TEACHER'S OCCUPATIONAL STRESS IN RELATION TO TECHNO-PEDAGOGICAL COMPETENCY

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ABSTRACT

The present study explored the teacher's occupational stress in relation to techno-pedagogical competency. Occupational stress is the feeling of unpleasant emotional states including anxiety, worry, despair, depression, and irritation that are linked to work-related causes. Techno-pedagogical competencies refer to a sound pedagogic way of teaching and learning through the effective use of technology. The study was conducted on randomly selected 100 higher secondary school teachers of Mandi district of Himachal Pradesh. The tools used for conducting the present study were: Teacher's occupational stress scale developed by Jamal and Raheem (2012) and Teacher's techno-pedagogical competency scale developed by Rajasekar and Sathiyaraj (2013). Results revealed that there exists significant correlation between the teacher's occupational stress and teacher's techno-pedagogical competency of higher secondary school teachers.

Key words: Teacher, Occupational Stress, Techno-Pedagogical Competency

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INTRODUCTION

The present day school education system is rapidly changing with the advancement in the field of technology and incorporation of the technology in all the elements of educational organisation. Stress developing from the growing complexities of work and differing demands has enhanced a famous and permeating feature of modern institutions (Robinson, 2007). Present day schools requires teachers capable in making use of online technologies including use of smart digital boards, use of online teaching-learning resources, preparation

of online teaching plans, online maintenance of students portfolios, maintaining operating system-driven communication plans, web-based students counselling, computer arbitrated communication, acumen mapping, and record organization, depict innovation, collaborative knowledge, and computerized management of learning outcomes. The transition from traditional in-person instruction to technology-enhanced learning modalities, such as blended learning and e-learning, require a parallel evolution in pedagogical approaches as well as the necessary skills for both teachers and students. To ensure instructional efficiency and relevance, faculty competencies must be thoroughly assessed and updated in light of the growing integration of blended learning in the contemporary school education environment. Since smart boards have replaced chalkboards in 21st-century classrooms, educators must be skilled in utilizing both technology and pedagogical approaches to establish a learning environment for their students. Realizing that effective instruction in the digital age requires the skillful application of technology, pedagogy, and content knowledge, the acronym Technological Pedagogical Content Knowledge was created (Kohler and Mishra, 2009).

Techno-pedagogical competency is the capacity of educators to successfully incorporate IT tools into their lesson plans while upholding a strong grasp of pedagogical principles and contextual considerations.*"Stress is essential to life; without it, there would be death"* (Selye, 1956). Occupational stress, another name for job stress, is the feeling of unpleasant emotional states including worry, despair, depression, and irritation that are linked to work-related causes (Kyriacou, 2001).Iroff and Johnson (2006) are of the view that *"Stress is the individual's response to the events and the events themselves are the stressors"*.The "techno-pedagogy" refers to online courses that integrate powerful educational ideas with technology to enhance learning and teaching. The degree to which teachers successfully incorporate technology, pedagogy, and subject matter into their regular lesson plans will determine this. Teachers who use advanced technology in the classroom must be aware of their responsibilities(Thakur,2015).

REVIEW OF RELATED LITERATURE

TEACHER'S OCCUPATIONAL STRESS

Okebukola and Jegede (1989) in their research revealed thatfemale teachers rated threats of physical violence from pupils as the most significant of the five least stressful factors. Among

professors who were male, it ranked second.Gaziel (1993) described that the vast bulk of research to date has focused on the organizational and human factors that influence the occupational stress experienced by teachers.Boyle, Borg, Falzon and Baglioni (1995)in their research demonstrated that the teacher stress construct has a multifaceted genesis. To effectively help educators manage the demands of their professions, stress management programs need to take into account the several factors that the current study discovered contribute to teacher stress.Yang, Ge, Hu, Chi and Wang (2009)stated that female teachers had more work-related stress and worse physical health than their male counterparts.

Desouky and Allam (2017) found that there is a greater incidence of occupational stress among instructors in private schools. This finding has been linked to the increased job uncertainty experienced by these educators.Khalifa, Khalaf and Mohammed (2022) in their research reported that one of the jobs with the highest levels of stressis teaching. Due to their exposure to numerous work-related stressors, teachers exhibited a significant prevalence of occupational stress. Depression and other physical symptoms associated with stress are severe effects of work stress that require early psychological intervention and cooperation between many educational system sectors for student's well-being and improved performance. Datta (2024)found evidence of the harmful impact of work-related stress on the social intelligence and life satisfaction of teachers. This result indicates that as teachers face higher levels of stress, their ability to demonstrate social intelligence diminishes considerably. Neelam (2025) discovered that there is no appreciable difference in occupational stress between male and female teachers in the areas of workload, student misbehavior, professional recognition, classroom resources, and relationships with co-workers. This shows that both male and female secondary school teachers are equally stressed out at work.

TEACHER'S TECHNO-PEDAGOGICAL COMPETENCY

Kasinathan and Mathew (2023)suggested facilitating the effective integration of technology in the classroom. It was determined that the level of Techno Pedagogical Practices of Higher Secondary School Teachers is moderate. Therefore, teachers need to participate in workshops and receive suitable in-service IT training to acquire the required technological knowledge and skills.Setua and Yadav (2024)found that successful educators, and rural secondary school instructors need to possess more pedagogical and technological abilities. Furthermore, it is

critical to foster a more positive attitude toward ICT because attitudes about ICT and technological pedagogical skills are positively correlated.Hussain, JamilandNasreen(2025)reported about the importance of digital accessibilityto the development of techno-pedagogical skills. In order to provide equal opportunities for all pre-service teachers to acquire the digital teaching skills they require, the study emphasizes the necessity of improved technical tools and assistance inside teacher education programs.

RATIONALE OF THE STUDY

The most important element in our education system is the teacher. Teaching is the occupation that teaches all other occupations and shapes the nation's future.Research results show that teachers throughout the world deal with a lot of ongoing stress at work{Okebukola and Jegede (1989),Gaziel (1993),Boyle, Borg, Falzon and Baglioni (1995), Yang, Ge, Hu, Chi and Wang (2009),Desouky and Allam (2017), Khalifa, Khalaf and Mohammed (2022), Datta (2024)& Neelam (2025)}. With the advancement of technology, teaching is also becoming more complex where teachers are required to be also an expert in their techno-pedagogical competencies. Techno-pedagogical competency is the ability of teachers to successfully and appropriately use the necessary technology in the classroom after gaining the necessary competence. Technology use by educators has the potential to change the learningand therefore, the way a teacher thinks and how well they use technology are important. In order to become proficient with instructional technology, teachers must stay up to date on the latest materials. Significant modifications have been made to the teaching-learning process as a result of the rapid advancement of educational technology. Teachers must therefore become knowledgeable about the newest concepts and technologies in order to employ technology in their lessons in an efficient manner.The assessment of the instructor's techno-pedagogical proficiency is consequently essential. To provide the best instruction possible, the teacher must be sufficiently aware of the dynamics and operations of educational technology. The availability of digital boards, e-learning resources/instructional aids in the classroom and the instructor's desire to employ contemporary technology in the classroom are two aspects that influence a teacher's techno-pedagogical proficiency. Many studies on teachers' techno-pedagogical skills have been carried out globally. However, further research is needed to explore the secondary school teachers' techno-pedagogical proficiency and teacher’s occupational stress in relation to techno-pedagogical competency.

OBJECTIVES OF THE STUDY

The present study was conducted to attain the below mentioned objectives:

i. To study the teacher's occupational stress and techno-pedagogical competency.
ii. To compare the occupational stress of the teachers working in the rural and urban schools.
iii. To compare the techno-pedagogical competency of the teachers working in the rural and urban schools.
iv. To find the correlation between teacher's occupational stress and techno-pedagogical competency.

HYPOTHESES

The study was conducted to test the below mentioned hypotheses:

H_{01} There exists no significant difference between the occupational stress of the teachers working in rural and urban schools.

H_{02} There exists no significant difference between the techno-pedagogical competency of the teachers working in the rural and urban schools.

H_{03} There exists no significant correlation between occupational stress and techno-pedagogical competency of teachers.

DELIMITATION OF THE STUDY

The study was delimited to only 100 higher secondary school teachers working in the Mandi district of Himachal Pradesh.

DESIGN OF THE STUDY

Descriptive survey method was used for conducting the present study. The present study covered two variables: Teacher's Occupational Stress and Teacher's Techno-Pedagogical Competency.

SAMPLE OF THE STUDY

The sample consisted of 100higher secondary school teachers (50 serving in rural areas schools and 50 serving in urban areas) of higher secondary schoolslocated in the Mandi

district of Himachal Pradesh. The technique of random sampling was used for conducting the present study

TOOLS USED

The following tools were used for conducting this study:

i. Teacher's Occupational Stress Scale by Jamal and Raheem (2012).
ii. Teacher's Techno-Pedagogical Competency Scale by Rajasekar and Sathiyaraj (2013).

STATISTICAL TECHNIQUES USED

Descriptive statistics was employed to analyze the data. The Teacher's occupational stress scale developed by Jamal and Raheem (2012) and the Teacher's techno-pedagogical competency scale developed by Rajasekar and Sathiyaraj (2013) was used for conducting this study. The study was conducted on a randomly selected sample of 100 higher secondary school teachers (50 urban and 50 rural) of different higher secondary schools of district Mandi of Himachal Pradesh. Data was analyzed by calculating Mean, Median, Standard Deviation, Skewness, and Kurtosis. t-test was applied to determine the significance of the differences between the means. Pearson's product-moment correlation was used to compute and determine the relationship between the teacher's occupational stress and teacher's techno-pedagogical competency.

ANALYSIS AND INTERPRETATION OF THE RESULTS

HYPOTHESIS -1

H_{01}:"*There exists no significant difference between the teacher's occupational stress of the teachers working in rural and urban schools",* was tested by employing t-test

TABLE 1

Comparison of Mean Scores of Teacher's Occupational Stress of Rural and Urban Schools.

Areas	Group	N	Mean	Standard deviation	t-value
Teacher's occupational stress	Rural	50	75.28	6.075	4.993*
	Urban	50	69.84	4.740	

**Significance at 0.01 level of significance*

Table 1 represents means, standard deviations and t-values of teacher's occupational stress of rural and urban higher secondary schools. The mean score for teacher's occupational stress of rural higher secondary schools is higher as compared to urban higher secondary schools. The t-value of rural and urban higher secondary schools teacher's occupational stress was found to be 4.993, which is significant at 0.01 level of significance. So, our null hypothesis, "There exists no significant difference between teacher's occupational stress working in the rural and urban schools" is not accepted.

HYPOTHESIS – 2

H_{02}: "*There exists no significant difference between the teacher's techno-pedagogical competency of the teachers working in the rural and urban schools"* was tested by employing t-test.

Table2

Comparison of Mean Scores of Teacher's Techno-Pedagogical Competency of Rural and Urban Schools Teachers

Areas	**Group**	**N**	**Mean**	**Standard deviation**	**t-value**
Techno-pedagogical competency	Rural	50	140.96	5.785	4.734*
	Urban	50	146.02	4.863	

**Significant at 0.01 level of significance*

Table 2 represents means, standard deviations and t-values of techno-pedagogical competency of rural and urban higher secondary schools teachers. The mean score for techno-pedagogical competency of urban higher secondary schools teachers is higher as compared to rural higher secondary schools teachers. The t-value of rural and urban higher secondary schools teacher's techno-pedagogical competency was found to be 4.734, which is significant at 0.01 level of significance. So, our null hypothesis, "There exists no significant difference between techno-pedagogical competency of the teachers working in the rural and urban schools" is not accepted.

HYPOTHESIS –3

H_{03}:"*There exists no significant correlation between teacher's occupational stress and the teacher's techno-pedagogical competency of teachers",* was tested by employing Pearson's coefficient of correlation. The results are entered in table 3.

Table3

Relationship between Teacher's Occupational Stress and Teacher's Techno-Pedagogical Competency of Teachers

Variable	N	r-value
Teacher's occupational stress and Teacher's techno-pedagogical competency	100	-0.344*

***Significant at level 0.01 of significance*

Table 3 shows the calculated coefficient of correlation between teacher's occupational stress and teacher's techno-pedagogical competency. The correlation value was found -0.344 which is significant at the 0.01 level of significance. So, our null hypothesis, "There exists no significant correlation between teacher's occupational stress and teacher's techno-pedagogical competency of teachers is not accepted.

FINDINGS AND CONCLUSIONS

In the light of analysis and interpretation of the data, the following conclusions are drawn;

1. There exists significant difference between teacher's occupational stress of the teachers working in the rural and urban schools.
2. There exists significant difference between teacher's techno-pedagogical competency of the teachers working in the rural and urban schools.
3. There exists significant correlation between teacher's occupational stress and teacher's techno-pedagogical competency of teachers.

EDUCATIONAL IMPLICATIONS

The present research revealed that there exists significant difference between occupational stress of the teachers working in the rural and urban schools. Results also show that theoccupational stress of rural higher secondary school teachers is higher as compared to urban higher secondary school teachers. This shows that teachers require better supportive mechanism for improving their techno-pedagogical knowledge and managing their occupational stress. Study also revealed that teachers serving in the rural areas of the country

face more challenges in upgrading their techno-pedagogical skills and are facing more occupational stress in comparison to their counterparts serving in the urban areas. The study recommends for providing more opportunityof professional development including workshops, more hand on experiences and exposure to new technology especially for the teachers serving in the rural areas of the country, where teachers may have restricted access to the changing technology which is being provided in a planned manner in our schools in the form of new advance smart classrooms, e-teaching learning resources and incorporating the advanced educational technologies. Study also found significant correlation between the teacher's occupational stress and teacher's techno-pedagogical competency and recommends enhancing supportive mechanism for improving thetechno-pedagogical abilities of the teachers serving in the country.

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