Technostress, Job Motivation and Job Satisfaction among University Faculty: Examining the Role of Mindfulness

By

Ambreen Muhammad

DEPARTMENT OF APPLIED PSYCHOLOGY

NATIONAL UNIVERSITY OF MODERN LANGUAGES

Islamabad-Pakistan

June, 2024

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By

Ambreen Muhammad

M.Phil in Psychology, NUML, Islamabad.

A THESIS SUBMITTED IN

PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE

DEGREE OF

Master of philosophy

In **PSYCHOLOGY**

To

DEPARTMENT OF APPLIED PSYCHOLOGY

NATIONAL UNIVERSITY OF MODERN LANGUAGES

Islamabad-Pakistan

NATIONAL UNIVERSITY OF MODERN LANGUAGES FACULTY OF SOCIAL SCIENCES

THESIS AND DEFENSE APPROVAL FORM

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Thesis Title: Technostress, Job Motivation and Job Satisfaction among University Faculty: Examining the Role of Mindfulness

Submitted by: Ambreen Muhammad **Registration #: 7** MPil-PSY-F20

Master of Philosophy
Degree name in full

Psychology
Name of Discipline

Dr Zafar Ahmad
Name of Research Supervisor

_____
Signature of Research Supervisor

Prof. Dr.Khalid_Sultan
Name of Dean (FSS)

_____
Signature of Dean (FSS)

_____
Date

AUTHOR'S DECLARATION

I Ambreen Muhammad

D/O Muhammad Khan

Registration# 7 MPhil-PSY-F20

Discipline: Psychology

Candidate of Masters of Philosophy at the national university of modern languages hereby declare that the thesis "**Technostress, Job Motivation and Job Satisfaction among University Faculty: Examining the Role of Mindfulness**" submitted by me in partial fulfillment of MPhil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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Ambreen Muhammad

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Abstract

Title: Technostress, Job Motivation and Job Satisfaction among University Faculty: Examining the Role of Mindfulness.

In the modern digital age, technology has been deeply embedded in higher education institutions, greatly affecting faculty personnel. Academic personnel experience "techno stress" as they face obstacles relating to technology, such as technical glitches, software integration, and online interactions. The objective of this study is to examine the impact of techno stress on the motivation and job satisfaction of faculty members, specifically in the setting of higher education in Pakistan, where there is limited research on this subject. The research investigates the impact of mindfulness on techno stress, specifically examining how faculty members' coping strategies affect their job satisfaction and motivation. Furthermore, the study investigates how demographics, including gender and employment level, influence individuals' reactions to technological stress. The research seeks to fill these gaps in order to offer valuable insights that can guide interventions aimed at improving faculty members' capacity to overcome technological obstacles and foster a culture of resilience and well-being in higher education institutions.

The data was collected through purposive convenient sampling in which male and female both participants were included. The main study sample was N=300. Cross sectional research design was used to conduct the data of the present study. The English version of all the questionnaires were used to measure variables. Techno Stress Questionnaire by Tarafdar(2007), Job satisfaction scale by Macdonald and Maclntyre (1997)., *Work Extrinsic and Intrinsic Motivation Scale by Tremblay et al (2009)and the Mindful Attention Awareness Scale by Brown and Ryan (2003), were used to measure the variables of the current study. The collected data was assembled and arranged in SPSS 22 in order to perform the required analysis such as descriptive analysis, correlation, regression t-test,one way ANOVA and moderation analysis. The finding of the study indicates that there exists a negative association between techno stress and job motivation.Job Motivation is positively correlated to job satisfaction, and mindfulness,while techno stress is negatively correlated with job satisfaction and mindfulnesss among*

faculty members of the higher education institutions. Similarly, different aspects of technostress are negatively correlated with job motivation and job satisfaction. Female faculty members are higher on techno stress as compared to male faculty members.Further, techno-stress is significantly predicting job motivation and job satisfaction among faculty members of higher education institutions. Different sspects are significantly predicting job satisfaction. The role moderator of mindfulness was found as a significant on the study variables. In the end, the results could help enhance the quality of teaching and increase productivity within the organisation. They can also provide guidance for creating rules and processes that assist faculty members in efficiently utilising technology.

Keywords: Job motivation, Job Satisfaction, Techno stress, Mindfulness, Faculty members.

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Acknowledgement

Firstly, I must say that I have no words to express my deepest sense of gratitude to **Almighty Allah and Holy Prophet Hazrat Muhammad** ﷺ who blessed me with wisdom, strength, mental peace and good health to complete this research work within the time duration. Foundational stone of my believe rests with Almighty Allah who remained the most Merciful and Beneficent in this arduous journey and bestowed me the adroitness to shape and refine my intellect.

Secondly, I am grateful to my respected supervisor Dr. Zafar Ahmad whose worth guidance and professional attitude is appreciable in completing this dissertation. His wise guidance and counselling always triggered my creativity and made me truly understand what this manuscript is all about. I also thankfully acknowledge the support and inspiration that I received from my all other teachers of Department of Applied Psychology NUML University.

I am deeply grateful to my parents and siblings for their support, appreciation, encouragement and keen interest in my academic achievements. Finally, I really thankful to my all friends for their moral support throughout my journey of research work.

DEDICATION

Dedicated to my parents whose love and support have been my greatest source of strength; to my beloved brother Usama Muhammad who has always stood by my side; and to all those who have supported me throughout this journey. Your encouragement and belief in me have made this achievement possible.

Thank you.

Chapter 1

INTRODUCTION

Modern society is being impacted by technology in every way. The failure to adapt to new technology in a healthy way results in techno stress, a modern sickness. Organizational technological innovation and revolution have improved productivity and effectiveness while also lowering workplace tiredness and boredom. The upgrading and enhancement of teaching methodology in colleges and universities has also been influenced by the development of technology. Academicians in all types of educational institutions experience techno stress as a result of the rapid advancement of technology.

Technology is at the forefront of all fields, including academic fields as well. Technology advancement is becoming more and more important to everyone and to educational institutions as well. To create an effective workforce, education programs are created and organized with market trends in mind. Without technical innovation, an educational organization cannot prosper. Education institutions must therefore pay closer attention to the quality of their technical infrastructure (Flanagan & Jacobsen, 2003). Academicians in all sorts of educational institutions have work stress, also known as techno stress, yet information technology has advanced work and ensured the successful completion of educational institution operations (Chesley, 2014). The inability to deal with technological advancements impacts employees' mental health. This can further have a profound impact on their job motivation and job satisfaction. The changing of organizations' cultures, and advancements lead to further changes in the technological softwares owned by organizations. In order to effectively understand the trajectory of techno stress, job motivation, and job satisfaction the current study was adopted.

The current investigation explores the effects of techno stress on academics' ability to execute their jobs while taking into account the job satisfaction and job motivation offered by educational institutions. The study looks at worker capabilities and technological stress in the higher education sector. General stress is characterized as an emotional or psychological condition of tension. It might be brought on by something that aggravates, angers, or worries you. Your body responds to a task or expectations by causing stress. When used wisely, stress can be advantageous, enabling you to avoid danger or finish a work (Herman et al., 2015).

Rationale of the study

Technology has permeated higher education institutions in the current digital era. The frequent use and integration of technology, however, can make faculty members more susceptible to a condition called "techno stress . The term "techno stress refers to the stress or negative psychological responses resulting from the use of technology in the workplace (Tarafdar, Tu, & Ragu-Nathan, 2019). The purpose of this study is to better understand how technological stress affects faculty members' motivation and job satisfaction. Faculty members' overall job satisfaction may suffer as a result of the demands of technology, which can frustrate and stress them. This in turn may have an effect on how motivated they are to carry out their teaching and research duties. As faculty members increasingly rely on technology for teaching, research, and administrative tasks, understanding its impact on their well-being becomes imperative.Job motivation and satisfaction are essential components of faculty members' professional lives. High levels of motivation and satisfaction contribute to increased productivity, engagement, and overall job performance (Judge, Thoresen, Bono, & Patton, 2001). Conversely, technostress can lead to burnout, decreased job satisfaction, and reduced motivation among faculty members (Ayyagari, Grover, & Purvis, 2011).

While research on technostress in the workplace is well-established, there is a gap in understanding its specific implications for faculty members in higher education institutions. Existing studies have primarily focused on the general workforce, neglecting the unique context and challenges faced by faculty members (Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008). Moreover, the potential moderating role of mindfulness, defined as the awareness of one's thoughts, feelings, and bodily sensations in the present moment (Brown & Ryan, 2003), remains largely unexplored in the context of technostress among faculty members. While studies have examined technostress in various occupational settings, few have specifically investigated its impact on faculty members in higher education institutions (Ragu-Nathan et al., 2008). Existing research often fails to capture the unique challenges faced by faculty members, such as the pressure to adapt to rapidly evolving technological advancements while maintaining high standards of teaching and research excellence.

The higher education context presents distinct challenges, including heavy workloads, administrative burdens, and the expectation to balance teaching, research, and service responsibilities

(Baldwin & Chronister, 2001). These contextual factors may exacerbate technostress among faculty members, necessitating a deeper understanding of its effects within this setting. The goal of the present research is to determine whether mindfulness can moderate the negative effects of technological stress. Mindfulness has been shown to reduce stress and improve well-being in various contexts (Brown & Ryan, 2003). However, its potential role in buffering the negative effects of technostress on faculty members' job motivation and satisfaction remains underexplored. Incorporating mindfulness-based interventions may offer effective strategies for enhancing faculty resilience and coping mechanisms in the face of technostress (Good et al., 2016).

This study also explores the impacts of demographics i.e, gender and job status on study variables .The current study contributes to existing literature as there is scarcity of literature regarding techno stress in Pakistan .Faculty members may improve their coping skills to handle technological stress and related difficulties by engaging in mindfulness practices. Their ability to maintain focus, manage stress, and improve their mental health can all contribute to enhanced job satisfaction and job motivation to perform well in their positions. The results of this study may have significant impacts for enhancing the level of instruction generally as well as for cultivating a culture of resilience and wellbeing among university professors.

Statement of the Problem

The issue is that there are a variety of components of work stress that affect employee job satisfaction, worker productivity, and organizational productivity. Due to the quick change in technology, users are under pressure to accept and integrate new developments, which causes stress (Tacy, 2015). In order to improve the academic experience for teachers, institutions are increasingly concentrating on strengthening their technical infrastructure and equipping students with the necessary ICT capabilities. Faculty members may experience unanticipated consequences from this technical demand, such as performance problems and technological stress. The primary gap in this study's findings relates to the perceived psychological and emotional effects of technological stress on higher education instructors' performance as well as varying degrees of job motivation and job satisfaction.

2. Research Objectives

The study includes the following objectives:

1. To examine the impact of techno stress on job motivation and job satisfaction, and to explore the interrelationship between job motivation and job satisfaction among faculty members in higher education institutions. To explore the role of mindfulness on Techno stress,
job Motivation and Job Satisfaction among faculty of higher education institutions.
2. To investigate the effects of demographic factors, such as gender and job status, on main variables.

3. Research Questions

The research questions for the study are listed below;

1. What is the association between Techno stress, Job Satisfaction and Job Motivation among faculty of higher education institutions?
2. How techno stress will lower the Job Motivation and Job Satisfaction among faculty members?
3. How mindfulness will moderate the connection of Techno stress, Job Motivation and Job Satisfaction among faculty members at higher education institutions?

4. Null Hypotheses

1. Techno stress and job motivation are not positively correlated among faculty members of the higher education institutions
2. Techno stress and job satisfaction are not positively correlated among faculty members of the higher education institutions.
3. The techno stress is not predicting Job Satisfaction and Job Motivation among faculty members of the higher education institutions
4. The connection between technological stress, job motivation, and job satisfaction among academic personnel of higher education institutions is not moderated by mindfulness.

Hypotheses

1. There is a negative relationship between Techno stress and Job Motivation.
2. There is a negative relationship between Techno stress and Job Satisfaction.
3. Mindfulness buffers the effect of Techno stress on Job Motivation.

4. Mindfulness buffers the effect of Techno stress on Job Satisfaction.

5. There is a negative relationship between sub scales of techno stress and job motivation, more specifically;

a) Techno overload is negatively associated with job intrinsic and extrinsic motivation.

b) Techno invasion is negatively associated with job intrinsic and extrinsic motivation.

c) Techno complexity is negatively associated with job intrinsic and extrinsic motivation.

d) Techno insecurity is negatively associated with job intrinsic and extrinsic motivation.

e) Techno uncertainty is negatively associated with job intrinsic and extrinsic motivation.

6. There is a negative relationship between sub scales of techno stress and job satisfaction, more specifically;

a) Techno overload is negatively associated with job satisfaction.

b) Techno invasion is negatively associated with job satisfaction.

c) Techno complexity is negatively associated with job satisfaction.

d) Techno insecurity is negatively associated with job satisfaction.

e) Techno uncertainty is negatively associated with job satisfaction.

7) Female faculty members are high on Techno stress as compared to male faculty members.

8) Tenure track faculty members are high on techno stress as compared to visiting faculty members.

9) Contract faculty members are high on Techno stress as compared to regular faculty members.

10). Mindfulness buffers the effect of different aspects of techno stress on Job motivation.

11). Mindfulness buffers the effect of different aspects of techno stress on Job satisfaction.

5. Conceptual Framework

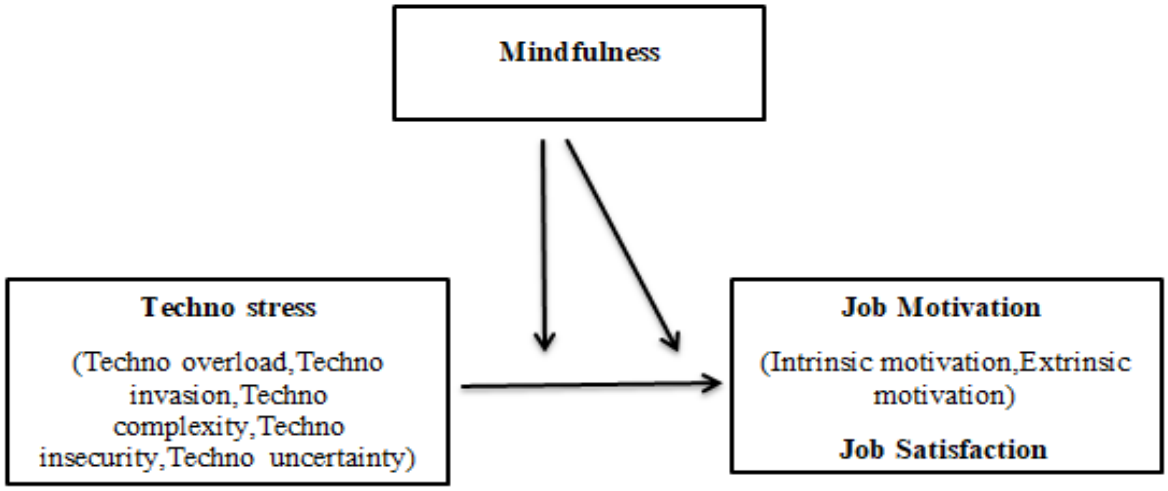


Figure 1: Relationship between Techno stress and Job Satisfaction and Job Motivation: Role of Mindfulness.

6. Significance of the study

The findings of the current study will assist faculty members of higher education institutions in coping with the negative impacts of techno stress on their motivation and job satisfaction. It is also significant as it will describe the moderating effects of mindfulness on study variables.

7. Methodology

The current investigation was carried out using a cross sectional study design. The current study has two phases (Phase-I and Phase-II). Purposive convenient sampling was used to gather the data. After collecting the data, it was entered into SPSS 21 for further analysis.

Operational Definitions

Operational definition of variables is provided by researchers to define study and properties of study data. Operational definitions attempt to better explain the theme of a specific study. These were following for this study:

Techno stress

Techno stress, as defined by Tarafdar (2007), is the stress that humans suffer as a result of using Information Systems. The situation is marked by the pressure caused by the rapid progress of technology and the incapacity to meet changing competency requirements (Vega, 2020). High average scores on tests of techno stress indicate increased levels of stress caused by the use of technology, whereas low average scores show decreased levels of such stress. The assessment of techno stress among teachers in higher education institutions is commonly carried out utilizing Tarafdar's (2007) Techno Stress Questionnaire.

Job motivation

Job motivation, as described by Pinder (1998), refers to the internal and external factors that influence an individual's work-related actions, determining their level of effort, focus, and persistence. The assessment of emotional reactions triggered by job performance is conducted using tools such as the Work Extrinsic and Intrinsic Motivation Scale, which was created byTremblay et al. (2009). A high average score on this scale indicates a strong level of job motivation, whereas a low average score suggests a reduced level of motivation.

Job satisfaction

Job satisfaction, as defined by Judge and Kammeyer-Mueller (2012), pertains to an individual's outlook on their work encounters, encompassing sentiments of pleasure, delight, or comfort with their profession. The Job Satisfaction Scale, created by MacDonald and MacIntyre in 1997, is employed to assess job satisfaction among faculty members in higher education establishments. A high mean score on this scale indicates a significant level of job satisfaction, whereas a low mean score suggests lesser levels of satisfaction.

Mindfulness

Mindfulness, as defined by Brown and Ryan (2003), refers to a state of mind that involves being fully aware and attentive to one's current events without making any judgments. The level of mindfulness, which can result in increased self-awareness, is assessed by tools such as the Mindful Attention Awareness Scale (Brown & Ryan, 2003). Higher mean scores on this scale imply a greater level of mindfulness, whereas lower mean scores signal lower levels of mindfulness, which could potentially affect the decrease of stress associated to technology and the work environment.

CHAPTER 2

Literature Review of the Study

1. Techno Stress

Craig Brod introduced the concept of "techno-stress" in 1984. Techno-stress, according to him, is a modern illness of adaptation brought on by an inability to handle new computer technology. It has an effect on mental health and manifests as a difficulty with using computers or an over-identification with them.(Brod, 1984). A primary disease of modern adaptation known as “Techno-stress”, that is caused either directly or indirectly by technology, has a negative impact on one's attitudes, thoughts, behaviors, or physical health. (Trafdar et al., 2007). It's true that initially, medical professionals saw technology stress as a disease. Later experts, however, believed it to be a result of information and communication technology (ICT) failing to change with the times (Brod, 1984).

Techno stress, as defined by Milis (1998), is the pressure to adopt new technology, particularly when there are insufficient technology standards and training resources.According to Clark and Kalin (1996), an organization's incapacity to adapt to technological change is the root of techno stress. They found that technological stress is more of a natural response to technology than a root cause. To manage and lower techno stress, each employee should be ready to adapt new technologies. In the 1940s, the word "stress" first appeared in scientific literature. The idea of general stress was made prominent by Walter Cannon”(1940), who later described it as homeostasis.

Walter Cannon (1940), also proved the sympathetic nervous system's role in the fight- or-flight response, which results in physiological changes. The fight or flight response controls a person's responsiveness, activation, and reaction, therefore understanding it is essential. ICT (information and communication technology) has experienced rapid expansion and advancement around the globe in recent years.

While this has benefited human civilization greatly, it has also had a number of unintended repercussions for both enterprises and individual users (Bondanini et al., 2020).The phenomenon of general stress in the workplace, which also affects higher education institutions, is the root cause of techno-stress.

General stress happens when a person's job demands do not align with his needs, resources, and capabilities, which causes negative and draconian emotional and physical reactions (Bondanini et al., 2020). Think about how a higher education institution's teaching faculty is impacted by technological stress. A study conducted in which a dynamic individual mismatch framework of workplace stress was designed and tested by 343 university instructors in China to examine the topic of techno-stress among university instructors of higher education. The results showed that the terms "individual misfit," "person and technology misfit," and "person with people misfit" generally reflected how faculty members interacted unbalanced with various components of the university environment, leading to Techno- stress (Ahmed et al., 2014).

It was found that key determinants of university professors' job performance included the usability of ICT for their work and university standards linked to ICT usage. Techno-stress is the term for when a teacher is unable to do their work well because they are not familiar with or unable to handle the new forms of technology needed to do that duty (Ismail et al., 2014). Because they were unable to use these cutting-edge technology, these professors grew upset. However, the usage of ICT, such as instant messaging, email, voicemail, and cell phones, can make workers feel overburdened, insecure about their roles, and insecure about their jobs.Multiple jobs and activities, such as role ambiguity, processing demands, and greater information, contribute to workplace stress.

Effective ways to reduce employee stress should be implemented because it tends to increase staff turnover and absenteeism as well as negatively affect organisational commitment and job satisfaction (Bakhtawar, 2016). University faculty members are also considered as employees, who also experience the effects of technostress and there is a need to explore that area as well. Regarding the harmful effects of technostress on university faculty members and the institutions where they teach, there is a dearth of literature (Joo et al., 2016). Few studies that are now accessible focus on the stress brought on by technology in higher education, where information and communication technologies (ICTs) are used as tools of profession and are rapidly emerging and changing all the time (Ortagus et al., 2018). Flipped classrooms, artificial intelligence, virtual and augmented reality, Chat GPT, cloud computing, applications, and game-based learning are some of the most recent teaching technologies. These are all more complicated than teaching and learning from an expert on a stage (Hatlevik & Hatlevik, 2018). Feeling stressed and

overwhelmed while learning new, advanced technology is possible (Skaalvik & Skaalvik, 2017).

Academics have paid close attention to the concept of job satisfaction in recent decades due to its effects on teaching staff job performance and achievement of organisational goals. Previous research has found that a happy worker performs well at work.As a result, job performance may be significantly impacted by employee satisfaction and dedication (Brendemühl & Schaarschmidt, 2020). Techno-stress, on the other hand, is divided into two categories: stress inhibitors and stress creators.

Techno-overload include information streams that increase the volume and pace of work, techno-invasions, which include a different type of connectivity that invades life, and techno-insecurity, which occurs when employees in the organization become afraid of other employees who have a better understanding of information and computer technology than them, making them feel threatened of losing their jobs (Chandra & Srivastava, 2019).

Techno-stress negatively impacts a university lecturer's life by causing a slew of organisational, psychosocial, and physical consequences. It is extremely hazardous to employees' health and can result in health problems as well as psycho-social problems such as decreased work engagement, job dissatisfaction, and anxiety, all of which can lead to the formation of self-belief in incompetence and mental exhaustion (Brooks & Califf, 2017).Workplace techno-stress can also decrease faculty members' personal use of technology, as well as it reduces retention, commitment, and performance (Tarafdar et al., 2020). Furthermore, improper use of computer technology in the workplace can harm social networks and contacts, as well as cause financial problems. Using computer technology in the teaching profession can undoubtedly be advantageous to the company, but it's also crucial to keep in mind that doing so could threaten teaching staff and their reputation due to misuse, abuse, or overuse, all of which lead to Techno-stress (Ungku et al., 2014).

Stress from conflict has a negative impact on behaviour, psychology, and physiology. Job satisfaction is also decreased by stress (Kivimäki et al., 2012). Due to the mismatch between universities and instructors, which is characterised as a modern maladaptation brought on by a failure to adapt to ICT(Information and communication technology) and changing requirements associated to ICT use, teachers may experience techno stress (Brod, 1984; Fuglseth & Sreb, 2014). Information and

communication technology (ICT) usage affects employees' feelings and behavior. Emerging new technologies like social networking have gained enormous popularity because of how convenient they are. But, it is clear that its effects on users are dual since they are continually bombarded with information, which makes them prone to distraction at home and to interruptions at work (Yao & Cao, 2017; Zhang et al., 2016). A user's reluctance to use ICTs could be caused by information overload (Maier et al., 2015). Complex computer technology may cause users to develop phobias, aversions, anxiety, or irritation (Moore, 2000). Additionally, because of these unfavourable emotions, employees' behaviour is subject to change.

They might have to devote some of their meager energy away from their jobs to deal with their distressing feelings, which could result in unexpected performance. In order to minimize these negative impressions, workers who feel more technological stress are more likely to complain (Mahmud et al., 2017) and plan to quit using ICTs) (Maier et al., 2015). Even between passionate managers and dissatisfied workers, interpersonal conflict can arise (Cao et al., 2017). Techno-stress, in its most basic form, is a phenomenon of a tension that that happens both before and after ICT use in the workplace. This notion was said to be significantly different for earlier generations due to the development of technologies, which are a requirement of modern living (Shu, Tu & Wang, 2011). This situation can be the outcome of an employee's poor use of modern technologies in their workplace. First of all, since these technologies are independent of time and location ideas, it can be argued that they have eliminated the boundary between work life and non-work life. Additionally, given the wide range of professions in which ICTs have found use, employees at all levels of the organizations specifically seek to promote high levels of productivity. Finally, it might be argued that ICT is not advancing for workers at a significant and unusual rate. Because of these factors, technological stress is more likely to arise at work and is linked to the private lives of individuals. (Karuppan, 1997; Smith & Carayon, 1995).

Studies revealed that strain occurs when environmental demands surpass a person's capacity for absorption. (COR theory; conservation of resources). The main goal of COR theory, which has been extensively studied, is to comprehend how people respond to prospective resource loss (Halbesleben & Wheeler, 2015).When adopting ICTs, for instance, workers are more likely to feel role overload and eventually exhaustion because they are unable to commit enough energy resources to the diverse needs of

each position (Tarafdar, 2007). Employees' attention is diverted from work-related tasks to other coworker requests on the ESM network because workplace social media (ESM) is frequently used for social-instrumental objectives during working hours, depleting their slack resources. (Luqman et al., 2021).

Employees are consequently more susceptible to resource loss and experience weariness under technological stress, in accordance with COR theory. Resources also include tangible things, traits, circumstances, and energy, and people work to acquire and safeguard them by maximizing resource gain and avoiding resource loss. When faced with technological stress, employees are driven to take action to safeguard their resources from ongoing loss because they must deal with unpleasant feelings and external impediments, which cause energy resource loss (Luqman et al., 2021).For the teaching profession, as it is for practically every other professional group, technological stress is a significant problem. Because of the benefits they provide, ICTs were quickly incorporated into educational systems and, starting in the 2000s, replaced traditional pedagogical methods. (Peeraer & Van Petegem, 2015) (Trucano, 2005).

Technology adaptation is not an easy process. While some people prefer to accept change, others do not (Wolski & Jackson, 1999). Technostress, as defined through studies, is the stress that can be caused by using technology and having the appropriate skills and expertise to successfully integrate it into one's teaching practice (Çoklar et al., 2017; Tarafdar et al., 2007). The past study has shown that instructors experience symptoms of technological stress (Lim, 2012), mostly because of usability issues, The absence of social and technological support, the need to instruct less experienced students, the added time and effort required to use technology, and a lack of instruction in the implementation of technologies (Al-Fudail & Mellar, 2008).

Technostress has been problematicalized by researchers worldwide in a variety of professional categories. (Çoklar et al., 2017; La Torre et al., 2019; Tarafdar et al., 2019). Khlaif et al. (2022). Technostress in a school setting is defined as the pressure, stress, or uneasiness a teacher feels when implementing technological advances in the teaching and learning process. Additionally, in light of the pandemic, Penado Abilleira et al. (2021) investigated technological stress among university professors. Results reveal that older and more experienced women teachers suffered the most from the harmful effects of technological stress. High school teachers' technological stress was studied by zgür (2020). The results

show reduced levels of technological stress for both school support and teachers' knowledge of technology-pedagogical content. (TPACK) (Mishra and Koehler, 2006).

Research done by Ali et al (2023) in Pakistan during COVID-19 among teachers depicted that technostress was one of the main causes of increase in work load, which ultimately led to an affect on the work engagement. Since the COVID-19 pandemic affected almost all the countries globally, all the educational institutions shifted to online mode of learning. This put extra pressure and workload on the teachers, specifically those who weren't comfortable in using technology. Another study by Siddiqui et al (2022) done in Pakistan supported the same results which depicted Learning Teaching Process Oriented and Technical Issues Oriented were the main factors contributing towards techno stress among teachers. Moreover, the results also showed that a greater self-efficacy in teachers was related to lesser amount of technostress. In a similar study conducted in Pakistan by Javaid et al. (2023) showed that among teachers, mindfulness served as a mediator between the stress of e-work and job satisfaction. Teachers' experiences with mindfulness decreased with increasing e-stress.

2. Management and Elements of the Techno stress

The management of technological stress is a very unique and particular problem that differs from person to person (Brillhart, 2014). Developing individual solutions for controlling and mitigating technological stress is crucial. It's also crucial to understand that as technology develops, it will lead to various levels of techno- stress. (Aida et al., 2017). After completing this, the user will be able to successfully manage technological stress (Tarafdar et al., 2019).

According to Tarafdar (2013) three crucial steps for handling technology properly.

There are three of them: (1) Methods for successfully managing technology change; (2) Recognizing one's sentiments about technological change; and (3) Understanding and understanding technological change.

According to Prystanski (2012) and Tarafdar et al. (2007) the following are the aspects of techno stress, technological invasion or takeover of individual life, very complicated technology, technological insecurity, and technological uncertainty.techno complexity and techno overload.

Techno Overload

Prystanski (2012) defined techno excess as the excessive use of technology that negatively affects a person's personal and professional lives. Prystanski contends that the presence of these informative platforms and technologies has led to an information glut problem by making consumers dependent on speedy information transfer. Large volumes of information that users "absorb" through ICTs may be hazardous. Switching between distinct gadgets and doing different tasks affects job quality and efficiency since individual's brain need time to analyse collected info.According to Tarafdar et al., portable technical gadgets, social networking, and group application can generate concurrent torrents of real-time data (2011). Multitasking and an overload of data are the results.

Techno Invasion

The term "technology invasion" refers to the impulse to connect when someone may be accessed at anytime and anyplace (Tarafdar, et al., 2011). Technology has made it possible for people to perform tasks in a number of ways thanks to remote access, borderless administrations, and virtual offices (Hollensbe & Sheep, 2019). Workplace issues are the main source of stress and other tension-related unpleasant impressions (Kreiner et al., 2020).

Techno Complexity

The proper operation of new programmes might take a very long time, and they are complex and difficult to operate (Tarafdar et al., 2011). According to a study by Shu et al., the concept of techno complexity and the incapacity to employ new technology are related (2011). Although everyone views technology differently, certain gadgets convey the impression that utilising it will be difficult. If developers wish to see a big acceptance of their technologies, they must design them with basic and user-friendly features (The Economist, 2010).

Techno Insecurity

Techno insecurity is the term for when a person feels threatened by new technologies or the existence of competitors who are perceived to have more technologically sophisticated skill sets or expertise (Mlotshwa, 2013). Younger generations are better able to understand how new technologies operate because of how swiftly technology is evolving. Due to their weaker confidence and morale, this development

unfortunately makes older people more susceptible to technological vulnerability (Mlotshwa, 2013).

Techno-uncertainty

When regular hardware and software changes prevent users from gaining the crucial knowledge they would have otherwise acquired by using particular tools, programmes, or systems, this is known as technological uncertainty (Tarafdar et al., 2011). Because software and technologies are continually changing, people become irritated, unsure, and nervous because they must master new technological skills in order to use and operate it properly. So, These factors exhibit as signs of technology stress in the domestic setting and may be detrimental to a person's health, concentration, and task-related performance (Tarafdar et al., 2011). Addressing these problems may assist in modifying individual bias by bringing personal goals into alignment and producing a person who is more focused and self-assured.

3. Theoretical Framework

P-E fit theory

This concept emphasizes the intimate connection between a person's environment and self. In contrast to the transactional method, this model recognizes the difficulty of technological stress. This point of view contends that stress results through interactions between people and their surroundings. As a result of being in an unsuitable environment, a person experiences techno stress. However, the P-E fit hypothesis has traditionally been applied to research that investigate how well or poorly a person fits into a certain feature of their environment, such as organizations, people, or jobs (Jansen & Brown, 2006). Contrary to the simultaneous nesting of individuals in several environmental dimensions (Chuang et al., 2016).

Given that person-environment mismatch has several aspects, techno stress is associated with organizations that enforce standards for ICT use and coworkers inside organizations who frequently have control over people's ICT use (Avanzi et al., 2018). University professors may perform poorly at work due to technological stress brought on by teacher misfits and many characteristics of the university environment, which could result in burnout and even quit intentions (Pignata et al., 2016).

Although technological stress decreases the productivity of university teachers, previous studies on the topic have mainly concentrated on the public and commercial sectors (Ayyagari et al., 2011). Additionally, there hasn't been much research done on this subject in higher education settings where

university lecturers are exposed to a variety of ICT and where ICT is rapidly affecting learning and teaching (Jena, 2015; Ortagus et al., 2018).It was also challenging to identify the problem and prevented the development of well-informed solutions because earlier research on technological stress from P-E fit approach was only interested in one aspect of the environment, such as organizations or particular roles within them. (Player et al., 2017).

Technological stress in higher education necessitates a more thorough analysis due to its context-dependence and complex environment (Tarafdar et al., 2015). (2006) Jansen and Brown. By creating a multidimensional person-environment mismatch framework of technological stress that takes into consideration a number of aspects of the academic setting in which university lecturers operate, this study aimed to close that gap. In comparison to the conventional P-E fit technique, which typically focuses on just one environmental variable, the significance of numerous environmental elements is emphasized by the multidimensional P-E fit theory (Brown, 2006).

A more thorough comprehension of technological stress in higher education is required due to its context-dependence and complicated environment (Tarafdar et al., 2015). Jansen and Brown (2006). This study seeks to fill that gap by developing a multidimensional person-environment mismatch framework of technological stress that takes into account a variety of aspects of the academic environment in which university instructors function. P-T Fit Technology places a high value on the different information and communication technologies (ICT) utilized by universities to digitise faculty management, instruction, and research. In this study, the terms people and organizations relate to the managers and supervisors who regularly make policy in universities and the coworkers of university lecturers, respectively.

P-O fit, P-T fit, and P-P fit are all related to how well a person fits with their particular organisations, technology, and coworkers, according to P-E fit theory and research on multidimensional P-E (mis)fit. Misalignments between a person's measurements and their environment are what lead to technology stress. The P-O misfit, P- T misfit, and P-P misfit are the three components of the multidimensional P- E misfit framework of techno stress, for the reasons stated above. Techno stress is best described as a mismatch between the environment and the person, but we also need to consider the causes of these mismatches. According to Edwards and his colleagues, stress happens when (a) an individual's

needs are not sufficiently satisfied by the resources of the environment or (b) an individual's abilities are not sufficiently matched by the demands of the environment. Hence, it is common practise to investigate a P-E mismatch using the techniques of abilities-demands (A-D) and/or needs-supplies (N-S) (Player et al., 2017).

Thanks to modern technology, a more enriched shared world is growing as a result of distance learning. (Beldarrain, 2006; Gunawardena & McIsaac, 2013). This phenomenon enables the growth of learning communities through social relationships that support subject learning, the development of knowledge-sharing behaviours among students (Ghadirian et al., 2014), shared understanding, feelings, and experiences that promote student interaction (Tee & Karney, 2010), and more (Tee & Karney, 2010). As a result of technological breakthroughs, people who are attempting to keep up with the changes may feel both positive and negative emotions, such as anxiety, worry, and dread (Betoncu & Ozdamli, 2019; Batanero et al., 2021). Tension, concern, and anxiety are characteristics of techno stress, which is brought on by advancements in information and communication technologies (Jena, 2015; Joo et al., 2016; Kim & Lee 2021).According to Jena (2015)a and Tarafdar et al. (2015), anxiety, worry, exhaustion, depression, motivation loss, poor performance, and dissatisfaction with one's job are some negative side effects of technological stress. The quality of life and satisfaction of one's job are both negatively impacted by technological stress, according to studies (Lee et al., 2016; Nimrod, 2018).

Transactional Stress Theory

According to the transaction theory of stress, reactions to stressful situations and the conditions themselves both contribute to stress in individuals(Lazarus & Folkman, 1984). This point of view suggests that the development of techno stress proceeds in a linear manner, beginning with stressors and ending with strain and consequences. Using a reductionist approach, research based on this hypothesis has analyzed techno stress inhibitors and creators independently (Nathan et al., 2008).One of the most well-known theories of techno-stress, According to the Transactional Theory of Stress (TTS), performance might be hampered by a variety of assessments and coping strategies in response to stresses like those brought on by technology. Truthers et al. (2000),

Tarafdar et al. (2007), Nathan et al. (2008), and Sreb (2014). Lei and Ngai (2014) made the first move in modifying the TTS for the context of technostress and suggested a study model to investigate the

contradictory results about the effects of technostress. It is possible that the inconsistent impacts of various techno-stressors may be due to people' varying appraisal outcomes in particular circumstances. Additionally, recent empirical research have demonstrated that users may perceive different technological stressors as challenges or threats, which in turn has diverse consequences on people (Wang & Yao, 2021; Zhao et al., 2020). As an example, example, Zhao et al. (2020) discovered that people typically view technological overload and uncertainty as challenges while viewing technological complexity and insecurity as threats.

However, subsequent research investigations have been inconsistent in their utilization of the technological stress generators and inhibitors because these constructs have been improperly described as one-dimensional (Lei & Ngai, 2014; Joo et al., 2016) or first-order reflecting, second-order reflecting. This compromises the reliability and simplicity of measuring models (Nimako, 2013). As suggested and supported by the original theory, the present research explains these constructs as multidimensional, first-order reflective, second-order formats (Zhao et al., 2020).

Social Cognitive Theory

In addition to these essential theoretical frameworks that define most earlier investigations, social cognitive theory has been employed to investigate the specifics of technostress and offer suggestions for mitigating its negative impacts on people. Social cognitive theory defines stress as simply a response, a trigger, an engagement, or a resolution. According to social cognition theories, a person's personal attitude toward a job is shaped by their beliefs about how well someone can accomplish themselves. Self-efficacy is a concept that represents a person's assessment of his or her personal skills to complete a task or behaviour. Self-efficacy influences activity and venue selection, as well as attempt intensity or effort perseverance, outcome prediction, and compensatory behaviour. More importantly, self-efficacy influences a person's anxiety and stress levels, as well as cognitive patterns and emotional responses (Howe, 1994).

Chronic work stress is a negative factor that affects a person's ability and capacity, as well as his ability to use technology (Yang et al., 2017). Adopting new technology and working efficiently is a full-time job in and of itself. Ahmad and Scott (2019) Workload is directly related to job satisfaction, and it can also generate negative thoughts about work and leave intentions (Holland et al., 2019). In this technological

era, efficient work is now a job requirement, and this accelerated process can put strain on employees (Atmaja et al., 2018). Self-efficacy is a critical factor that enables the client to go above and beyond to achieve his personal and organisational objectives (Tierney and Farmer, 2011). These achievements and feelings of self-efficacy keep them motivated in the long run. This motivation allowed them to absorb more information while also increasing their confidence and creativity, resulting in exceptional performance to meet their goals (Ismail et al., 2019).

4. Determinants of Techno-stress

The main subject of the previous section dealt with the causes of techno-stress. The two primary causes of technological stress, according to the study, are social and environmental variables. Many studies on the subject have aligned various aspects of the causes of techno-stress (Salanova et al.,; Prystanski, 2012). According to a study by Bloom (2015), a lack of computer knowledge and abilities are the main causes of computer-related techno-stress. Clude (2019) lists a number of reasons that contribute to technological stress, such as a lack of computer experience, inadequate training, performance anxiety, organisational issues, information overload, understaffing, and language pressure.

The internet offers a range of innovative habitats without any established rules for their production, preservation, or reorganisation, according to Huidburg (2016), making it a significant factor in techno-stress. Doronina (2015) focused her research on several computer anxiety problems. The sensation of inexperience or incompetence, anxiety when utilizing novel technology, worry about specific technological infringements, and numerous health risks (Doronina, 2015).

Environmental Factors

Environmental factors that can contribute to technological stress include poor working conditions, poor lighting, outdated tools and security precautions, operator unsuitability, noisy equipment, software limitations, a lack of funding, electrical problems, the possibility of unintentional information loss, a lack of maintenance expertise, and a shortage of senior staff (Salanova et al., 2012).

Social Factors

Social factors underline the tension brought on by the use of technology, the shifting of roles, and the worry about failure; changes in work hierarchy may lead to technology-related stress for some people (Lorens, &

Cifre, 2012). Among the aforementioned reasons, Enis (2005) also identifies six other significant causes of techno- stress: include knowledge gaps, technology dependability, an increase in workload, frequent changes, a lack of workplace standardization, and job adjustments. Despite differing viewpoints on the causes of techno-stress, the rapid advancement and change in technology, including mobile devices, is what specifically causes techno-stress at this time. Regarding the condition of techno-stress, psychological pressures have a same impact on everyone.

Demographic Factors

Studies on techno-stress and gender have yielded different findings. According to certain empirical studies, older workers are less susceptible to technological stress. (Ragu- Nathan et al., 2008; Tarafdar et al., 2011) . Older workers may be more able to handle overall work stress, and as they have experienced more changes at work, they are better equipped to deal with them. Additionally, it has been claimed that women are more susceptible to technological stress. This is frequently supported by research showing that women experience more techno stress because they typically experience greater computer anxiety (Durndell & Haag, 2002; Ong & Lai, 2006). However, other research indicates that men are more likely to be affected by techno stress (Ragu-Nathan et al., 2008).

A study conducted by Sareen(2019) on 300 employees out of which 200 belong to teaching staff and 100 belong to non-teaching staff ,results indicated that techno stress creators i.e. , techno overload,techno invasion,techno complexity and techno uncertainty are more in men then women.Another study conducted by Efilti and Naci Çoklar (2019) stated that women reported higher levels of technostress than men.Temporary professors report lower levels of stress than full-time professors, according to studies done by (Gappa and Leslie, 2002; Outcalt, 2002).

5. Job Satisfaction

Job satisfaction is described as the pleasant sensations and emotions experienced by an individual as a result of self-evaluation of one's job and occupational life (Locke, 1976). Job satisfaction is an important variable that helps in understanding teachers' feelings and thoughts about their jobs and careers (Arifin, 2015; Skaalvik, 2011).Job satisfaction has a substantial impact on teachers' attitudes toward learning and professional development as well as their general contentment. (Kelchtermans, 2005). Their increased job

satisfaction boosts their motivation and productivity at work, which enhances educational quality and effectiveness. Senyametor et al., 2019; Baluyos et al., 2019; Iqbal et al., 2016; Ololube, 2006).

Researchers have described job satisfaction as a pleasant emotional state that happens when faculty members receive positive feedback from their jobs over the years. The way a person is treated at work has an impact on how they feel about their employment. It is essential for an employee to be content with his or her job because it takes up a significant amount of both their professional and personal time (Javid & Rehman, 2018).

Job satisfaction refers to how satisfied, comfortable, and pleased an individual is with his or her job at the organization where he or she works. Job satisfaction, as previously stated, is a favorable or pleasant emotional state that arises when a professor's higher authority or administrative people in the organization appreciate or commend him for his hard work. Increased training opportunities, the physical condition of the workplace, the work environment, and modern equipment used in the workplace are the major components used to analyze job satisfaction. Other highly disparate factors that contribute more than 40% in job satisfaction queries are new opportunities, and employment related benefits, paid leaves, a good salary, and the location of the job (Peters et al., 2010).

These factors can change over time and, of course, vary from employee to employee. Job satisfaction is inextricably linked to these factors and their effects on individual life. And these elements are critical to ensuring that employees' needs are met. Because it has an impact on client motivation and loyalty (Varma C, 2018). This is critical in instilling confidence in them and motivating them to perform even better than they are currently praised for (Zahed & Ardabili, 2017).Organizations need to make sure that their workers are satisfied with their jobs. because they are the organization's key component and core asset, and are thus responsible for ensuring that all operations of the organization are carried out effectively, allowing the organization to achieve its organisational goals and objectives. As a result, higher education institutions around the world should pay special attention to enacting policies that benefit their teaching staff in order to help them to give better results (Ensour et al., 2018).

According to Locke (1969), job satisfaction is a feeling of satisfaction and fulfillment from one's job. More specifically, it describes how much a person believes that his or her needs linked to their

profession are being addressed (Evans, 1997). Teachers' motivation, well-being, and dedication to teaching have all been linked to their sense of job satisfaction (Barnabe' & Burns, 1994; Vansteenkiste et al., 2007; Feather & Rauter, 2004). By raising teachers' feelings of job satisfaction, the costs related to high levels of teacher stress, such as absenteeism and illness, can be reduced (Billingsley & Cross, 1992). According to a large body of research, teachers are generally dissatisfied with the aspects of their job that surround the performance of their job, such as working conditions, interpersonal relationships, and salary, but generally satisfied with the aspects of their job that relate to their teaching work (such as work tasks, professional growth). Moreover, Caprara and associates (Caprara, Barbaranelli, Borgogni, & Steca, 2003; Caprara et al., 2006) discovered that teaching effectiveness was a factor in determining teachers' job satisfaction, while Klassen and Chiu (2010) discovered that stress and teaching effectiveness both influenced job satisfaction.

Teachers who are satisfied with their jobs go above and beyond to meet all deadlines and ensure that no work is left undone, even if it means working extra hours, whereas professors who are dissatisfied with their jobs lose interest in their work and thus do not care about meeting any deadlines (Ali, 2016).Such employees do not contribute to the organization's success and tend to leave as soon as they find a better job, increasing the company's turnover rate. When employees are dissatisfied with their jobs, several issues arise, including teaching- related challenges and problems such as decreased employee productivity, organisational commitment, organisational performance, and increased employee turnover (Fatimah, 2021). Satisfaction is a sort of influence at work that is based on cognitive assessment and takes into account a variety of characteristics of one's work as well as one's emotions response to the position as a whole (Pepe et al., 2019). According to Locke (1976) satisfaction is a positive mental attitude that is a result of one's evaluation of their work, their perceptions of the advantages they have received at work, how much they enjoy their jobs, and their cognitive and affective responses to the discrepancy between their expectations and what they actually receive (Weiss, 2002);a group of sentiments and emotions that an individual experiences in relation to his or her job (Robbins & Judge, 2019); these feelings and emotions can be either positive or negative (Davis & Newstrom, 2014).

Happy employees are more effective and can work longer hours with greater skill (Sohail & Delin, 2013; Tabassum & Rahman, 2020). They are also positively correlated with organisational success and

performance (Gozukzra & Colakoglu, 2016), feel comfortable and make a positive contribution (Ali et al., 2018), are less likely to quit their jobs (Balabanova et al., 2016), and have lower turnover intentions (Forsteret al (Sabbagha et al., 2018). A higher degree of satisfaction encourages development, performance, and teamwork and displays a higher level of job worth and productivity (Jaiswal, 2019). (George & Zakkariya, 2015). Work satisfaction increases employee job involvement, organisational commitment, and performance while reducing frequent absences, a lack of discipline, and high turnover (Leslie & Stinchcomb, 2013).Employee loyalty and interpersonal connections are fostered by job satisfaction. It is a crucial indication of work behaviours including organisational citizenship, absenteeism, and turnover (Anleu & Mack, 2014); it measures employees' experiences, orientation, and dedication (Saari & Judge, 2004), Bozionelos (2016) found a connection between genuine interactions with clients and coworkers and job satisfaction.

According to Faroque, Rahman, and Rahman (2019), education and marital status were significant predictors of job satisfaction. An investigation into gender disparity and the gender-job satisfaction gap in Europe was done by Perugini and Viadisavijevic in 2019. Findings revealed a link between exposure to more gender equal environments in the formative years of life and smaller gender differences in work satisfaction.Academic turnover is a difficult problem at Ethiopia's higher education institutions.Yet, it is also a significant predictor of organisational leadership practises in terms of human resource development and general performance (Yarinbab & Mezgebu, 2019). Organizational goals may be endangered by high personnel turnover rates. It demonstrates that turnover is one of the most expensive and difficult staff concerns that businesses face. Employee churn can be terrible for any organisation (Kemal, 2013). In some instances, the academic staff turnover rate in Ethiopian universities has gone up.

Employee morale suffers and stress levels rise as a result of the increased workload, which in turn raises absenteeism. Additionally, it was discovered that the important determinants of staff turnover intention are job satisfaction, job security, salary, benefits, allowances and incentives, career development opportunities, training opportunities, positive relationships with coworkers, and positive relationships with the supervisor (Haileyesus et al., 2019). According to Ibrahim Yimer et al. (2017), the absence of amenities including offices, seats, internet, and restrooms was the most often mentioned cause for quitting Mada

Wellabu University's academic staff. Five or more years of employment increased the likelihood of academic personnel leaving their institution by 4.5 times. Debre Berhan University also has this serious issue. 190 academic staff members left the institution between 2018 and 2021, according to the university's 2021 report.

Yet, no one has yet looked at what caused it. According to Islam (2013), the concept of organisational fit identifies common goals and recognizes the importance of both the individual and the organization as an essential element of affective commitment. According to studies, organisational fit is characterized as teamwork and employee readiness to work together. According to Belete (2018), improving congruence between employee values and corporate culture should be taken into consideration during the hiring process. It has not yet been determined what effect academic staff members' personal values have on whether or not the university where they work. Several studies have shown that demographic parameters like age, gender, work experience, education level, and marital status have an impact on turn-over intention, albeit their results have not yet proven consistently consistent. For instance, the intention to quit smoking was not significantly influenced by gender (Hayes,2015; Muhangi, 2019).

The relationship between rewards and employee retention has been the subject of research investigations (Ahmed et al., 2015), which has revealed information about what employees hope to achieve, what they say about rewards, and how they feel about work and reward-related issues. Gustafson (2002) asserts that the likelihood of increased salary and compensation significantly affects employees' intentions to quit their jobs. Research examining the connection between age and job satisfaction have found that there is both a linear and a curved relationship, with job contentment increasing with age. Employees growing more used to their tasks, having fewer goals, and engaging in a process of self-selection that excludes older, resentful people from the labour field, leaving behind a limited pool of pleased workers, may be the causes of the upward linear trend in workplace happiness (Gazioglu & Tansel, 2006).found a link between years of service and work satisfaction that is unfavourable.

Women report higher levels of working stress due to culture, workplace characteristics, and family responsibilities (He et al., 2002). It's interesting to note that the majority of studies have shown no connection between gender and job satisfaction awe. The relationship may be brought on by differences in

work status, duties, obstacles, and authority. According to Robie et al. (1998), the power distance across ranks has an effect on how satisfied workers are with their jobs. They advise reducing this distance to lessen the disparity in job satisfaction. According to research conducted in India, there is a strong correlation between the variables and no relationship between rank and job satisfaction. (Lambert et al., 2015).

Marital status affects both the amount of family assistance provided for carrying out official tasks and the negative impact of work-family conflict on job satisfaction. (Howard et al., 2004). Support from family members reduces stress, while conflict between work and family reduces job satisfaction and even leads to emotional exhaustion and burnout. (He et al., 2002). However, Johnson (2012) did not discover a link between marital status and job happiness.

6. Job Motivation

Job motivation is characterized as an employee's dedication, energy, passion, and amount of innovation that they bring to the workplace on a daily basis. The level of motivation of an employee is determined by how engaged and empowered he or she feels at work (Kimeu & Kioko, 2018). Job motivation is significant because it is connected to the concept of job satisfaction. Teachers who are frequently motivated by their seniors are more satisfied than those who are not motivated by their more experienced colleagues. Professionals who are unhappy at work are more inclined to quit, contributing to a rise in the rate of employee turnover at the organization (Hagen & Diehl, 2012).

According to Robbins et al. (2009), motivation is essential to the institution since it increases employee productivity and makes it possible to achieve goals.In any association, changing a worker's behavior through inspiration is possible.Additionally, as it effectively achieves the goal, motivation plays a crucial role in education for teachers.While Mustafa and Othman (2010) contend that teacher motivation is essential since it improves teachers' skills and knowledge and has a direct impact on students' achievement.

Two major factors that influence overall organisational performance are the organization's environment and human resource management. Employee motivation is the primary concern of human resource management in order to get the most out of them. Job motivation refers to an individual's efforts, energies, and personal interest in their jobs. The foundation of an organization's success is job satisfaction. Many studies on employee motivation have been conducted, and they conclude that it is dependent on the

numerous benefits that a company can provide to a worker, as well as job type and individual preferences (Nduke, 2016). According to Bishay (1996), who executed numerous studies on teacher motivation and job satisfaction, it is ineffective to address teacher motivation solely in terms of wages and rewards.

Rather, this phenomenon is linked to trying new things, taking on new responsibilities, and working in an independent environment. In terms of educational systems, teachers' performance can be seen as a key factor in professional knowledge and skills, educational resources and tactics, and job motivation. But given that it is intimately connected to students' motivation (Pelletier, Séguin- Lévesque, & Legault, 2002). In order to fulfill basic human needs through one's career and enhance academic performance, it is crucial to understand the job motivation of instructors (Ololube, 2006).

However, determining job motivation appears to be a crucial step in achieving educational objectives, implementing educational improvements, and ensuring student motivation. (Lunenburg & Ornstein, 2013).According to self-determination theory(SDT) (Deci and Ryan, 1985) Extrinsic and intrinsic motivation are two approaches that organizations can use to motivate their employees.According to Ryan and Deci (2000), intrinsic motivation is an innate desire to do something for its own reason, such as learning new things, enjoying yourself, or satisfying one's curiosity. (Adair, 2009) asserts that motivation encompasses all of the reasons a person acts, including both positive and negative ones like anxiety and more positive ones like money, advancement, or recognition. Intrinsic and extrinsic factors are the cornerstone of motivation. Individuals who are motivated by internal factors will engage in an action. When individuals have some control over how much effort they put into a task, they feel more motivated because they know that the results they will get won't be the result of coincidence. Gratification, curiosity, or happiness on an individual level are examples of intrinsic motivation.

Employees who are intrinsically motivated are driven from inside, and this manifests as traits like curiosity, acceptance, a desire for achievement, and honors. It has also been noted that intrinsically motivated professors work more and accomplish more in their positions. Intrinsically driven teachers could do something only because they find it interesting, challenging, or entertaining. For instance, a teacher might take more time than usual to design and create an interesting lesson plan because they enjoy doing so.

According to studies, teachers who are intrinsically motivated have higher levels of engagement and

performance. (Brouwer et al., 2019). Hackman and Oldham (1976) utilized three variables to explain the intrinsicl motivation process that enables people to perform their jobs productively. These are described as (a) the psychological states of the workers for the development of intrinsically motivated work behaviors, (b) the qualities of the jobs that can create these psychological states, and (c) the qualities of the personal characteristics that determine how positively a person responds to a task that is challenging and complicated. Identification of motivational mechanisms is extremely demanding and hard in terms of the roles and responsibilities of teachers since motivational processes have a complicated foundation with numerous components.

Extrinsic motivation, on the other hand, refers to motivation that is influenced by external factors like recognition and rewards. (2018) Singhvi et al.These incentives, benefits, and bonuses enable organizations encourage their staff to develop new skill sets, motivating them to perform better work. Although these motivations operated in distinct ways, research has shown that they are somehow interconnected.

Incentives are important in extrinsic motivation. Experts frequently strike a balance between inspiration that comes from within and inspiration that is provided by options for help. Teachers typically believe that intrinsic motivation is more appealing and produces better learning outcomes than extrinsic motivation (Deci et al., 1999).According to Adelabu (2005), teachers have extremely low levels of motivation and are dissatisfied with their administrative positions and pay scales. The explanation for decreased motivation is that "teachers' motivation is low due to their low compensations.

A person who is internally satisfied by their work position and employment will be externally motivated by rewards that meet their needs, which will positively affect their intrinsic motivation. And occasionally, intrinsic motivation yields rewards from the external. Studies have shown that people are equally motivated; some choose internal advantages while others prefer external rewards (Bhattacharyya, 2007).According to a study by Akhtar et al. (2020), teachers' view of reward as a extrinsic motivation affected the quality of their instruction and their job satisfaction. According to Deci and Ryan (1985), extrinsic motivation can be classified as external, introjected, identifiable, and integrated regulation.The term "external regulation" describes behavior that is done in order to obtain rewards or escape punishment

(for instance, instructors who teach because they receive longer holidays and a decent wage).

The behaviors that people engage in to prevent emotions of blame (such as teachers who prepare their lessons so they don't feel worse about themselves) are known as introjected regulation.The jobs that are subject to identified regulation are those in which people attach value on their work because they think it may be valuable (for example, instructors who think their work may be significant for their students' and their own personal and professional growth).

The person accepts the necessity of the action or duty in integrated regulation. The task itself then becomes their primary concern instead of the reward.For instance, a teacher might value helping students without receiving anything in return. Amotivation is defined as a lack of expertise, intention to participate in an activity, and expectation to achieve the expected outcome (example: teachers who do not understand why they should continue teaching because they believe the work they do is meaningless) (Deci and Ryan1985).

A substantial amount of SDT-based research has shown that motivational approaches that are more self-determined can support positive outcomes, including teacher engagement(Cheon et al.,2014), as well as the desire of teachers to engage in creative tasks and continue their professional development(Gorozidis & Papaioannou, 2014; Thoonen et al., 2011) and avoid being worn out(Fernet, Guay, Senécal, & Austin.,2012; Roth et al., 2007).

Additionally, research that have examined the detrimental effects of teachers' less self-determined forms of motivation and amotivation have linked overwork (Fernet, Senécal, Guay, Marsh, & Dowson.,2008), tiredness from teaching (Eyal & Roth.,2011) and their lack of interest in taking part in professional development and executing novelties (Gorozidis & Papaioannou.,2014). Employee motivation in the workplace is still a complex topic that determines how much effort workers will put in to produce better results. Whether the employee is extrinsically or internally motivated, what matters is the employee's satisfaction and motivation towards his or her job, as defined by (Lawler, 2003) that in the modern world, treating individual rights is clearly not an option but a legal requirement. This was emphasized by Dreher and Dougherty (2002), who stated that an organization's ability to create and maintain a competitive advantage over other organizations is determined by how it manages its employees (Mensah, 2016).

Despite stemming mostly from the intrinsic merits of teaching, there are a variety of factors that can

decrease a teacher's motivation. Numerous studies have revealed that compared to other professional groups, teachers had higher levels of professional stress and lower levels of motivation (Bess, 1977; de Jesus & Lens, 2005; Lens & de Jesus, 1999). It has been examined under the subject matter of teacher demotivation. Several European countries, including Australia, England, New Zealand, and the US, have experienced a problem with teacher attrition in their early years of teaching (Dinham & Scott, 2000; Watt & Richardson, 2008). Demotivation, in the opinion of Dörnyei and Ushioda (2011), addressed negative aspects that diminished the already available motivation.

Techno-stress is expected to increase stress among academic institution professors while decreasing motivation and job dissatisfaction. Overloading, complication, ambiguity, and other stressors exhaust teaching staff and cause them to lose interest in their work (as stressors). As a result, job performance, job satisfaction, and motivation suffer. Academicians are in charge of shaping future generations who will be assets to the country. Low morale and unmotivated performance can have a negative impact on students (Chong et al., 2019), so keeping academicians motivated is critical. The motivational hypothesis proposes psychological (intrinsic) and survival (extrinsic) demands. A type of drive known as intrinsic motivation is based on a person's underlying interest in difficult and unusual tasks. (Ekundayo & Ayodele, 2019).Instead of obtaining outside advantages, it involves people's expressions of who they are and what they are interested in (Ryan & Deci, 2020). On the other hand extrinsic motivation is influenced by external factors, most of which are economic in nature. It also goes by the name "result of an activity's performance," in addition to promotions, financial advantages, and performance reviews (PALs).

Only the two aforementioned attributes were chosen for the study, which modified these elements from the literature (Robbins & Judge, 2009). Common teacher and parent behaviours, which are closely related to intrinsic motivation, naturally impede the success of the teaching and learning process (Ryan & Deci, 2020). Extrinsic incentive and intrinsic motivation are said to be mutually exclusive, yet some types of extrinsic drive are successful while others are, according to self- determination theory (SDT) (Matos et al., 2021).

Both domestic and foreign students are drawn to Malaysia's higher education system's unique selection of educational alternatives. According to the Malaysian Qualification Framework, eight levels of

higher education programmes are offered by more than 450 private universities and colleges as well as 20 public institutions in Malaysia (MQF 2.0). (2002) (Abdullah & Azman) (Azman & Abdullah).At universities today, 30% of the student body is made up of foreigners. Instead of enhancing the nation's social, economic, and political economy, Malaysia's higher education system seeks to boost fair foreign exchange (Ministry of Higher Education, 2019). The foundation of the higher education system is quality teaching, which can only be realized when faculty members are satisfied and working according to schedule. (Lee et al., 2022).

As indicated by the growth of private higher education institutions in Malaysia, private investors are starting to enter the profitable higher education sector. By 2021 and 2026, the PHEI industry share would have risen to USD 0.85 billion and USD 1.50 billion, respectively. (MIDA, 2022). But, competent academics who are motivated to work in an appropriate workplace are necessary for excellent education (Hartinah et al., 2020). However, a substantial amount of empirical research in the field of organisational behaviour psychology has been done, and it is interesting to learn that incentives like pay bonuses and prizes for creative work are actually not all that successful at stimulating creative work. Paying employees is likely crucial for aspects that emphasise creativity, but particularly when employing financial incentives to encourage innovative work. The capacity to collaborate in the workplace fosters employee creativity. They frequently urged their subordinates to heed their counsel so that they would be alerted right away if something was missing that might be filled (Zhao & Rosson, 2007).

Organizations may be able to draw in more highly qualified workers by developing a culture that values creative people. They are stronger candidates for opportunities and more qualified. A different group of scientists has also investigated the link between stress and employees' creativity. In the article, he investigated how the drive for creativity enhances the quality of customer service using a multilevel analytic analysis of workplace stress (Hon, 2013).

Malaysian higher education provides a unique blend of learning opportunities that appeal to both domestic and international students. Under the Malaysian Qualification Framework (MQF 2.0), a total of 20 public and approximately 450 private universities and higher education colleges in Malaysia offer eight levels of higher education programmes (Azman & Abdullah, 2021). Currently, international students make

up 30% of university students. Malaysia's higher education system focuses on attracting reasonable foreign exchange rather than improving the country's social, economic, and political economy (Ministry of Higher Education, 2019). The increased number of private higher education institutions in Malaysia shows that private investors are making inroads into the lucrative higher education market.

7.Association between Techno stress,job satisfaction and job motivation.

Association between Techno Stress, Job Satisfaction and Job Motivation According to Pushpakumari (2008) and Gu & Chi (2009), job motivation and job happiness are intricately intertwined, and both are crucial for an employee's personal and professional growth. The "perceived link" between what an individual desires from their job and what they anticipate it will provide according to Locke (1969), is what constitutes job satisfaction. One of the most crucial elements impacting employee performance is job satisfaction, which if correctly addressed might cause the firm to suffer huge losses (Nathan et al., 2008).

Tarafdar et al. (2011) looked at how technological stress affected task performance in 233 ICT users. The findings demonstrate that techno stress negatively affects employees ability to effectively employ ICT. Technology overload, intrusion, intricacy, and insecurity, according to Tarafdar et al. (2014), all have a negative impact on their behavioural efficacy.In a sample of 215 New Zealand employees, Wei Qiu (2013) investigated the causes of technological stress as well as the connections between this stress, job satisfaction, and organizational commitment.The study's results show how technological stress has a significant impact on organizational commitment and job satisfaction.. The results also indicated that stress and organisational commitment can be masked by job satisfaction.

In a similar vein, Kumar et al. (2013) hypothesized that technological stress is linked to decreased organisational commitment and work satisfaction. In Lithuanian workers, Raiien and Jonuauskas (2013) looked at the effects of techno stress in relation to ICT use on work-life balance (Jonusauskas, 2013).The findings demonstrate that employees in Lithuanian institutions experience high levels of technological stress, with 75% citing this stress and 41% citing an unbalanced work-life schedule. Another study discovered a connection between technology stress and job happiness.The study's multiple regression analysis discovered that technological stress was a significant predictor of 27.3% of the difference in job satisfaction among librarians at KPK University in Pakistan.The findings indicate that technological

advancements considerably lower job satisfaction (Khan et al., 2013). A different study found that professors' job satisfaction reflects their genuine views of their jobs and may be an indicator of how well they perform at work.

The literature substantiated the notion by highlighting how more productive and capable individuals are of making a big contribution to increased organisational effectiveness (Nawi et al., 2016; Jermsittiparsert et al., 2019). However, Contrary research suggests that job performance is not always correlated with job satisfaction (French et al., 2020). Investigating how job satisfaction affects lecturers' job performance in higher education would be fascinating (Mohanty, 2019). Jena (2015) investigated how technological stress affected academic work happiness in India. The study's findings imply that technological stress is detrimental to job satisfaction. Technology stress was examined in a study of academic staff at the University of Jos in Nigeria to see how it influenced work performance and coping mechanisms (Tagurum et al.,2017).

The results showed that 54.2% of participants experienced techno stress, which adversely affected 9% of the participants' ability to do their jobs. Negative physical symptoms including neck pain and hazy vision were brought on by technological stress in 45.8% and 42.4% of employees, respectively. According to Rajput's (2011) research, women IT workers are more stressed than men IT workers in terms of internal job aspects, management responsibilities, interpersonal interactions at work, career and achievement, and organisational environment.

Numerous studies also reveal that women are more content with their jobs than men are (Kim, 2005; Gligorovi et al., 2014). Additionaly,Femen teachers performed better on average than their men counterparts in the areas of motivation, mindfulness, and satisfaction.(Bagherpour & Khadijeh, 2016). However, several studies have not shown a link between job satisfaction and productivity (Sumner & Niederman, 2002). Overall, the results show a strong relationship among the three research variables—technology stress, job satisfaction, and job performance—with Technology stress has a negative impact on both performance and job satisfaction. The following hypotheses are proposed.: (1) gender differences exist among all study variables; (2) job satisfaction and performance are positively correlated; (3) techno stress is negatively correlated with both job satisfaction and performance; and (4). The results of the present study

support the idea that techno stress has a detrimental effect on both job satisfaction and performance.

According to Altnay-Gazi and Altnay-Aksal (2017), teachers who lack the skills necessary to operate the most recent/updated technology are more vulnerable to the development of the stress condition known as technostress. The growth of technostress in teachers has negative effects on their activities, including minimal desire and motivation to use technology, poor individual outcomes, dissatisfaction with work, exhaustion, lack of concentration, and low participation in the teaching profession, which not only affects the economic and financial outcomes of institutions (Ioannou and Papazafeiropoulou, 2017;

Maier et al., 2015; Sarabadani et al., 2018; Suh et al., 2017),but also influences the general success of the organization. (Ayyagari et al., 2011; Tarafdar et al., 2015). According to Liorens (2011), teaching is one of the most stressful occupations in the world because of the constant changes brought on by scientific and technical advancements from the 1990s to the present.Ragu-Nathan and colleagues (2008) discovered an association between job satisfaction and technological stres. It means that overall job satisfaction declines as employment becomes more technologically intensive. This means that if the educational setting efficiently controls teachers' technological stress, job satisfaction can rise.

Additionally, it was discovered that technology invasion, complexity, insecurity, and uncertainty were all inversely connected with job satisfaction. Dawis and Nestron (1984) described job satisfaction as workers' assessment of how well the work environment meets their needs. People's attitudes and feelings toward their jobs are referred to as job satisfaction. Positivity toward one's work indicates job satisfaction. Unfavorable and negative attitudes toward the job are the indicators of job dissatisfaction (Armstrong, 2006).

Additionally, numerous research have been conducted to look into the connection between organizational commitment and job stress. (Boshoff & Mels, 1994; Dale & Fox, 2008; Lee & Jamil, 2003). Omolara (2008) found that employees who experienced less stress were more dedicated to accomplishing organizational goals and expressed a higher level of commitment to the organization. Techno stress" strains might have psychological or behavioral characteristics. Stressful circumstances including job dissatisfaction, depression, and low self-esteem can cause psychological strains, which are emotional responses. Reduced productivity, a rise in absenteeism and turnover, and poor task performance are all

symptoms of behavioral strain. (Tarafdar et al., 2010).

Due to pandemic conditions in higher education, a technology-based process has been witnessed in the supply of education and training services via distance learning (Mishra et al., 2020). The hurried distance learning process caught universities off guard and brought with it a number of problems (Bozkurt et al., 2020; Toquero, 2020). It was found that some students were unable to access distance education (Adnan & Anwar, 2020; Dhawan, 2020; Korkmaz & Tora) and that faculty members lacked the professional competencies required for distance education (Marinoni et al., 2020). These issues were discovered during the distance education process (Ifijeh & Yusuf, 2020; Lassoued et al., 2020).

However, it was discovered that students struggled with stress, anxiety, depression, and a lack of motivation for online learning (Patricia, 2020), that student- faculty interaction was inadequate (Flores & Gago, 2020), and that there were fundamental problems relating to the lack of technological literacy skills of faculty members for distance learning (Cao et al., 2020; Salari et al., 2020). Yet, it has been demonstrated that colleges with distance education infrastructure and competence have handled this procedure more smoothly and quickly than other universities (Butnaru et al., 2021; Mishra et al., 2020).

Distance education has created a thriving online sharing community using contemporary technologies (Gunawardena & McIsaac, 2013). This has made way for advantageous technological advancements that support learning through a variety of learning environments, including encouraging information-sharing behaviours (Imen & Ylmaz, 2017; Ghadirian et al., 2014), promoting interpersonal interaction (Tee & Karney, 2010), and creating learning communities through interpersonal connections (Hulme, 2012, Ma & Yuen, 2011; Tseng & Kuo, 2010). According to studies (Fernández et al., 2021; Keller et al., 2017), technology- based changes can have both positive and negative consequences, including tension, fear, and dread in those who are attempting to keep up with them.

Technological advances in information and communication technologies can cause tension, worry, and anxiety (Jena, 2015; Kim & Lee, 2021). Negative effects of techno stress include low morale, low motivation, worry, fear, fatigue, inadequate performance, and a lack of job satisfaction (Salanova et al., 2013; Tarafdar et al., 2015). However, research indicates that technolo stress has a detrimental impact on people's job satisfaction. (Tarafdar et al., 2007).

A fascinating area of organisational research that is related to stress and technology is shed light on by this paradox. Brod in 1984 described techno stress as a modern illness brought on by a person's incapacity to embrace or connect with technology in a healthy way Information and communication technologies (ICTs) were first employed by a variety of organizations, and this definition later included “the strain caused by a person's efforts to deal with ever evolving ICTs and the varying physical, social, and cognitive reactions anticipated by their use " (Hwang & Cha, 2018).

Researchers have stressed that inconsistent results of empirical studies about stress are produced by failing to recognise the significance of individual differences (Galluch et al., 2015). Current techno stress research demonstrates a significant theoretical gap in the association between TSCs and employment outcomes when individual differences are taken into account (Srivastava et al., 2015). According to a prior study (Tarafdar et al., 2015), which highlighted the need for a more thorough theoretical approach to this effect, personality differences influence the coping mechanisms people choose to employ in response to stressful situations and play a role in psychological effects (Srivastava et al., 2015).

Today's teachers play the role of complex learning environment designers rather than basic knowledge transmitters due to the usage of technology in teaching and learning (Gros and Silva, 2005). Content, pedagogy, and technology are the three main pillars of today's learning environment, and teachers must be aware of how they interact. Since teachers have what is known as technological pedagogical content knowledge (TPACK) (Schildkamp et al., 2020; Koehler & Mishra, 2020; Rienties et al., 2013; Mishra & Koehler, 2006), it is believed that this is necessary.

Today's teachers must successfully incorporate technology into their lesson plans, yet they frequently struggle to find the time to keep up with new technical advancements and the related pedagogical modifications (Graham et al., 2009). (Tarus et al., 2015; Voet & Wever, 2017.Despite the fact that a lot of teachers lack the knowledge and abilities needed to develop and use technology-based teaching strategies that are efficient for both teaching and learning, they frequently utilise technology to plan lessons, convey information, or engage students (Chen, 2008; Munyengabe et al., 2017).

Teachers are continuously under technological stress because they frequently lack the skills necessary to operate new and updated technologies (Aksal, 2017; Li & Wang, 2020). However, the use of

technology in the classroom by instructors must be pedagogically sound for educational innovation. (Koh et al., 2017; Schildkamp et al., 2020). Al-Fudail and Mellar (2008) created a model of how instructors interact with technology based on the P-E fit theory that demonstrates how teachers experience technological stress when there is a mismatch between their attributes. (such as needs and skills) and school technology support (e.g., training and technical support). When incorporating technology into lesson planning, the teaching staff's abilities and character attributes are essential. This assertion is especially true during a pandemic, which has led to an abundance of studies highlighting this issue and highlighting the significance of this research (Bruggeman et al., 2021).

The current state of university education is one in which technology is pervasive but not always effectively incorporated into routine instruction. Because of the pandemic's lockdown of educational facilities, teachers have been compelled to develop novel forms of instruction that resemble emergency remote teaching rather than high-quality online teaching. (Mohmmed et al., 2020). Among the many methods of instruction used today, online institutions rely solely on technology to communicate with students, deliver curriculum, and conduct evaluation activities—all without having any face-to-face interactions. The teacher- learner relationship is fundamentally based on personal interaction in face-to-face instruction, despite the fact that virtual platforms improve and complement the process of material transfer (Mohmmed et al., 2020).

These two modes of instruction suggest that online institutions have generally adopted more ICT-based methods of interaction, which may mean that their faculty members face less of a mismatch (techno stress) between the expectations of the institution and their personal technology requirements. These disparities might be more pronounced in face-to-face colleges due to a lack of a tradition of completely integrating technology in instruction.

In 2020, Panisoara et al. examined the effect of technological stress factors on Pakistani teachers conducting online teaching sessions. The study used the Self- determination theory (SDT), the Job-Demands Resources Model (JD-R), and the Technology Acceptance Model (TAM) to analyze the emotional reactions of in- service instructors to online tools and courses. The findings also revealed that motivational practices were both directly and indirectly connected to the (OS) through the (OS) (CI). Furthermore, it was

discovered that intrinsic motivation (IM) is positively related to teachers' (TPK-SE) but negatively related to their (EM) (Hodges et al., 2020).

These results gave a thorough grasp of the motivational conceptions and elements that contribute to occupational stress (OS) in many teachers. Through their research, Torlak and Kuzey (2019) showed how transformational leadership is applicable to Pakistan's higher education system and how this powerful strategy directly impacts employees' levels of job satisfaction across a range of higher education sectors. In order to help participants adjust to a new environment or changes in the educational setting, the study examined the effect of employee job satisfaction and employee job performance in terms of their contingent and significant relationship with the variable of inspirational motivation and intellectual stimulation provided by their managers and seniors.

Similarly, various studies have shown that technological stress causes negative effects like burnout (Zhao et al., 2022) , turnover propensity (Calif & Brooks, 2020; Galluch et al., 2015),less satisfaction with their jobs (Aktan & Toraman, 2022) and decreased productivity y (Tarafdar et al., 2007). Furthermore, techno stress in an organization is a major problem because stressful working conditions are linked to employee wellness, physical health, and work performance, as well as the amount of their job satisfaction (Aktan & Toraman, 2022).

On the other hand, Magistra et al. (2021) carried out research to identify the self- efficacy and motivational factors that influence the performance levels of significant higher education teachers, their impact on technological stress, and the performance of high school teachers in light of organisational commitment. The results revealed that self-efficacy had a substantial impact on the teachers' organisational commitment level, and that technological stress had a big impact on their performance levels as high school instructors (Magistra, 2021).

Wongtongkam et al. (2017) examined the role of mindfulness in the development and implementation of influential sustainability among coworkers and teachers in conclusive educational institutions. Many teachers and their work environments have been found to increase the level of tension and anxiety, which may affect their job performance and teaching style. When it comes to living a hopeful and constructive life, many students may find this to be harmful and toxic as they adapt and learn from their

fellow teachers and educational instructors (Wongtongkam, 2017).

Those who are mindful, according to Halliday et al. (2018), are more likely to be resilient in the face of adversity. Brown and Ryan (2003) define mindfulness as a psychological condition characterized by alertness to and awareness of current events. Being able to adjust to adversity depending on the circumstances, according to Bartz (2017), is an important trait of resilience. Mindful people can respond appropriately by paying attention to or being informed of incoming information, which increases their likelihood of becoming resistant (Bartz, 2017).

Mindfulness is defined by Zinn (2005) as "moment-to-moment, nonjudgmental consciousness that is developed by bringing awareness in a certain way that appears to be as non-reactively, non-judgmentally, and openheartedly practicable as possible." According to Hyland (2012), the education sector as a whole lacks a sociological approach and encourages mindless learning, which means that academic institutions and instructors frequently provide specific guidelines that discourage students from questioning and inquiring. Mindfulness practise, according to researchers, promotes creative thinking, which is essential in the learning process (Hayland, 2012).

Kabat (2013) discusses the necessary training for a mindfulness professor. Despite the fact that mindfulness teacher training is now widely available, there is concern that practices are now being presented by people who have not been adequately trained or practitioners. This is troubling, in part because there is a thin line between goal-oriented popular philosophy, which has theoretical underpinnings but can be inconsistent in its prototype system, and authentic mindfulness practice, which is consistent and constantly explored (Kabat, 2013).

Vacarr (2001) investigated the benefits of mindfulness in teaching in the context of increasing heterogeneity in the community and the classroom. While there is some variation among students in a classroom setting, it has been claimed that mindfulness increases compassion. The efficacy of an organisation is increased through consistent staff performance (Shet et al., 2019). As a result, managing employee performance in a continually shifting environment becomes exceedingly difficult (Rodrigues and Pinho, 2012). People have been compelled to use technological solutions by outside environmental changes like COVID-19. Worry and technological overload may decrease workforce effectiveness, neither of which

is always a good thing (Atmaja et al., 2018). According to McFedries (2003) and Maier et al. (2019), concern and challenging technology use can cause technostress, which can make workers doubt their competence. Also, it could result in withdrawal symptoms and harm worker productivity (Yang et al., 2017).

People have been forced by the COVID-19 to keep their distance from one another, putting their health in danger. Due to the requirement to operate remotely and maintain a distance, employees have been obliged to accept information and communication technology (ICT) as a suitable instrument (social distancing). Employees face technological stress as a result of the sudden necessity to adopt new technology and acquire new skills (La Torre et al., 2019). The technology advancement has enhanced working conditions in many ways. It can speed up work and boost productivity, and it is connected to certain work attitudes and behaviours, claim Tarafdar et al. (2015). (Yang et al., 2017). since embracing new technologies is not always simple, users can develop negative psychological associations with them (Prabhakaran and Mishr, 2012).

The term "technostress" refers to a negative psychological condition that is "associated with the use or "threat" of using modern technology" and is characterized by "worry, mental fatigue, cynicism, and a sense of ineffectiveness." (Salanova et al., 2013).Past studies on technostress have generally found that it can negatively affect an employee's capacity to execute their job. It is clear how technological stress affects workers' productivity negatively. Yet, empirical evidence for either a significant positive or minor influence of technological stress on workers' productivity is known (Tu et al., 2005, 2008).

Two boundary criteria are proposed that significantly strengthen the relationship due to the contradictory findings about the link between technological stress and employee performance. These boundary requirements work in tandem with employee training and their sense of creative self-efficacy (Hung et al., 2011). Workers may work more slowly, lose motivation, show less organizational commitment by disrupting their work-life balance, and perform worse as a result of the stress caused by the adoption of new technologies. (Raiien & Jonuauskas, 2013).

However, staff performance can be maintained through sustaining social interactions inside firms, such as by offering training and praising employees for their innovative attempts to perform better. The

staff's training in utilising technology has helped them perform better and achieve their objectives. Since technology may be used as a tool to manage work, employees who have received training in its use will probably perform better than those who have not. (Holman et al., 2020).

The study found that training and having a creative self-efficacy are efficient approaches to reduce the negative effects of technological stress and enhance performance. According to Wolor et al. (2020), a person's creative self-efficacy is thought to increase their excitement for their work, strengthen their organisational commitment, and improve performance. Within organizations, people engage in interaction and connection-building that is strengthened by a developing sense of reciprocity and trust. As a result of this reciprocity and trust, employees are motivated to improve their performance at work and support the organizational objectives. (Cook et al., 2013). The new research suggests that these encounters may reduce stress, boost motivation, and provide employees the certainty they need to perform better. The new phenomenon known as "technostress" hasn't been thoroughly investigated.

Researchers in burnout and tedium have conducted extensive research into the causes and consequences of exhaustion. It has been demonstrated that work overload leads to work exhaustion (Tabassum et al., 2017), hence it is logical to anticipate that workers who are experiencing techno-overload would also experience work exhaustion. As previously stated, the feeling of being enslaved by these technologies, referred to as techno-invasion, can cause psychological and physical harm. Additionally, insecurity implies a reduction of a person's psychological resources and is likely to lead to work exhaustion. ICTs' complexity and uncertainty force employees to commit more energy resources to completing routine tasks, which leads to work exhaustion. In conclusion, a significant psychological consequence of technological stress is work exhaustion. (Reinecke et al., 2017).

Techno stress is a condition that affects individuals who are unable to adapt and make an effective adjustment to using ICT.Some authors claimed that it is any detrimental effect of technology on bodily physiology, attitudes, or behaviors. Overload, job insecurity, and role ambiguity are all symptoms of technological stress. High levels of technological stress in an organization are associated with worse organizational commitment and work performance, lower satisfaction with technology, and greater turnover rates.

Additionally, due to technological stress, other authors have seen an increase in work- related burnout, anxiety, and depression. The negative effects of technological stress, on the other hand, are not limited to the workplace, and their effects are frequently associated with family issues such as work-family conflict and increased family burnout. It has been shown that receiving messages or emails after the workday interferes with family issues and contributes to work-family conflict (Marchiori, 2019).

Age, gender, ICT training, working environment, and workload can all have an effect on the negative impact of workplace technostress. Previous research found that as IT complexity increased, older and more experienced workers reported greater difficulty completing their tasks. Women reported higher levels of technological uncertainty in a similar study, whereas men reported greater effects from technological invasion. In contrast, no differences in workers' educational levels were discovered (Yadav, 2020).

As ICT is rapidly integrated into educational institutions, particularly in many developed countries, the problem of technological stress among teachers is becoming more prevalent. As a result, there is research focusing on the problem in the literature. Previous research discovered high levels of technological stress among elementary and secondary school teachers. Women faculty reported less techno-fatigue and anxiety than men faculty, according to their findings. Other authors came to the conclusion that, while the causes of technological stress are consistent across regions, the appropriate solutions may vary (Torres, 2021). Coklar and Akçay (2016) revealed that overall teacher technostress levels were average , general teacher techno stress levels varied with Internet use and time but were not affected by gender or length of service. Men and women instructors or school kinds did not significantly differ from one another, according to Syvänen et al. (2016); nevertheless, younger teachers reported experiencing less techno stress than older teachers.

Additionally, technological stress is influenced by education level and computer familiarity, according to research by Rebman and Kitchens (2014). Senior employees and women teachers experienced higher degrees of techno stress.According to Jena and Mahanti, there are a number of factors that affect techno stress, including gender, age, technological awareness, and academic tenure. In a 2013 paper on the effect of technological stress on job satisfaction and organizational commitment, Zainun found that

technological stress is negatively correlated with job satisfaction and organizational commitment.Agbu and Simeon (2011) found that older distance education instructors are more stressed by technology, with no significant gender difference. (Jena, 2014).

Techno-stress develops as a result of a poor person-technology fit, which can be mitigated by designing an ideal person-technology environment. Today, it is difficult to imagine life without technology. Every industry is becoming more reliant on technology. There are some disadvantages to using this technology. People there are dealing with technological stress issues such as stress. Teachers go through techno-stress when they can't use modern technologies in the classroom. Because psychological stress (anxiety and depression) causes staff turnover, unhappiness, and absenteeism, it is imperative that teacher stress be properly examined. This psychological stress will have an effect on the teacher's behavior (alcoholism, smoking, lifestyle, and sleep issues) as well as their physical health (headache, tachycardia, excessive stress, and hypertension). (Lee, 2017).

Teachers' stress affects classroom effectiveness. Thus it's crucial to deal with and manage teacher stress. The stress it creates seems to have stayed constant despite increased access to technology in classrooms.Viaduţ and Kallay (2010) claimed that teachers are frustrated and have negative feelings towards employing technology in the classroom (Lee, 2017). In collaborative teaching and learning contexts among Indian academics Jena (2015) discovered a strong correlation between techno-stress creators, techno-stress inhibitors,and consequences of techno stress. To explore techno-stress, Ragu-Nathan, Ragu-Nathan, and Tu created a thorough survey in 2002. Five technical dimensions were identified: overload, invasion, complexity, insecurity, and uncertainty (Tu et al., 2002).

Technological overload happens when employees are forced to work more quickly or even multitask in order to meet requirements of the job (Tarafdar et al., 2011).Technological overload may be made worse by job and information overload in the modern office (Ayyagari et al., 2011). Techno-uncertainty is a result of a lack of confidence in technology. The phrase distrust refers to the mind-boggling array of features and capabilities offered by technology. Take into account, for instance, concerns with technological applications, computer system failure, computer program/system failure, and faults (Purvis, 2011).

The ambiguity of mistrust can make people furious, worried, and frustrated. Smith and Carayon (1995) found a correlation between technological stress and a high level of job unhappiness, but the connection between employee job satisfaction and changes in performance brought about by the advent of computers. Doll and Torkzadeh (1989) found a link between employee job satisfaction and the stress of utilising technology because it offers too much information, necessitates frequent operating system or application upgrades, and obfuscates the boundaries between work and home. Stress brought on by technology is perceived negatively. It may raise the chance of memory loss, hostility towards other people, and a difficulty to relax, according to some researchers (Raiien & Jonuauskas, 2013). Several studies have been done by Korean academics to determine whether technological stress has an impact on job happiness. Technical support, in contrast to technological stress, which negatively impacts both, is what Park and Choi (2013) claim breaks the link between technical stress and job happiness or personal productivity.

According to research by Kim and Kim (2014), there is a negative correlation between technological stress and job satisfaction as well as between technological stress and company dedication and continuing commitment. The links between job satisfaction, connectivity at work after hours, and technology stress relievers were next investigated by the researchers. These experts deduced from the results of the experiments mentioned above that technological stress has an effect on employee job satisfaction. One of the main reasons why information and communication technology professionals are unsatisfied is work overload. Ayyagari's (2012) study of working professionals found a favourable correlation between stress and technological or information overload. Technology or work overload can exacerbate anxiety and tension, which can result in dissatisfaction and the need for overtime. Overloading with information and tasks can increase workplace resentment and animosity (Park, 2015).

Techno-stress has developed despite the rising usage of technology in the workplace, endangering employees' job satisfaction and garnering greater academic attention. Liu and Ramsey claim that teachers were unhappy with their working environments, time management, and workloads (2008). If issues are not resolved right away, low job satisfaction, according to Moomaw and Pearson (2005), can cause stress and burnout. It is clearly established in the literature that stress and job satisfaction are related. Klassen and Chiu's (2010) study found that teachers with high levels of overall teaching stress reported less work

satisfaction.Women are more stressed than mens, despite some data suggesting that men employees are more satisfied with their professions (Crossman & Harris, 2006). (Kamper & Steyn, 2006). As comparison to men instructors, elementary and secondary school teachers, Koustelios found that women were more satisfied with their working conditions (2001).

Teachers who are not computer proficient will have to work a lot of extra, mostly after school or at home. As a result, teachers will be required to work extended hours after school and on weekends. According to Coklar and Akçay (2016), it was determined that there were typical levels of technological stress among teachers; these levels did not vary by gender or years of employment but did by Internet usage time. Continuous technology training programmes lowered technological stress and strengthened participants' perceptions about technology, according to a quantitative study of salespeople. Further qualitative research involving a range of occupational groups has cited communication measures as important resources. Email culture was also mentioned, including informal, generally accepted rules on when to use appropriate media (such as an email or phone call), meeting in person rather than sending emails, and conversing with coworkers about digital communication, such as how to send less emails (Park, 2015).

High internal communication was found to mitigate the detrimental effects of technological uncertainty on commitment to change, but it did not attenuate the links between technological overload, invasion, complexity, or insecurity. Additionally, improved human resource management, a hierarchical, process-oriented organisational culture, transparent and equitable task distribution, and a reduced workload were recognized as organizational-level resources in managing work-related technological stress. Customer satisfaction seems to lessen perceived technical stress even though there was a significant correlation between the two (Mahanti et al., 2019). The theoretical framework was used to distinguish between problem- and emotion-focused coping strategies. Problem-focused and emotion-focused coping strategies were almost equally investigated in the included studies. Asking for help seems to be a problem-focused coping strategy for reducing technological stress at work. Speaking your frustrations out loud and avoiding technology are two often studied emotion-focused coping strategies for reducing technological stress.

According to research on the COVID-19 pandemic, digital detoxification practises like IT distance

can reduce the amount of stress brought on by working remotely and utilising ICT for work (Tu et al., 2019). Employees seem to employ a range of coping mechanisms in response to elevated technological stress. The health and job performance of employees who used a range of coping mechanisms to manage technological stress were rated higher, and they also reported having an easier time psychologically disengaging from work during downtime than those who used only a few coping mechanisms. Teenage study findings support the idea that greater levels of technological stress result in better coping. Yet, our data show that coping techniques are typically studied on an individual basis. The absence of team- based coping mechanisms in their case study astounded (Saxena and Lamest, 1998).

Every day at work and amid emergencies, employees are under technological stress, which has negative outcomes. The present Covid-19 pandemic is a very recent and well- known illustration of how technology has significantly improved remote working circumstances. Though, having the option to work from home and utilising technology frequently had a negative impact on employees' psychological health and increased the frequency of techno stress episodes. (Carroll & Conboy, 2020; Dey et al., 2020; Molino et al., 2020; Prasad et al., 2020).The COVID-19 pandemic study investigated the relation between employee mindfulness and proactive coping with technological stress. 714 workers from the service sector were surveyed. The findings demonstrated the critical role that dispositional and interpersonal mindfulness play in encouraging proactive coping. While employment ambiguity reduced the beneficial impact of promotion focus on proactive coping, technological stress amplified the detrimental effects of preventive focus. These results deepen our comprehension of how technology stress can be managed through mindfulness in difficult situations.(Tuan., 2022)

Defects, failures, delays, and interruptions at work (such as lost network connections, missing features, abrupt shutdowns, and crashes in programmes and systems) can affect employee effectiveness by about 30%. Additionally, this may result in feelings of technological stress. Workers worry twice as much and recover three times as slowly under such stressful circumstances (Huling, 2020). Ramiller and Swanson's (2009) study, which argued for its incorporation in an organization's IT innovation processes, introduced mindfulness to the Information Systems (IS) sector. The majority of the following investigations had a level of collective or organizational focus. (Aanestad & Jensen, 2016; Amaye et al., 2016; Butler &

Gray, 2006; Carlo et al., 2012; Teo et al., 2011).

A study looked at the connection between secondary teachers' levels of happiness, mindfulness, and job motivation. Using stratified sampling, 214 men and 256 femen teachers were included in the sample. Happiness and motivation have been found to be positively correlated, as have mindfulness and motivation. satisfaction and both intrinsic and extrinsic motivation exhibited good correlations, and extrinsic motivation and mindfulness were positively correlated.The motivation of men and women teachers differs significantly, as do their levels of enjoyment and mindfulness.

In terms of happiness, mindfulness, and motivation, women teachers scored on average higher than their men counterparts.(Bagherpour & Khadijeh., 2016)Furthermore, studies that focus on the individual level of mindfulness have recently been published. (Bernárdez et al., 2018; Jensen et al., 2017; Maier et al., 2017; Sun et al., 2016; Zou et al., 2015). Individual-level investigation into the application of IT systems broaden the concept by investigating at how mindfulness affects decisions about utilizing new technology and e- government services (Beck., 2017).

8. Literature Review of the study variables from Pakistan

A study by Khan and Rehman (2013) examined the connection between the idea of technological stress and job satisfaction among local librarians at numerous universities in KPK, Pakistan. The objective was to identify and categories any type of discomfort and technological stress that many librarians experience in an era where using technology has become a requirement for students and university staff. The results showed that among university librarians, techno stress and job satisfaction had a negative but statistically significant relationship (Rehman et al., 2013).

Many driving elements, according to Ahmed (2010), are directly related to an employee's job happiness and job performance. These studies also discovered a connection between internal motivations and workers' job performance and job happiness. Using the Herzberg theory's theoretical framework, the study was able to show that intrinsic motivational elements, in particular, have an impact on an employee's personal and occupational qualities. According to Kashif (2021), when provided the correct possibilities, employees can improve their job performance, which is essential for raising employee satisfaction. The study looked at how the ease of keeping up with coworkers' social life might influence other employees to

adopt social media applications and also have an impact on their job performance in terms of building a favorable online work image for other organisational workers. The results showed that employees who were engaged on various social media platforms had a higher likelihood of succeeding at their jobs.

Additionally, it enhanced their job performance because the support and appreciation from their coworkers and corporate staff served to inspire them. In a different instance, Mushtaque et al. (2021) looked into Pakistani higher education teachers' propensity and reluctance to employ online teaching modules, as well as the emotional contagion of job insecurity brought on by technological stress. The sample size for this study was gathered from several institutions using the practical sampling technique .Data was gathered using the Techno Stress Scale, the Job Insecurity Scale, and the Instructors' Willingness to Use Online Teaching Modes. The findings indicated a negative relationship between the teacher's readiness to use online teaching methods and the technological stress component. Additionally, it was found that as the usage of online instruction grew, many teachers encountered unfavorable outcomes in managing their online classrooms, exhibiting a lack of abilities that negatively impacted their job performance and degree of job satisfaction (Mushtaque et al., 2021).

Khalid and Mahmood (2011) offered evidence of the relationship between work satisfaction and a number of influencing factors in the Punjab province of Pakistan. A 72% response rate revealed that the disparity in pay between public and private universities in Punjab had an effect on many employees' job satisfaction after comparing four different relevant private and public institutions in the region. And because the compensation system varies and differs between many of these universities and their employees, this variance directly affects how motivated and dedicated they are to their jobs in relation to their pay structure (Mahmood et al., 2011).

Khan (2015) looked into the connection between Pakistani university librarians' job satisfaction and their Technology Management Competencies (TMC). In order to test and evaluate all four dimensions of the Technology Management Competencies (TMC) with JS, samples were gathered using a random sampling technique. The results, which were based on statistical analysis and a self- development scale, showed a favorable and significant correlation between all four TMC and JS dimensions and factors among university librarians. The results showed that information storage assurance and security skills were the top

competitors and JS predictors. Developing technology management skills is crucial for increasing the job performance of librarians (Nazar, 2014).

Nobody disputes the many roles that university libraries and librarians play since they act as the institutions' beating hearts. As technology has developed, the job of a university librarian has grown increasingly complicated. Technology has emerged as a critical issue for librarianship, particularly in developing nations (Chang & Chen, 2011). University librarians are under constant pressure from researchers to do tasks quickly, thus they must become technologically proficient to do so (Haider, 1998; Mahmood, 2003; 2012; Ameen, 2008, Ullah, 2011).

The traditional ideology of libraries have changed from those of a social group to those of a digital or virtual identity as a result of the dissemination and assimilation of these technological advancements. The responses of librarians to the use of technological skills, however, have remained static even while the needs of university library users have evolved (Tanlet & Tuamusak, 2011). (Ramazan, 2004; Sridhar, 1999). Furthermore, there is a dearth of competent staff and a decline in university librarianship in Pakistan (Ameen, 2008). Mahmood (2003) outlines a number of factors, such as a lack of technological know-how, a shortage of library and information science (LIS) education, and out-of-date LIS course materials, that contribute to the lack of skilled workers in Pakistani university libraries. along with librarians' collaboration and a lack of interest on their part to update their knowledge (Ullah, 2011).

9. Mindfulness as a Moderator

In psychology, the term mindfulness was first used to describe a complex, dynamic state of awareness, engagement, and attention. By the time Langer (1992) first used the term to describe a state of conscious awareness in which a person is implicitly aware of the context and content of information, the term had acquired a lot of usage. The individual in this situation deliberately constructs categories and distinctions in order to be open to new experiences.

Adaptive coping mechanisms including direct participation, acceptance, and reframing of the event are used more successfully by mindful people to manage stress. They typically avoid defensive behaviours like ignoring or running from dangerous stimuli (Weinstein, Brown and Ryan, 2009). According to studies, mindfulness training can improve emotional intelligence, mental clarity, and memory in addition to

reducing stress and anxiety (Davis & Hayes, 2011). Today, in order to improve cognitive abilities like performance, productivity, and creativity, large corporations like Facebook, Twitter, Google, and other companies have embraced mindfulness and provide it to their staff members. (Hadley et al., 2015).

One of the main tactics that conscientious people use when prolonged ICT use causes stress at work is prioritising competing tasks and the most crucial assignments (Shapiro, Wang and Peltason, 2015). Evidence from a number of earlier studies suggests that practising mindfulness helps reduce people's levels of workplace stress. (Roeser et al., 2013; Grégoire and Lachance, 2015; Virgili, 2015; Grover et al., 2016). The rise of new information technologies has increased workplace uncertainty and volatility, which has increased people's already high levels of stress and led to unfavourable outcomes like high absenteeism and decreased productivity, which have cost UK businesses over 70 billion pounds, based on the UK government's Mindfulness All Party Parliamentary Group (MAPPG, 2015) report. Yet, recent research suggests that using mindfulness as a stress-reduction strategy at work may be possible (MAPPG, 2015).

Findings suggests that engaging in mindfulness medications helps young people experience fewer unpleasant feelings and greater happy feeling. It also appear to help educational staff experience less sadness, anxiety, stress, and burnout. (Hwang et al.2017). Glomb et al. (2011) define mindfulness as a dynamic, rich state of in-the- moment awareness and observation that is free of reactivity and judgment. The term "mindfulness" is more accurately used to describe the practice of focusing on what is happening in the present moment while taking into consideration both internal and external stimuli. (Glomb et al., 2011). Instead of focusing on the past or the future, it places more emphasis on living in the now. (Langer & Moldoveanu, 2000).

On the other hand, mindlessness is defined as a condition of reduced attention combined with a strong reliance on and routine application of out-of-date classifications, standard operating procedures, rigid judgements, and rigid mental processes (Langer, 1992; Butler & Gray, 2006; Braun & Martz, 2007).There have been numerous definitions published in the literature in an effort to operationalize and define the concept of mindfulness, which, in the perspective of academics, is difficult to do (Chiesa, 2013). According to research, there are several different ways to classify mindfulness, including as a condition, a trait, an attitude, a type of meditation, and intervention programmes (Vago & Silbersweig, 2012; Choi & Leroy,

2015; Reb et al., 2015). One school of thought claims that mindfulness is a Buddhist philosophy-based concept that draws inspiration from other contemplative traditions and focuses on increasing attention and awareness (Brown et al., 2007). This contemporary study psychology then introduced mindfulness to Western medicine by using this traditional idea of mindfulness. Brown, Ryan, and Creswell define mindfulness as a receptive awareness of present-moment events and experiences (2007).

In 2004, Bishop and colleagues created an operationalization of mindfulness that incorporates (a) attention self-regulation and (b) experience orientation. Focus self- regulation is exemplified by sustained attention, attention switching, and the inhibition of elaborative processing. First of all, the ability to maintain situational awareness is referred to as sustained attention. Attention switching, also known as attention flexibility, is the capacity to change your focus from one object to another. People who exclusively concentrate on internal stimuli, such as thoughts, feelings, and sensations, are able to completely experience all mental and physical experiences and develop elaborative processing inhibition. (Bishop et al., 2004).

An individual who exhibits event orientation accepts, questions, and is receptive to every experience that arises (Bishop et al., 2004). Bishop and companions (2004). Based on the prominent definition of a founding father of mindfulness, it also entails self-observation and a decentering viewpoint on thoughts, feelings, and experiences (Bishop et al., 2004).According to Shapiro (2009), awareness is the consciousness that develops as a result of paying attention to whatever is occurring in the present moment with openness, acceptance, and discernment. Shapiro et al. (2006) contend that intention, attention, and attitude are the core principles of the concept in their groundbreaking work, which was the first to establish the basic underlying mechanisms of mindfulness. Because of this, the majority of studies that have attempted to define mindfulness concur that its key pillars are awareness and attention. (Shapiro et al., 2009). Based on Langer's (1989) study, which outlines the traits of a mindful individual. By developing the idea of collective or organizational awareness for high dependability organizations (HROs), Weick and Sutcliffe (2001) expanded the concept of mindfulness beyond individuals to organizations. According to Weick and Sutcliffe (2001), organizational awareness is the capacity and willingness to create new expectations that make sense of unexpected events as well as an ongoing differentiation and refinement of existing expectations based on newer experiences.

Collective mindfulness is defined by five fundamental processes: (a) concerned with operational failure, (b) attention, (c) unwillingness to simplify interpretations, (d) emphasis on resilience, and (e) handing off decision-making to specialists. By promoting and rewarding error reporting, the organization uses its mistakes and failures to understand and strengthen its system (Obstfeld, 2008).A mindful workplace cultivates a readiness among all members to approach problems in novel and diametrically opposed ways (Butler & Gray, 2006). As a result, the company can spot any possible anomalies and act promptly and effectively (Khan et al., 2013). The body of research shows that stress levels can be significantly decreased in organisational contexts by implementing mindfulness interventions programmes (Virgili, 2015). People can significantly lessen their experiences of stress at work by practising mindfulness (Grégoire and Lachance, 2015; Virgili, 2015; Grover et al., 2016; Zimmaro et al., 2016). Operational sensitivity is the capacity to maintain an in-depth awareness of the organization's operations at all times as well as a situational awareness that could be used to avoid possibly fatal failures (Sutcliffe, 2008).The empirical study of mindfulness and its uses have seen a sharp rise in interest in recent years. Recent studies have examined the advantages of mindfulness-based therapies for individuals, particularly in the medical profession (Gotink et al., 2015), but also in organizational and workplace environments. (Mills, 2015).

To present, a great deal of academic research has focused on the possible clinical advantages of mindfulness practices for people with their physical, mental, and psychiatric illnesses (Chiesa & Serretti, 2010).Mindfulness is one of the most effective methods to manage technological stress (Naik & Harris, 2013) .There is proof that those who experience both mental and physical symptoms and have chronic pain, cancer, cardiovascular disease, or mental health issues may benefit from mindfulness. Additionally, a substantial and growing amount of empirical evidence supports the link between mindfulness and reduction in depressive symptoms in both clinical and non-clinical groups. (Mills, 2015).By being conscious at work, one may increase their resilience and productivity while lowering attrition and absenteeism (Hyland et al., 2015).

A person who is mindful is able to adjust to changing settings and provide original solutions to issues that might occur at work (Langer, 1989; Roberts, Thatcher, and Klein, 2007). Studies have been done using Langer's definition of mindfulness or his description of qualities of a mindful person. The work of

Weick and Sutcliffe (2001) broadened the application of mindfulness from individuals to groups. There is currently little research on the person level (Sun 2011; Sun et al. 2016; Wolf et al. 2011), with the majority of IS work focusing on the organisational level (Carlo et al. 2012; Vogus and Sutcliffe 2012). In order to demonstrate how effective and protective they are against workplace techno stress, we will look at the impacts of dispositional mindfulness (also referred to as mindfulness throughout the research) and IT mindfulness on it. Many studies (Grégoire & Lachance, 2015; Shapiro et al., 2015; Shonin & Van Gordon, 2015; Van Gordon et al., 2014) have investigated the effectiveness of mindfulness in lowering workplace stress. By using mindfulness, people could reduce the growing workplace uncertainties brought on by the use of new technologies. A mindful individual may lessen his feelings of job insecurity by considering other points of view and understanding that the same situation or stimulus is a different stimulation regardless of how it is described or perceived. (techno insecurity) (Langer, 1989).

Because of job insecurity, some people have emotions of anxiety and tension about the future (Jacobs and Blustein, 2008; Glomb et al., 2011). Prior research has demonstrated that mindfulness can decrease the detrimental impacts of information overload (Wolf, Pinter, and Beck, 2011). Because they are alert and focused on their current experiences, persons who practice mindfulness are better able to accept interruptions from various ICTs, such as emails and messages outside of work contexts. They are more likely to perceive these circumstances as less scary and respond with objectivity, lessening the impact of techno invasion, by carefully considering how to react (Alberts and Hülsheger, 2015; Schultz et al., 2015)

According to the results of a study by Ioanna & Papazafeiropoulou (2017) employees feel less worried if they are more knowledgeable about technology. Individual mindfulness has been shown to have positive impacts in reducing the negative impacts of information overload, based on empirical research (Wolf, Pinter,and Beck, 2011).A waitlist-control condition was used to assess how mindfulness training (MT) affected teachers' stress and burnout. Improvements in self-compassion, mindfulness, and attention, as well as decreased stress and burnout, were seen in the MT group of teachers. 87% of teachers who finished the programme said it was worthwhile. These results imply that MT might be a useful strategy for lowering job-related stress and enhancing teachers' wellbeing.(Roeser et al. 2013). Research have also examined how mindfulness improves worker wellbeing, which has been connected to a number of workplace variables like

productivity, performance, intention to leave the organization, and absenteeism (Dane, 2013; Glomb et al., 2011; Good et al., 2016; Schultz et al., 2015). Academics claim that more research is required since the coping strategies, feelings, and actions people take in response to perceived threats have not received enough attention.

However little recent study has looked at the connection between technology stress and mindfulness. According to the limited research, IT mindfulness, which is focused on IT use and its conditions, lowers white-collar professionals' perceptions of technological stress while also reducing job burnout brought on by technological stress (Pflügner et al., 2021). However, since the idea of IT mindfulness in the IS sector was first envisioned as a theoretical construct, there have been no improvements in developing policies or programs that can promote and strengthen IT mindfulness. (Roberts et al., 2007b; Thatcher et al., 2018). Prior study on IT mindfulness and techno stress overlooked the significance of mindfulness as a general, broad trait that may alter workplace techno stress situations by contrasting its effect on techno stressors with other IS context- specific traits (such as personal innovativeness in IT)(Thatcher et al., 2018).

IT Technology in the workplace is not seen as a threat but rather as a challenge by the mindful worker who feels in control of it (Thatcher et al., forthcoming; Roberts, Thatcher, and Klein, 2007b).In order to handle challenges that arise during routine work activities, a mindful person develops fresh, original solutions or even finds different solutions (Langer, 1989; Roberts, Thatcher, and Klein, 2007b).Wolf, Pinter, and Beck (2011) have empirically demonstrated, with an emphasis on the IT context, that by focusing their attention on the important job at hand, mindful individuals may mitigate the impacts of information overload.

Technostress situations can be effectively reduced by people who are honest and mindful of the systems and ICT applications they are utilising (Thatcher et al., forthcoming).The capacity to stop responding automatically and habitually to difficult situations and stand back; As a result, people have time to stop, think, and carefully consider how to respond to obstacles at work (Glomb et al., 2011; Malinowski and Lim, 2015. A mindful person sees stressful situations as manageable rather than unpleasant by establishing a distance between emotions and reactions (Schultz et al., 2015). Multiple research

investigations have shown that practising mindfulness offers a range of psychological benefits. Additionally, it decreases stress, emotional exhaustion, and work-family conflict while increasing job satisfaction, disengagement from work, positive affect, and self- efficacy. (Tetrick & Winslow, 2015).

Therefore, more research is needed to investigate the impact of mindfulness as a potential stress reliever as a result of prolonged IT use. Mindfulness is defined as "paying attention to the experiences that are unfolding in the present moment in a nonjudgmental or accepting manner" (Baer et al., 2006). Buddhist tradition served as the inspiration for mindfulness training, which first became popular as treatment for coping with chronic illnesses (Zinn, 2006). Currently, it is gaining popularity in the disciplines of organizational and work psychology (Glomb et al, 2011). When faced with difficult situations, mindfulness promotes the growth and development of more positive and less negative emotions (Glomb et al., 2011; Good et al., 2016). People engage in states of awareness at different times, and this variation has been acknowledged as a constant quality called trait mindfulness.

By contrast, mindfulness describes how much a person is aware of and pays attention to stimuli occurring in the present.Mindfulness is a mental state that fluctuates minute by minute. (Glomb et al., 2011). A mindfulness intervention and the continuous practice that goes with it can lead to increased state mindfulness. (Hülsheger et al., 2015). Therefore, with enough practice and repetition, the mode of state awareness can become more stable and lead to controlled attention in everyday situations (Jamieson & Tuckey, 2017). Furthermore, mindfulness training alters underlying systems, according to data from neuroimaging studies (Slagter et al., 2011). A coach and group training sessions are part of traditional mindfulness programs like Mindfulness-Based Stress Reduction, which are longer than 8 weeks. (Kabat, 1990). However, it has also been shown that far shorter-term self-training programmes are efficient. (Hülsheger et al., 2013). Being simpler to integrate into everyday routines, brief self-training interventions may be more effective in a working population (Moore et al., 2012).

Employee mindfulness and job happiness have been linked in a few recent research (Andrews et al., 2014; Hülsheger et al., 2013; Charoensukmongkol, 2014; Reb et al., 2015), however the relationship is only marginally positive.Additionally, Foureur and colleagues' (2013) qualitative study found that mindfulness training can lower perceived stress and increase job satisfaction. People who have severe symptoms may

also gain from such interventions. After receiving mindfulness training, the majority of previously diagnosed workers in a research reported that their levels of occupationally related stress, anxiety, and depression were no longer in the clinical range. (Gold et al., 2010). Modern studies have demonstrated that the idea and practise of mindfulness can enhance workers' performance by allowing them to stay stress-free and concentrated on the task at hand in the present. (Sattar, Khan, & Nawaz, 2010) and (Juneja). In other words, by promoting and engaging in mindfulness practises at work, technostress in job outcomes can be greatly reduced. (Chu & Mak., 2020).

Understanding how people perceive stress is necessary to comprehend the connection between mindfulness and job happiness.Compared to individuals who don't practice mindfulness, those who do experience less stress, report fewer stressors, and appear less stressed (Foureur et al., 2013). Weinstein and colleagues (2009) discovered that more mindful persons have a propensity to maintain objectivity and utilise adaptive coping techniques as opposed to avoidance coping strategies when faced with a challenging scenario. Consequently, they have more positive than negative emotional reactions. (Hülsheger et al., 2013; Kiken & Shook, 2011). Additionally, mindful individuals use more effective stress- management strategies in both specific hazardous circumstances and everyday tasks. (Weinstein et al., 2009).

The relationship between mindfulness and job satisfaction might also be explained by interpersonal connections. Mindfulness practitioners tend to be more accepting and sympathetic, which can improve interpersonal dynamics at work (Epstein et al., 2015; Glomb et al., 2011). They typically pay greater attention to their surroundings and are less self-conscious about any unfavourable opinions that others may have about them. They also employ social support more efficiently and steer clear of discouraging comparisons with others (Carson & Langer, 2006). (Glomb et al., 2011). This could facilitate better communication amongst coworkers (Charoensukmongkol, 2014). Additionally, the connection between mindfulness and job happiness might be explained in terms of emotional awareness. Job happiness is closely correlated with emotional awareness (Glomb et al., 2011). Recent research suggests that there may be slightly beneficial association between employee mindfulness and workplace performance. (Dane & Brummel, 2013; Reb et al., 2015). It would appear that people who are more aware while working are more productive. There may be several ways to account for this relationship.

The primary mechanism for the advantageous association is enhanced attention stability and control. People who are more mindful are better at focusing and completing activities than those who are less mindful (Good et al., 2015, Mrazek et al., 2014). The ability to focus on details and a wide range of information is improved in those who practise mindfulness, making it easier for them to spot potential issues and come up with solutions (Good et al., 2015). According to several studies (Andrews et al., 2014; Robins et al., 2009; Zhang & Wu, 2014), people who are mindful make fewer mistakes and avoid risky circumstances. It is simpler to deal with distracting ideas when attentional control and stability are enhanced, which are an indication of absentmindedness and reduce work performance. This kind of behavior is characterized by mind-wandering while doing a task (Brown & Ryan, 2003; Reb et al., 2015; Mrazek et al., 2014).

Improved decision-making is another element that explains the relationship between mindfulness and job performance. The intentional decision-making process that is facilitated by mindfulness encourages the control of impulses and the careful evaluation of all options before acting. The intentional decision-making process that is facilitated by mindfulness encourages the control of impulses and the careful evaluation of all options before acting. Additionally, it enhances problem-solving abilities by raising awareness of various viewpoints and the rate at which they are absorbed (Glomb et al., 2011; Langer, 1989). Additionally, mindfulness makes plans and intentions come true, which results in more effectively accomplished professional goals. (Chatzisarantis & Hagger, 2007; Reb et al., 2015).Numerous meta-analytic studies have examined the relationship between job performance and job satisfaction. In their meta-analyses, Petty, Mcgee, and Cavender (1984) found an average correlation of r =.31 whereas Judge and colleagues (2001) found an average correlation of r =.30. According to individual study findings, which ranged from r =.04 to r =.86 (Judge et al., 2001; Petty et al., 1984, moderators that may have an impact on the relationship between job performance and job satisfaction must be taken into account.

Previous studies have examined factors including rewards, compensation, the intricacy of the profession, and self-esteem. Only a handful of the studies that focused on these moderators had significant findings, with varied results being reported (Judge et al., 2001). To the relationship between job performance and job satisfaction, we believe that mindfulness can add another moderator. Though there is

mounting research linking mindfulness to performance and job happiness. These connections, while small, do not rule out the possibility that mindfulness could have a moderating influence. It is contend that while aware individuals are more task-focused and are less distracted by their feelings and beliefs regarding their jobs, attitudes like job satisfaction have less of an impact on their performance (Marzek, 2014).

10. Mindfulness Reduces Responsiveness by Influencing Attention

The response to interruptions caused by technology may be decreased with a quick mindfulness self-training intervention. During the interruption lag, the core work is typically neglected in favour of quick response times. A lengthier resuming delay would be beneficial, nevertheless, as it would allow for the reduction of costly regulatory processes (Baethge & Rigotti, 2010). Tams and colleagues (2015) discovered that those with greater inhibitory deficits were more likely to experience the negative effects of technology-mediated interruptions in an experimental study with high interruption salience. Furthermore, Russell and colleagues' (2017) correlational field investigation found that attentional control impairments in low conscientiousness are associated with more frequent email checking.According to Good's (2016) integrative paradigm for tying it to workplace outcomes, an increase in attention is the first advantage of mindfulnes. Attentional stability, control, and efficiency are better descriptions. Attentional control is the capacity to successfully direct attention in the face of competing demands. (Ocasio, 2011).

Among other aspects, mindfulness reduces emphasis on distracting information, which has an impact on attentional control. (Good et al., 2016). Moore and colleagues (2012) discovered, through a longitudinal randomised control group EEG experiment, that mindfulness meditation modifies the allocation of cognitive resources, enhancing self- regulation and attention. According to other studies, people who practice meditation are less prone to routine and emotional distractions (Tang et al., 2007). (Allen, 2012). According to Hülsheger et al. (2013), mindfulness can be seen as an efficient method for controlling one's emotions.

CHAPTER 3

Research Methodolog

1. Introduction

The current study set out to determine how techno stress would impact faculty members' job motivation and job satisfaction as well as how mindfulness would operate as a moderator.

2. Research Design

A quantitative research design was used for the current investigation. Utilizing a cross- sectional design, the relationship was investigated between Techno stress, Job motivation and Job satisfaction among faculty members of higher education institutions: Role of mindfulness. The study was conducted in two phases which are mentioned below with further details.

Phase I

Phase I comprised of pilot study. To assess the link between study variables and the psychometric properties of the instruments

Phase II

Phase II entails the main study, which focuses on the relationship between technological stress, job motivation, and job satisfaction among faculty members at higher education institutions, as well as the moderating role of mindfulness. The impact of demographics on the variables under study was examined as well. Sample of the study included 300 faculty members from different universities of Rawalpindi and Islamabad.

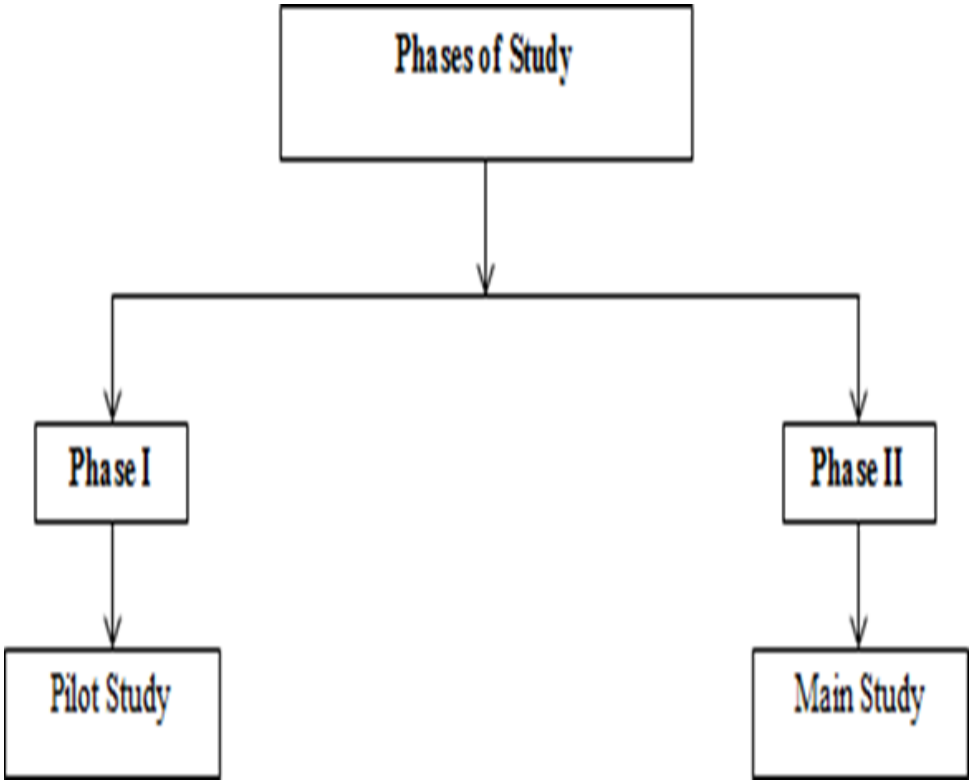


Fig 2: Model of Research Design

3. Research Questionnaires

1. Demographic sheet

The demographic sheet of the current study was composed of following variables such as age of the faculty members, gender and job status on the study variables.

4. Instruments

2. Techno-stress Questionnaire (Tarafdar, 2007)

The current study used the Techno Stress Questionnaire by Tarafdar to quantify techno stress among higher education staff. The scale features 23 questions . This scale's subscales incled:(1) techno overload, (2) techno invasion, (3) techno complexity,(4) techno insecurity, (5) techno uncertainty. A 5-point Likert scale is used. Overall Cronbach Alpha reliability of sacle is.95.

3. The Mindful Attention Awareness Scale (MAAS) (Brown and Ryan 2003)

The MAAS is a 15-item scale that evaluates a fundamental component of consciousness: a reactive psychological condition where attention is governed by a slight awareness of what's happening right now and just monitors what might be happening. The Likert scale it used had an alpha value of 0.92 (Barajas & Garra, 2014).

The MAAS was created to assess a person's level of mindfulness; Responses are graded on a six-point Likert scale, with 1 signifying almost always and 6 signifying almost never. The test's average score was regarded as an individual score; a high score indicated a high level of mindfulness, and vice versa. For the aim of validation, Brown and Rayan used the mindful attention awareness scale on various student groups and the broader adult population. This test's test-retest reliability was.81 (Brown et al., 2003; MacKillop 2007).

4. Job Satisfaction Scale (Macdonald and Maclntyre, 1997).

The Job Satisfaction Scale (JSS), created by Macdonald and MacIntyre, was used to measure job satisfaction. With a Cronbach Alpha reliability of 0.85.It includes 10 items and is scored on a Likert scale of 1 to 5, with 1 representing strongly disagree and 5 representing completely agree

5. Work Extrinsic and Intrinsic Motivation Scale Trembly et al., 2009)

Job motivation was assessed by Taylor et al. using the 18-item Work Extrinsic and Intrinsic Motivation Scale (WEIMS), which is based on self-determination theory. (Deci & Ryan, 2000). It's subscales include Extrinsic motivation and intrinsic motivation.Between 0.64 and 0.85 is the Cronbach alpha reliability range of overall scale.

6. Sampling Technique

For the purpose of this study, 300 faculty members from educational institutions of Rawalpindi and Islamabad have been contacted for the purpose of data collecting. A purposive convenient sampling method was adopted. Neither College faculty was included as the participant nor the administration faculty. The phase 2 was started after the completion of first phase. In the study's second phase, various analyses were performed out to examine the effects of study variables.

Inclusion Criteria

1. For current study only faculty members of higher education institutions has been approached for data collection.

2. For current study researcher has approached faculty members only from universities of Rawalpindi and Islamabad.

Exclusion Criteria

1. Faculty members from colleges were not included.

2. Administration faculty members were not included.

7. Procedure

For conducting a Quantitative Research topic “Techno stress, Job motivation and Job satisfaction among faculty of higher education institutions: Role of Mindfulness” was selected. Research received "Institutional Review Board" approval (IRB). Researcher has selected a sample of faculty members(N=300). Participants for the data collection were selected from different universities of Islamabad and Rawalpindi(Numl University ,Islamic University ,Iqra University,Foundation University,Fatima Jinnah University and Rawalpindi University For Women). Access was granted to universities in Rawalpindi and Islamabad after getting permission and presenting a study letter describing the data collection provided by the university supervisor.

Informed consent of the faculty was taken. The informed consent procedure included informing the participants about the study, giving them the option to withdraw their consent at any time, and maintaining the confidentiality of the information they gave. It simply takes 20 to 25 minutes for faculty members to complete the questionnaires and data sheets that were provided. Very calm and relax environment was given to them to fill the provided questionnaires.

The participants were then given a demographic sheet and all the questionnaires for which the authors had already given permission. (see Annexures). Guidelines on how to fill out the surveys were given to the participants. They were told there are no correct or incorrect responses. The participants received certainty that the information they provided would only be used for academic purposes and their responses will be kept anonymous.In order to improve the effectiveness of the research, a pilot study was carried out.

After the pilot study, the main study was performed in order to thoroughly investigate the results of the data gathered.

CHAPTER 4

PHASE I: PILOT STUDY

Objectives

The study's objectives are listed below:

1. To examine the reliability of the scales for the present study.

2. To find out the direction of relationship between Techno stress,job motivation and job satisfaction among faculty of higher education institutions and moderating role of mindfulness.

Sample:

For pilot study (Phase I) data were gathered from 100 faculty members of higher education institutions using purposive convenient sampling technique.

Instruments

1. The Technostress questionnaire (Tarafdar 2007).

2. Work Extrinsic and Intrinsic Motivation Scale (Tremblay et al, 2009)

3. Job Satisfaction Scale (Macdonald and Maclntyre 1997).

4. Mindful Attention Awareness Scale (Brown and Ryan 2003).

Procedure

Authors' permission was obtained before using the scale. Information was gathered from several universities of Islamabad and Rawalpindi (Iqra University,Foundation University,Numl University,Islamic University,Fatima Jinnah University,Rawalpindi Women University. All participants were asked for their permission. Additionally, Along with the scales used in the main study.

Statistical plan

The data was gathered in SPSS 21 after the phase of collection. Then, a number of analyses were carried out to evaluate the proposed hypotheses and assess the psychometric properties of the scales employed in the study to gather information from the target population. Percentages and frequencies were computed for the demographics variables such as category of gender and job status.. All the obtained results are mentioned in the below given tables.

Table 1.

Demographic Characteristics of gender differences and Job status (N=100)

Variables	***f (%)***
Gender	
Males	50(50)
Females	50(50)
Job Status	
Visiting Faculty	23(23.0)
Tenure Track	3(3.0)
Contract	13(13.0)
Regular	61(61.0)

f=frequency, %=percentage

Descriptive analysis was used to determine the gender and job status of the the study (N=100). It comprised of 50% male and 50% female faculty members. Furthermore,23% members belong to visiting faculty,13% belong to tenure track, 13% were on contract basis and 61% were regular faculty members.

Table 2.

Psychometric properties of the study variables (N=100)

Variables	No. of Items	α	M	Range				
				SD	Actual	Potential	Skewness	Kurtosis
Techno stress	23	0.87	67.2	14.69	23-108	23-115	-0.06	0.28
Job Motivation	18	0.83	20.05	7.36	9-50	18-126	-0.37	0.05
Job satisfaction	10	0.80	18.46	7.63	8-43	10-50	0.75	0.93
Mindfulness	15	0.84	17.96	7.32	8-42	15-90	-0.01	-0.28

Note= a= Cronbach's Alpha, M= Mean, SD= Standard Deviation

The above table shows descriptive statistics of the pilot study,which include mean(M), Standard deviation(SD),Alpha coefficients(α),range,skewness and kurtosis on a small sample of study variables (N).According to reliability tests, the Cronbach alpha values for each variable ranges from average to high. Scales possess sound internal consistency which means scales are reliable for the assessment of variables for which they have been used to assess. For a test to be deemed satisfactory, the reliability coefficient must be between.7 and.9 (Kline, 2000). The normality checks and parametric test assumptions are satisfied, and the data are distributed normally according to the skewness and kurtosis (+2 to -2). The test can therefore be used to support the theories.

Participants have scored high mean on techno stress scale (M = 67.20, SD =14.69) while mean on job motivation (M=20.05, SD = 7.36), job satisfaction (M = 18.46, SD = 7.63) and mindful attention awareness scale (M = 17.96, SD = 7.32). The skewness and kurtosis values indicated a regularly distributed distribution of the data.

Table 3.

Descriptive statistics and correlation among Technostress, Job motivation, Job satisfaction and Mindfulness. (N=100)

Scales	M	SD	1	2	3	4
1.Technostress	67.20	14.69	-			
2.Job motivation	20.05	7.36	-.73**	-		
3.Job satisfaction	18.46	7.63	-.74**	.68**	-	
4.Mindfulness	17.96	7.32	-.72**	.67**	.94**	-

***p= < 0.01*

Table 3 shows the descriptive statistics and correlation among study variables. The findings of the research showed that techno stress and motivation were negatively correlated; Job motivation has a positive relationship with job satisfaction. However, it is additionally stated that there is a significant negative correlation between techno stress and job satisfaction..Furthermore, mindfulness has a negative correlation with techno stress ,but a positive correlation with job motivation and job satisfaction.

CHAPTER 5

Phase II: Main Study

A main sample was gathered in the second stage of the research in order to conduct the further proposed analysis.

Objectives

The following objectives are part of the study:

1. To investigate the effects of techno stress on job motivation and job satisfaction among faculty of higher education institutions.
2. To find the relationship between job motivation and job satisfaction among faculty of higher education institutions.
3. To explore the role of mindfulness on Techno stress, job Motivation and Job Satisfaction among faculty of higher education institutions.
4. To investigate the impact of demographic factors on the research variables, such as gender and job status.

Hypotheses

1. There will be a negative relationship between Techno stress and Job Motivation among faculty members of the higher education institutions.
2. There will be a negative relationship between Techno stress and Job Satisfaction among faculty members of the higher education institutions.
3. There is a negative relationship between sub scales of techno stress and job motivation.
4. There is a negative relationship between sub scales of techno stress and job satisfaction
5. Female faculty members are high on Technostress as compared to male faculty members.
6. Tenure track faculty members are high on Techno stress as compared to visiting faculty,contract and regular faculty members.
7. Mindfulness will buffer the effect of Techno stress on Job Motivation and Job Satisfaction among

faculty members of the higher education institutions.

Data Analysis

Initially demographic details of main study variables were computed for the main study (N=300); following descriptive statistics,Pearson Product Moment Correlation was computed to determine the relationship among study variables, t-test was applied to determine the mean difference on demographic variables,and Regression was applied to examine the effect of Independent variables on dependent variables using SPSSv-22. Moderation analyses were conducted using Process macro by Andrew Hayes in SPSS.

Results

Table 4.

Demographic Characteristics of the main study variables (N=300)

Study Variables	*f (%)*
Gender	
Males	150(50)
Females	150(50)
Job Status	
Visiting Faculty	46(15.3)
Tenure Track	10(3.3)
Contract	41(13.7)
Regular	203(67.7)

f=frequency, %=percentage

Table 4 shows the demographic details of Main study variables (Gender and Job status) of total sample (N=300).It comprised of 50% males and 50% female faculty members. Out of 300 participants (15.3%) were visiting faculty,(3.3%) were on tenure track,(13.7%) were on contract basis and (67.7%) included regular faculty.

Table 5.

Psychometric properties of Main study variables (N=300)

Scales	No. of Items	**α**	M	SD	Range Actual	Range Potential	Skewnes	Kurtosis
Techno stress	23	.85	67.20	14.64	23-108	23-115	-.06	.28
Job motivation	18	.82	20.01	7.35	9-50	18-126	-.37	.05
Job satisfaction	10	.88	20.52	7.70	8-43	10-50	-.75	.93
Mindfulness	15	.86	19.15	7.69	8-42	15-90	-.01	-.28

Note= a= Cronbach's Alpha, M= Mean, SD= Standard Deviation;

Table 5 lists all the results of the descriptive analyses together with Cronbach's alpha reliability scores of main study variables, which include mean (M),standard deviation (SD), Alpha coefficient (α), range, skewness and kurtosis on a large sample of study variables (N=300).According to reliability tests, the Cronbach alpha values for each scale range from average to high. For a test to be deemed satisfactory, the reliability coefficient must be between.7 and.9 (Kline, 2000,). The normality checks and parametric test assumptions are satisfied, and the data are distributed normally according to the skewness (+2 to -2). Participants have scored high mean on techno stress scale (M = 67.20, SD =.14.64) while mean on job motivation (M=20.01, SD = 7.35), job satisfaction (M = 20.52, SD = 7.70) and mindfulness (M = 19.15, SD=7.69). Data is regularly distributed, as seen by the skewness and kurtosis values.

Table 6.

Correlation matrix of the study variables (N=300)

	Scales	M	SD	1	2	3	4
1	Techno stress	67.20	14.64	-			
2	Job motivation	20.01	7.35	-.73**	-		
3	Job satisfaction	20.52	7.70	-.60**	.53**	-	
4	Mindfulness	19.15	7.69	-.53**	.47**	.62**	-

***p= < 0.01*

Table 6 displays the descriptive statistics and correlation between the research variables. The study's findings showed that technological stress and motivation were negatively correlated, Job satisfaction and job motivation are positively correlated. However, it is additionally stated that there is a significant negative correlation between technological stress and job satisfaction. Furthermore, mindfulness has a negative correlation with techno stress ,but a positive correlation with job motivation and job satisfaction.

Table 7

Descriptive statistics and correlation among techno stress sub dimensions, job intrinsic and extrinsic motivation ,job satisfaction and mindfulness among faculty members of higher education institutions. (N=300).

	M	SD	1	2	3	4	5	6	7	8	9
Techno_overload	16.05	4.91	-								
Techno_Invasion	7.96	2.86	.897**	-							
Techno_Complexity	15.32	4.26	.613**	.639**	-						
Techno_Insecurity	16.00	4.65	.624**	.646**	.822**	-					
Techno_Uncertanity	10.92	3.83	.621**	.634**	.798**	.871**	-				
Intrincic_motivation	9.27	2.04	-.344**	-.338**	-.235**	-.229**	-.266**	-			
Extrinsic_motivation	52.59	8.65	-.485**	-.499**	-.459**	-.468**	-.476**	.735**	-		
Job Satisfication	23.72	7.17	-.619**	-.615**	-.450**	-.490**	-.495**	.486**	.716**	-	
Mindfulness	54.62	13.6	-.962**	-.957**	-.653**	-.647**	-.648**	.368**	.501**	.650**	-

*p<.05 **p<.01 ***p<.001

Table 7 shows the descriptive statistics and correlation among variables under study.It indicates that techno overload, techno complexity,techno insecurity and techno uncertainty have positive relationshonship with each other but they have negative relationship with work extrinsic and intrinsic motivation,job satisfaction and mindfulness,Intrinsic and extrinsic motivation has positive relationship with job satisfaction and mindfulness.It also indicates that job satisfaction has positive relationship with mindfulness.

4.3 Regression Analysis

The impact of the independent variable (Techno stress) on the dependent variables (Job Satisfaction and Job Motivation) were assessed using a simple linear regression analysis. The results along with interpretation are mentioned in the below given table.

Table 8.
Simple linear regression on job motivation by techno stress (N=300)

	Job Motivation						
						95 % CL	
Variables	B	SEB	β	t	p	LL	UL
Techno Stress	-.36	.02	-.73	-18.69	.000	-.40	-.33
R = .73, R^2= .54, (F = 349.38**)							

Table 8 displays a simple linear regression analysis to check the predictive role of techno stress on job motivation. The regression analysis's findings showed that the predictor accounted for 54% of the variance. (F=349.38 ,p=.00).Techno stress performs significant role in predicting the job motivation among faculty members. Futhermore, the beta values is negative which indicates the negative relationship between Techno stress and Job Motivation.

Table 9.

Simple Linear Regression on job satisfaction by techno stress (N=300)

	Job satisfaction						
						95 % CL	
Variables	B	SEB	β	t	p	LL	UL
Techno Stress	-.31	.02	-.60	12.97	.000	-.36	-.26
R = .60, R^2= .36, (F = 168.37**)							

Table 9 provides a simple linear regression analysis to check the predictive role of techno stress on job satisfaction. The regression analysis's findings showed that the predictor accounted for 36% of the variance. The model was fit for the data (F=168.37,p=.00). Techno stress performs significant role in predicting the job satisfaction among faculty members Furthermore, the beta value is negative which indicates the negative relationship between Techno stress and Job Satisfaction.

Table 10.

Multiple linear regression on job satisfaction by techno overload,techno invasion,techno complexity,techno insecurity and techno uncertainty (N=300)

				95.0% CL	
	B	SE	β	LL	UL
(Constant)	20.04	1.84		16.40	23.68
Tech Overload	.25	.10	.17	.05	.46
Tech Invasion	.11	.17	.04	-.22	.44
Tech Complexity	-.13	.12	-.08	-.38	.11
Tech Insecurity	-.24	.10	-.15	-.44	-.04
Tech Uncertainty	.42	.11	.22	.19	.65
			R=.31, R^2=.07	(F=6.282**)	

*p<.05 ** p<.01 ** p<.001

Table 10 shows the impact of techno stress dimension i.e techno overload,techno invasion,techno complexity,techno insecurity and techno uncertainty on job satisfaction among faculty members.The value of R^2 is .07 which exhibited that predictor's dimensions explained 7% variance.The model was fit for the data (F=6.282, p=.00). The only Techno stress dimensions i.e techo overload (p=.015),techno insecurity (p=.015), techno uncertainty (p=.001),perform significant role in predicting job satisfaction. Techno invasion and techno complexity were not found to have statistically significant effects on job satisfaction (p > 0.05). This suggests that, in this study, these dimensions of techno stress did not have a measurable impact on faculty members' job satisfaction.

Table 11.

Mean, standard deviations and t-values for males and females on study variables (N=300)

Variables	Male (n=150)		Female (n=150)				CI 95%		
	M	SD	M	SD	t	P	LL	UL	Cohen's d
1.Intrinsic motivation	3.19	0.692	3.51	0.917	-3.41	.001	-0.50	-0.13	0.39
2.Extrinsic motivation	41.38	4.61	44.45	8.62	-3.78	.00	-4.66	-1.48	0.44
3. Job Satisfaction	3.73	0.504	4.10	0.826	-4.75	.000	-0.53	-0.22	0.05
4. Mindfulness	4.29	0.668	4.01	0.915	3.10	.002	0.10	0.47	0.34
5.Techno overload	1.61	0.683	1.92	0.945	3.23	.013	-0.49	-0.12	0.37
6. Techno invasion	1.65	0.723	1.96	0.961	-3.18	.002	-0.50	-0.11	0.36
7. Techno complexity	1.19	0.684	2.31	0.905	-4.31	.000	-0.58	-0.21	1.39
8. Techno insecurity	1.67	0.69	2.12	0.933	-4.71	.000	-0.63	-0.26	0.54
9.Techno uncertainty	1.76	0.754	2.16	0.937	-4.07	.000	-0.59	-0.20	0.47

Table 11 shows mean differences between men and women faculty members on all study variables.Results revealed that Intrinsic motivation is more in female faculty members (M=3.51,SD=.91) than male faculty members (M=3.19,SD=.69). Extrinsic motivation was found more in female faculty members (M=44.45,SD=8.62) than male faculty members (M=41.38,SD=4.61). Job satisfaction was more in female faculty members (M=4.10,SD=.82) as compared to male faculty members (M=3.73,SD=.50).Mindfulness was experienced more by male faculty members (M=4.29,SD=.66) than female faculty members (M=4.01,SD= .91). Techno overload was experienced more in female faculty (M=1.92,SD=.94) than male faculty members (M=1.61,SD=.68).Techno invasion was experienced more in female faculty (M=1.96,SD=.96) as

compared to male faculty members(M=1,65,SD=.72).Techno complexity was more in female faculty (M=2.31,SD=.90) than male faculty members(M=1.91,SD=.68). Techno insecurity was experienced more by female faculty (M=2.12,SD=.93) than male faculty members (M=1.67,SD=.69). Techno uncertainty was more in female faculty (M=2.16,SD.93) as compared to male faculty members (M=1.76,SD.75).

Table 12

One way ANOVA across study variables on the basis of job status (N=300).

Scales	Visiting (n=44)		Tenure track (n=10)		Contract (n=40)		Regular (n=196)		F	P
	M	SD	M	SD	M	SD	M	SD		
Intrinsic motivation	3.50	0.84	3.32	0.82	3.42	0.902	3.32	0.81	0.628	0.59
Extrinsic motivation	43.95	6.75	40.6	5.68	43.95	7.00	42.6	7.17	1.09	0.35
Job satisfaction	4.09	0.69	3.60	0.555	3.99	0.636	3.88	0.723	1.83	0.14
Mindfulness	4.14	0.765	4.06	0.681	4.31	0.687	4.15	0.836	0.539	0.65
Techno overload	1.81	0.785	2.00	0.666	1.60	0.708	1.75	0.86	0.85	0.46
Techno invasion	1.77	0.773	1.71	0.823	1.65	0.769	1.82	0.888	0.52	0.66
Techno complexity	2.22	0.642	2.60	0.699	1.85	0.863	2.10	0.837	2.89	0.03
Techno insecurity	1.88	0.784	2.31	1.05	1.67	0.858	1.90	0.836	1.69	0.16
Techno uncertainty	1.95	0.776	2.10	0.737	1.77	0.861	1.98	0.894	0.769	0.51

Table 12 showed comparison of job status across study variables. Results revealed that only techno complexity shows a significant difference across job statuses, while the other study variables do not exhibit significant differences. The significant difference in techno complexity across job statuses suggests that individuals in different job categories perceive and experience varying levels of complexity related to technology in their work environments. Specifically, those in tenure track positions (M=2.60, SD=.699) report the highest level of techno complexity, followed by those in visiting positions. Contract and regular employees report lower levels of techno complexity.

4.4 Moderation Analysis

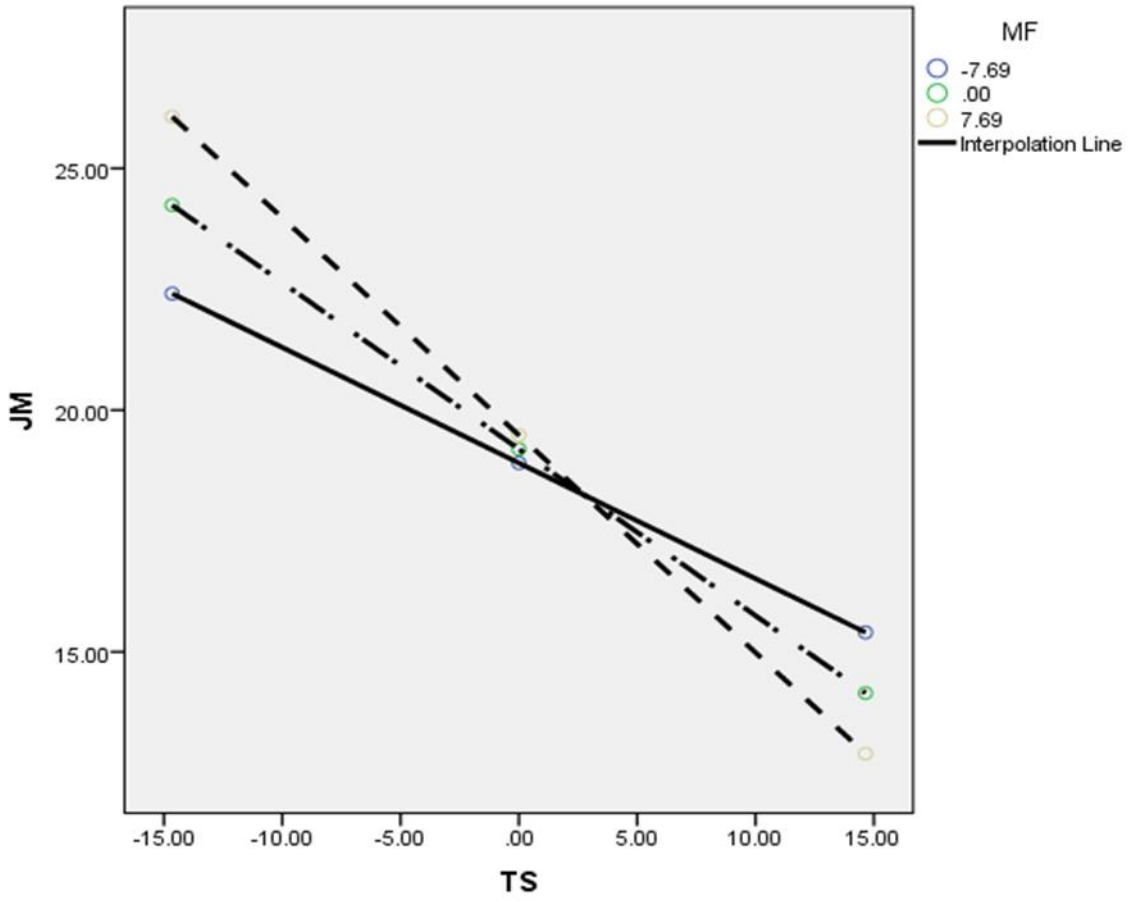
The moderation analysis was performed through Process Macros 4.0v and the model was 1. The moderation analysis was executed to measure the moderating influence of moderator on independent and dependent variable of the study. The tables below provide information about the findings of the moderation analysis.

Table 13.
Moderation of the effect of Techno stress on Job Motivation by Mindfulness (N=300)

Predictors			Job Motivation	
			95% CI	
	B	*t*	*LL*	*UL*
Constant	19.19	64.31***	18.60	19.78
Techno Stress	-.34	-15.84***	-.38	-.30
Mindfulness (Moderator)	.03	.870	.04	.12
Technostress x Mindfulness	-7.69	-8.94	-.29	-.18
R^2	.60			
ΔR^2	.55			
F	149.91			
ΔF	109.80			

The results mentioned above table 13 depict that there is negative moderation effect of techno stress on job motivation by mindfulness. The moderator of the study is indicating negative interaction among the variable and the interaction is getting weakened. The interaction effect is significant at p>.05. Hence, the moderator is indicating as significant effects. The difference generated by this association is 55%. This percentage of change is indicating that the moderator mindfulness has moderately higher influence on the relationship between techno stress and job motivation.

Figure 3



The lines of the graph is showing negative value, mean value and positive value. The interacting lines of the graph are showing that there exist a moderation effect.It means that if faculty members are high on mindfulness then they are more motivated towards their jobs.

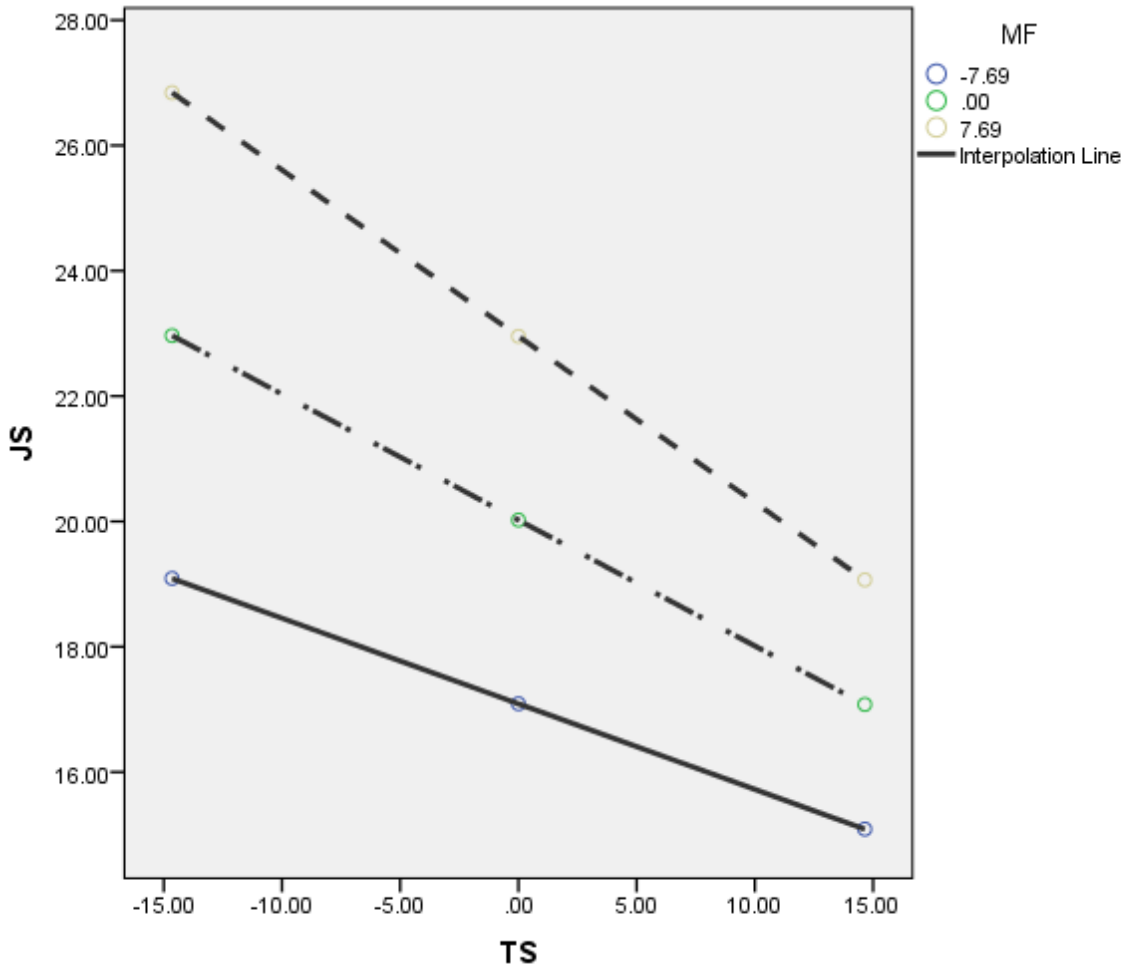
Table 14

Moderation of the effect of Techno stress on Job Satisfaction by Mindfulness (N=300).

Predictors			Job Satisfaction	
			95% CI	
	B	*t*	*LL*	*UL*
Constant	20.02	57.53***	19.33	20.70
Techno Stress	-.20	-7.91***	-.25	-.15
Mindfulness (Moderator)	.38	7.60	.28	.47
Technostress x Mindfulness	-7.69	-3.33	-.01	-.02
R^2	.50			
ΔR^2	.49			
F	102.16			
ΔF	91.14			

The results mentioned above depict that there is a moderation effect of techno stress on job satisfaction by mindfulness. The interaction effect has a negative sign with beta value which means that the prediction is weakened. The difference generated in this interaction is 49 %. This indicates that the relationship between technological stress and job satisfaction is more affected by the moderator. The interaction effect is significant at p>.05. Whereas the beta value is also significant. Hence, the moderator is indicating significant effects.

Figure 4



The lines of the graph is showing negative value, mean value and positive value. The interacting lines of the graph are showing that there exist a moderation effect. The graph is showing the effect of independent value at different values of the moderator.It means that if faculty members are high on mindfulness then they also more satisfied with their jobs.

Table 15.

Moderation effect of mindfulness on techno overload and job satisfaction (N=300)

	Job Satisfaction			
			95% CI	
Predictors	*B*	t	LL	UL
Constant	15.85	3.414***	6.719	25.00
Tech_Ov	.87	3.068***	.312	1.430
Mindfulness	.04	.5909	-.114	.2119
Tech_O*MF	- .00	-2.01	-.019	-.0002
R^2	.08			
ΔR	.07			
F	9.34			
ΔF	5.34			

***p<.000, **p<.01, *p<.05

Note Tech_Ov =Techno overload, MF=Mindfulness

Table 15 displays that mindfulness is a significant moderator for techno overload and job satisfaction. The difference generated in this interaction is 7%. Further, table 15 reports that interaction between techno overload and mindfulness serves as negatively significant predictor for job satisfaction.

Table 16.

Moderation effect of Mindfulness on Techno invasion and Job Satisfaction (N=300)

	Job Satisfaction			
			95% CI	
Predictors	*B*	t	LL	UL
Constant	16.92	4.05***	8.71	25.13
Tech_In	1.51	3.05***	.53	2.48
Mindfulness	.07	1.01	-.07	.22
Tech_In*MF	-.02	-2.44	-.038	-.00
R^2	.06			
ΔR	.04			
F	6.8			
ΔF	0.9			

***p<.000, **p<.01, *p<.05

Note Tech_In=Techno Invasion, MF=Mindfulness

Table 16 displays that mindfulness is a significant moderator for techno invasion and job satisfaction. The difference generated in this interaction is 4%. Further, table 16 reports that interaction between techno invasion and mindfulness serves as negatively significant predictor for job satisfaction.

Table 17.

Moderation effect of mindfulness on techno complexity and job satisfaction (N=300)

	Job Satisfaction			
			95% CI	
Predictors	*B*	t	LL	UL
Constant	13.96	2.700***	3.78	24.14
Tech_Com	1.05	3.115***	.387	1.718
Mindfulness	.13	1.383	-.058	.337
Tech_Com*MF	-.01	-2.624	-.028	-.004
R^2	.06			
ΔR	.04			
F	6.44			
ΔF	-0.44			

***p<.000, **p<.01, *p<.05

Note Tech_In=Techno Complexity , MF=Mindfulness

Table 17 displays that mindfulness is a significant moderator for techno complexity and job satisfaction. The difference generated in this interaction is 4%. Further, table 17 reports that interaction between techno complexity and mindfulness serves as negatively significant predictor for job satisfaction.

Chapter 6

Discussion

The current research was intended to investigate the association among Techno stress ,job motivation and job satisfaction.Moreover, it was intended to investigate the role of mindfulness as a moderator among professors from different universities of Rawalpindi and Islamabad. Gender and job status related differences of faculty members were explored in the current thesis This study emphasizes on the current challenges that higher educational institutions are facing due to the growing adoption and use of technological operations and tools that are posing a barrier for many new and veteran teachers who are unable to keep up with the technological advancements that are occurring at a rapid rate around the globe. The current study's research method was a cross- sectional one. The data for the current study was conducted using purposive convenient sampling. Phase I and Phase II are the two phases of the current investigation.

Phase I involved conducting a pilot research to assess cultural appropriateness, while phase II involved carrying out all statistical methods. In this section results are going to be discussed with the consideration of existing theory and research.Moreover,this section will provide recommendations and implications which are in accordance with current research's findings.

Table 4 shows the demographic details of Main study variables (Gender and Job status) of total sample (N=300).It comprised of 50% males and 50% female faculty members. Out of 300 participants (15.3%) were visiting faculty,(3.3%) were on tenure track,(13.7%) were on contract basis and (67.7%) included regular faculty.Table 5 showed that the coefficient of alpha reliabilities for all the instruments of research variables are good and within the acceptable range,moreover the data was normally distributed.The alpha values of scales were;Techno stress (α=.85),Job motivation scale (α=.82), Job satisfaction scale(α=.88),Mindfulness scale (α=.86) were observed.For a test to be deemed satisfactory,the reliability coefficient must be between .7 and .9 (Kline ,2000).

Correlational Findings

It was hypothesized that there is a negative relationship between technological stress and job motivation and job satisfaction among faculty members of higher education institutions. The study's findings revealed a negative relationship between job motivation, job satisfaction, and technological stress, among faculty members of higher education institutions.This depicts that there is an inverse relationship among techno stress and job motivation, and job satisfaction. Job satisfaction, and job motivation decreases among faculty members when techno stress increases. Literature of the study reported that workplace techno-stress can also decrease faculty members' personal use of information and computer technology, as well as it reduces retention, commitment, and job motivation (Tarafdar et al., 2020).

The findings indicates that there is a positive relationship between job motivation and job satisfaction which are corroborated with the past literature which indicated that there is a strong relationship between employee motivation and satisfaction (Gillet, Valherand, & Rosenet, 2009; Inder, 2014; Stringer, 2011).The findings indicated that there is a positive relationship between intrinsic and extrinsic motivation with job satisfaction which are corroborated with the past literature which indicated that exchange of external motivation factors (such as compensation satisfaction (Nazir et al., 2013) and performance-based incentives (Cantarelli et al., 2016) and intrinsic motivation factors (such as employee empowerment (Tariq et al., 2016) and employee recognition (Al-Emadi et al., 2015) can enhance job satisfaction.

Workplace issues are the main source of stress and other tension-related unpleasant impressions (Kreiner et al., 2020). Numerous studies on employee motivation have been conducted, and they conclude that it is dependent on the numerous benefits that a company can provide to a worker, as well as job type and individual preferences (Nduke, 2016).

Techno-stress is expected to increase stress among academic institution professors while decreasing motivation and job dissatisfaction. Overloading, complication, ambiguity, and other stressors exhaust teaching staff and cause them to lose interest in their work (as stressors). As a result, job performance, job satisfaction, and motivation suffer. Academicians are in charge of shaping future generations who will be assets to the country. Low morale and unmotivated performance can have a negative impact on students (Chong et al., 2019), so keeping academicians motivated is critical. In a sample of 215 New Zealand

employees, Wei Qiu (2013) investigated the causes of technological stress as well as the relationship between this stress, job satisfaction, and organizational commitment. Teachers are continuously under technological stress because they frequently lack the skills necessary to operate new and updated technologies (Aksal, 2017; Li & Wang, 2020).

Ragu-Nathan et al. (2008) found a negative correlation between technological stress and job satisfaction. It shows that as work becomes more technologically demanding, overall job satisfaction decreases. This suggests that if the educational setting successfully controls teachers' technological stress, job satisfaction could increase as well. It was hypothesized that job motivation and job satisfaction are negatively correlated to techno overload ,techno invasion, techno uncertainty and techno complexity.The findings from current research are in accordance with previous literature in which there was a negative association between techno overload ,techno invasion, techno uncertainty and techno complexity with Job satisfaction and job motivation. Ragu-Nathan et al. (2008) indicated techno-complexity, techno-insecurity, techno-overload, techno-invasion, and techno-uncertainty as correlates of job dissatisfaction. Thus, employees suffering from technostress have low productivity and job satisfaction (Sinha, 2012). Weil and Rosen, in their research, found that scientific evidence shows that technostress (Techno overload,techno invasion,techno complexity,techno uncertainty and techno complexity)also leads to excessive work perception, information overload, loss of motivation, and job dissatisfaction (Weil & Rosen, 1997) Kumar et al. (2013) hypothesized that technological stress is linked to decreased decreased job motivation and work satisfaction. In Lithuanian workers, Raiien and Jonuauskas (2013) looked at the effects of techno stress in relation to ICT use on work-life balance (Jonusauskas, 2013).

Jena (2015) investigated how technological stress affected academic work satisfaction in India.The study's findings indicate that technological stress negatively impacts job satisfaction. The impact of technological stress on work performance and coping mechanisms was examined in a study by Tagurum et al. (2017) on academic employees at the University of Jos in Nigeria. The results showed that 54.2% of participants experienced techno stress, which adversely affected 9% of the participants' ability to do their jobs. Negative physical symptoms including neck pain and hazy vision were brought on by technological stress in 45.8% and 42.4% of employees, respectively. According to Rajput's (2011) research, women IT

workers are more stressed than men IT workers in terms of internal job aspects, management responsibilities, interpersonal interactions at work, career and achievement, and organisational environment.

Numerous studies also reveal that women are more content with their jobs than men are (Kim, 2005; Gligorovi et al., 2014). The results of the current study revealed that the more mindful the faculty members are the less they experienced techno stress and are more satisfied and motivated towards their jobs.The findings of the current research are corroborated with the previous literature in which Increase in techno stress leads towards less job satisfaction and motivation among teachers, where mindfulness moderates the relationship between these two variables (Javaid et al., 2023).

Regression Findings

The specific impacts of the independent variable (techno stress) on the dependent variable (work satisfaction and job motivation) were assessed using linear regression analysis. It was hypothesized that the techno stress is a predictor of job motivation and job satisfaction among faculty of universities. Table 8 displays that Techno stress significantly and negatively predicted job motivation among faculty members.The current findings are corroborated with earlier researchers in which techno stress is emerged as a negative predictor of job motivation (Ellen et al., 2017). Similarly results from table 9 indicated that technological stress is a significant negative predictor of job satisfaction. These findings are corroborated with earlier research studies such as study conducted by Ayyagari in 2011,findings manifested that fast changing technology is a strong predictor of job dissatisfaction among employees.

Table 10 shows the impact of techno stress dimension i.e techno overload,techno invasion,techno complexity,techno insecurity and techno uncertainty on job satisfaction among faculty members. The only Techno stress dimensions i.e techo overload (p=.015),techno insecurity (p=.015),

techno uncertainty (p=.001),perform significant role in predicting job satisfaction.These findings are supported by prior researches as technostress creators predicted workers' job satisfaction (Tarafdar et al., 2007). Ayyagari (2008) identified a negative impact of technostress creators and job satisfaction and further elaborated that technology uncertainty,overload and insecurity are a strong predictor of job dissatisfaction among employees.

Gender and Job status related findings.

The current study examined how demographic factors including gender and job status affected the study variable.Age, gender, ICT training, working environment, and workload can all have an effect on the negative impact of workplace technostress. Previous research found that as IT complexity increased, older and more experienced workers reported greater difficulty completing their tasks. Women reported higher levels of technological uncertainty in a similar study, whereas men reported greater effects from technological invasion. In contrast, no differences in workers' educational levels were discovered (Yadav, 2020).

However, other research indicates that men are more likely to be affected by techno stress (Ragu-Nathan et al., 2008). A study conducted by Sareen(2019) on 300 employees out of which 200 belong to teaching staff and 100 belong to non-teaching staff ,results indicated that techno stress creators i.e. , techno overload,techno invasion,techno complexity and techno uncertainty are more in men than women members.However, results of the current study indicated that technostress creators(techno invasion,techno overload,techno complexity,techno insecurity and techno uncertainty) are more in women faculty members then men faculty members.

Additionally, the findings of the present study are consistent with previous studies showing that women are more intrinsically motivated than men. (Khan, Khan & Naz, 2019). According to a study done on Australian employees, women reported higher levels of intrinsic or self-determined motivation than their men counterparts. (Fernet et al., 2008).

Likewise, a study by See et al. in 2022 found that women are more likely to express intrinsic motivation than men are to report extrinsic motivations.The findings of the present study are at contradiction with earlier literature, which found that women faculty members expressed more extrinsic motivation than men faculty members.

There were significant gender differences in terms of overall job satisfaction according to a study by the Association of University Teachers. Men frequently reported being less satisfied with their jobs than women, according to survey respondents.in 1998 .(Kinman).The new study's findings line up with previous pieces of literature.

Similar to this, a recent study found that men teachers exhibit greater mindfulness than women teachers.(Ashwathi., Kalaimathi., &.2022).which is consistent with the most recent study's findings that men members pay greater attention to their surroundings than women members. Coklar and Akçay (2016) found that there existed typical amounts of technological stress among teachers; these levels did not vary by gender or years of employment but did vary significantly by Internet usage time. In addition, education level and computer confidence have an impact on techno stress, according to research by Rebman and Kitchens (2014). Femen instructors and senior employees also had greater levels of techno stress. According to Jena and Mahanti, there are a number of factors that affect techno stress, including gender, age, technological awareness, and academic tenure.

Temporary professors report lower levels of stress than full-time professors, according to studies done by (Gappa and Leslie, 2002; Outcalt, 2002). Morever,the current findings showed that the level of techno complexity is high on tenure track than visiting faculty.All other variables did not show significant results.

Moderation Analysis

The moderation analysis was performed through Process Macros 4.0v and the model was 1. To determine the moderating impact of the moderator on the study's independent and dependent variables, moderation analysis was carried out. The results mentioned above depict that there is moderation effect of techno stress on job satisfaction by mindfulness. The moderator of the study play an interaction on the variable. On the other hand, the results mentioned above depict that there is moderation effect of techno stress on job motivation by mindfulness. The moderator of the study play an interaction on the variable. The interaction effect is significant at $p<.05$. Whereas the beta value is also significant. Hence, the moderator is indicating as a significant effects. The research was conducted on 60 faculty of the higher education department in Netherland and the study's findings showed that mindfulness significantly moderates the relationship between technological stress, job satisfaction, and job motivation. (Hyland et al., 2015).

However, there is still a dearth of empirical data (Good et al., 2016). In order to show how effective and protective they are against workplace techno stress, we will research the impacts of mindfulness (also known as mindfulness throughout the article) and IT mindfulness on workplace techno stress and its

detrimental repercussions.However, there is currently few number of researches focusing on the connection between mindfulness and technological stress (Pflügner et al., 2021).

The scant evidence indicates that mindfulness reduces job burnout brought on by technology stress in white-collar employees whereas IT mindfulness, which is focused on IT use and its surroundings, lowers feelings of technological stress. Yet, since the idea of IT mindfulness in the IS sector was first envisaged as a theoretical construct.There have been no significant developments in creating policies or initiatives that help increase IT mindfulness.

(Roberts et al., 2007; Thatcher et al., 2018). Recent research suggests that there may be some correlation between employee mindfulness and job effectiveness (Dane & Brummel, 2013; Reb et al., 2015). According to Hülsheger et al.'s (2013) ,mindful individuals experience higher job satisfaction. Previous studies have revealed that mindfulness can effectively mitigate the negative consequences arising from information overload (Wolf et al., 2011).

Previous studies have shown that mindfulness can mitigate the negative consequences arising from information overload (Wolf et al., 2011) and multitasking (Levy et al., 2012) thus decreasing techno overload. Moreover, by thoughtfully considering how to react to IT interruptions, such as emails arising outside of work settings, a more mindful individual is more likely to appraise these situations as less threatening and respond more objectively thus decreasing the impact of techno invasion (Alberts & Hülsheger, 2015; Schultz et al., 2015). In fully experiencing a situation, a more mindful individual can combat feelings of anxiety and stress about the future that arise from job insecurity (Glomb et al., 2011; Jacobs & Blustein, 2008) thus decreasing techno insecurity. Also, more mindful individuals feel more confident about their skills and become more interested in enhancing their learning efforts towards combatting the unsettling feelings and uncertainty caused both by techno complexity and techno uncertainty (Glomb et al., 2011).

2. Conclusion

The purpose of the presentt study was to examine the impacts of technological stress.on faculty members working in higher education institutions' motivation and job satisfaction, as well as how mindfulness served as a moderator.To examine the study variables in the current study, we performed

correlation, regression,t test and One Way Annova and moderation analysis. Due to this, the statistical analysis tables in the results chapter demonstrate a strong link between the primary study variables, namely technological stress, job satisfaction, motivation, and mindfulness. It is therefore conceivable to draw the conclusion that technological stress has a negative and significant relationship with faculty members' motivation for their work and opinion of job satisfaction.This means that increase in techno stress will decrease the job motivation and job satisfaction of the faculty members of the university faculty .

Findings exhibited that mindfulness moderate the relationship between job motivation and job satisfaction.It is also mentioned that demographics such as gender and job status have impact on study variable. Moreover gender and job status related differences showed that older workers reported greater difficulty completing their tasks, women reported higher levels of techno uncertainty, whereas men reported greater effects from techno invasion.The current study also concluded that women are more intrinsically motivated towards their jobs as compared to men,likewise men shows extrinsic motivation .Findings of the current study indicated that men frequently reported being less satisfied with their jobs than women.Moreover,the current findings showed that the level of techno complexity is high on tenure track than visiting faculty.All other variables did not show significant results.

3. Limitations And Suggestions

Below are mentioned the limitations of the study

This survey specifically targets faculty members in higher education institutions exclusively situated in Rawalpindi and Islamabad, Pakistan. The findings of this study may not be applicable to the full population of Pakistani higher education teachers due to potential variations in experiences across different locations and types of institutions, thereby limiting generalizability. By incorporating universities from diverse cities and potentially other forms of higher education institutions, such as colleges, in future study, the generalizability of the findings would be enhanced.

The study is based exclusively on data provided by faculty members through self- reporting. Self-reported data is prone to bias, as people may either underestimate or overestimate their experiences. In order to obtain a more full knowledge of the phenomenon, future studies may consider integrating supplementary data gathering methods, such as interviews or observations.

A cross-sectional design is a research method that involves collecting data from a sample of individuals at a single point in time. The study utilises a cross-sectional design, which gathers data at a specific moment in time. This design lacks the ability to conclusively show causal links between techno stress, mindfulness, demography, and faculty motivation and satisfaction. Future research could employ longitudinal designs to monitor the evolution of these variables over time and build stronger causal inferences.

Implications of the study

The study's results can guide the creation of faculty development programmes that provide faculty members with the necessary skills and expertise to properly handle techno stress. These programmes can instruct individuals in mindfulness practices, deliver instruction on certain technologies, and provide strategies for effortlessly incorporating technology into teaching and research endeavours.

The findings can provide guidance to higher education institutions in formulating policies and establishing support systems that enhance the well-being of faculty members and alleviate techno stress. This may entail offering continuous technical assistance, establishing explicit protocols for technology utilisation, and cultivating an environment of transparent communication where faculty members may express their concerns and seek help with technological difficulties.

The study highlights the limited amount of studies on techno stress in the Pakistani environment. The present discoveries can act as a catalyst for additional investigation in this domain. Potential future research could examine the encounters of academic staff in different areas of Pakistan, analyse the influence of particular technologies on techno stress, or further analyse the function of mindfulness and coping strategies in reducing techno stress.

To further enhance our understanding of techno stress among academic members in Pakistani higher education institutions, future research should focus on overcoming the constraints and leveraging the implications discussed in this study. This knowledge can be utilised to create focused interventions that enhance the well-being of faculty members, ultimately resulting in a more favourable and efficient learning environment for both staff and students.

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APPENDIX A

CONSENT FORM

Assalam o Aliakum

I am a student of MPhil in Department of Applied Psychology (NUML), for my research study about "Techno-stress, Job Satisfaction and Job Motivation among Faculty Of Higher Education Institutions: Role of Mindfulness." I am collecting some data from university faculty members. Its major project of my subject therefore I need your precious time for opinion about following questions. I ensure that the information obtained from this questionnaire will not be disclosed and will only be used for research related project. If you are willing to participate, then you are requested to sign in the column below. You are allowed to withdraw your name and details from this research at any time, if you don't feel comfortable.

Signature:_____

Date: _____

Appendix B

Demographic Sheet

1. Gender 1. Male 2. Female
2. Job status Visiting Faculty/ Tenure Track/ Contract/ Regular

APPENDIX C

Techno stress Questionnaire

Please respond to the following statements and circle the number to indicate your degree of agreement.

S#	STATEMENT	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1	I am forced by this technology to work much faster.	5	4	3	2	1
2	I am forced by this technology to do more work than I can handle.	5	4	3	2	1
3	I am forced by this technology to work with very tight time schedules.	5	4	3	2	1
4	I am forced to change my work habits to adapt to new technologies.	5	4	3	2	1
5	I have a higher workload because of increased technology complexity.	5	4	3	2	1
6	I spend less time with my family due to this technology.	5	4	3	2	1
7	I have to be in touch with my work even during my vacation due to this technology.	5	4	3	2	1
8	I have to sacrifice my vacation and weekend time to keep current on new technologies.	5	4	3	2	1
9	I feel my personal life is being invaded by this technology.	5	4	3	2	1
10	I do not know enough about this technology to handle my job satisfactorily.	5	4	3	2	1
11	I need a long time to understand and use new technologies.	5	4	3	2	1

12	I do not have enough time to study and upgrade my technology skills.	5	4	3	2	1
13	I find new employees to this organization know more about computer technology than I do.	5	4	3	2	1
14	I often find it too complex for me to understand and use new technologies.	5	4	3	2	1
15	I feel constant threat to my job security due to new technologies.	5	4	3	2	1
16	I have to constantly update my technology skills to avoid being replaced.	5	4	3	2	1
17	I am threatened by co-workers with newer technology skills.	5	4	3	2	1
18	I do not share my knowledge with my coworkers for fear of being replaced.	5	4	3	2	1
19	I feel there is less sharing of knowledge among co-workers for fear of being replaced.	5	4	3	2	1
20	There are always new developments in the technologies we use in our organization.	5	4	3	2	1
21	There are constant changes in computer software in our organization.	5	4	3	2	1
22	There are constant changes in computer hardware in our organization.	5	4	3	2	1
23	There are frequent upgrades in computer networks in our organization.	5	4	3	2	1

APPENDIX D

Work Extrinsic And Intrinsic Motivation Scale

Using the scale below please indicate to what extent each of the following items corresponds to the reasons why you are presently involved in your work.

Does not correspond at all			Correspond moderately		Correspond exactly	
1	2	3	4	5	6	7

1	Because this is the type of work I chose to do to attain a certain lifestyle	1	2	3	4	5	6	7
2	For the income it provides me	1	2	3	4	5	6	7
3	I ask myself this question I don't seem to able to manage the important tasks related to this work	1	2	3	4	5	6	7
4	Because I derive much pleasure from learning new things	1	2	3	4	5	6	7
5	Because it has become a fundamental part of who I am.	1	2	3	4	5	6	7
6	Because I want to succeed at this job, if not I would be very ashamed of myself.	1	2	3	4	5	6	7
7	Because I chose this type of work to attain my career goals.	1	2	3	4	5	6	7
8	For the satisfaction I experience from taking on interesting challenge.	1	2	3	4	5	6	7
9	Because it allows me to earn money.	1	2	3	4	5	6	7
10	Because it is part of the way in which I have chosen to live my life.	1	2	3	4	5	6	7
11	Because I want to be very good at this work, otherwise I would be very disappointed.	1	2	3	4	5	6	7
12	I don't know why we are provided with unrealistic working conditions.	1	2	3	4	5	6	7
13	Because I want to be a "winner" in life.	1	2	3	4	5	6	7
14	Because it is the type of work I have chosen to attain certain important objectives.	1	2	3	4	5	6	7
15	For the satisfaction I experience when I am successful at doing difficult tasks	1	2	3	4	5	6	7
16	Because this type of work provides me with security	1	2	3	4	5	6	7
17	I don't know too much is expected from us	1	2	3	4	5	6	7
18	Because this job is part of my life	1	2	3	4	5	6	7

APPENDIX E

Job Satisfaction Scale

For each statement, please circle the number to indicate your degree of agreement.

S#	STATEMENT	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1	I receive recognition for a job well done	5	4	3	2	1
2	I feel close to the people I work with	5	4	3	2	1
3	I feel good at working at this company	5	4	3	2	1
4	I feel secure about my job	5	4	3	2	1
5	I believe management is concerned about me	5	4	3	2	1
6	On whole I believe work is good for physical health	5	4	3	2	1
7	My wages are good	5	4	3	2	1
8	All my talents and skills are used at work	5	4	3	2	1
9	I get along my supervisor	5	4	3	2	1
10	I feel good about my job	5	4	3	2	1

APPENDIX F

The Mindful Attention Awareness Scale (MAAS)

Below is a collection of statements about your everyday experience.Using the 1-6 scale below,please indicate how frequently or infrequently you currently have each experience.

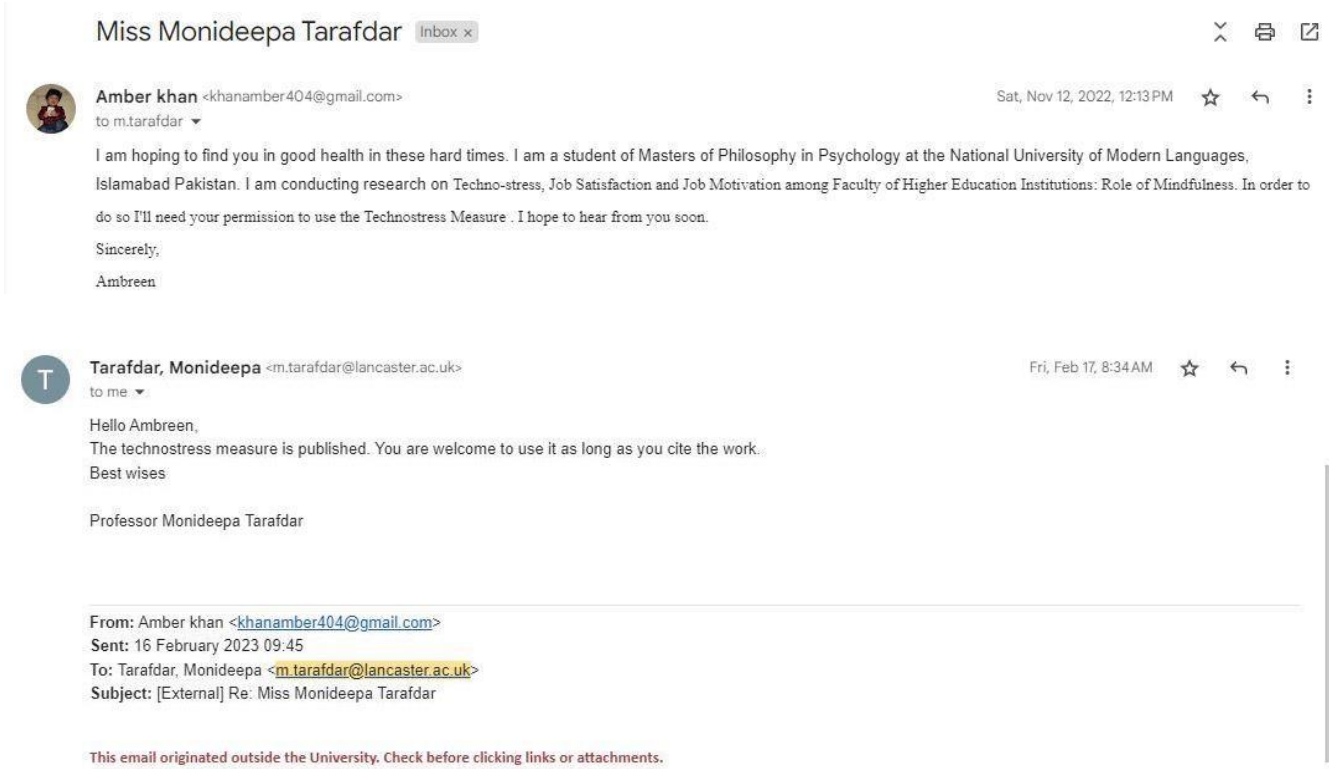
1	2	3	4	5	6
Almost always	Very frequently	Somewhat frequently	Somewhat infrequently	Very infrequently	Almost never

S#	STATEMENT	**Almostalways**	**Veryfrequently**	**Somewhatfrequently**	**Somewhatinfrequently**	**Veryinfrequently**	**Almost never**
1	I could be experiencing some emotions and not be conscious of it until some time later.	1	2	3	4	5	6
2	I break or spill things because of carelessness, not paying attention, or thinking of something else.	1	2	3	4	5	6
3	I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5	6
4	I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	1	2	3	4	5	6
5	I tend to not to notice feelings of physical tension or discomfort until they really grab my attention.	1	2	3	4	5	6
6	I forget a person's name almost as soon as I have been told it for the first time.	1	2	3	4	5	6
7	It seems I am running on automatic", without much awareness of what I am doing.	1	2	3	4	5	6
8	I rush through activities without being really attentive to them.	1	2	3	4	5	6
9	I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.	1	2	3	4	5	6
10	I do jobs or tasks automatically, without being aware of what I am doing.	1	2	3	4	5	6
11	I find myself listening to someone with one ear, doing something else at the same time.	1	2	3	4	5	6

12	I drive places on automatic pilot and then wonder why I went there.	1	2	3	4	5	6
13	I find myself preoccupied with future or the past.	1	2	3	4	5	6
14	I find myself doing things without paying attention.	1	2	3	4	5	6
15	I snack without being aware that I am eating.	1	2	3	4	5	6

APPENDIX G

Permission mail to use Techno stress Questionnaire.



Miss Monideepa Tarafdar Inbox ×

Amber khan <khanamber404@gmail.com> Sat, Nov 12, 2022, 12:13 PM
to m.tarafdar

I am hoping to find you in good health in these hard times. I am a student of Masters of Philosophy in Psychology at the National University of Modern Languages, Islamabad Pakistan. I am conducting research on Techno-stress, Job Satisfaction and Job Motivation among Faculty of Higher Education Institutions: Role of Mindfulness. In order to do so I'll need your permission to use the Technostress Measure . I hope to hear from you soon.

Sincerely,

Ambreen

Tarafdar, Monideepa <m.tarafdar@lancaster.ac.uk> Fri, Feb 17, 8:34 AM
to me

Hello Ambreen,
The technostress measure is published. You are welcome to use it as long as you cite the work.
Best wises

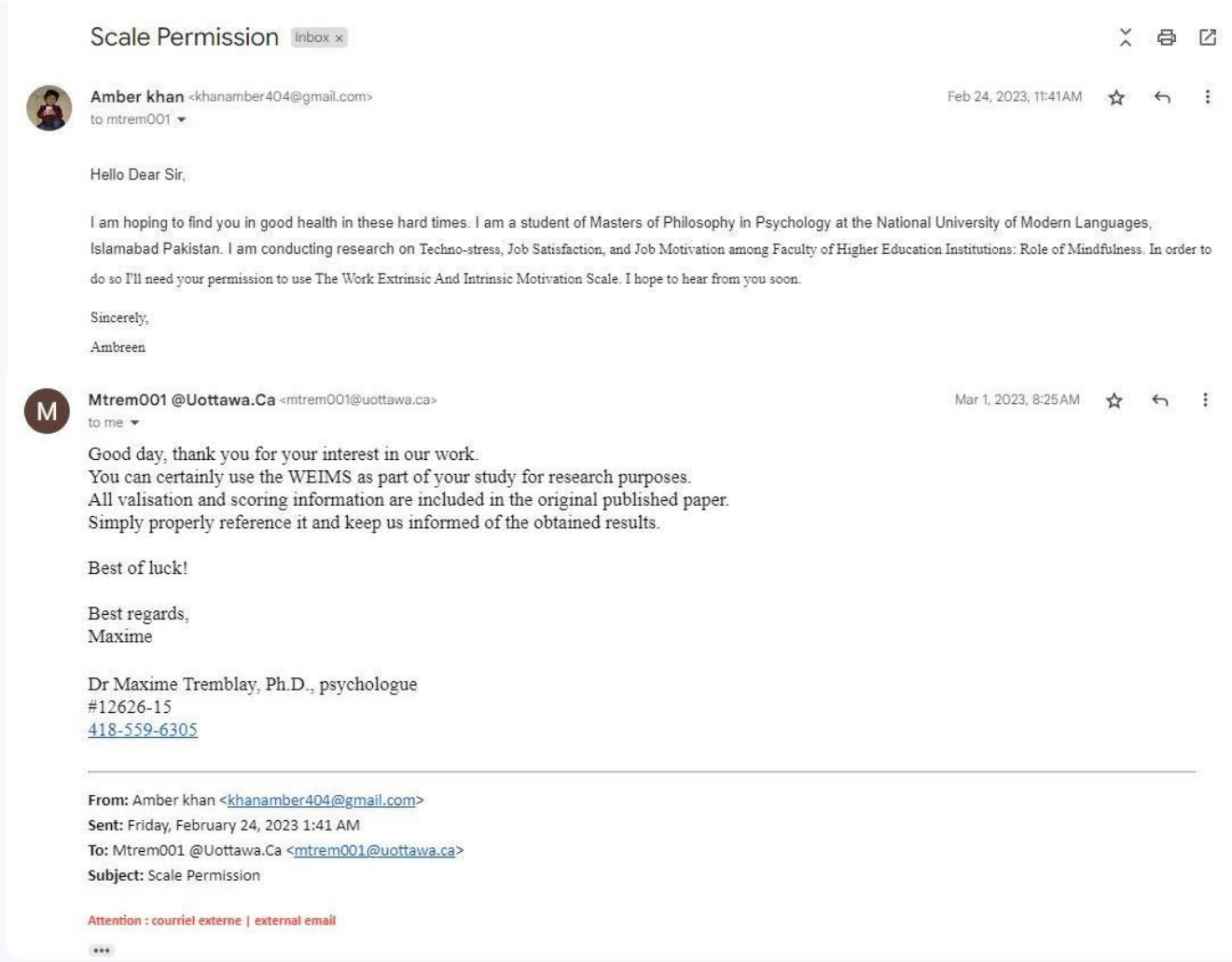
Professor Monideepa Tarafdar

From: Amber khan <khanamber404@gmail.com>
Sent: 16 February 2023 09:45
To: Tarafdar, Monideepa <m.tarafdar@lancaster.ac.uk>
Subject: [External] Re: Miss Monideepa Tarafdar

This email originated outside the University. Check before clicking links or attachments.

APPENDIX H

Work Extrinsic and Intrinsic Motivation Scale.



Scale Permission Inbox ×

Amber khan <khanamber404@gmail.com> Feb 24, 2023, 11:41AM
to mtrem001

Hello Dear Sir,

I am hoping to find you in good health in these hard times. I am a student of Masters of Philosophy in Psychology at the National University of Modern Languages, Islamabad Pakistan. I am conducting research on Techno-stress, Job Satisfaction, and Job Motivation among Faculty of Higher Education Institutions: Role of Mindfulness. In order to do so I'll need your permission to use The Work Extrinsic And Intrinsic Motivation Scale. I hope to hear from you soon.

Sincerely,

Ambreen

Mtrem001 @Uottawa.Ca <mtrem001@uottawa.ca> Mar 1, 2023, 8:25 AM
to me

Good day, thank you for your interest in our work.
You can certainly use the WEIMS as part of your study for research purposes.
All valisation and scoring information are included in the original published paper.
Simply properly reference it and keep us informed of the obtained results.

Best of luck!

Best regards,
Maxime

Dr Maxime Tremblay, Ph.D., psychologue
#12626-15
418-559-6305

From: Amber khan <khanamber404@gmail.com>
Sent: Friday, February 24, 2023 1:41 AM
To: Mtrem001 @Uottawa.Ca <mtrem001@uottawa.ca>
Subject: Scale Permission

Attention : courriel externe | external email

•••

APPENDIX I

Job Satisfaction Scale.

Scale Permission Inbox ×

Amber khan <khanamber404@gmail.com> Fri, Feb 24, 9:05 AM

to scottmac

I am hoping to find you in good health in these hard times. I am a student of Masters of Philosophy in Psychology at the National University of Modern Languages, Islamabad Pakistan. I am conducting research on Techno-stress, Job Satisfaction, and Job Motivation among Faculty of Higher Education Institutions: Role of Mindfulness. In order to do so I'll need your permission to use The Generic Job Satisfaction Scale. I hope to hear from you soon.

Sincerely,

Ambreen

Scott MacDonald <scottmac@uvic.ca> Fri, Feb 24, 9:14 AM

to Peter, me

Yes, this scale is openly available for you to do your research.

Sent from my iPhone
Scott Macdonald
250-213-1669

> On Feb 23, 2023, at 8:05 PM, Amber khan <khanamber404@gmail.com> wrote:
>
> •••

APPENDIX J

The Mindful Attention Awareness Scale (MAAS).

Scale permission Inbox ×

Amber khan <khanamber404@gmail.com> Sun, Jan 9, 2022, 2:23 PM

to lcarlso

Hello dear sir!

My name is Ambreen. I'm studying M.Phil. Applied Psychology in National University Of Modern Languages, Islamabad Pakistan. I am doing research on Technostress, Job satisfaction and job motivation Among Faculty Of Higher Education Institutions: Role of Mindfulness. So for this purpose i want to use Mindfulness Attention Awareness Scale (MAAS).

Kindly allow me to use this scale.

I shall be very thankful to you for this favor.

Linda Carlson <lcarlso@ucalgary.ca> Jan 10, 2022, 8:28 AM

to me

Hi Amber,

The scale is in the public domain so you do not need permission to use it. Best of luck with your research,

Linda Carlson

On 1/9/2022 2:23 AM, Amber khan wrote:

[△EXTERNAL]

•••

--

Linda E. Carlson, Ph.D., R.Psych, FABMR, FSBM, FMLI
Enbridge Research Chair in Psychosocial Oncology
CIHR SPOR Mentorship Chair in Innovative Clinical Trials (TRACTION Program Director)
Professor, Department of Oncology, Cumming School of Medicine
Adjunct Professor, Department of Psychology, Faculty of Arts
University of Calgary
Director, *Alberta Complementary Therapy and Integrative Oncology (ACTION) Centre*
Co-Editor-in-Chief, *Journal of Psychosocial Oncology Research and Practice*
President, *Society for Integrative Oncology*
Director of Finance, Executive Committee, *International Society for Contemplative Research*

Department of Psychosocial Oncology
Cancer Control Alberta – Holy Cross Site
2202 2nd St. SW
Calgary, Alberta, Canada T2S 3C1