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A Study of Technostress among Faculty Members of HEI's

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Abstract

The rapid advancement of technology in the twenty-first century has exceeded our expectations. As a result, there is a rising belief that our lives are becoming more stressful due to the quick developments in technology. In a survey of 1,300 managers across the US, UK, Australia, Hong Kong, and Singapore, Reuters Business Information Services discovered that 33% of them had health problems as a result of technology stress, and 66% said that information overload had made relationships with coworkers more tense and affected their ability to do their jobs. According to the research, modern technologies might have a lot of advantages, but they might also make jobs more stressful and demanding. Multitasking and information overload are two ICT-related behaviors that can lead to stress by causing work overload (Paoli [1]). ICT adoption, rapid spread, and evolution have added several new demands to the workplace that cause stress at work. The inability to focus on a single problem, a rise in irritation, and a sense of being in control are all telltale signs of Techno Stress. The purpose of the study was to gauge the stress levels of faculty members at HEIs. Additionally, it looks to decide how faculty members' stress levels vary in relation to their age, gender, experience, and stress level. Considering the detrimental effects of technostress, this study is crucial since it helps us pinpoint the stress associated with its use. Additionally, the results could serve as a guide for HEI faculty members as they develop strategic plans to address Techno Stress. 308 respondents from the Delhi NCR completed the surveys, which included 23 Technostress items and a section on demographics (Tarafdar et al. 2007). The respondents' degree of stress was found to be moderate. The study found that tenure, gender, age, and technological savvy of HEI faculty members are all significantly affected by technostress.

Keywords: Technology, Faculty members, Technostress, Demography, Age, Gender

Introduction

In the twenty-first century deployment and integration of ICTs has benefited universities in terms of staff effectiveness and production efficiency (Brynjolfsson and Hitt 1996). Yet have these advantages come at a price? We contend that there are sometimes hidden costs associated with employing ICTs. Is it proper for a manager to push team members to use ICTs to be reachable outside of business hours? Do we need to discourage setting rigid work-home boundaries? If an organization needs wireless email use. Faculty members are experiencing a sort of stress known as technostress due to the widespread use of computers and other rapidly evolving information technology tools in the classroom (Santos and Sussman 2000). The unfavourable psychological connection that people have with modern technologies is known

as technostress. According to Mazmanian et al. (2006) and Middleton and Cukier (2006), the usage of contemporary information and communication technology at work has changed people's work and cooperation habits, which might lead to technostress. When workers are unable to adjust to or manage information technologies in a hassle-free and healthful way, they become victims of technostress. They multitask out of habit and feel compelled to be up to date on work-related information in real time. Additionally, they are under pressure to perform more quickly because information is given more quickly, and they have less time for thoughtful reflection or original analysis. Described as "... a modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner," technostress was first found by renowned researcher Craig Brod in 1984. According to earlier academic research in this field, technostress is an unwanted phenomenon brought on using communication and computer equipment (Kudyba and Diwan 2002).

ICT use has several advantages, including improved accuracy, productivity, and efficiency as well as space savings and a decrease in monotony and drudgery. However, several variables have been found to provide a more correct definition of technostress. Technostress, according to Tarafdar (2007), is an issue of adaptation and an inability to deal with or acclimatize to technology.

Understanding how ICTs show themselves is crucial to understanding how ICTs cause stress. What about the technologies that make us stressed out in the end? Regretfully, although helpful in its descriptiveness, most of the research on technostress that is currently available (Brod 1984; Sami and Pangannaiah 2006; Weil and Rosen 1997) offers extraordinarily little insight into the technostress. The ideas like "space invasion" to define technostress as a source of stress. These notions do not consider the attributes of establishments (such as continuous connectivity) and their part in the development of technostress. Nelson (1990) adds weight to the need for further research on Hei's theory by urging scholars to focus on aspects of technology rather than approaching it universally. Therefore, to provide a better understanding of the phenomena of technostress, the present study outlines the technological qualities that generate stress rather than using technology as a stand-in for components that occur at many levels and units of analysis.

Technostress affects people in diverse ways on a psychological and physiological level. It includes a decline in production, organizational commitment, and job satisfaction. The following are the main reasons for technostress:

- rapid technological change.
- inadequate knowledge and training.
- an increase in workload.
- lack of standardization in technology.

Literature review

Most early ICT exchanges took place inside such institutions. However, as ICTs have advanced, interactions increasingly permeate both the personal and organizational domains. People must get used to using ICTs because of these interactions. These adaptations include the use of ICTs in the workplace, the worry about becoming outdated, and the occurrence of technostress. The stress phenomena are clarified by two overarching theoretical frameworks.

One could refer to the first paradigm as an epidemiological perspective (Fox et al., 1993). When faculty members adopt this perspective, they usually associate real disease symptoms like coronary heart disease with technostress factors like workload or work-family conflict. This point of view supports the use of objective metrics for stressor and outcome management. One could refer to the alternative paradigm as a cognitive perspective (Fox et al. 1993). This point of view highlights that people's cognitive interpretation or appraisal of environmental demands decides stressful outcomes. The cognitive perspective primarily studies psychological results, and proponents of this viewpoint support the use of subjective measurements such personal assessments of job demand. Although the nomenclature employed in stress studies is inconsistent (Jex et al. 1992).

Among the most important institutions where ICT resources are extensively used to boost productivity are universities worldwide. The inability to manage or cope with ICTs in a healthy way is referred to as technostress (Brod, 1984). Organizations must address technostress because it can negatively affect people's productivity and health. Most earlier studies on technostress have concentrated on its effects. By examining the effects of task-technology fit and information overload on technostress, researchers can go farther in this line of inquiry. Results from 664 working people show that while task-technology fit reduces technostress, information overload brought on by ICTs has a negative effect on it (Kristof-Brown et al. 2005). According to earlier research, one of the main effects of the technology revolution in the workplace today is the rise in occupational stress. Additionally, it has been discovered that when someone is expected to cope with technology, they experience technostress, which is a state of worry that negatively affects their body, attitudes, behaviors, and thoughts. Faculty members are under tremendous strain due to the employment of advanced ICT technologies. Employee happiness in academic institutions has been proven to be negatively affected by occupational stress. Higher stress levels have been linked to decreased organizational commitment and satisfaction, according to research.

The impact of demographic profile on technostress has previously been proved by researchers (Sutton and Rafaeli 1987). Technostress has been found to be favorably influenced by educational attainment, with the theory being that users with higher levels of education would pick up new ICT skills more quickly and with less worry. Therefore, it makes sense that users with greater education will be less stressed by technology (Hung et al., 2011; Lapina's, 2015). Results on how age affects technostress varied across studies conducted in various contexts. It was discovered that the perceived ease of using technology is negatively affected by age. However, research on stress connected to computers shows that neither computer phobia nor stress associated with computers are influenced by age. In other words, compared to younger people, elderly adults do not suffer from more computer anxiety or phobia. Studies about genders show that distinct factors affect the decision of people to adopt technology. Perceived behavioral control and subjective organizational norms have an impact on women. Men's attitudes towards technology have an impact. In the office, women are less likely to use computers. In addition, women are more likely than men to experience computer anxiety and phobia (Mahapatra & Pati, 2018). Studies additionally show a robust correlation between technological awareness and personal responses to computing technology. Lower levels of computer-related anxiety and computer phobia are associated with more awareness of computer technology (Tarafdar et al., 2019). Consequently, it is clear from the explanation above that technology has an impact on environmental and demographic issues.

Theoretical Framework and Hypothesis

The primary objective of this study is on how five key demographic factors: age, experience, marital status, and technology awareness—affect those who create technostress (technostress: overload, invasion, complexity, insecurity, and uncertainty). Figure 1's relationship diagram illustrates how independent and dependent variables are related. Technostress is viewed as a dependent variable in this model, while demographic variables as independent variables.

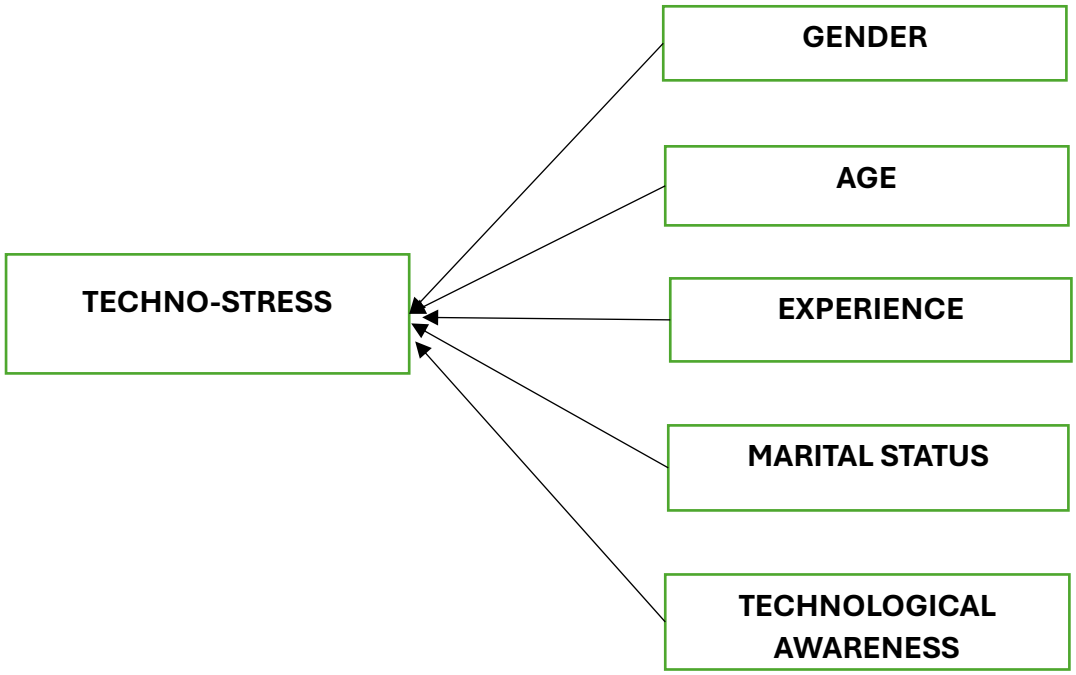

FIGURE 1: PROPOSED RESEARCH MODEL

Drawing from extant literature and the relationship diagram depicted in Figure 1, the current investigation has advanced the following conjectures:

H1: Among faculty members at HEIs, there is a statistically significant relation between gender and technostress.

H2: Among faculty members at HEIs, there is a statistically significant relation between age and technostress.

H3: Among faculty members at HEIs, there is a statistically significant relation between tenure and technostress.

H4: Among faculty members at HEIs, there is a statistically significant relation between technological awareness and technostress.

H5: Among faculty members at HEIs, there is a statistically significant relation between marital status and technostress

Methodology

A survey method was employed to collect data about the demographic profile of 308 faculty members of HEI's. Out of 308 questionnaires collected through e-mails and online social forum, 141 are males and 167 are female faculty members. The area of sample was Delhi NCR HEI's.

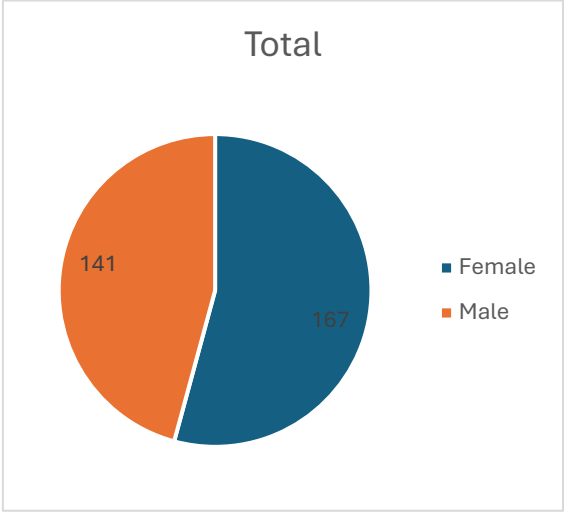

Figure 2 Gender Profile

For this study, demographic scales and the five dimensions of the Technostress Questionnaire (Ragu-Nathan, et al., 2008) are employed. An earlier investigation by Ragu-Nathan and colleagues attests to the instrument's dependability. They discovered that all five of the technostress creators' components had Cronbach's alpha (a measure of dependability) values higher than 0.7. All responses are collected using a 5-point Likert scale, with 1 denoting Strongly Disagree, 2 disagree, 3 neutral, 4 agree, and 5 strongly agree. The demographic items are the only exception. Age, gender, experience (length of service), marital status, and technical awareness are the demographic and environmental scale data gathered for this study. The degree of knowledge about technological advancements and how they are used in the workplace is measured by technical awareness. The results of data analysis are presented in the form of descriptive and inferential statistics. Table 1 shows the demographic description of the sample collected through questionnaire.

TABLE 1 DEMOGRAPHIC PROFILE OF RESPONDENTS

ATTRIBUTES	CHARACTERISTICS	No of ITEMS
GENDER	MALE	141
	FEMALE	167
AGE	21-30 yrs	39
	31-40 yrs	101

	41-50 yrs	116
	51-60 yrs	41
	61 and above	11
MARITAL STATUS	MARRIED	192
	UNMARRIED	116
EXPERIENCE	11-20 yrs	122
	21-30 yrs	45
	31-40 yrs	15
	Less than 10 yrs	122
	Above 40 yrs	4
TECHNOLOGICAL AWARENESS	YES	204
	NO	104

Table 1 describes the demographic profile of the faculty members of HEI's of Delhi NCR. There are 308 respondents who answered this questionnaire. Out of the total respondents, 141 are male and 167 are female. The majority are in the age group above 31-40 years and 41-50 years of age group. Among all respondents, 192 are married and 116 are unmarried. 122 have experience of 11-20 years and 122 faculty members have experience of less than 10 years, 45 faculty members have experience of 21-30 years, 15 have experience of 31-40 years and only 4 faculty members are there who have experience of more than 40 years. Majority of the faculty members in 204 have technological awareness i.e., ICT education.

	MEAN	STANDARD DEVIATION	CRONBACH's ALPHA
TECHNO-OVERLOAD	2.89	0.68	0.82
TECHNO-INVASION	2.07	0.78	0.88
TECHNO-COMPLEXITY	3.01	0.64	0.80
TECHNO-INSECURITY	2.19	0.77	0.75
TECHNO-UNCERTAINTY	3.24	0.55	0.81

TABLE 2 RESULT OF DESCRIPTIVE STATISTICS

Using bi-variant analysis, the relative impact of demographic factors on technostress is investigated. The difference between the two subgroups was measured using the independent t-test, and the difference between three or more subgroups was determined using one-way ANOVA (F). According to Table 3's findings, among faculty members at HEIs in Delhi NCR, technostress is statistically correlated with four of the five major demographic characteristics. The gender, age, and technological savvy of faculty members at HEIs in the Delhi NCR are the factors associated with higher levels of techno-stress disparity. Technostress has less of an impact on other variables like age and length of service. However, there is no discernible effect of technostress on marital status. Table 3 presents the detailed results in the following manner:

ATTRIBUTE	STATISTICS (F Value)	P-VALUE (SIG)
GENDER	-2.99	0.002
AGE	3.04	0.001
MARITAL STATUS	1.64	0.622
EXPERIENCE	2.22	0.010
TECHNOLOGICAL AWARENESS	-3.57	0.000

TABLE 3 Association between Demographic Variables and Technostress

Discussion

The results demonstrate that the three demographic factors that most strongly influence technostress are age, gender, and technological sophistication. Male faculty members experience higher levels of technostress than female faculty members because women believe technology to be less user-friendly than males. While female faculty members frequently reserve their usage of technology for emergencies, male faculty members are more likely to utilize it whenever they like. Men faculty members experienced a higher level of technostress since they typically use technology more than female faculty members. Similar findings have also been obtained by earlier study.

But according to a 2011 study on social network users in Türkiye by Ahmet Naci Çoklar and Yusuf Levent Sahin, female users had higher levels of technostress than male users. On the other hand, faculty members who are more tech-savvy typically experience less technostress since they are more likely to believe that they can adjust to the demands and changes that come with technology. Additionally, the results indicate that senior faculty members experience higher levels of technostress than junior faculty members. Comparable results were found in a study done by Mahalakshmi et al. (2018) among Indian library employees. Younger people are more likely to be familiar with the newest technology, which should lessen their feeling of technostress. This result makes perfect sense. Our research findings are well supported by Ahmet Naci Collar's (2008) research conducted in Türkiye. But this is not the same result as the studies by Hoiberg (2014) and Monideepa Tarafdar (2007).

Through their analysis, they found that elderly people had experienced less pressure from technology than younger people because of their maturity. The differences in the outcomes could be explained by how much technology is used in their settings and workplaces. This study is being conducted among faculty members at HEIs in the Delhi NCR, whereas Tarafdar and Hoiberg's (2007) research were conducted in an industry context. This study also demonstrates that faculty members who have worked at the institution for a longer period exhibit lower levels of technostress than faculty members with less experience. First, a better comprehension of the technologies already utilized in the classroom and institutionally specific experiences could be the root reason for this. Second, a longer tenure at an academic institution may boost a worker's authority inside the company, giving them greater latitude and flexibility in their use of technology and potentially reducing the strain that comes with it. Tarafdar and Hoiberg (2007) have published comparable results.

Faculty members in higher education institutions with formal IT education and a strong technological background are more likely to be exposed to technology and experience lower levels of technostress than their less tech-savvy colleagues. They also find it easier to adapt to the quickly changing technologies in the academic context. Teachers who possess technical degrees in information technology and have a longer history of using computers report lower levels of technostress because they are more knowledgeable about the most recent changes, innovations, and improvements in IT. Additionally, they are more aware of how the institution will adapt culturally to impending technical developments. In the end, it is found that faculty members who are married or single do not significantly affect technostress. Comparable results have been found in another research.

Conclusion

The purpose of this study was to investigate the impact of demographic variables on technostress among faculty members at Delhi NCR's Higher Education Institutions. The findings showed that age, gender, experience (length of service), and technological awareness all had a substantial impact on technostress. However, faculty members' marital status is unaffected by technostress. It is believed that this study's findings would give higher education institutions a way to deal with technostress. Considering the rapidly evolving ICT landscape and the ever more demanding work environment, it makes it essential to create efficient wellness and training initiatives to lower stress levels among faculty members while also boosting their sense of personal worth and technological ability. To get a more generalized finding, future research can include more samples with varying demographics and environmental factors.

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