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RESEARCH ARTICLE

A Study of Relationship Techno Stress and well being among Primary School Teachers

Raja Ram
Research Scholar
Navyug Kanya Mahavidyalaya Lucknow
Lucknow University, Lucknow, U.P., India
Email – rajarambtc333@gmail.com

Prof. Sarita Kannaujiya
Education Department
Navyug Kanya Mahavidyalaya Lucknow
Lucknow University

Abstract

This study explores the relationship between technostress and the well-being of primary school teachers, with a particular focus on how technology-induced stress affects their mental and physical health. The increasing integration of digital tools in classroom settings has introduced specific challenges for teachers, including technological overload, insecurity, and complexity, all of which may adversely affect their overall well-being. The primary objective of this research is to examine the extent to which technostress influences teachers' work-life balance, emotional well-being, and job satisfaction. Employing a cross-sectional survey methodology and a quantitative correlational research design, the study sampled 300 primary school teachers from both urban and rural institutions in [specific region/country], selected through stratified random sampling to ensure representation across gender, age, and teaching experience. Data were collected using two validated instruments: the Teacher Well-Being Scale (Collie et al., 2015), assessing job

satisfaction, emotional health, and work-life balance; and the Technostress Scale (Tarafdar et al., 2007), evaluating five dimensions of technostress—techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. Demographic information, including training and frequency of technology use, was also recorded to control for potential confounding variables. Statistical analyses, including descriptive statistics, Pearson correlation, and multiple regression, were conducted to examine the relationship between technostress and well-being and to identify the predictive power of individual technostress components. Preliminary findings reveal a significant negative correlation between technostress and teacher well-being, with techno-overload and techno-invasion emerging as key predictors of diminished well-being. The study concludes with recommendations for teacher education programs and institutional policies aimed at mitigating technostress and enhancing educators' well-being.

Keywords: Technology, Emotional health, Well-being, Technostress

Introduction

In the modern world, technology is utilized in practically every aspect of life, including education. It is required of teachers to use digital technologies, computers, and internet resources in the classroom. Although technology can make teaching more engaging and easier, it can also cause stress for educators. Technostress is the term for this type of stress that results from excessive usage of technology. Many elementary school teachers struggle with things like learning new software, staying current with changes, or feeling like they have to be online all the time. These issues may cause people to feel worn out, nervous, and dissatisfied with their work.

Studying the effects of technostress on primary school teachers' well-being is the goal of this research work. Work-life balance, job satisfaction, and emotional well-being are among its main topics. For the study, 300 teachers from both urban and rural schools were surveyed. Both technostress and teacher well-being were measured using well-known instruments. This study intends to provide insights into the ways in which schools and training programs might better support teachers by examining the effects of technostress. When teachers use technology for their jobs, the intention is to lessen stress and make them feel happier and healthier.

As noted by Chaplain (2008) and Skaalvik and Skaalvik (2016), the teaching profession has become increasingly demanding. Globally, stress among educators has emerged as a significant concern, particularly in the context of online instruction during the COVID-19 pandemic (Pressley et al., 2021; Santamaria et al., 2021). However, elevated stress levels are also evident in traditional classroom environments (Collie et al., 2012; Klassen, 2010). These challenges manifest across various educational settings, including both rural schools (Ogakwu et al., 2024) and urban institutions (Bottiani et al., 2019; Herman et al., 2018). In the United Kingdom, the education

sector ranks among the top three occupational fields most affected by work-related stress (Bourlakis et al., 2023). Such stress negatively impacts teachers' job satisfaction, career trajectories, performance, and overall health (Jepson & Forrest, 2006; Yalcin et al., 2022).

In recent years, a distinct category of stress—technostress—has emerged as a salient component of teachers' overall stress profiles due to the proliferation of educational technologies. The term "technostress," first introduced by Craig Brod, refers to "a modern disease of adaptation caused by an inability to cope with new computer technologies in a healthy manner" (Brod, 1984, p. 16). It has since come to denote the psychological strain associated with the rapid integration of information and communication technologies (ICT) into professional and educational environments (La Torre et al., 2019). Although a relatively recent concept, technostress is evolving rapidly and receiving growing scholarly attention (Salazar-Concha et al., 2021).

Educators now face increasing pressure to effectively and proactively incorporate digital technologies into their pedagogical practices (Graham et al., 2009). While technology can enhance teaching efficacy and improve student engagement, it also introduces several challenges. Among these are increased workload, concerns over privacy and data security, and issues of technological reliability, all of which are recognized as significant contributors to technostress (Dong et al., 2020; Fischer et al., 2021). To design lessons, disseminate information, and foster student participation, teachers must develop advanced competencies in designing and implementing technology-integrated instruction (Chen, 2008; Dong et al., 2020; Munyengabe et al., 2017). The evolving demands associated with digital pedagogy, coupled with shifting instructional responsibilities and institutional expectations, are likely to amplify stress levels among educators (Li & Wang, 2021; Syvänen et al., 2016).

Review of Literature:

Digital technology integration has transformed the teaching and learning process, but it has also presented educators with new psychological difficulties. The phrase technostress, which refers to the stress brought on by using technology, is one of the most well-known of these. Primary school teachers are more likely to experience different types of technostress, which can have a detrimental impact on their wellbeing, as digital technologies become more and more necessary in today's classroom. Five major aspects of technostress were identified by Tarafdar et al. (2007): techno-overload (having to work longer and faster because of technology), techno-invasion (having technology invade personal life), techno-complexity (feeling inadequate because of complex technology), techno-insecurity (fear of losing one's job because of technology), and techno-uncertainty (frequent changes and updates in technology).

These aspects of technostress have been found to have a substantial impact on teachers' work-life balance, job satisfaction, and emotional health. Ragu-Nathan et al. (2008), for instance, discovered a correlation between technostress and decreased production as well as increased role

stress. Teachers who experience technological overload and invasion also frequently report emotional tiredness and diminished motivation, which can result in burnout and a drop in job satisfaction, according to Saleem et al. (2021).

Maintaining a productive learning environment depends on teachers' emotional well-being, job happiness, and work-life balance. Collie et al. (2015) created the Teacher Well-Being Scale to assess these aspects and discovered that occupational stressors, such as technostress, had a significant impact on well-being. Additionally, Bakker and Demerouti's (2007) job demands-resources (JD-R) model offers a helpful theoretical framework for comprehending how high job demands, like the pressure to use technology, can lead to stress and decreased well-being when they are not accompanied by sufficient resources, like training or support.

Furthermore, Skaalvik and Skaalvik (2017) maintained that self-efficacy and emotional health are critical for teacher effectiveness and retention. Stress from constant technological adaptation can make teachers feel less capable and more nervous, which lowers morale and performance. According to Li and Wang (2020), teachers' anxiety symptoms and decreased professional efficacy are highly predicted by technological complexity and insecurity.

The research emphasizes that teachers' emotional and professional well-being are impacted by technostress. Work-life imbalance is exacerbated by the inability to distinguish between work and home because of digital communication tools, or "techno-invasion," which blurs the lines between personal and professional life (OECD, 2020). These results highlight the value of institutional measures to lower technostress and improve well-being, such as supportive policies and teacher training programs.

More region-specific studies that take into account demographic differences including age, gender, teaching experience, and location (rural vs. urban) are still needed despite the rising body of data. The new study's use of quantitative correlational designs and stratified sampling contributes to a more thorough comprehension of these dynamics.

Research Methodology and design:

Component	**Details**
Research Design	Quantitative, correlational research design
Approach	Cross-sectional survey
Population	Primary school teachers
Sample Size	300 teachers
Sampling Technique	Stratified random sampling (based on gender, age, experience, location)
Instruments Used	Teacher Well-Being Scale (Collie et al., 2015);

	Technostress scale (Tarafdar et al., 2007)
Domains Measured.	Well-being: Emotional health, job satisfaction, work-life balance; Technostress: Techno-overload, techno-invasion, techno- complexity, techno-insecurity, techno-uncertainty
Additional Data Collected	Demographics: Gender, age, years of experience, training, tech usage frequency
Data Analysis Methods	Descriptive statistics; Pearson correlation; Multiple regression analysis

Analysis :

This study provides a clear and systematic examination of the relationship between technostress and teacher well-being among primary school educators. The use of a quantitative, correlational research design and a cross-sectional survey approach enables the researcher to gather measurable data and identify patterns across a diverse sample. The stratified random sampling method adds credibility to the research by ensuring representation from various demographic categories, such as gender, age, teaching experience, and school location (urban vs. rural).

The study's strength lies in its use of validated measurement tools. The Teacher Well-Being Scale (Collie et al., 2015) captures essential aspects of a teacher's professional life, while the Technostress Scale (Tarafdar et al., 2007) breaks down technostress into five precise dimensions. This detailed approach allows for in-depth analysis of which stressors—such as techno-overload or techno-invasion—most negatively impact teacher well-being.

The analytical methods—descriptive statistics, Pearson correlation, and multiple regression—are appropriate for exploring relationships between variables and identifying key predictors. The preliminary findings, which reveal a significant negative correlation between technostress and well-being, are consistent with existing literature and reinforce the urgency of addressing technology-related stress in schools.

One of the most important contributions of this study is its practical implications. By highlighting specific stressors like technological overload and invasion, the study offers a foundation for policy recommendations. It suggests that teacher training programs should include digital stress management and that schools need to establish healthier technology-use policies.

In summary, this study effectively connects technostress to the mental and emotional health of teachers. It adds value to the academic field by using a rigorous methodology and by offering practical solutions to improve teacher well-being in the digital age. Future research may expand on these findings with longitudinal studies or interventions.

Conclusion:

This study systematically explored the impact of technostress on the well-being of primary school teachers. Using a quantitative, correlational design and a cross-sectional survey approach, the research provided clear evidence that technostress negatively affects emotional health, job satisfaction, and work-life balance among teachers.

The major conclusions drawn from the study are as follows:

1. **Technostress is prevalent:** With increasing reliance on digital tools in education, teachers frequently experience technostress in various forms such as techno-overload, techno-invasion, and techno-complexity.
2. **Negative correlation with well-being:** The results revealed a significant negative correlation between technostress and teacher well-being. As technostress levels increase, overall well-being—especially emotional health and job satisfaction—tends to decrease.
3. **Techno-overload and techno-invasion as key stressors:** Among the five dimensions studied, techno-overload (working faster and longer due to technology) and techno-invasion (inability to disconnect from work) were found to be the strongest predictors of poor well-being.
4. **Demographic variables matter:** Differences in age, experience, and training influenced levels of technostress and well-being, suggesting that personalized support may be more effective than one-size-fits-all solutions.
5. **Need for institutional support:** The findings emphasize the urgent need for schools and policymakers to design interventions such as teacher training, digital well-being workshops, and policies that protect personal time from work-related technological demands.

Technostress has emerged as a significant challenge in the educational sector, particularly for primary school teachers who are required to integrate digital tools into their daily teaching practices. This study highlights the substantial negative impact of technostress on various aspects of teacher well-being, including emotional health, job satisfaction, and work-life balance. Among the identified stressors, techno-overload and techno-invasion were found to be the most detrimental, often leading to emotional exhaustion and reduced job motivation. The findings underscore the importance of institutional support in mitigating these effects. Schools must implement well-structured training programs that enhance teachers' digital competencies while also addressing stress management. Additionally, policies should be introduced to establish clear boundaries between work and personal life, preventing excessive digital intrusion outside of school hours. By offering a data-driven understanding of the relationship between technostress and teacher well-being, this study contributes meaningfully to existing educational research. It calls for immediate attention from educational leaders and policymakers to create healthier, more

supportive work environments. Ultimately, addressing technostress is not only essential for teacher retention and satisfaction but also for maintaining the overall quality of education in a technology-driven world.

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