



# A Cross Sectional Study to Estimate Occupational Stress among Higher Secondary School Teachers in Kerala

Krishna Raj<sup>1</sup>, Sushrit A Neelopant<sup>2</sup>, Manisha Wadhwa<sup>3</sup>, Pratibha Dabas<sup>4</sup>

<sup>1</sup>Assistant Professor, Department of Community Medicine, Malabar Medical College, Calicut

<sup>2</sup>Assistant Professor, Department of Community Medicine, Raichur Institute of Medical Science, Raichur

<sup>3</sup>Professor, Department of Education, Aditi Mahavidyalya, Delhi University, Bawana

<sup>4</sup>Professor & Hod, Department of Community Medicine, Malabar Medical College, Calicut

## ABSTRACT

**Background:** Changing norms have overburdened the educators. Our study aims to assess the levels of occupational stress among higher secondary school teachers and demographic, academic characteristics and relevant factors influencing it.

**Methodology:** Cross sectional study was conducted in Thalassery block of Kannur district, Kerala. The block comprised of 38 schools with 516 teachers. Overall, 484 teachers participated in the study. Modified 'Manual for teacher's occupational stress scale' questionnaire was used. Results were analyzed using Chi square test, 't' test and one way ANOVA.

**Results:** Males were 155 (32%) and females were 329 (68%). The mean age was 40.6 years. Four-fifth (81%) were from government and one-fifth (19%) were from private schools. Majority, 268 (55%), of teachers were found to have mild occupational stress. While, 171 (35%) had moderate stress and 45 (9%) had severe occupational stress. Stress was linked to vast syllabus, time constraint, outside interference, students' behavior, poor infrastructure and favoritism from authorities. Increased teaching experience and rising position in school were significantly associated with stress.

**Conclusion:** All higher secondary school teachers in Thalassery block of Kannur, Kerala felt occupational stress. Majority (55%) had mild stress, 35% had endured moderate and 9% suffered severe stress.

**Key words:** Occupational stress, Teachers, Higher secondary school

## INTRODUCTION

Stress can be defined as the psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation.<sup>1</sup> Olson et al (1989) defined stress as "a state of tension that arises from an actual or perceived demand that calls for an adjustment or adaptive behavior".<sup>2</sup> World Health Organization defines Occupational stress as, "a pattern of reactions that occur when workers are presented with work demands not matched to their knowledge, skills or abilities and which challenges their ability to cope."<sup>3</sup>

According to Kyriacou (2000), teachers' stress can be defined as "the experience by a teacher of unpleasant negative emotions such as anger, frustration, anxiety, depression and nervousness, resulting from some aspect of their work".<sup>4</sup> Few prime reasons for teachers' stress were excessive workload and long teaching hours, role ambiguity, poor working conditions, overcrowded classes, uncongenial working environment, scarcity of resources, conflicting peer relations, frequently changing curriculum, assessment and evaluation strategies, accountability, lack of job security, lack of public esteem, meager salaries, indifferent students' and parents' behaviors, professional development, fatigue, frustra-

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**Correspondence:** Dr. Pratibha Dabas (Email: doctorpratibha@gmail.com)

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tion, stagnation, boredom, loss of motivation or enthusiasm, limited support from the government, inadequate training, lack of information on contemporary educational issues, excessive demands from administration and difficulty in interacting with parents etc.<sup>5,6</sup> Former studies have identified that stress has alarming negative effects on psychological, physical and behavioral responses of the teachers. Teachers' stress negatively affects not only their own health but also that of the students.<sup>7</sup>

In India, more than half of the teachers work in non-government schools at the primary level.<sup>8</sup> India has more than 500 thousand 'Para teachers' working on a contractual basis and get half to one fifth of regular teachers salary. <sup>9</sup> In India, in most states including Kerala, teachers engage in lot of non-teaching activities adding onto stress. Kerala lags behind in technical education and research.<sup>10</sup> At the higher level institutions offering new courses crop up while the old ones wither according to whims of the market. There is a dire need to know the level of stress the teachers are experiencing in order to enable them for effective stress management. This research was planned to study the prevalence of stress among teachers of higher secondary schools and the associated factors.

## OBJECTIVES

The study was conducted with objectives to assess the levels of occupational stress among the teachers of government and private higher secondary schools, and also to study various demographic and academic characteristics and other relevant factors influencing the occupational stress among them.

## MATERIALS AND METHODOLOGY

The study was a cross sectional survey conducted in higher secondary schools of Thalassery block in Kannur district of Kerala state. The block had a total of 38 schools and 516 teachers at higher secondary level. Study population comprised of teachers of 11<sup>th</sup> and 12<sup>th</sup> classes in this 38 schools irrespective of his/her place of residence. Sample frame covered all schools of higher secondary level at Thalassery block. The schools' list was obtained from Office of The Regional Deputy Director (RDD), Department of Education, Kannur. List comprised of 38 schools; 27 government schools and 11 private schools. The study was conducted from January 2016 to June 2017.

**Sample size:** A complete enumeration of 516 teachers working in higher secondary schools in Thalassery block was done. All were approached for the research. Available teachers willing to participate in the research were included. Sample size was 484 teachers. Inclusion criteria: Teachers working in government and private higher secondary schools with at least one year of teaching experience and

willing to participate were included. Exclusion criteria: Teachers not available during the study time and those not willing to participate were excluded.

**Data collection tool:** After obtaining written informed consent, face to face interview was conducted with each study subject. Information regarding socio demographic and academic characteristics was collected using a questionnaire. Occupational stress level was assessed through modified "Teacher's occupational stress scale" questionnaire (validated scale) designed by Dr. Meenakshi Sharma and Dr. Satvinderpal Kaur (**Annexure 1**). The validated scale was modified through a pilot study on 20 teachers meeting inclusion criteria. Modifications included addition of more socio demographic variables, questions to elicit causes of occupational stress and self suggested solutions for stress management. The questionnaire was divided into two sections: 1) Socio-demographic data; and 2) Occupational stress tool

Dependent variable was Occupational stress. It was measured using modified "Teacher's occupational stress scale" questionnaire which consisted of 30 questions. Independent variables were Demographic variables: Age, sex, number of years working as higher secondary teacher, and education qualification. Social variables: Position at school. Variables related to work: Working hours in a day, classes taken in the school and other variables like: Type of school and area of school. (**Table 1**) Teachers' occupational stress scale questionnaire contained 30 questions. Five point Likert scale was used for the information. Options of 5, 4, 3, 2, 1 were provided for strongly agree, agree, undecided, disagree and strongly disagree respectively. Aggregated score indicated occupational stress score for the teacher. Each questionnaire's total score ranged from 30 to 150; 30 being lowest and 150 being highest level of stress. Level of occupational stress was classified into 7 categories (**Table 2**) based on the score: a) Extremely high - Score of  $\geq 127$ ; b) High - score 115-126; c) Average -score 103-114; d) Average or moderate - score 86-102; e) Below average - score 75-85; f) Low - score 63-74; and g) Extremely low - score  $\leq 62$ .

We further classified these seven categories of teacher's occupational stress into 3 groups; mild, moderate and severe occupational stress.

Mild stress comprised of extremely low, low and below average occupational stress. Moderate stress included average occupational stress and severe occupational stress consisted of above average, high and extremely high occupational stress categories.

**Data collection:** Data was collected by visiting each school. After a brief description about the study, permission was obtained from the concerned Principals of the school. After a written informed consent, teachers (including Principals) were given modified "teacher's occupational stress scale" questionnaire to fill in the presence of the observer. Each school was

visited twice to include the teachers who were absent during first visit. Data was entered in Microsoft Excel and analyzed using SPSS trial version 20.0. In addition to descriptive analysis, associations were tested using t test and one way ANOVA. All statistical analyses were carried out at 5% level of significance and *P* value of  $<0.05$  was considered as statistically significant. **(Table 3)**

**Ethical consideration:** Approval from Institutional Ethics Committee was obtained before the start of study. Prior permission from the Regional Deputy Director (RDD) in charge of higher secondary schools, Kannur district was taken. Permission was also sought from respective Principals in charge of concerned schools prior to administration of questionnaire to teachers of that school. Informed written consent was obtained from every teacher before participation. Strict anonymity and privacy of the participants was maintained throughout the study. Teachers were contacted either during interval or immediately after individual teacher finished his/her class.

## RESULTS

Out of 484 teachers participated in study, 155 (32%) were males and 329 (68%) were females. Majority of the teachers belonged to government schools 392 (81%) and 92 (19%) were from private schools. (table 1) The government institution included both government schools and government aided schools.

Youngest teacher in the research study was aged 22 years and the eldest teacher was 67 years. The mean age of study participants was  $40.62 \pm 7.22$  years. Majority (90.7%) were married. Remaining teachers were unmarried, widowed, separated or divorced. Most (466, 96.3%) teachers were post graduates. Few (10, 2.1%) were doctorate and fewer (8, 2.1%) were graduates.

Professional experience ranged from 1 year to 27 years. Average teaching experience was  $9.9 \pm 5.5$  years. Forty one percent (201) of the teachers had more than 10 years of experience. More than half (57.4%) were designated senior teachers. About one thirds (37.4%) were junior teachers. Principals included were 25 (5.3%) (Table 3). Working hours ranged from one hour per day to 10 hours per day. Average functional hours were  $6.8 \pm 1.73$  hours.

The research detected that about half (268, 56%) the teachers exhibited mild occupational stress. Moder-

ate stress was endured by more than one third (171, 35%). And about one tenth (45, 9%) of teachers suffered severe occupational stress (Table 2).

Above three fourths (377, 78%) of teachers were required to take extra classes in addition to their daily academic schedule. About half (229, 47.3%) of them refused to comment on stress contributing factors.

A third (151, 31.2%) of the teachers pinpointed to extensive syllabus and time constraint to complete huge curriculum as key stress agents. Others sources of stress were interference from outside 53(11%), students' behavior, poor infrastructure 34 (7%) and favoritism from authorities 21 (4.3%).

Occupational stress was not found to have a significant association with gender ('t' value as 0.405, *P* 0.686), type of institution (t test -0.069, *P* 0.945), place of residence ('t' value as -1.542, *P* 0.124) and marital status ('t' value as 0.613, *P* 0.540). **(Table 3)** Thus, both male and female teachers, both Government and Private school academicians were equally susceptible to occupational stress. Irrespective of the place of residence and marital status, teachers were at risk to develop occupational stress.

One-way ANOVAs test was used for finding association between position of teachers and mean occupational stress score. Significant statistical association was found in mean occupational stress score and school teachers' position. School Principals developed more stress compared to teachers. ('F' value 9.426, *P* 0.001). **(Table 3)**

**Table 1: Distribution of Teachers (N=484)**

Variable	Teachers (%)
<b>Sex</b>	
Males	155 (81)
Females	329 (19)
<b>Location</b>	
Urban	250 (51.7)
Rural	234 (48.3)
<b>Working Hours</b>	
01-Apr	67 (13.8)
05-Aug	407 (84.1)
09-Dec	10 (2.1)
<b>Type Of School</b>	
Government	392 (81)
Private	92 (19)
<b>Classes Taken</b>	
Plus One	20 (4.1)
Plus Two	10 (1.4)
Both Plus One And Plus Two	466 (94.4)

**Table 2: Distribution according to the classification of teacher's occupational stress**

Occupational stress	Teachers (%)	Occupational stress	Teachers (%)	Mean stress score	CI (95%)
Extremely high	4 (0.8)	Severe	45 (9.3)	75.54	65.61 - 85.47
High	21 (4.3)				
Above average	20 (4.1)				
Average/ moderate	171 (35.3)	Moderate	171 (35.3)	94.65	89.6 - 99.7
Below average	166 (34.3)	Mild	268 (55.4)	108.90	103.3 - 114.49
Low	92 (19)				
Extremely low	10 (2.1)				

**Table 3: Association between mean occupational stress score and independent variables using 't' test and ANOVA test**

Groups	Teachers	Mean stress score	P value
<b>Gender</b>			
Male	155 (32.0)	85.94	0.686
Female	329 (68.0)	85.34	
<b>Institute</b>			
Government	392 (81.0)	85.51	0.945
Private	92 (19.0)	85.62	
<b>Location</b>			
Urban	250 (51.7)	84.6	0.124
Rural	234 (48.3)	86.53	
<b>Marital Status</b>			
Married	439 (90.7)	85.65	0.54
Others*	35 (7.2)	84.33	
<b>Qualification</b>			
Graduate	8 (1.7)	80	0.063
Post Graduate	466 (96.3)	85.81	
Doctorate	10 (2.1)	76.8	
<b>Position</b>			
Junior Teacher	181 (37.4)	82.78	0.001
Senior Teacher	278 (57.4)	86.56	
Principal	25 (5.2)	93.96	
<b>Experience</b>			
1 -5 Years	126 (26.0)	84.75	0.047
6-10 Years	157 (32.4)	83.87	
>10 Years	201 (41.5)	87.32	
<b>Age</b>			
22-35 Years	124 (25.6)	85.52	0.081
36-49 Years	304 (62.8)	84.84	
50-63 Years	56 (11.6)	89.32	

\*Unmarried, Divorced and Widow/Widower

Although there was no statistical association between occupational stress and teachers' age, significant association was discovered between teachers' experience and mean occupational stress score. ('F' value 3.076,  $P$  0.047). More than 10 years of experience led to more risk of developing occupational stress. (Table 3)

## DISCUSSION

The study was done on 484 higher secondary school teachers from 38 schools in Thalassery block of Kannur district, Kerala. More than half (268, 55.4%) of teachers felt mild occupational stress. More than a third (171, 35.3%) endured moderate occupational stress and 45 (9.3%) suffered from severe occupational stress. In a study amongst University professionals in Ludhiana, Bakhshi et al established that 40% of faculty had high occupational stress.<sup>12</sup> Another investigation by Kyriacou (2004) opined that 26.3 percent teachers suffered 'very high' or 'extreme' stress in Taiwan.<sup>13</sup> Our research was in contrast to the similar study in Varanasi by Singh and Singh (2006). Varanasi study concluded that 42% of teachers experienced 'high' to 'very high' level of stress.<sup>11</sup> Regular salaries and financial benefits provided to higher secondary teachers in Kerala may be one of the reason for less stress among them. Dis-

criminatory practices by the principal with staff were also least reported among teachers in our study which indirectly had a positive impact on their mental status. And also in our study, it was clear that most of the teachers 392(81.0%) were satisfied with their income.

Although nearly half the teachers did not comment on the genesis of stress, about a third (151, 31.2%) stated that extensive syllabus and time scarcity to complete curriculum were prime stress generators. Some (53, 11%) teachers indicated outside interference and students' behavior created stress. Few teachers conveyed that poor infrastructure (34, 7%) and favoritism from authorities (21. 4.3%) produced occupational stress.

Although nearly half the teachers did not suggest solutions to their occupational stress, some (107, 22%) divulged curriculum curtailment as a solution to diminish occupational stress. Few (78, 16 %) teachers advocated that co-operation among colleagues will minimize stress. Few (53, 11%) teachers proposed good infrastructure as a solution and few (20, 4.1%) teachers recommended healthy lifestyle, Yoga and physical exercises as stress coping mechanisms.

## CONCLUSION

The majority of teachers in our study were showing mild occupational stress, followed by moderate and then severe occupational stress. The teachers stated vast syllabus and shortage of time to cover the portions, interference from outside and student's behaviour, poor infrastructure and favourism from authorities as some of the reasons for their stress. For reducing occupational stress teachers suggested reduction in portion, co-operation among staffs, good infrastructure, healthy lifestyle and stress releasing exercises.

## LIMITATIONS

As the questionnaires were filled during school hours, some may not have been forthright in their responses. It is likely that few were not candid about higher authorities. Researcher participants' interactions occurred during their meager break times, so it's probable that teachers rushed through the questionnaire.

## RECOMMENDATIONS

First and foremost, the high prevalence of occupational stress amongst higher secondary teachers needs to be acknowledged by Government and school managements. Strategies must be devised to minimize and possibly eliminate occupational stress. Counseling services and stress management programs for teachers should be perpetually adopted. Multiple interventions for relaxations; exercises, Yo-

ga, meditation and more social interactions ought to be made available in schools for teachers, because these were suggestions given by the teachers in our study to reduce the stress.

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