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Impact of Techno-Stress on Employee Productivity & Burnout

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Abstract

This study investigates how techno-stress affects teacher productivity and burnout, aiming to identify strategies to reduce techno-stress and improve workplace efficiency in rural areas of Peshawar. Employing a quantitative, survey-based approach, the study uses a sample of 283 teachers to explore the relationships between techno-stress, burnout, and productivity. This quantitative and Survey based study employs a sample of 283 teachers to look for links between techno-stress and factors like burnout and productivity. The results indicate a strong correlation (R-squared = 63.7%), showing that increased techno-stress is associated with lower productivity and higher levels of burnout. In order to maintain teacher effectiveness and well-being, it is crucial to manage techno-stress in educational settings, as these results demonstrate. The findings align with the Technology Acceptance Model (TAM), highlighting that perceived ease of use and perceived usefulness are crucial for effective technology integration in educational settings. Structured training to increase adaptation, mental health services to fight burnout, & proactive management tactics to lessen digital stress are all suggestions. Future research should adopt longitudinal designs to better understand causal relationships. It should also include urban contexts and examine moderating variables such as resilience and organizational support. Educational administrators and legislators can use the study's findings to better meet the needs of teachers in light of technology advancements and to enhance the quality of instruction they give.

Keywords: Techno-stress, Productivity, Burnout, Technology Acceptance Model (TAM), Workplace Efficiency, Mental Health Resources, Adaptability Training.

Introduction

Background of the Study

Over the past four decades, innovations in information and communication technologies (ICTs) have significantly benefited organizations by reducing operating costs, streamlining workflows, introducing new strategic approaches, and fostering creativity (Hitt et al., 2021).. Researchers concur, however, that the application of ICTs has dual nature consequences and that these effects are quite wide and indirect in character. Our everyday lives and routines have been transformed by the widespread use of ICTs, including the Internet, advanced wireless communication systems, and mobile networks (Hoffman, Novak, & Venkatesh, 2004). People can connect to the ICTs at any time and place, enabling real-time delivery of data and information to support both personal and business decisions. On the other hand, relying too much on sophisticated ICTs can be rather convenient and productive. However, the rapid proliferation of advanced technologies has led to increasing psychological and occupational strain among users. As a result, many employees across organizations experience what is now known as techno stress—stress stemming from the constant demands of working with digital tools. According to studies, techno-stress significantly lowers worker production (Tarafdar, et al, 2007). The concept of productivity is relatively easy to define. It is the output to input ratio in a given production scenario According to Rogers, M., & Rogers, M. (1998). Burnout refers to the emotional, mental, and physical exhaustion that develops from prolonged stress (Maslach et al., 2001). It often

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manifests as a loss of enthusiasm for work, decreased energy, and a sense of reduced personal accomplishment (Gill et al., 2006).

Furthermore, many office workers can relate to starting their day overwhelmed—facing a flood of unread emails, constant phone calls, and buzzing notifications demanding immediate attention. If there are network issues, such an overloaded server or a broken connection, all work stops while repairs are completed and staff members wait uncomfortably. At the same time, managers began expecting higher productivity, assuming that technology made work easier and faster. When on leave or at home, employees are frequently expected to be approachable via phone or email. A Health Canada report (Duxbury & Higgins, 2001) found that while ICTs promised efficiency, they often increased workloads beyond what most employees could manage during normal working hours. Interestingly, only a small number of participants felt that modern technology actually made their work less stressful. Managers weren't exempt either—they, too, reported feeling overwhelmed by the added pressure technology brought to their roles. More than 75% of managers surveyed said that technology added to their workloads rather than reducing stress at work. Research by Thomee et al. (2007) highlights concerns that excessive ICT use may contribute to mental health issues, such as chronic stress and depressive symptoms. Spending long hours on both computers and smartphones has been associated with increased risk of chronic stress and symptoms of depression.

Numerous studies have outlined the potentially harmful effects of adopting and using ICT in the workplace (Nelson, 1990). First, ICT users often report experiencing tension and anxiety (Marcoulides, 1989). People's emotions toward ICTs can shape their experience—some may feel anxious or even fearful when working with computers. This can lead to emotional effects such as uncertainty, reduced self-confidence, and discomfort when using ICT tools. Such experiences can lead to computer aversion (Abdul-Gader et al., 1995), even phobias (Hudiburg et al., 1996), and feelings of helplessness or emotional distress. For example, process re-engineering often accompanies new enterprise software, altering how tasks and operations are carried out within the organization. As employees interact less with physical tools and more with data, their tasks become increasingly mediated by computers and often feel more abstract (Zuboff, 1988). Moreover, as processes are updated, old roles are phased out and new ones emerge, leading to shifts in power, authority, and decision-making within the organization.

Thirdly, people who use ICTs experience stress. Technostress arises when individuals struggle to adapt to the rapid changes and demands of modern digital communication tools (Brod, 1984; Weil & Rosen, 1997). Weil and Rosen (1997) expanded the definition of technostress to include 'any negative effect on attitudes, thoughts, behaviors, or psychological well-being caused by technology. Researchers also refer to technostress by a number of different names, including cyber phobia, technophobia, computer phobias, technology nervousness, machine pressure, unfavorable computer attitudes, and others. To summarize, technostress reflects the unease, anxiety, and fear people feel when trying to understand or use computer technology—whether directly or indirectly Over time, this can lead to avoidance behaviors and emotional resistance, making it harder for individuals to learn or engage with digital tools.. For example, because current ICTs are so everywhere, people are almost constantly "connected" via the phone, the Internet, and e-mail. People believe that as they are constantly connected, they are always "on call." They get stressed out because they think they have no authority over their time or space as a result of this.

Another example is the overwhelming flow of information from multiple sources that ICT users constantly face. The amount of data they have is often greater than they can effectively process. This overload, combined with the increasing complexity of ICT systems, often leads to mental fatigue and heightened anxiety. Thus, techno-stress is an outcome of an individual's efforts and difficulties in dealing with ICTs that are always developing as well as the shifting social and cognitive demands associated with using them. With ICT use becoming more widespread in today's workplaces, its effects—both positive and negative—have become increasingly evident.

To date, limited research has examined how ICT-related stress impacts individuals, despite rising awareness of its effects. Recent reviews and meta-analyses—including one systematic review in 2024—confirm this ongoing gap in research (Califf et al., 2020; Pflügner, 2022; Sevic & Brønnick, 2025). Some studies have explored how individuals cope with stress by reorganizing their daily routines in response to growing demands like multitasking, remote monitoring, and constant online access. A trend further supported by recent findings that highlight strategies such as task

reprioritization and controlled connectivity in digital work settings (Brillhart, 2004; Siitonen et al., 2025). Research has also explored stress among IT professionals, revealing how their roles can intensify technostress and contribute to negative outcomes such as burnout and turnover intention—especially in high-demand environments like software development and cyber security (Sethi, King, & Quick, 2004;Parry et al., 2022; Sutton et al., 2023). Nevertheless, there is a dearth of systematic study attempting to comprehend the components of ICTs that cause stress and how they affect ICT users in organizations. Rapid advancements in ICTs have significantly transformed workplaces, leading to permanent changes and new challenges in managing digital transitions, employee well-being, and organizational adaptation (Markus, 2004; Marta-Salinas, Sánchez-Hernández, & González-López, 2023). In most modern workplaces, the use of ICT is mandatory and often unavoidable. While technostress has been widely examined in Western contexts, there is limited research exploring its impact in Asian settings—particularly in Pakistan. Some Scholars have looked at the impact of Technological stress on employee productivity and some have looked at burnout. Thus, it is critical to know how ICTs might cause stress. Therefore, the main intent of the current study to investigate the outcome of techno-stress on employee productivity & burnout.

Literature Review

Technostress is increasingly recognized as a negative psychological state that arises from the growing use of information and communication technologies (ICTs). As Salanova et al. (2007) describe, it often manifests as mental fatigue, dissatisfaction, and anxiety. I find this particularly relevant today, as many individuals are required to interact with digital tools in nearly every aspect of life. Building on this, Wang et al. (2008) argue that exposure to technology—whether direct or indirect—can provoke emotional responses such as worry, fear, and frustration. These emotions may interfere with one's ability to effectively engage with technology, leading to increased psychological strain.

Chiappetta (2017) connecting technostress with cognitive overload. Constant connectivity and influx of digital information, it's easy to feel mentally exhausted. One of the most comprehensive perspectives comes from Tarafdar and Ragu-Nathan (2010), who define techno stress as workplace stress driven by factors like information overload, constant multitasking, job insecurity, and technical disruptions. They conceptualize it as a multifaceted experience, made up of five key components. Furthermore, Sahin and Çoklar (2009) describe techno-stress as a psychological pressure linked to the rapid pace of technological advancement. In their opinion, people are often overwhelmed not necessarily by the technology itself, but by the speed at which they're expected to adapt. This idea resonates with what I've seen in both academic and professional contexts. Similarly, Türen et al. (2015) emphasize that the **complexity** of modern technologies, particularly with systems and platforms constantly serves as a key source of stress.

Techno stress is associated with four situations: Techno-**overload** are situations where individuals must manage overwhelming volumes of information, often without clarity on what's important. **Techno-invasion** refers to the inability to disconnect, where work and personal life blur due to constant accessibility. **Techno-complexity** captures how people may feel inadequate or unprepared to handle new systems. **Techno-insecurity** is a growing fear that others with stronger digital skills might replace one's job. Finally, **techno-uncertainty** relates to the relentless pace of updates and change, which forces users to constantly relearn and adapt.

Employee Burnout

Burnout is a negative emotional state that arises from prolonged and unmanaged stress (Maslach et al., 2001). According to Gill et al. (2006), burnout is characterized by severe physical, emotional, and mental exhaustion, often accompanied by a sense of hopelessness and detachment from one's professional role. It occurs when individuals experience persistent emotional, physical, or mental fatigue. Maslach (2011) conceptualizes burnout as consisting of three core dimensions:

- **Emotional Exhaustion**: This occurs when individuals become emotionally depleted and unable to meet the demands of their job due to excessive workload. It is characterized by feelings of failure, negativity, critical attitudes toward others, and diminished emotional energy in interpersonal interactions.
- **Depersonalization**: This refers to a psychological detachment from one's work. Employees may become cynical or indifferent, developing negative attitudes toward their job or colleagues. These behaviors—such as procrastination and disengagement—can harm

organizational performance, even turning otherwise productive employees into ineffective contributors.

- **Reduced Personal Accomplishment**: This dimension reflects a decline in an individual's sense of competence and achievement. Employees may begin to feel ineffective and dissatisfied with their performance, leading to a loss of confidence and professional identity.

Understanding these components is essential for recognizing burnout and implementing interventions to maintain employee well-being and organizational effectiveness.

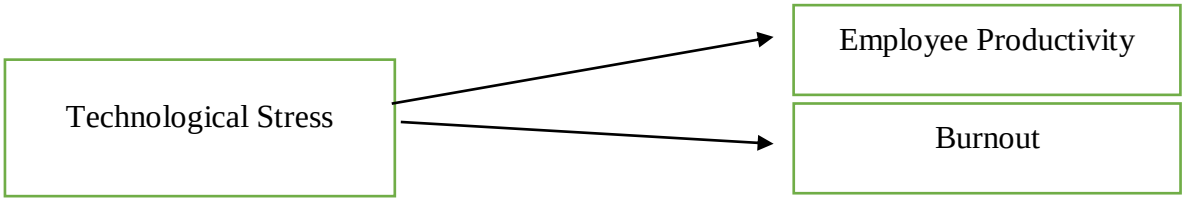
Theoretical Framework of the Study

This study is grounded in the **Technology Acceptance Model (TAM)**, which provides a useful lens for examining how individuals come to adopt and integrate new technologies. The model aligns well with the research focus, as it emphasizes the importance of both individual attitudes and organizational conditions in shaping technological uptake. Kalseth and Cummings (2001) argue that effective information management is not just about systems and tools, but also requires strong leadership, adaptability, a belief in employee capabilities, and a collaborative work environment. At the core of successful digital implementation lies people's **willingness to accept and use technology**. As Scherer et al. (2019) suggest, no matter how advanced a tool is, its impact depends heavily on whether individuals are ready to adopt it. Still, the process isn't always smooth. According to Gelbrich and Sattler (2014), users typically undergo a period of behavioral adjustment, where familiar routines must be reshaped to fit the demands of new systems. Adding to this complexity, Anderson-Connolly et al. (2002) observe that digital transformation often results in job restructuring, which forces employees to rethink how they approach their work. In such settings, the ability to **adapt workflows and habits** becomes just as important as technical proficiency. Momani and Jamous (2017) support this by emphasizing that integrating technology into daily routines is a key part of successful workforce adaptation. Originally developed by Davis (1989) and grounded in Ajzen and Fishbein's (1980) **Theory of Reasoned Action**, the Technology Acceptance Model introduces two central concepts. First, **Perceived Usefulness (PU)** refers to the degree to which a person believes that a technology will improve their job performance. Second, **Perceived Ease of Use (PEOU)** concerns how effortless they expect the technology to be. Together, these perceptions significantly influence whether someone chooses to embrace a new tool or resist it.

These two factors influence a user's attitude toward the technology and their behavioral intention to use it, ultimately determining actual system usage (Lee et al., 2003). As shown in recent studies, high levels of PU and PEOU are associated not only with increased technology usage but also with reduced techno-stress and improved job satisfaction (Marta-Salinas et al., 2023).By incorporating TAM, this study aims to understand how teachers' perceptions of technological systems influence the experience of techno-stress and, consequently, their productivity and burnout. The framework thus provides a comprehensive lens through which to examine the psychological and behavioral impacts of educational technology.

Conceptual framework of the Study

The following can help to explain the link between the dependent and independent variables: Architecture of conceptual frameworks.



Source: (Nour El Hoda TARABAH, 2021)

Hypotheses Development

H1: Techno-Stress has significant impact on employee Productivity.

H2: Techno-Stress has significant impact on employee Burnout.

Research Methodology

This study adopts a positivist research philosophy, emphasizing objective analysis and measurable evidence to examine the impact of techno-stress on employee productivity and burnout. Rooted in empirical observation, the approach relies on quantitative data and statistical evaluation. A cross-sectional research design was employed, wherein data was collected at a single point in time to

investigate the relationships among techno-stress, employee productivity, and burnout. Data were gathered using structured questionnaires adapted from validated scales, allowing for firsthand, quantifiable insights. The target population consisted of teaching staff from the Department of Elementary and Secondary Education in the rural areas of Peshawar, Khyber Pakhtunkhwa, where educators face increasing exposure to technological demands. The study utilized a simple random sampling technique to ensure unbiased respondent selection. According to the District Department of Education (Male), Peshawar, the rural region has approximately 1,107 teaching staff, as per the Human Resource Information System (HRIS) records. To determine an appropriate sample size, Yamane's formula (1967) was applied:

Thus, the final sample size was 283 respondents. The selected participants were drawn from public primary schools affiliated with the Department of Elementary and Secondary Education. Data were analyzed using Statistical Package for the Social Sciences (SPSS) to identify patterns and correlations between the study variables.

n= the sample size

N= the population of the study

e= the margin error in the calculation

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{1107}{1+1107(0.0499)^2}$$

$$n = 283$$

The sample size was determined to be 283 respondents.

Instrumentation and Data Analysis Techniques

The study utilized a **structured questionnaire** composed of three sections, all measured using a **5-point Likert scale**, where 1 represented *Strongly Disagree* and 5 represented *Strongly Agree*. **Techno-Stress** was assessed using a **24-item scale** developed by **Tarafdar et al. (2007),** which measures five key dimensions: techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. **Employee Productivity** was measured using a **5-item instrument** adapted from **Apiri Joel Amakiri (2019),** focusing on self-reported efficiency, task completion, and output quality. **Burnout** was measured with the **22-item Maslach Burnout Inventory (MBI),** developed by **Maslach and Jackson (1986),** which captures emotional exhaustion, depersonalization, and reduced personal accomplishment.

For **data analysis**, the following statistical procedures were employed: **Descriptive statistics** (means and standard deviations) were used to summarize the distribution of responses. **Pearson correlation analysis** was conducted to examine the relationships between techno-stress (independent variable) and the outcome variables—employee productivity and burnout. **Reliability testing** (Cranach's alpha) was performed to assess the internal consistency of the scales. **Multiple regression analysis** was applied to determine the extent to which techno-stress predicts changes in employee productivity and burnout. These quantitative methods provide robust insights into the relationships among the study variables.

Results & Discussion

This chapter presents the key findings of the research study titled "The Impact of Techno-Stress on Employee Productivity and Burnout." The collected data were analyzed to address the central research questions concerning how techno-stress influences employee productivity and contributes to burnout. Through the application of statistical methods, this chapter explores the strength and direction of these relationships, underscoring the significance of techno-stress as a critical factor in the modern workplace. The chapter is organized to present the results derived from both descriptive and inferential statistical analyses. Additionally, this section interprets the findings in the context of the study's theoretical framework—the Technology Acceptance Model (TAM)—and existing scholarly literature. This dual focus enables a comprehensive understanding of the role techno-stress plays in shaping work-related outcomes, particularly in terms of task performance and psychological well-being among employees.

Demographic of the Participants

When we talk about the demographics of the population participating in the research, the sample size of this research is 283 which consists of all the male participants. The largest group is individuals

aged **31-40 years**, comprising **182 participants** or **48.1%** of the total sample. This is followed by the **20-30 years'** age group, which includes **110 respondents** and accounts for **29.1%**. The **41-50 years'** age bracket contains **84 individuals**, making up **22.2%** of the sample. Finally, only **2 participants,** or **0.5%**, fall into the **above 50 years'** category. Furthermore, the most significant portion of respondents, **220 individuals** or **58.2%,** fall within the **5-10 years'** experience range, indicating a substantial group of individuals with a moderate level of industry exposure. Following this, **148 respondents** (or **39.2%)** report having **11-20 years** of experience, which suggests a strong representation of seasoned professionals in this category as well. In contrast, only **10 participants,** constituting **2.6%** of the total, have between **21-30 years** of experience, underscoring a relative scarcity of individuals with extensive tenure in this sample.

Moreover, among the participants, **72 individuals,** representing **19.0%**, hold a **Bachelor's degree,** indicating a foundational level of higher education. A larger segment, **129 respondents** or **34.1%,** possess a **Master's degree,** making this the most common qualification among the survey population. Additionally, **108 respondents** (or **28.6%)** have Passed Simple BA. Lastly, **69 individuals**, accounting for **18.3%**, hold a **Master Degree**, reflecting a smaller but notable proportion of highly qualified respondents.

Descriptive Statistics Analysis

Table No.1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Techno-Stress	283	1.00	5.00	3.0138	0.91072
Employee Productivity	283	1.00	5.00	3.4114	0.85396
Burnout	283	1.00	5.00	3.0681	0.88945
Valid N (listwise)	283				

The table provides an overview of three key variables Techno-Stress, Employee Productivity, and Burnout were analyzed in this study, based on responses from 283 participants. For Techno-Stress, the minimum score is 1.00, while the maximum is 5.00, with a mean of 3.0138. This data reveals that participants generally feel a modest amount of techno-stress, with a standard deviation of 0.91072, indicating some variability in responses. Employee Productivity shows a mean of 3.4114, with scores also ranging from 1.00 to 5.00, suggesting a slightly higher level of productivity among respondents, though responses still vary moderately (standard deviation = 0.85396). Lastly, the Burnout variable has a mean score of 3.0681, reflecting a moderate level of burnout across participants, and a standard deviation of 0.88945, which indicates a relatively broad spread in the data. Overall, these descriptive statistics provide a general sense of the participants' experiences with techno-stress, productivity, and burnout, laying the groundwork for further analysis of how these factors are related.

Reliability Analysis

Table No.2

S. No	Variable Name	Nature	Items	Cronbach's Alpha Value	Remarks
1	Techno-Stress	Independent Variable	24	0.894	Good
2	Employee Productivity	Dependent Variable	05	0.916	V. Good
3	Burnout	Dependent Variable	22	0.927	Excellent

A breakdown of the scales' internal consistency for measuring the three primary variables is presented in the reliability analysis table, the first one is Techno-Stress, while others are Employee Productivity, and Burnout. Cronbach's Alpha is used as an indicator of reliability, with higher values reflecting greater consistency among the items within each scale. The first variable, Techno-Stress, is an independent variable assessed through 24 items. It has a Cronbach's Alpha of 0.894, which is considered "Good," indicating a high level of internal consistency in measuring the construct of techno-stress. Employee Productivity, a dependent variable with 5 items, has a Cronbach's Alpha of 0.916, categorized as "Very Good." This suggests that the items measuring productivity are closely related and reliably assess this construct. Finally, Burnout, another dependent variable comprising 22 items, has an excellent reliability score with a Cronbach's Alpha of 0.927. The elevated score shows that the burnout assessment items are very consistent with one another. In summary, the reliability analysis shows that all scales used in the study are highly reliable, supporting the validity of these measurements for analyzing techno-stress, employee productivity, and burnout.

Correlation Analysis

Table No.3

		TS	EP	BO
TS	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	283		
EP	Pearson Correlation	.618**	1	
	Sig. (2-tailed)	.000		
	N	283	283	
BO	Pearson Correlation	.690**	.737**	1
	Sig. (2-tailed)	.000	.000	
	N	283	283	283

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis table presents the relationships between Techno-Stress (TS) as the independent variable and Employee Productivity (EP) and Burnout (BO) as dependent variables. The Pearson correlation coefficient between TS and EP is 0.618, with a p-value of 0.000 indicating statistical significance at the 0.01 level. This positive correlation suggests a strong association between Techno-Stress and Employee Productivity, indicating that as techno-stress increases, employee productivity is impacted significantly. Similarly, the correlation between TS and BO is even higher, at 0.690, also significant at the 0.01 level (p = 0.000). The robust positive correlation here suggests that higher levels of techno-stress are closely associated with an increase in burnout symptoms among employees. Additionally, the relationship between Employee Productivity and Burnout shows a significant positive correlation of 0.737 (p = 0.000), highlighting a substantial interconnection where productivity and burnout are influenced by each other in the context of techno-stress. Overall, these correlations reveal that techno-stress significantly impacts both employee productivity and burnout, with strong positive associations, especially between techno-stress and burnout. The findings suggest that as employees experience higher techno-stress, they are likely to encounter decreased productivity and increased burnout. This underscores the importance of addressing techno-stress within workplaces to help maintain productivity and manage burnout.

Multiple Regression Analysis

Table No.4

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.798[a]	.637	.632	.59932

The model that investigates the connection between Techno-Stress (TS), Employee Productivity (EP), and Burnout (BO), as well as other dependent variables, is presented in the use of multiple regression analysis table, which contains important statistical metrics. A strong overall fit is suggested by the model's R value of 0.798, which suggests an elevated positive relationship involving the variables that are both dependent and independent. With an R-squared value of 0.637, Techno-Stress explains 63.7% of the variation in Employee Productivity and Burnout, the dependent variables. This proves that Techno-Stress makes a big difference when it comes to workplace burnout and productivity. Taking into consideration the number of factors in the model, the Adjusted R Squared value of 0.632 gives an approximate adjusted proportion of the variation explained by the model. The model is highly robust, as evidenced by the minimal discrepancy within R Square & Adjusted R Square. Lastly, the average range that the values seen fall from the regression line is 0.59932, which is reflected in the Standard Error of the Estimate. The model's ability to accurately predict the dependent variables from the independent variable is supported by this comparatively low number. All things considered, these numbers point to Techno-Stress as a strong predictor of burnout and productiveness in the workplace.

Table No.5

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	234.782	5	46.956	130.732	.000[b]
	Residual	133.615	372	.359		
	Total	368.396	377			

a. Dependent Variable: Employee Productivity, Burnout.

b. Predictors: (Constant), Techno-Stress

To see how Techno-Stress (TS), an independent variable, relates to Employee Productivity (EP) & Burnout (BO), a regression model was employed, and the results are presented in the ANOVA table. A total of 234.782 with 5 degrees of freedom (df) is shown in the Regression row for the regression. A regression's Mean Square, calculated as the average squared departure of anticipated outcomes from the dependent variables' means, is 46.956. There is statistical significance in the model, as shown by the F-value of 130.732 and the Sig. value of 0.000. Techno-Stress does, in fact, influence Employee Productivity & Burnout to a statistically significant degree, as its statistically significant value of 0.000 is significantly lower than the conventional cutoff of 0.05. This model's inability to account for certain variation is shown in the Residual row. Remaining residuals have a df of 372 and a Sum of Squares of 133.615. A residual Mean Square value of 0.359 indicates that the average squared variance among the dependent variable's values observed and anticipated is quite small. The dependent variables' total variance is displayed in the Total row. The 377 degrees of freedom and Sum of Squares value is 368.396. Together, the regression and residual variances make up this sum.

In line with the results of the regression analysis, the ANOVA results indicate that the model, which incorporates Techno-Stress as the variable that predicts the accounts for a considerable amount of the variance in Employee Productivity and Burnout.

Table No.6

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.579	.108		2.593	.000
	Techno-Stress	.470	.045	.278	6.252	.000

a. Dependent Variable: Employee Productivity, Burnout.

To further understand the connection between Techno-Stress, the independent variable, and Employee Productivity and Burnout, the dependent variables, we can look at the outcomes of the regression analysis in the Coefficients table. The unstandardized coefficient (B) is 0.579 with a standard error of 0.108. It is located in the first row labelled (Constant). When an independent factor (Techno-Stress) is set to zero, this represents a baseline value of employee productivity & burnout. Techno-Stress has a moderately positive relationship with Employee Productivity and Burnout, as indicated by a standardized coefficient (Beta) of 0.278 and a t-value of 6.252 and a Sig. value of 0.000. The term that is constant is significant at the 0.01 level, with a t-value of 2.593 and a Sig. value of 0.000. This intercept is a significant factor in the model, and for all one-unit increase in Techno-Stress, there is expected to be an increase of 0.470 units in Employee Productivity and Burnout, with all other variables held constant.

In conclusion, these results highlight that Techno-Stress significantly influences both Employee Productivity and Burnout, with the strength of the relationship being moderate, as evidenced by the standardized beta coefficient.

Conclusion

This study concludes that techno-stress significantly affects both employee productivity and burnout among teachers in the rural areas of Peshawar. The findings confirm that rising technological demands contribute to elevated stress levels, which in turn negatively impact productivity and increase the likelihood of burnout. The positive correlation between techno-stress and burnout, coupled with the inverse relationship with productivity, indicates that as techno-stress intensifies, performance diminishes while psychological strain increases.

The regression analysis reveals an R-squared value of **63.7%**, suggesting that techno-stress accounts for a substantial proportion of the variance in productivity and burnout outcomes. These results highlight the critical importance of addressing techno-stress in educational environments to preserve teacher effectiveness and well-being.

This study underscores the role of perceived usefulness and ease of use in facilitating successful technology adoption in the teaching-learning process based on the **Technology Acceptance Model (TAM)**. In this context, technology refers to tools such as projectors, laptops, tablets, and educational applications designed to enhance instructional delivery and assessment. However, without adequate support and adaptability mechanisms, these tools may become sources of stress rather than solutions, thereby undermining both productivity and psychological health.

Recommendations

The following measures are recommended to mitigate the adverse effects of techno-stress: Implement well establish training programs to improve teachers' digital literacy and adaptability. Conduct **workshops** focusing on enhancing perceptions of the usefulness and usability of educational technologies. Provide **mental health support**, such as counseling services to manage stress. Ensure **technical support** and adopt **effective workload management** practices to reduce digital fatigue.

Managerial Implications

Our findings highlight the importance of integrating Techno-stress management as a part of institutional strategies for administrators and policy makers. Adopting these policies can help foster environments where educators feel confident and supported in using technology. Managers should also invest in **user-friendly digital systems**. Institutional leaders must cultivate a culture of continuous support and learning to promote technology acceptance while safeguarding employee well-being.

Future Research Directions

Future studies should consider a **longitudinal design** to explore the long-term effects of techno-stress on productivity and burnout. Alternative methodologies, such as **qualitative interviews or case studies**, may provide richer, contextual insights. Expanding the research to other regions, occupational sectors, and comparing **rural versus urban** educational settings would enhance the breadth of understanding. Moreover, examining **moderating variables** such as resilience, organizational support, or digital competence could reveal critical buffers against techno-stress.

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