, average-, and high-adjustment groups after gender, locale, and school sector are considered.

2.3 Gender and Rural-Urban Variation

Evidence on gender differences remains mixed, which suggests that gender may interact with working conditions and coping resources. Antoniou et al. (2006) analysed 493 Greek primary and secondary school teachers and found that female teachers reported significantly higher occupational stress, particularly for interpersonal demands, workload, student progress, and emotional exhaustion. In contrast, Dhull (2018) studied 200 secondary-school teachers and found no significant male-female difference, although government-school teachers reported lower occupational stress than private-school teachers. (Klassen & Chiu, 2010) also showed that gender effects were not uniform across stress, self-efficacy, and satisfaction outcomes. The inconsistent findings indicate that a single overall comparison may conceal conditional

differences. Examining gender within adjustment levels can determine whether gender disparities appear mainly where coping and adjustment resources are average or weak.

Locale also operates through contextual rather than purely geographic mechanisms. Abel and Sewell (1999) compared 51 rural and 46 urban secondary-school teachers. Urban teachers reported greater stress from poor working conditions and staff relations, while pupil misbehaviour and time pressure were important in both settings. Different predictors of burnout emerged for rural and urban teachers, showing that similar total stress may arise from different sources. Indian comparative research has often reported nonsignificant rural-urban differences, but many studies have used limited samples or analysed locale without adjustment. Rural schools may involve professional isolation, infrastructure shortages, travel, multigrade teaching, and non-teaching duties, whereas urban schools may involve crowding, competitive expectations, parental monitoring, and administrative intensity. A balanced locale comparison is therefore necessary, but interpretation should focus on effect magnitude and context rather than stereotypes.

2.4 Organizational Setup and School Context

Organizational setup is a consistent but not universal source of variation. Dhull (2018) reported significantly lower occupational stress among government secondary-school teachers than private-school teachers in a stratified random sample of 200 teachers. The descriptive survey design did not establish causality, but the result suggested that employment security, workload, supervision, and performance expectations may matter. Rana and Soodan (2019) surveyed 412 college teachers in Punjab and reported substantial financial, intrinsic-job, career, burnout, and health concerns. Although the participants worked in higher education, the regional evidence demonstrated how employment conditions and institutional demands can influence occupational health. (Rani & Singh, 2012), by contrast, found no significant differences by gender, type of school, or locality among secondary teachers, illustrating the inconsistency that remains in Indian findings.

International organizational research has explained why sector effects may emerge. Collie et al. (2012) surveyed 664 Canadian teachers and found that school climate and social-emotional learning conditions predicted teacher stress, job satisfaction, and teaching efficacy. Shackleton et al. (2019) used multilevel analysis and found that perceptions of school safety, support, and student attitudes were among the school-environment factors most consistently associated with burnout. These studies imply that government-private differences should not be interpreted as fixed sector traits. They may represent differences in leadership, resources, autonomy, workload allocation, collegial support, or employment conditions. The present study accordingly compares sectors overall and within each adjustment level, allowing assessment of whether stronger adjustment narrows the organizational stress gap or whether sector pressure remains evident even among highly adjusted teachers.

2.5 Identification of Literature Gap and Significance

Prior studies have separately examined teacher stress, adjustment, gender, locale, and school type, but few have integrated these variables in a factorial framework with unequal group sizes. Evidence is especially limited on mean occupational stress across low-, average-, and high-adjustment groups and on whether government-private, gender, and rural-urban differences remain within each adjustment level. The study addressed this gap through a proportionately stratified Punjab teacher sample, standardized Indian instruments, subgroup comparisons, effect-size reporting, and Type III factorial analysis. Addressing the gap is significant because it separates broad contextual risk from adjustment-related vulnerability and supports differentiated teacher well-being policies.

3. RESEARCH METHODOLOGY

A quantitative, cross-sectional, descriptive-comparative survey design was used. The individual school teacher was the unit of analysis. The design was selected because the objectives required estimation of occupational-stress levels and comparison of naturally occurring groups without manipulating employment conditions or teacher adjustment. The target population comprised full-time teachers working in recognized government and private schools in Punjab, India.

Table 1. Data source and primary-data collection protocol

Element	Definite specification
data source	Primary responses obtained directly from school teachers through one structured, self-administered questionnaire booklet.
Geographical scope	Recognized government and private schools located in selected rural and urban blocks of Punjab, India.
Target respondents	Full-time classroom teachers employed at upper-primary, secondary, or senior-secondary level.
Sampling method	Multistage proportionate stratified random sampling: districts, rural/urban blocks, schools by organizational setup, and teachers within selected schools.
sample	256 teachers: 143 female and 113 male; 119 rural and 137 urban; 146 government and 110 private-school teachers.
Eligibility	Age 23-60 years; minimum one completed year in the present school; current instructional responsibility; informed consent.
Exclusion	Administrative personnel without a regular teaching load, guest teachers with less than one year of service, and questionnaires with more than 10% missing responses.
Collection mode	Paper questionnaire administered during a pre-approved staff period; average completion time approximately 25-30 minutes.
Ethical safeguards	Voluntary participation, written consent, anonymity, no employee code or personal identifier, sealed return envelope, and aggregate reporting.
Single analytical software	IBM SPSS Statistics, version 26, used for data coding, screening, descriptive analysis, t-tests, ANOVA, Tukey comparisons, and factorial ANOVA.

The sample was selected through proportionate multistage stratification. It comprised 143 female and 113 male teachers, 137 urban and 119 rural teachers, and 146 government and 110 private-school teachers. The eight gender-by-locale-by-organization cells ranged from 21 to 41 respondents, retaining analyzable subgroup sizes while reflecting naturally unequal group distributions. Adjustment was classified from the observed Mangal Teacher Adjustment Inventory distribution into low ($n = 62$; 24.2%), average ($n = 119$; 46.5%), and high ($n = 75$; 29.3%) groups. Because the cells were unequal, the factorial general linear model used Type III sums of squares. The sample-based adjustment classification supported direct comparison within the study population and avoided the uncritical application of externally derived cut points.

Occupational stress was measured with the Occupational Stress Index developed by Srivastava and Singh. The instrument contains 46 statements rated on a five-point response scale and produces a total score from 46 to 230; higher scores indicate greater occupational stress. Scores of 46-122, 123-155, and 156-230 were treated as low, moderate, and high

stress, respectively. Teacher adjustment was assessed through the 70-item short form of the Mangal Teacher Adjustment Inventory, published by the National Psychological Corporation. Higher scores indicated more favourable adjustment. In the dataset, internal-consistency coefficients were .91 for occupational stress and .86 for adjustment.

Data screening included range checks, missing-value inspection, group-frequency verification, and review of standardized residuals. The significance level was fixed at .05. Means and standard deviations summarized occupational stress. Independent-samples t-tests compared gender, locale, and organizational setup overall and within adjustment groups. One-way ANOVA tested mean differences across low, average, and high adjustment, followed by Tukey HSD comparisons. A factorial general linear model using Type III sums of squares evaluated the simultaneous main effects of adjustment, gender, locale, and organizational setup and the adjustment-by-context interactions. Cohen's d, eta squared, partial eta squared, and 95% confidence intervals were reported to distinguish statistical significance from substantive magnitude.

Null Hypotheses

H01: There is no significant difference in the mean occupational-stress scores of male and female school teachers.

H02: There is no significant difference in the mean occupational-stress scores of rural and urban school teachers.

H03: There is no significant difference in the mean occupational-stress scores of government and private school teachers.

H04: There is no significant difference in the mean occupational-stress scores of school teachers at low, average, and high levels of adjustment.

H04a: There is no significant gender difference in occupational stress within the different levels of adjustment.

H04b: There is no significant locale difference in occupational stress within the different levels of adjustment.

H04c: There is no significant organizational-setup difference in occupational stress within the different levels of adjustment.

4. RESULTS AND ANALYSIS

The results are presented in accordance with the analytical procedures described in the methodology. Descriptive and inferential statistics were used to examine occupational-stress differences across adjustment levels and the selected demographic and organizational categories.

Table 2. Distribution of the sample (N = 256)

Characteristic	Category	n	%
Gender	Male	113	44.1
Gender	Female	143	55.9
Locale	Urban	137	53.5
Locale	Rural	119	46.5
Organizational setup	Government	146	57.0
Organizational setup	Private	110	43.0
Adjustment level	Low	62	24.2

Characteristic	Category	n	%
Adjustment level	Average	119	46.5
Adjustment level	High	75	29.3

Note. Percentages are based on $N = 256$.

Table 2 shows an unequal but analytically adequate sample structure. Female teachers constituted 55.9% of the sample and male teachers 44.1%. Urban teachers represented 53.5% and rural teachers 46.5%, while government-school teachers represented 57.0% and private-school teachers 43.0%. Adjustment groups were also unequal: 24.2% were classified as low adjustment, 46.5% as average adjustment, and 29.3% as high adjustment. The larger average-adjustment group reflected the concentration of scores near the centre of the observed adjustment distribution. Because the group margins were unequal, Type III sums of squares were used in the factorial model.

Table 3. Descriptive statistics and internal consistency of the study measures

Instrument	Items	Possible range	M	SD	alpha
Occupational Stress Index	46	46-230	152.71	15.83	.91
Mangal Teacher Adjustment Inventory	70	0-70	53.41	10.06	.86

Note. M = mean; SD = standard deviation; α = Cronbach's internal-consistency coefficient.

Table 3 indicates that the mean Occupational Stress Index score was 152.71 ($SD = 15.83$), with an observed range of 103-194. The mean adjustment score was 53.41 ($SD = 10.06$), with an observed range of 29-70. The internal-consistency estimates exceeded the conventional .70 criterion: α was .91 for occupational stress and .86 for adjustment. These coefficients supported group-level comparison but did not independently establish construct validity or measurement equivalence. The continuous adjustment-stress correlation was $r = -.739$, $p < .001$, indicating a strong inverse association between adjustment and occupational stress. Because the design was cross-sectional, the correlation was interpreted as noncausal.

Table 4. Occupational-stress category by level of teacher adjustment

Adjustment level	Stress category	n	Within-group %
Low adjustment	Low	0	0.0
Low adjustment	Moderate	6	9.7
Low adjustment	High	56	90.3
Average adjustment	Low	0	0.0
Average adjustment	Moderate	71	59.7
Average adjustment	High	48	40.3
High adjustment	Low	4	5.3
High adjustment	Moderate	68	90.7
High adjustment	High	3	4.0

Note. Stress categories followed the OSI score ranges: low=46-122, moderate=123-155, and high=156-230. Percentages sum within each adjustment group.

Table 4 provides a distributional view of the adjustment-stress relationship. Among low-adjustment teachers, 56 of 62, or 90.3%, fell in the high-stress category, and none fell in the low-stress category. The average-adjustment group was divided between moderate stress (59.7%) and high stress (40.3%). In contrast, 90.7% of highly adjusted teachers were in the

moderate category, 5.3% were in the low category, and only 4.0% were in the high category. High adjustment therefore substantially reduced severe stress but did not eliminate occupational pressure, supporting both universal organizational reform and targeted adjustment support.

Table 5. Occupational-stress scores across adjustment levels

Adjustment level	n	M	SD
Low	62	169.95	11.36
Average	119	153.64	9.58
High	75	137.00	10.48
Total	256	152.71	15.83

Note. One-way ANOVA: $F(2, 253) = 174.72$, $p < .001$, $\eta^2 = 0.580$. Higher OSI scores indicate greater stress.

Table 5 demonstrates a clear monotonic decline in occupational stress as adjustment improved. Low-adjustment teachers recorded a mean of 169.95, average-adjustment teachers recorded 153.64, and the high-adjustment group recorded 137.00. The overall difference was statistically significant, $F(2, 253) = 174.72$, $p < .001$, and $\eta^2 = 0.580$. Thus, approximately 58.0% of total stress-score variation was associated with adjustment-group membership in the one-way model. The 32.95-point gap between low and high adjustment was practically meaningful. H04 was rejected, although the cross-sectional design prevents a causal claim that improving adjustment alone would necessarily produce the observed reduction.

Table 6. Tukey HSD comparisons between adjustment levels

Comparison	Mean difference	95% CI lower	95% CI upper	p	Decision
Low - Average	16.31	12.51	20.11	< .001	Significant
Low - High	32.95	28.79	37.12	< .001	Significant
Average - High	16.64	13.06	20.22	< .001	Significant

Note. Mean differences are expressed so that positive values indicate higher stress in the first-named, lower-adjustment group. Familywise $\alpha = .05$.

Table 6 shows that every adjustment group differed significantly after Tukey control of familywise error. Low-adjustment teachers exceeded average-adjustment teachers by 16.31 points, and average-adjustment teachers exceeded high-adjustment teachers by 16.64 points. The largest separation, 32.95 points, occurred between low and high adjustment. All confidence intervals excluded zero. The ordered pattern indicates that stress reduction was evident across each transition rather than only between the two extreme groups. Interventions should therefore include preventive support for average-adjustment teachers as well as intensive assistance for low-adjustment teachers.

Table 7. Gender comparison of occupational stress overall and within adjustment levels

Adjustment	Gender	n	M	SD	t	df	p	d
Overall	Female	143	153.78	16.03	1.21	254	.228	.15
Overall	Male	113	151.37	15.53				
Low	Female	35	170.29	11.06	0.26	60	.795	.07
Low	Male	27	169.52	11.93				
Average	Female	68	155.50	10.52	2.50	117	.014	.46
Average	Male	51	151.16	7.56				

Adjustment	Gender	n	M	SD	t	df	p	d
High	Female	40	136.40	8.89	-0.53	73	.599	-.12
High	Male	35	137.69	12.14				

Note. The *t*, *p*, and *d* values are reported on the first row of each paired comparison. Positive *d* indicates higher mean stress among female teachers.

Table 7 indicates that female teachers had a somewhat higher overall mean than male teachers, but the difference was nonsignificant, $t(254) = 1.21$, $p = .228$, $d = .15$; H01 was retained. Gender differences were also nonsignificant in the low- and high-adjustment groups. Within the average-adjustment group, however, female teachers scored 4.34 points higher than male teachers, $t(117) = 2.50$, $p = .014$, $d = .46$. H04a was therefore partially rejected at the subgroup level. Because the Type III adjustment-by-gender interaction remained nonsignificant, this isolated subgroup difference was interpreted cautiously.

Table 8. Rural-urban comparison of occupational stress overall and within adjustment levels

Adjustment	Locale	n	M	SD	t	df	p	d
Overall	Rural	119	153.13	15.88	0.39	254	.693	.05
Overall	Urban	137	152.35	15.82				
Low	Rural	29	170.17	12.17	0.14	60	.887	.04
Low	Urban	33	169.76	10.79				
Average	Rural	57	153.84	10.12	0.22	117	.825	.04
Average	Urban	62	153.45	9.13				
High	Rural	33	136.94	9.33	-0.04	73	.965	-.01
High	Urban	42	137.05	11.41				

Note. The *t*, *p*, and *d* values are reported on the first row of each paired comparison. Positive *d* indicates higher mean stress among rural teachers.

Table 8 shows that rural and urban teachers had nearly identical overall stress scores, $t(254) = 0.39$, $p = 0.693$, $d = 0.05$. The comparisons were nonsignificant at low, average, and high adjustment levels, and all effect sizes were negligible. H02 and H04b were retained. Similar total scores do not imply identical stress sources: rural teachers may face professional isolation, travel, infrastructure constraints, and multiple duties, whereas urban teachers may face crowding, competitive expectations, behavioural demands, and intensive monitoring. The result supports common well-being standards combined with local diagnosis of stress composition.

Table 9. Government-private comparison of occupational stress overall and within adjustment levels

Adjustment	Organization	n	M	SD	t	df	p	d
Overall	Private	110	158.06	15.05	4.90	254	< .001	.62
Overall	Government	146	148.68	15.24				
Low	Private	32	173.28	9.45	2.48	60	.016	.63
Low	Government	30	166.40	12.28				
Average	Private	50	157.82	8.41	4.35	117	< .001	.81
Average	Government	69	150.61	9.27				
High	Private	28	141.11	10.50	2.73	73	.008	.65
High	Government	47	134.55	9.78				

Note. The *t*, *p*, and *d* values are reported on the first row of each paired comparison. Positive *d* indicates higher mean stress among private-school teachers.

Table 9 identifies organizational setup as the clearest contextual difference. Private-school teachers had an overall mean of 158.06, compared with 148.68 for government-school teachers, $t(254) = 4.90$, $p < .001$, $d = 0.62$. The private-school mean was significantly higher at low, average, and high adjustment levels, with effect sizes of 0.63, 0.81, and 0.65, respectively. H03 and H04c were rejected. The factorial adjustment-by-organization interaction was nonsignificant, indicating that the sector difference was broadly consistent rather than demonstrably moderated by adjustment. Individual coping interventions therefore cannot substitute for organizational review of workload, employment security, performance pressure, autonomy, compensation, and participation.

Table 10. Factorial analysis of variance for occupational stress

Source	df	Sum of squares	F	p	Partial eta-squared
Adjustment level	2	32,917.70	172.68	< .001	0.586
Gender	1	83.55	0.88	.350	0.004
Locale	1	48.10	0.50	.478	0.002
Organizational setup	1	2,723.12	28.57	< .001	0.105
Adjustment x Gender	2	339.87	1.78	.170	0.014
Adjustment x Locale	2	9.88	0.05	.950	< .001
Adjustment x Organization	2	3.01	0.02	.984	< .001
Error	244	23,256.47			

Note. The model included adjustment and each two-way interaction between adjustment and the contextual variables. Partial eta-squared estimates effect magnitude after the remaining model terms were considered.

Table 10 confirms that adjustment level was the dominant predictor after gender, locale, organizational setup, and interaction terms were considered simultaneously. Its partial eta squared was 0.586. Organizational setup also showed a significant main effect, $F(1, 244) = 28.57$, $p < .001$, partial eta squared = 0.105. Gender and locale were nonsignificant after adjustment for unequal cells. The adjustment-by-gender, adjustment-by-locale, and adjustment-by-organization interactions were also nonsignificant. The model explained 63.6% of total stress variance (adjusted $R^2 = 0.619$). These results reinforce the interpretation that adjustment and organizational context contribute independently, while the isolated average-group gender difference should be treated as exploratory rather than evidence of formal moderation.

Table 11. Summary of null-hypothesis decisions

Hypothesis	Null proposition	Statistical evidence	Decision
H01	No gender difference in occupational stress	$t(254) = 1.21$, $p = 0.228$	Retained overall
H02	No locale difference in occupational stress	$t(254) = 0.39$, $p = 0.693$	Retained
H03	No organizational-setup difference	$t(254) = 4.90$, $p < .001$	Rejected
H04	No difference across adjustment levels	$F(2, 253) = 174.72$, $p < .001$	Rejected
H04a	No gender difference at adjustment levels	Average level $p = 0.014$; other levels $p >$	Partially rejected

Hypothesis	Null proposition	Statistical evidence	Decision
		.05	
H04b	No locale difference at adjustment levels	All $p > .05$	Retained
H04c	No organizational difference at adjustment levels	All $p \leq .016$	Rejected

Note. Retained means that the evidence was insufficient to reject the null at $\alpha=.05$; it does not prove exact equality between groups.

Table 11 consolidates the findings in relation to the objectives. H01 and H02 were retained because the overall gender and locale comparisons were nonsignificant. H04a was partially rejected because a gender difference appeared only in the average-adjustment group, while H04b was retained because all locale comparisons were nonsignificant. H03 and H04c were rejected because private-school teachers reported higher stress overall and within every adjustment category. H04 was rejected decisively, and every pair of adjustment groups differed significantly. The integrated conclusion is that adjustment is the principal differentiating factor, organizational setup is an additional contextual source of stress, locale contributes little to total-score variation, and gender effects are conditional rather than general.

5. DISCUSSION AND POLICY IMPLICATIONS

The findings present a coherent pattern in which occupational stress declines sharply as teacher adjustment improves. Low-adjustment teachers were concentrated in the high-stress category, average-adjustment teachers were divided between moderate and high stress, and highly adjusted teachers rarely reached the high-stress range. Adjustment accounted for 58.0% of total variation in the one-way analysis. This graded result is consistent with the significant stress-adjustment relationship reported by Baruah and Gogoi (2017) and with person-centred evidence that teachers differ in combined profiles of stress, coping, efficacy, and burnout (Herman et al., 2018). It extends that literature by expressing the relationship through directly interpretable mean differences and stress categories.

The result can be interpreted through a demand-resource perspective. Occupational demands produce strain when they exceed the resources that teachers can mobilize. Adjustment represents a capacity to appraise pressure, regulate emotion, solve problems, use social support, and preserve functional balance. Betoret (2009) showed that internal resources such as self-efficacy and external resources such as school support reduce perceived stressors and burnout. The present pattern is compatible with that mechanism: high-adjustment teachers may not experience fewer demands, but they may interpret, manage, and recover from them more effectively. However, the finding does not justify placing responsibility exclusively on the teacher. Most high-adjustment teachers still remained in the moderate-stress category, indicating that occupational conditions continue to impose strain even where personal resources are comparatively strong.

The organizational comparison provides the clearest contextual result. Private-school teachers reported higher stress overall and at every adjustment level, supporting Dhull (2018) and regional evidence connecting occupational stress with burnout and health (Rana & Soodan, 2019). The nonsignificant adjustment-by-organization interaction indicates that the sector gap remained broadly stable across adjustment levels rather than narrowing or widening reliably. Organizational setup may capture differences in employment security, remuneration, workload, monitoring, decision authority, leave, class size, professional recognition, and

expectations for availability beyond school hours. These mechanisms should be measured directly in future research rather than inferred from sector membership alone.

Gender findings were more conditional. The overall male-female difference was nonsignificant, which agrees with Dhull (2018). Nevertheless, female teachers reported significantly greater stress within the average-adjustment group, while differences at low and high adjustment were nonsignificant. Antoniou et al. (2006) found higher occupational stress among female Greek teachers, especially for workload and interpersonal demands, but gender patterns vary across systems. The present pattern may indicate that strong adjustment protects both genders and that severe adjustment difficulty dominates gender-related variation in the low group. Within the average group, differences in unpaid care, role conflict, safety, travel, or recovery time may become more visible. The finding remains exploratory because the adjustment-by-gender interaction was nonsignificant and subgroup testing increases the chance of isolated significance.

Locale did not produce a significant total-score difference, either overall or within adjustment levels. This result differs from Abel and Sewell (1999), who found that urban teachers experienced more stress from working conditions and staff relations, but their study also showed that stress sources varied by locale. A nonsignificant difference in the present study should therefore be understood as similarity in total burden rather than similarity in experience. Rural teachers may encounter resource scarcity, professional isolation, transport, multigrade responsibility, and non-teaching duties. Urban teachers may encounter crowding, competitive performance expectations, difficult behaviour, extensive documentation, and stronger parental monitoring. Policy should avoid assuming that one locale is uniformly more stressful; it should use local diagnostic evidence to identify the particular demand profile.

The hypothesis decisions have direct policy implications. First, state and school authorities should institute periodic psychosocial risk assessment as part of occupational health and school-quality monitoring. Such assessment should report workload, non-teaching duty, role clarity, safety, collegial support, autonomy, and access to counselling rather than relying only on a total stress score. The need is reinforced by evidence that time pressure was a strong predictor of teacher emotional exhaustion (Skaalvik & Skaalvik, 2017) and that workload was a major stressor among secondary-school teachers in Hyderabad (Nikhat, 2018). Administrative requirements should be reviewed for educational necessity, duplication, timing, and digital usability.

Second, teacher-support policy should operate at three levels. Universal measures should include predictable workloads, protected planning time, transparent role descriptions, fair allocation of non-teaching work, supportive supervision, and safe channels for employee voice. Selective measures should be offered to groups or schools reporting elevated stress, particularly private institutions or units undergoing rapid change. Indicated support should be confidentially available to individual teachers with low adjustment or high stress through counselling, mentoring, peer consultation, stress-management training, and referral pathways. Adjustment screening must not be used for punitive appraisal or employment exclusion. Its purpose should be early assistance and resource matching, with strict confidentiality and informed consent.

Third, private-school governance requires focused attention without assuming that all private institutions are alike. Regulatory bodies and school management should examine contract stability, salary delays, unpaid additional duties, extended availability, performance pressure, leave practices, grievance mechanisms, and participation in decisions. The effect sizes indicate that organizational changes may yield greater benefit than generic wellness

workshops alone. Government schools should not be treated as stress-free; their teachers may face administrative deployment, election duties, data reporting, transfers, large classes, and accountability pressure. Sector-specific interventions should therefore follow institutional audits rather than broad labels.

Theoretically, the findings support an integrated view in which adjustment is a personal resource and organizational setup is a contextual demand-resource structure. The large adjustment effect and independent organizational main effect suggest additive rather than clearly moderated contributions: adaptive resources were associated with lower stress in both sectors, while private-school conditions were associated with higher stress across the adjustment gradient. This interpretation builds on school-climate evidence showing that support, safety, and social-emotional conditions predict teacher stress and efficacy (Collie et al., 2012; Shackleton et al., 2019). It also cautions against causal overstatement because adjustment may reduce stress, prolonged stress may erode adjustment, and both may reflect unmeasured personal and institutional conditions.

Several limitations bound the conclusions. The design was cross-sectional and could not determine temporal direction. Both measures were self-reported and may have been affected by response style, social desirability, or common-method variance. Adjustment groups were sample-relative, which supported internal comparison but limited normative interpretation. The analysis focused on total occupational stress and did not identify which Occupational Stress Index dimensions produced each difference. Teachers were nested within schools, yet ordinary ANOVA did not model school-level clustering.

Future research should replicate the study with larger probability-based samples and preregister the hypotheses and decision rules. Multilevel modelling should separate teacher- and school-level variance, while longitudinal measurement should test whether adjustment predicts later stress, whether stress erodes adjustment, or whether the association is reciprocal. Qualitative interviews can explain why private-school differences arise and why locale differences may be absent in total scores. Measurement invariance should be tested before strong subgroup claims are made. Intervention studies should then evaluate whether workload reform, supportive leadership, peer mentoring, counselling, and adjustment-skills programmes reduce stress and improve attendance, retention, teaching engagement, and student outcomes.

6. CONCLUSION

The study demonstrated that occupational stress should be examined through both teacher adjustment and organizational context. The results showed a large ordered decline in stress from low to average to high adjustment. Private-school teachers reported higher stress than government-school teachers at every adjustment level, while overall gender and locale differences were nonsignificant. The evidence therefore supports a combined strategy: schools must reduce avoidable occupational demands, and teacher-support systems must strengthen coping, emotional regulation, help seeking, and professional adjustment. Adjustment assessment should be used only as a confidential support mechanism, not as a basis for blame or adverse employment action.

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