ORIGINAL ARTICLE

Assessment of Occupational Stress among High School Teachers of Ahmedabad City, India

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Abstract | Introduction | Methodology | Results | Conclusion | References | Citation | Tables / Figures

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Abstract

Background: Apart from teaching, school teachers are involved in much of the school related work which may eventually affect their psychological wellbeing. It is important to know the psychological impacts of such work related stress among school teachers. **Objectives**: To find out the prevalence of variables of the occupation stress among high school teachers using scale; To find out association between the selected personal variables with different component of occupational stress as defined in The School Teachers Job Stressor Scale-STJSS; **Methods**: STJSS was used as a tool for data collection. The sample size was calculated and the data were analyses for components of occupational stress by selecting 36 school teachers from each zone. Statistical analysis was done using proportions, Kurtosis-Skewness and Chi-square test. **Results**: Among a total of 218 school teachers, Male teachers had significantly higher proportions of anxiety (72.72%) and depression (76.66%) than female counterparts. On the other hand, female teachers (38.88%) were more likely to feel "additional work-load" than the males (21.09%). Depression was more common in overweight (18.51%) and obese (23.07%) participants. **Conclusion**: Demographic variables like age and gender had significant associations with occupational stressors among the school teachers. The need of psychological improvements among school teachers should be the area of focus including school health.

Keywords

Anxiety; Depression; Occupational Stress; School Teachers Job Stressor Scale; Work-Related Stress

Introduction

Occupational stress (OS) is ongoing stress that is related to the workplace which can eventually affect both physical and emotional well-being.(1) Apart from work stress due to teaching itself, teachers face many different stressful situations within the school environment. This includes perceptions like lack of professional recognition, problems with maintaining discipline in the classroom, lack of support from peers and additional work like government duties, surveys etc. These all can eventually affect the mental health of school teachers.(2).The multi-task involvement of school teachers has fasten the chances of feeling "emotional labor" among the them. (3) Shift of education from classroom teaching to online teaching has lead to further increase in stress among school teachers which has given rise to increased depressive symptoms and anxiety among teachers.(4,5)This, along with pandemic restrictions like lockdown has further raised the levels of stressful environment among the school teachers.(6,7). Teacher's stress is likely to affect teacher-student relationships as well as classroom management in an adverse way. (8). In contrast to college students, it is far more difficult for the school teachers to "teach" students. It is a must to recognized that these mental and physical health issues would impose threat to the students' learning and development as well because the efficiency of the teachers is affected adversely on a long run.(9,10)

Aims & Objectives

1. To find out the prevalence of variables of the occupation stress among high school teachers.
2. To find out association between the selected personal variables with different component of occupational stress.
3. To find the perceptions of study participants about online education.

Material & Methods

The study was a Cross-Sectional Study conducted among high school teachers of selected schools of Ahmedabad city, Gujarat, India during 2021-22. A pre-designed questionnaire "School Teachers Job Stressor Scale (STJSS)"(10) was used for data collection. The abridged version having 23 item STJSS is a valid and reliable (10) questionnaire using a 5 point Likert scale score (1 never, 2 rarely, 3 sometimes, 4 often, 5 always). Scale included questionnaire regarding mental health related issues (anxiety, depression, insomnia, loss of appetite) and other issues (additional workload, exhaustion, and support from peers). The abridged version of the scale has been used widely among researchers for measuring occupational stress including many Asian countries like Japan, China and India. The questions are divided into parts like "Time spent outside of work", "Self-assessment ability as a teacher", "Relationships between teachers", "Social interactions outside of teaching", "Duties outside of teaching" and "Online education". Institutional Ethical permission was obtained before collection of data. Prior Informed Consent of school principal and students was taken for collecting data. High school teachers, working in selected high school of Ahmedabad city, having at least 1 year of teaching experience, willing to give consent for participation were included in the study. All other teachers, who do not qualify for inclusion criteria were excluded. The sample size was calculated taking 67.5% prevalence of anxiety among school teachers from previous studies (11)and when this value was added in the formula of was estimated as : $n=(z\alpha/2)2p(1-p)/d2$; with the following assumptions *P* (proportion of stress assumed to be 0.5 since this would provide the maximum sample size), *d* (the permissible Margin of error (the required precision = 5%) and Zα/2 (the value of the standard normal curve score corresponding to the given confidence interval = 1.96) and considering 10% non-response rate, the final sample size was 218. The teachers who could not fulfill the inclusion criteria were excluded.

Sampling Technique: Ahmedabad Municipal Corporation (AMC) is divided into 6 zones (North zone: 44 schools, East zone: 63 schools, West zone: 36 schools, South zone: 27 schools, Central zone: 31 schools, New West zone: 38 schools) having a total of 239 high schools in Ahmedabad city (both government and private). Schools were selected by selecting one school from each zone using simple random sampling technique. For required sample size of 218 school teachers, systemic random sampling technique was applied. After applying inclusion and exclusion criteria, for equal representation of data, averagely 36 school teachers from each of the six school of different zones were selected. The data entry was done in Microsoft office-excel and analysis were done by using SPSS software version 21. Statistical analysis was done using Chi-square test, a 5% level of significance was considered significant ($P < 0.05$).High school teachers, working in selected high school of Ahmedabad city, having at least 1 year of teaching experience and who were willing to give consent for participation were included in this study.

Results

In the present study, mean age of the participants was 46.06 ± 9.31 years. Among a total of 218 school teachers, 128 (58.7%) were male teachers and 90 (41.3% were female teachers. The participants were from both urban (n=120, 55%) and rural (n=98, 45%) backgrounds. Most of the respondents were Hindu (99.1%) by religion. About two third of the respondents belonged to "General" cast (n=146, 67%) followed by OBC (n=46, 21.15). Almost 36.67% (n=80) teachers found out to be overweight or obese in the present study. Prevalence of anxiety was 25.22 %, depression was 10.55%, additional work load was 28.64 %, exhaustion was 9.63 %, Loss of appetite was 5.04 %, Insomnia was 7.33 % and support from peers was 13.59 % among the school teachers according to the STJSS. The proportions of Anxiety and Depression (calculated based on responses of questions 10-12 and questions 13-15 of the abridged 23-item version(10)) were more common among males with 31.25% (n=40) as compared to females, which was about 16.66% (n=15). Additionally, the proportions of depression was also on a higher side for male teachers (17.95%, n=23) as compared to female teachers (7.77%, n=7). From the study, it was found that teachers from "Overweight" and "Obese" categories cumulatively had more in depression with 53.3 % (n=16) as compared to participants with normal weight. It was also found that about61.33 %(n= 134) of the participants perceived online teaching "more difficult" as compared to classroom teaching. [Table 1].

The Table 2 shows the mean scores (from 1-5) of the Likert scale for each question of STJSS. The highest mean scores were observed for questions on "achieving results as a teacher" (4.39 ± 0.738) and "satisfaction with the technology for online teaching" (3.26 ± 1.378). On the other hands, the lowest mean scores were observed with questions related to "feeling mental exhaustion while interacting with parents" (1.08 ± 0.432) and "feeling mental exhaustion while interacting with diverse students" (1.21 ± 0.500). The skewness and Kurtosis statistics were also determined for each question. [Table 2]

The present study also compared certain personal variables with various components of occupational stress as per STJSS. [Table 3] Apart from Anxiety and Depression, it also included variables such as "Exhaustion", "Loss of appetite", "Additional work-load", "Insomnia" and "Support from peers". Age of more than 45 years had a significant statistical association with "Depression" and "Exhaustion" among the teachers. On the other hands, significant statistical association was also seen for "Additional work-load" among male and female teachers. (p=0.0041).The variable "Additional work-load" also had statistically significant difference for BMI categories(p=0.0016). The variables such as "Insomnia", "Support from peers" and "Loss of appetite" did not have any significant association with age, gender or BMI categories.

Discussion

Variables like age, gender and Body Mass Index (BMI) was assessed for different components of occupational stress like anxiety, depression, exhaustion, additional work load and support from peers, all of which are parts of the STJSS. In the present study, the higher proportions of male teachers experienced both anxiety and depression than female teachers. This is similar to the study done among school teachers in Uganda where the occupational stress was found to be higher among male teachers.(12) This may be because of the fact that males are more likely to be sole earners of their families.

In the present study, the prevalence of depression was about 13.76% (n=30), of anxiety was 25.22% (n=55) and that of Exhaustion was 9.63% (n=21). The findings were similar to the study done among Egyptian teachers where the prevalence of mild to moderate depression, anxiety and stress were found to be 22.5%, 23.2% and 6.35 respectively. (13) However, the study in Ethiopia had significant statistical associations for anxiety and depression for variables like age and gender which is not there for the present study. This may be due to socio-cultural variables as well as difference in the sample size.

In this study, the prevalence of underweight, overweight and obesity among the respondents were 10.5% (n=13, 24.7 %(n=54) and 11.92% (n=26) respectively. The findings were not comparable to the study done among Chinese preschool teachers where the proportions for the same were 7.5, 19.8, and 25.5%, respectively. The difference might be due to variations in the diet, built as well as the sample size. (14)However, in both the studies, the "additional work-load" and "burnout" had a significant statistical association with BMI categories. In this study there was no statistically significant association between demographic variables such as age with anxiety and depression. The same observation was made in a study done among school teachers of Greece. (15)In the present study, "additional work-load" had a significant association with gender and BMI. Thus it can be seen that works other than teaching can lead to more psychological issue including stress. This is further in similar to the study done in teachers of Ethiopia and elsewhere. (16,17)

Conclusion

Anxiety, depression and additional work-load were among the major outcomes of occupational stress among the respondents. "Depression" was more common in more than 45 years age group while "Anxiety" was not related with particular age group. Gender was significantly associated with anxiety, depression, and additional work load.BMI was statistically significantly associated with additional work load only. Anxiety and depression were more common among males and depression was more common in overweight and obese participants.

Recommendation

More studies regarding factors affecting occupational stress and psychological issues, among school teachers are needed to be addressed with validated tools. Periodical medical evaluation and psychological support to the teachers are recommended through school authorities and local health functionaries. The school health program may also include teachers as one of the beneficiaries.

Limitation of the study

Due to less time and other administrative issues, this study is focussing on variables affecting on mental health status of teachers which is suggested by STJSS score only. Though, there was lack of studies available using this scale in Indian context, there can be a different requirement for teachers in studies done at other countries. There can be limited applicability and some points may be missing in this scale.

Relevance of the study

Work related stress has been amplified in recent times due to the pandemic crisis and changing teaching technologies. The study focused on the possible revelations of impact of this change among the school teachers. The results could throw light on some of the new challenges which might determine the course of action as well as remedial measure by the school stakeholders where teachers are the beneficiaries rather than students only. The use of valid scale would also help determine the levels of such problems in more quantified manner.

Authors Contribution

All the authors have substantially contributed to all the components of the research including concept, design, literature search, data acquisition, data analysis and report writing including revision of the final draft.

References

1. Ji Y, Wang D, Riedl M. Analysis of the correlation between occupational stress and mental health of primary and secondary school teacher, 2021;69(2):599-611
2. Antoniou, Alexander-Stamatios &Ploumpi, Aikaterini&Ntalla, Marina. Occupational Stress and Professional Burnout in Teachers

of Primary and Secondary Education: The Role of Coping Strategies. Psychology.2013; 4:349-355.
3. Chang ML. An appraisal perspective of teacher burnout:Examining the emotional work of teachers. EducPsychol Rev.2009;21(3):193-218.
4. Silva D.F.O, CobucciR.N.Lima S.C.V.C and Andrade F.B Prevalence of anxiety. depression, and stress among teachers during the COVID-19 pandemic-Monitoring Editor: Hussain A. 2021; 100(44): e27684.
5. Othman, Zahiruddin&Sivasubramaniam, Vevehkanandar. Depression, Anxiety, and Stress among Secondary School Teachers in Klang, Malaysia. International Medical Journal (1994).2019;26. 71-74. 10.5281/zenodo.2586221.
6. Khatoony, S., &Nezhadmehr, M. EFL teachers' challenges in integration of technology for online classrooms during Coronavirus (COVID-19) pandemic in Iran. AJELP: Asian Journal of English Language and Pedagogy. 2020; 8(2), 89-104.
7. B Hyndman, Science Education News, December 2018, 67(4); 41-42. (accessed online on 12.12.2021)
8. Ramberg J., Låftman S.B., Åkerstedt T., Modin B. Teacher stress and students' school well-being: The case of upper secondary schools in Stockholm. Scand. J. Educ. Res. 2020;64:816–830.
9. NagatomoK.N.AbeH.Yada H Higashizako K, Nakano M, Takeda R, and Ishida Y, Development of the School Teachers Job Stressor Scale (STJSS)-Naono-Nagatomo 2019 Neuropsychopharmacology Reports - 2019;39(3):164-172.
10. Naono-Nagatomo K, Abe H, Yada H,et al. Development of the School Teachers Job Stressor Scale(STJSS). Neuropsychopharmacol Rep. 2019;39:164–172.
11. Desouky D, Allam H. Occupational stress, anxiety and depression among Egyptian teachers. J Epidemiol Glob Health. 2017;7(3):191-198.
12. Ssenyonga J, Hecker T. Job Perceptions Contribute to Stress among Secondary School Teachers in Southwestern Uganda. Int J Environ Res Public Health. 2021;18(5):1:10
13. Desouky D, Allam H. Occupational stress, anxiety and depression among Egyptian teachers. J Epidemiol Glob Health. 2017;7(3):191-198.
14. Li S, Li Y, Lv H, et al. The prevalence and correlates of burnout among Chinese preschool teachers. BMC Public Health. 2020;20(1):160.
15. Stachteas P, Stachteas C. The psychological impact of the COVID-19 pandemic on secondary school teachers. Psychiatriki. 2020;31(4):293-301.
16. Kabito, G.G., Wami, S.D. Perceived work-related stress and its associated factors among public secondary school teachers in Gondar city: a cross-sectional study from Ethiopia. BMC Res Notes 2020;13, 36. https://doi.org/10.1186/s13104-020-4901-0 .
17. Henshaw P. Teacher stress is most closely linked to high job demands. Seced. 2017;(14):1. doi: 10.12968/sece.2017.14.1

Tables

TABLE 1DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF STUDY PARTICIPANTS

Variables		Anxiety (N=55) n (%)	Depression (N=30) n (%)
Age Groups (In completed years)	25-35	13 (23.64)	4 (13.32)
	36-45	12 (21.82)	1 (3.34)
	46-55	20 (36.36)	11 (36.67)
	56-65	10 (18.18)	14 (46.67)
Gender	Male	40 (72.72)	23 (76.66)
	Female	15 (27.28)	7 (23.34)
BMI (kg/m^2)*	Underweight	5 (9.09)	2 (6.66)
	Normal weight	31(56.36)	12 (40.00)
	Overweight	16 (29.09)	10 (33.33)
	Obese	3 (5.46)	6 (20.01)

** Underweight: less than 18.5, Normal weight: 18.5-22.9, Overweight: 23-24.9, Obese: more than or equal to 25*

TABLE 2 DESCRIPTIVE STATISTICS FOR THE SCHOOL TEACHER STRESS SCALE (N=218)

Question	Mean	Std Deviation	Skewness	Kurtosis
Time spent outside of work				
I feel a burden from doing a lot of after-hours work	2.54	1.043	0.074	-0.036
I feel I do a lot of work aside from instructing children/students in my work as a teacher	2.54	1.302	0.307	-1.22
Self-assessment ability as a teacher				
I feel that I lack the ability to guide children/students	1.03	0.213	8.283	70.909
I feel I am achieving the results expected of me as a teacher	4.39	0.738	-1.334	2.753
I feel I lack ability when I fail in my work	2.01	1.032	0.557	-0.953
Relationships between teachers				
I feel there is a difference in the workload between male and female teachers	1.83	1.082	1.391	1.232
I feel mental exhaustion from interacting with instructing, etc) teachers with less experience than me	1.34	0.817	2.983	8.944
I feel dissatisfied by the difference in workload depending on years of experience as a teacher	1.6	0.843	1.797	3.46
Social interactions outside of teaching				
I feel mental exhaustion from interacting with parents	1.08	0.432	7.371	61.94
I feel a burden from after-hours duties that occur suddenly such as dealing with trouble	1.71	0.746	1.198	2.594
Duties outside of teaching				
I feel dis satisfied that duties for managing safety are included in my work as a teacher	1.74	0.975	1.329	1.518
I feel dissatisfied that duties for taking care of the school environment are included in my work as a teacher	1.46	0.916	2.373	5.597
Online education				
How much are you satisfied with technology and software used for online teaching?	3.26	1.378	-0.427	-1.129
Howoftendoyoufeeldifficulttopredictemotionalsituationandnotawareofwhatstudentaredoing?	2.32	1.147	0.696	-0.231
How often do you feel teaching student from online (home) is difficult as compare to offline teaching?	2.69	1.234	0.173	-0.844
How difficult is it for you to communicate with students while teaching?	1.95	1.042	1.055	0.545
How often do you feel it is difficult for preparing for online class and arranging exams online?	2.3	1.12	0.235	-0.815
How often do you feel helpless if something technical error come in middle of live session or communicating with students?	2.36	1.16	0.43	-0.738

TABLE 3 ASSOCIATION OF THE SELECTED PERSONAL VARIABLES WITH DIFFERENT COMPONENT OF OCCUPATIONAL STRESS AS DEFINE IN STJSS

Variables		Age		Gender		BMI (kg/m2)			
		≤45	>45	Female	Male	Underweight	Normal weight	Overweight	Obese
Anxiety	Present	25(45.46%)	30(54.54%)	15(27.23%)	40(72.72%)	5(21.73%)	31(26.95%)	16(29.63%)	3(11.54%)
	Absent	56(34.36%)	107(65.64%)	75(46.02%)	88(53.98%)	18(78.24%)	84(73.05%)	38(70.37%)	23(88.46%)
Chi square (p value)		2.1694 (0.14077)		5.9576(0.01465)*		3.468 (0.3249)			
Depression	Present	5(16.66%)	25(83.34%)	7(23.34%)	23(76.66%)	2(8.69%)	12(10.44%)	10(18.52%)	6(23.08%)
	Absent	76(40.44%)	112 (59.56%)	83(44.15%)	105(55.85%)	21(91.31%)	103(89.56%)	44(81.48%)	20(76.92%)
Chi square (p value)		6.25439(0.012)*		4.6244(0.03152)*		4.501 (0.2122)			
Exhaustion	Present	17(20.98%)	4(2.92%)	9(10%)	12(9.38%)	7(30.44%)	25(21.74%)	7(12.92%)	6(23.08%)
	Absent	64(79.01%)	133(97.08%)	81(90%)	116(90.62%)	16(69.56%)	90(78.26%)	47(87.08%)	20(76.92%)
Chi square (p value)		19.09 (<0.0001)*		0.0237 (0.876)		3.469(0.3248)			
Loss of Appetite	Present	5(6.17%)	6(4.37%)	3(3.34%)	8(6.25%)	2(8.69%)	3(2.61%)	3(5.56%)	3(11.54%)
	Absent	76(93.83%)	131(95.63%)	87(96.66%)	120(93.75%)	21(91.31%)	112(97.39%)	51(94.44%)	23(88.46%)
Chi square (p value)		0.34(0.558)		0.93(0.3327)		4.382(0.2230)			
Additional work load	Present	21(25.93%)	41(29.93%)	35(38.89%)	27(21.1%	3(13.05%)	27(23.47%)	17(31.48%)	15(57.69%)
	Absent	60(74.07%)	96(70.07%)	55(61.11%)	101(78.90%)	20(86.95%)	88 (76.53%)	37(68.52%)	11(42.31%)
Chi square (p value)		0.4(0.5270)		8.22(0.0041)*		15.24(0.0016)*			
Insomnia	Present	7(8.65%)	9(6.56%)	10(11.12%)	6(4.68%)	2(8.69%)	9(7.83%)	3(5.56%)	2(7.69%)
	Absent	74(91.35%)	128(93.44%)	80(8888%)	122(95.39%)	21(91.31%)	106(92.17%)	51(94.44%)	24(92.31%)
Chi square (p value)		0.32(0.57)		3.20(0.073)		0.36(0.9437)			
Support from peers	Present	9(11.12%)	19(13.86%)	16(17.77%)	12(9.37%)	4 (17.39%)	12(10.44%)	7(12.92%)	5(19.24%)
	Absent	72(88.88%)	118(86.14%)	74(82.23%)	116(90.63%)	19(82.61%)	103(89.56%)	47(87.08%)	21(80.76%)
Chi square (p value)		0.34(0.5563)		3.33(0.06)		1.96(0.5788)			

** Significant at 5% level*

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