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TECHNOSTRESS, COMPUTER SELF-EFFICACY AND PERCEIVED ORGANIZATIONAL SUPPORT AMONG SECONDARY SCHOOL TEACHERS: DIFFERENCE IN TYPE OF SCHOOL, GENDER AND AGE

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Abstract

Technostress can be seen as a relevant factor that may affect teacher satisfaction and teachers' performance. The objective of the study was to explore the technostress in relation to computer self-efficacy and perceived organizational support among secondary school teachers. The present study was conducted on 11 schools (both CBSE and PSEB) of Amritsar District of Punjab by using descriptive survey method. The researcher had taken 200 secondary school teachers as a sample on the basis of convenience sampling. The researcher had used 3 tools i.e., Technostress Scale by Nathan and Nathan (2002), Computer Self-Efficacy Scale by Singh (2018) and Perceived Organizational Support Scale by Eisenberger et al. (1986) to collect data for the study. The Study revealed that PSEB school teachers have more technostress than CBSE teachers. Further, the results revealed that male teachers and female teachers do not differ with respect to technostress and computer self-efficacy. However, female teachers perceived more organizational support than male teachers. The study also found that teachers of different age groups do not differ with respect to technostress and perceived organizational support. However, teachers of age group 20-30yrs exhibited better Computer Self-Efficacy followed by teachers 30-40yrs, 40-50yrs, above 50yrs. The research findings suggests that the government of Punjab, NCERT and SCERT should be aware about the need of the time and should provide hands-on experiences of ICT in education and provide training of ICT integration for the development of teachers which help to improve the learning of the students.

Keywords: *Technostress, Computer Self-Efficacy, Perceived Organizational Support, secondary school teachers, ICT integration.*

INTRODUCTION

The advent of technology has changed the world in many ways. Today, schools continue to face the challenge of educational technology becoming more visible, more important and more expensive. With current educational trends, a modern classroom wouldn't be complete without computers, software, internet connection, projects, and a host of other high-tech gadgets. Technology is the key to its development. Technologies are essential tools for teaching and learning. To use these tools effectively and efficiently, teachers must have a vision of its challenging professions in our society where knowledge is developing rapidly and much of it is available to students as well as teachers at the same time (Perraton, Robison & Cread, 2001). The modern development of innovative technologies has offered new possibilities to the teaching profession, but at the same time has placed more demands on teachers to learn how to use these technologies in their teaching (Robinson & Latchman, 2002).

Teachers are under pressure to keep up with new technologies and create pedagogical usage of technologies due to the rapid development of technologies and gradually rising needs for technology integration into instruction (Dong, Xu, Chai & Zhai 2020). During last three years, 90% of our education system depends on technologies. Due to COVID-19 pandemic every school, colleges and universities was closed. Teachers taught their students with the help of online mode. Most of the teachers were not technosavys; it creates techno-stress among not only teachers but also in students and their parents.

Everyday demands, opportunities, and difficulties are presented to an individual in both the workplace and in life as a whole. Some of these requirements or occurrences cause the person to experience stress. When a person is employed and under stress at work, it seriously affects both his performance at work and the organization where he works (Mohan, 2004). For many people, the transition to the Information Age has been hurried and stressful due to the changes and requirement for technological adaption. Many people still do not use much technology and are uncomfortable utilizing it when necessary, despite the fact that many have expanded their usage and are comfortable with it. Anyone who are adaptable yet unable to change, there are frequently a number of answers or outcomes. Techno-stress is one sort of reaction. Techno-stress, which manifests as either (1) computer users struggling to accept the

technologies or (2) computer users over-identifying with the technology (Brod, 1984), is the inability to adapt to or cope with new computer technologies.

Craig Brod, a clinical psychologist, coined the term "techno-stress" in 1984. (Gaudioso et al., 2017) Techno-stress is seen as a modern disease that affects individuals who struggle to manage IT in a healthy way (Ayyagari et al., 2011; Tarafdar et al., 2007). In other words, techno-stress refers to any negative consequences that technology use has on people's behaviors, thoughts, attitudes, and psychology. Techno-stress is the term used to describe the adverse psychological relationship that exists between people and the adoption of new technology. Technostress results from changed work and cooperation practices brought about by the usage of contemporary information technology in both work and home environments. Techno-stress is a condition in which people struggle to adjust to or deal with information technologies in a healthy way. They feel compelled to stay connected and constantly share updates, feel under pressure to react to work-related information immediately, and multitask nearly automatically.

Therefore, it is important to give teachers the right training and hands-on experience so that they can build effective IT abilities. This also helps technology learners develop confidence and self-efficacy. Initially put forth by Bandura in 1977, self-efficacy is a psychological concept that may be defined as "a belief about one's own capability to organize and complete a course of action required to accomplish a specific task" (Eggen and Kauchak, 2007). The definition of self-efficacy is that it "is concerned... with judgments of what one can do with whatever skills he/she possess" (Bandura, 1986). It has two parts: efficacy expectations, or the conviction that one has the power to influence behavior, and outcome expectations, or the conviction that a specific outcome will arise from a given course of action (Albion, 1999). Computer self-efficacy was described by Compeau and Higgins (1995) as "a person's ability to apply his or her computer skills to a wider range of computer related tasks." Therefore, a person's impression of his or her capacity to use computers to carry out a task is represented by computer self-efficacy. Computer self-efficacy is "a judgment of one's capability to use a computer," according to Compeau and Higgins (1995).Computer Self-Efficacy is defined as "self-judgment regarding the ability of a person to use a computer is one kind of confidence regarding self-computer abilities, which are used to complete some specific task" (Murphy, Coover& Owen, 1989).

According to Sarfo, Amankwah, and Konin (2017), computer self-efficacy is based on a person's beliefs and confidence in what they can achieve with the computer skills and knowledge they already have. According to research by Compeau and Higgins (1995), teachers with higher computer self-efficacy tend to think of themselves as capable of using technology, whereas instructors with lower self-efficacy experience greater anxiety and frustration when using computers. According to Oz Celik and Kurt (2007), teachers who are confident in their ability to use computers will be more inclined to frequently use the tools when carrying out classroom duties.

Teachers can lower their techno-stress by increasing their computer self-efficacy, which in turn makes it easier for them to gain organizational assistance from their employer. Perceived organizational support has drawn the attention of researchers in the management and psychology sectors (Rhoades and Eisenberger 2002). According to Eisenberger et al.'s definition from 1986, "employees in an organization form global beliefs concerning the extent to which the organization values their contributions and cares about their wellbeing." According to Shore (1991), perceived organizational support is a measurement of an employer's dedication to the actions necessary to ensure the well-being of their workers in the workplace. Researchers have created a framework to measure organizational or employer care and support (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Eisenberger, Huntington, Hutchison, & Sowa, 1986). Staff practices such as fair treatment, management support, rewards, and favorable working conditions have shown a strong association with perceived organizational support (Rhoades and Eisenberger, 2002). Eisenberger et al. (1990) found a positive association between organizational support and commitment. Employees look to the organization for support in the form of an appropriate assessment of their contribution and well-being. According to Aselage and Eisenberger (2003), if employees gave maximum support to employees in their organization, they would do their best in the workplace in return. Perceived organizational support has a significant impact on job satisfaction and employee commitment to the organization (Rhoades and Eisenberger, 2002; Aube et al., 2007; Riggle et al., 2009). Perceived organizational support is the exchange of beliefs between an employee and an employing organization. A higher level of perceived organizational support from the employer would lead to the worker's commitment to improving the organization, which in turn would lead to the worker's engagement with the job and commitment to the goals of the workplace. Organization (Eisenberger et al .1986) .

Today's teachers are in a situation where they have to use computers to update their knowledge and deliver lessons through the computer and across the screen; they face certain stressful symptoms when using the computer in class. Most teachers agree that computers are a very useful tool, but few of them make much use of computers in the classroom. Teachers with anxiety avoid teaching with computers or pass on their fear and negative attitudes to their students if they don't teach with them. Teachers have a fear or technophobia of using technology, resulting in a feeling of low computer self-efficacy and a negative attitude towards using computers in their classrooms. Thus, there is a need for research into technostress in relation to computer self-efficacy and organizational support among teachers in secondary education.

OBJECTIVES OF THE STUDY

1. To study the technostress, computer self-efficacy and perceived organizational support of secondary school teachers among CBSE and PSEB schools.
2. To study the technostress, computer self-efficacy and perceived organizational support of secondary school teachers with respect to gender.
3. To study the technostress, computer self-efficacy and perceived organizational support of secondary school teachers with respect to their age.

HYPOTHESES OF THE STUDY

1. There exists no significant difference in technostress, computer self-efficacy and perceived organizational support among CBSE and PSEB secondary school teachers.

2. There exists no significant difference in technostress, computer self-efficacy and perceived organizational support among male and female teachers.

3. There exists no significant difference in technostress, computer self-efficacy and perceived organizational support of secondary school teachers with respect to their age.

METHODOLOGY

Population and Sample:

The present study was conducted in 11 CBSE and PSEB secondary schools of Amritsar District, Punjab, India. The researcher had taken 200 secondary school teachers both male and female as a sample on the basis of convenient Sampling.

Tools for the present study:

In order to collect data for the present study the investigator had taken 3 tools.

TOOL 1 Computer Self-Efficacy Scale (CSES) for teachers developed by (Jasbir Singh, 2018).

TOOL 2 Technostress Questionnaire for teachers developed by (Ragu-Nathan and Ragu-Nathan, 2002)

TOOL 3 Perceived Organizational Support Scale (POS) for teachers developed by (Eisenberger et al., 1986)

Statistical Analysis:

The data collected were analyzed by using descriptive and inferential analysis. The following statistical techniques were employed for the analysis and interpretation of the data.

1. Descriptive statistics techniques such as mean, standard deviation, were used to see the nature of distribution of the scores.

2. t-test was applied to determine the significant difference between groups with respect to gender, age and type of school.

3. One-way ANOVA was used to determine the significant difference between groups with respect to their age.

ANALYSIS AND INTERPRETATION OF DATA

Table 1: Mean, SD, Std. Error mean, Std. Error difference, t-value and p-value of technostress, computer self-efficacy and perceived organizational support among CBSE and PSEB secondary school teachers.

Variables	BOARD	N	Mean	S. D	Std. Error Mean	Std. Error Difference	T	p
Computer Self-Efficacy	CBSE	147	166.20	24.391	2.012	3.752	1.727	0.086
	PSEB	53	159.72	20.431	2.806			
Technostress	CBSE	147	57.76	15.796	1.303	2.449	3.482	0.001
	PSEB	53	66.28	13.745	1.888			
Perceived Organizational Support	CBSE	147	53.41	6.943	.573	1.117	4.425	0.000
	PSEB	53	48.47	7.054	.969			

From the findings of table-1, it was concluded that CBSE secondary school teachers and PSEB secondary school teachers do not differ with respect to Computer Self-Efficacy. It was also concluded that PSEB secondary school teachers have more techno-stress than CBSE

secondary school teachers Further, CBSE secondary school teachers perceived more organizational support than PSEB secondary school teachers.

Table 2: Mean, SD, Std. Error mean, Std. Error difference, t-value and p-value of techno-stress, computer self-efficacy and perceived organizational support among male and female teachers.

VARIABLES	GENDER	N	Mean	Std. Deviation	Std. Error Mean	Std. Error Difference	t	P
Computer Self-Efficacy	MALE	26	167.62	27.126	5.320	4.954	0.727	0.468
	FEMALE	174	164.01	23.000	1.744			
Techno-stress	MALE	26	65.54	17.180	3.369	3.820	1.936	0.054
	FEMALE	174	59.19	15.357	1.164			
Perceived organizational support	MALE	26	50.08	9.683	1.899	1.528	1.526	0.129
	FEMALE	174	52.41	6.847	.519			

From the findings of table-2, it was concluded that male teachers and female teachers do not differ with respect to techno-stress. Male teachers and female teachers also do not differ with respect to computer self-efficacy. However, female teachers perceived more organizational support than male teachers.

Table 3: Mean, SD, Std. Error mean, Std. Error difference, t-value and p-value of techno-stress, computer self-efficacy and perceived organizational supportof secondary school teachers with respect to their age.

Variables	Age	N	Mean	Std. Deviation	Std. Error
Computer Self-Efficacy	20-30	28	169.46	16.059	3.035
	30-40	84	168.89	23.471	2.561
	40-50	61	163.39	19.524	2.500
	Above 50	27	148.04	30.973	5.961

	Total	200	164.48	23.533	1.664
Techno-stress	20-30	28	59.21	16.772	3.170
	30-40	84	57.80	16.088	1.755
	40-50	61	61.25	14.759	1.890
	Above 50	27	64.96	14.880	2.864
	Total	200	60.02	15.706	1.111
Perceived organizational support	20-30	28	51.61	7.470	1.412
	30-40	84	53.00	7.874	.859
	40-50	61	51.98	6.876	.880
	Above 50	27	50.11	5.899	1.135
	Total	200	52.11	7.290	.516

In order to analyze the variance in techno-stress, Computer Self-Efficacy and Perceived Organizational Support the obtained scores are subjected to ANOVA and the result have been presented as given in table 4

TABLE 4: ANALYSIS OF VARIANCE IN TECHNOSTRESS, COMPUTER SELF-EFFICACY AND PERCEIVED ORGANISATIONAL SUPPORT

	Source of variance	Sum of squares	D. f.	Mean square	f-value	p-value
Techno-stress	Between group	1184.407	3	394.802	1.615	.187 Not significant
	Within group	47904.548	196	244.411		
	Total	49088.955	199			
Computer Self-Efficacy	Between group	9703.400	3	3234.467	6.308	.000 Significant
	Within group	100500.520	196	512.758		
	Total	110203.920	199			
Perceived Organizational Support	Between group	182.466	3	60.822	1.147	.331 Not significant
	Within group	10394.329	196	53.032		
	Total	10576.795	199			

From the findings of table-4, it was found that statistically no significant mean difference was found in scores of techno-stress of secondary school teachers with respect to different age groups. The results revealed that teachers of different age groups do not differ with respect to techno-stress.

Statistically significant mean difference was found in scores of computers self-efficacy of secondary school teachers with respect to their different age groups. The mean scores of teachers of age group 20-30yrs were higher than the other age group followed by 30-40yrs, 40-50yrs, above 50yrs.

Statistically no significant mean difference was found in scores of perceived organizational support of secondary school teachers with respect to different age groups. The results reveal that secondary school teachers of different age groups do not differ with respect to perceived organizational support.

FINDINGS

1. The present study revealed that PSEB teachers have more techno-stress than CBSE secondary school teachers. Further it was revealed that PSEB school teachers have more Techno-Complexity and Techno-Insecurity dimension of techno-stress as compared to CBSE school teachers. CBSE secondary school teachers and PSEB secondary school teachers do not differ with respect to Computer Self-Efficacy. Female teachers perceived more organizational support than male teachers.
2. The present study revealed that male teachers and female teachers do not differ with respect to techno-stress. Male teachers and female teachers also do not differ with respect to Computer Self-Efficacy. Female teacher perceived more organizational support than male teachers.
3. The present study reveals that teachers of different age groups do not differ with respect to techno-stress. It was found that teachers of age group 20-30yrs exhibited better Computer Self-Efficacy than the other age group followed by 30-40yrs, 40-50yrs, above 50yrs. Further the present study revealed that teachers of different age groups differ with respect to computer performance skill and web-based skill of computer self-efficacy. Secondary school teachers of different age groups do not differ with respect to perceived organizational support.

EDUCATIONAL IMPLICATION

The present study has multiple implications in the field of education. The findings of this study can become a source of information and guidance to secondary school teachers for

techno-stress in relation to computer self-efficacy and perceived organization support towards teaching. On the basis of research findings and conclusion this study suggests few implications:

- The present study revealed that PSEB secondary school teachers have more techno-stress than CBSE secondary school teachers. To lesser the techno-stress of PSEB secondary school teachers it is suggested that the govt. of Punjab, NCERT and SCERT should be aware about the need of the time and should provide hands-on experiences of ICT in education and provide training of ICT integration for the development of teachers which help to improve the learning of the students.
- The present study revealed that mean scores of age group 2 (30-40yrs) teachers was higher than other age group. It is suggested that the teachers 98 falling under group 2 as mentioned above i.e., age between 30-40yrs working in an institution needs to be provided special workshops on enhancement their skills and update their computer knowledge so that they could meet the needs and overcomes the challenges of every working or non-working person of an institution.
- The present study revealed that mean scores CBSE secondary school teachers have higher than PSEB teachers with respect to perceived organizational support. It improves the computer self-efficacy of the teachers which help in coping with the stress regards to educational technology.

CONCLUSION

The present study sought to explore the effect of computer self-efficacy and perceived organizational support on teacher's techno-stress. Study reveals that computer self-efficacy and perceived organizational support effect teacher's techno-stress in schools. The present study indicated that the teachers who have more computer self-efficacy and received more perceived organizational support have less techno-stress. The study also reveals that PSEB school teachers have more techno-stress than CBSE teachers. To reduce techno-stress among teachers, NCERT or SCERT can implement strategies such as providing comprehensive training programs covering technical and pedagogical aspects, ensuring reliable infrastructure, establishing clear guidelines and policies, fostering collaboration and peer support, gradually introducing technology, collecting regular feedback, promoting work-life balance, offering recognition and incentives, conducting research and sharing resources, providing continuous professional development opportunities, and encouraging flexibility in technology adoption based on individual preferences and teaching styles. These efforts aim to create a supportive environment where teachers can effectively integrate technology into their teaching practices, enhancing the overall educational experience for students.

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(Pg. 343-354)