INTERRELATIONSHIP BETWEEN TECHNOSTRESS, WORK-LIFE BALANCE, TECHNOLOGY READINESS AND EMPLOYEES MENTAL HEALTH

SAFIA SHAHAB

00000330354

MS-HRM 2K20

SUPERVISOR

ASSOC.PROF. DR. MUMTAZ ALI MEMON

A Thesis submitted to NUST Business School for the degree of

Master of Science in Human Resource Management

DECEMBER 2022

INTERRELATIONSHIP BETWEEN TECHNOSTRESS, WORK-LIFE BALANCE, TECHNOLOGY READINESS AND EMPLOYEES MENTAL HEALTH

SAFIA SHAHAB

00000330354

MS-HRM 2K20

SUPERVISOR

ASSOC.PROF. DR. MUMTAZ ALI MEMON

A Thesis submitted to NUST Business School for the degree of

Master of Science in Human Resource Management

DECEMBER 2022

THESIS ACCEPTANCE CERTIFICATE

It is certified that the final copy of the MS-HRM thesis written by Ms. Safia Shahab, Registration No. 00000330354 of MS-HRM 2K20 has been vetted by the undersigned, found complete in all aspects as per NUST Statutes/Regulations/MS Policy, is free of plagiarism, errors, and mistakes and is accepted as fulfilment for award of MS degree. It is further certified that necessary amendments as pointed out by GEC members and foreign/local evaluators of the scholar have also been incorporated in the said thesis.

Signature of Supervisor with stamp: _____

Date: _____

Program Head Signature with stamp: _____

Date: _____

Signature of HoD with stamp: _____

Date: _____

Countersign by

Signature (Dean/Principal): _____

Date: _____

DECLARATION

I hereby state that no portion of the work referred to in this dissertation has been submitted in support of an application for another degree or qualification of this or any other University or other institute of learning.

Student's Name: <u>Safia Shahab</u>

Signature _____

Date _____

ACKNOWLEDGEMENT

Table of Contents

List of Tables

List of Figures

ABSTRACT

The purpose of this paper was to understand the impact of technostress on mental health and the impact of mental health on work-life balance (WLB). Moreover, it examines the mediating role of mental health and moderating role of technology readiness. The data was obtained using a cross-sectional questionnaire methodology and a purposive and snowball sampling technique. 253 banking, IT and telecommunications employees took part in this research. Initial screening resulted in the exclusion of 17 samples in total. In the end, 253 samples were used to analyse the data. The hypothesized model was tested using partial least squares-structural equation modelling.

The findings of this study revealed that there is a strong association between technostress, mental health and work-life balance. Technostress was negatively associated with mental health and mental health was negatively associated with work-life balance. Moreover, mental health mediated the relationship between technostress and work-life balance whereas technology readiness did not moderate the relationship between technostress and mental health. The results of this study imply that organizations should focus on technostress and how to regulate it when new technology is introduced in order to have good mental health and healthy work-life balance. Till date, little attention has been given to study the mediating role of mental health between technostress and work-life balance. Also, technology readiness has not been used as a moderator in the relationship of technostress and mental health.

CHAPTER 1: INTRODUCTION

1.1. Introduction

The presence of Work life balance has yielded critical ramifications in the workplace. It has been proven to be favourably associated with work satisfaction, employee engagement, and organizational citizenship behaviour, while being negatively associated with turnover intentions. The impact of work life balance can be characterized as directly improving work related attitudes, which in turn influence job performance and turnover (Haar and Brougham, 2020). Work life balance is significant since it has been linked to factors such as employee well-being (Aruldoss et al., 2020). Individual variables such as personal attitudes, behaviours, and wellness were discovered to be the most significant predictors of one's perceived work life balance. Again, proving that work life balance has a favourable relationship with employee's happiness and well-being, as well as the amount and quality of personal time (Wong et al., 2021). This can further be attributed to the fact that family satisfaction in a dual earners household positively corresponds with work life balance (Schnettler et al., 2020). The presence of work life balance is therefore immensely important for the well-being of the employees.

A very contrasting perspective to this is that often the imbalance in work and life is due to certain policies in place. Organizational policies often contribute to stress and work-life imbalance. Work life balance policies, according to often does not assist female employees, particularly working moms, putting pressure on them to balance work and family duties. A major concern being the inflexible work schedule and policy, which causes stress and reduces productivity (Nwagbara, 2020). According to Gartner's Global Talent Monitor, employees carry 26% of their work home, raising a risk of burnout from overworking, and 40% of people use laptops after 10 p.m., decreasing what has been considered healthy sleep. On an annual basis, the cost of this turnover due to burnout is estimated to be about $7,600 per employee (Forbes, 2020). Therefore, it is vital for organizations to decipher what policies aid work life balance and how to turn that into positive outcomes for the organization.

The effect of work life balance on the mental health of employees has been immense. Work life balance has been linked to mental health issues and mental health attitudes in a detrimental way.

The greatest predictor of mental health issues was work life balance. Various work pattern groups showed different mental health ratings; employees who worked during the day had worse mental health (Kotera et al., 2019). Work-life balance and job satisfaction have a negative connection, with higher the work-life balance tension, the lesser the job satisfaction level. The link amongst work environment and job satisfaction demonstrates that work environment satisfaction rises in tandem with job contentment, and the influence of work-in-work relationships on job satisfaction demonstrates that work satisfaction rises as well. So, when the link between work and mental health is examined, it is discovered that when job satisfaction rises, so does mental health (Lee and Cho, 2020). Therefore, much of the current studies focusing on how mental health is detrimentally affected if there is a work life imbalance.

Over the past few years, the world has seen a surge in the use of Information and Communication technology. This need for a widespread use has been due new discoveries, upgrading existing technology to compete or in most recent times, events like the Covid-19 pandemic pushed, which required remote, real-time communication, has lately given information and communication technology in the workplace an additional push digital working arrangements are a result (Davies, 2021). This is just one of the very few examples of how year by year the reliance on technology has almost become avoidable and rather a need. Bondiani (2020) explained how information and communication technology frequently has positive aspects and makes our work easier, but they can also be strenuous or even detrimental to our health. Technostress has frequently been referred to as the evil side of technology, despite the fact that it, like stress overall, is a procedure that relies on a person's experience and judgment (Tarafdar et al., 2020). The general impact of technology's ubiquity is a spike in workload and disruptions in the flow of work, primarily as a result of increased job pace and the demand to complete tasks on schedule and under duress (Beer et al., 2020). Employees need coping mechanisms for greater workloads, independence, and intricacy in the workplace. Mental, emotional, and self-restraint needs are among the necessary skill demands. Therefore, the employment of new technology does not appear to inevitably lead to chances for role growth and advancement (Kotera et al., 2020). These disruptions are bound to spillover to other aspects of an employee's life beyond work. The negative effects of employing modern technologies are seen in the murkier borders they produce. Their primary threat now stems from their ability to link at anytime, anyplace. Because we operate in a worldwide market, we anticipate quick communication without accounting for time or geographical distance (Graveling, 2020).

New working arrangements, as a result of new technology, have rapidly been dissolving the work–life divisions, making it tougher for employees to shut off from work now that information and communications technology enables them to pick their working hours and settings. Technology use has an impact on workers by influencing three major components of work design, which is   job autonomy, job demands and relational aspects (Wang, Liu and Parker, 2020). The usage and availability of technology has increased dramatically in the twenty-first century, resulting in a radical transformation in how we operate. These constant technological advancements have given rise to Techno Stress, which is the continual technological developments and the requirement to adjust to the external environment's dynamism, which has altered social connections and time perceptions (Christ-Brendemühl and Schaarschmidt, 2020). Techno stress has permeated employees' daily lives due to the fast growth of technology and smart gadgets (Bondanini et al., 2020). This is particularly important to understand because of the impact it has on an employee's life. Both techno-overload and techno-invasion, aspects of techno stress, were shown to be associated with increased intention to quit, role conflict, and family fatigue (Harris et al., 2021). This leads to a probable negative spiral of decreasing work life balance because of excessive work technology use outside of work hours (Tennakoon, 2021). The added pressures of changing technology have the potential to drastically exhaust one's endurance and energy, putting one at greater risk of exhaustion and worsening one's mental health (Johnson et al., 2020). Also, because it forces them to learn more in order to be considered worthy. In a study conducted by CIPD (2020), only 5% of respondents believed they needed fewer skills and expertise to do their roles, while 50% thought they needed more of both. Also, it was revealed that compared to 13% who said their activities had become less complicated, 40% felt their work-related responsibilities had grown more complicated. Contrarily, more than half of firms, around 61%, who used AI and automation discovered that employees needed more training and expertise as a result. Not only is mental health being affected by technology advancements but work-life balance also has an impact.

Moreover, employee attitudes and technology readiness anxiety have a substantial influence on their change preparedness. Employee perceptions, in particular, have a beneficial impact on change readiness, but technology anxiety has a detrimental impact (Suseno et al., 2020). Therefore, highlighting the fact that technological advancements adversely impact work life balance by not

only blurring the boundaries but also the stress that rises due to the adoption of these technological advancements.

Looking at work life balance through a Pakistani lens, it has been found to have a beneficial influence on employee performance among Pakistani academics. This outcome could be explained by the fact that young full-time academics, aged 21 to 40, are inclined to work prolonged hours in order to achieve their work and future aims, and that this commitment contribute to greater work performance when they perceive higher work–family balance (Soomro et al., 2018). Whereas, assessing how this would fare in the banking sector, in Nigeria's Lagos state, work-life balance in banks has a major impact on employee's performance (Egbuta, Babatunde and Nanle, 2019). Thus, showcasing employees of various sectors in different countries and cultures valuing work life balance.

Drawing on the boundary management theory, the hypothetical links between techno stress, mental health, technological readiness, and work life balance will be made in the following section.

1.2. Context

The banking sector would be ideal to assess the techno stress effect since there is rapid digitalization within this sector recently. Digital forms of contact and communication that have been adopted. Geo-fencing is now being used to track sales team activity. A digital approach for workers to engage with HR is through mobile app and software with a 24/7 hotline which enables employees to work from home and guarantees that resources are available when they are needed (KPMG, 2021, p. 20). IT solutions may be used to automate self-assessments, provide bank-wide dashboards and real-time compliance calendars that assess the organization's overall management and compliance (KPMG, 2021, p. 30). The last five years, particularly the year 2020, have brought a level of change never previously seen. Financial institutions are being forced to embrace client-centered innovations that will help them deliver a more personalized, value-added customer experience due to rising fintech businesses' ability to swiftly acquire momentum in the global financial services industry. The new technology is disrupting the financial services industry using data analytics automation and cloud (KPMG, 2021, p. 33). The present government's Digital Pakistan Policy has specifically stressed the necessity to establish a structure to permit e-banking

operations services while adopting new softwares and structures (KPMG, 2021, p.33). Thus, making the banking sector ideal for assessing how techno stress can impact the work life balance of employees amidst the rapid technological advancements.

Moreover, in the area of telecommunications, which has grown to be a vital factor in the development of Pakistan's economy and technology, the country has also made significant advancements. The government has granted the telecom industry industrial classification for the years 2021 and 2022, which will help to further promote its expansion. The significance of the industry was evident during the Covid-19 crisis. Because of their technological development and reach, they were better able to help the national healthcare system, state and local governments. One of the numerous examples of how telecommunications is becoming more and more essential in the day-to-day activities of the typical user is the rising trend of video conferencing, e-learning, and telemedicine and online commerce. Lately, the country's 5G service will be launched by December 2022, according to the Federal Minister for Information Technology and Telecommunication, who also alluded to working with industry leaders. With such huge initiatives in the works, cutting-edge technology like block chain, artificial intelligence, machine learning, and the like would soon become commonplace in the Pakistani economy. With the aid of agile digital solutions, Pakistani telecommunication organizations are also preparing to upgrade and optimize their business processes in order to provide customers with a positive user experience (Dawn, 2021). Thus, making the Telecommunications sector ideal for assessing how techno stress can impact the work life balance of employees amidst the rapid technological advancements.

Lastly, Pakistan has seen a huge growth in its IT sector over the past few years. The emergence of technology parks and special zones is one testament to it. The government has made an investment of $1 billion based off of how fast the sector is growing and to improve it further (Forbes, 2022). The tech industry is Pakistan's 3rd largest source of digital labour and the sector has seen a growth of 47% in tech exports (STZA, 2022). Blockchain, Big Data AI, AR/VR, IoT, Cloud Computing, Quantum Computing and 5G have been deemed as some of the upcoming technological advances in the Pakistani IT sector (PSEB, 2020). Thus, making the IT sector ideal for assessing how techno stress can impact the work life balance of employees amidst the rapid technological advancements.

1.3. Problem Statement

The line separating work and non-work environments has become hazier with the use of "information technology gadgets." The needlessly extended work hours of the employees have harmed both their relationships with their families and their general health and wellbeing. Technology gadgets have the ability to enhance work-life balance, but if they are not properly controlled, they could lead to work-life conflict (Park et al., 2020). This conflict can be aggravated if employee's mental health concerns are overlooked. Studies have shown that 78% employers said that their workers have flexibility and balance in their schedule to get mental help they need, however, only 56% employees agree with this. 80% of the of the employers say that they have been accepting of the mental health challenges faced by their employees, whereas only 59% employees agree with this (Hartford Research, 2021). Thus, the problem of techno stress and its adverse effects on mental health and work life balance should be addressed. It will help the businesses in the long run and contributing to a better understanding of why such issues arise.

1.4. Scope of the study

This study focuses on how technostress impacts the work-life balance of employees in the prominent banking, IT and telecommunication sector organizations in Rawalpindi. Islamabad and Lahore. The data will be through questionnaires and will only focus on full time employees.

1.5. Research Objectives

1. To examine the effect of technostress on work-life balance among employees in the Pakistani banking, telecommunications and IT sector.
2. To what extent does mental health mediate the association between technostress and work-life balance among employees in the Pakistani banking, telecommunications and IT sector.
3. To investigate the moderating role of technological readiness between technostress and mental health among employees in the Pakistani banking, telecommunications and IT sector.

1.6. Research Questions

1. How does technostress effect work-life balance of employees in the Pakistani banking, telecommunications and IT sector?
2. How does mental health mediate the relationship between technostress and work-life balance among employees in the Pakistani banking, telecommunications and IT sector?
3. How does technological readiness moderate the relationship between technostress and mental health among employees in the Pakistani banking, telecommunications and IT sector?

1.7. Gaps and Theoretical Contributions

Technostress and work-life balance have been studied in the context of job self-efficacy & emotional exhaustion (Ma, Ollier-Malaterre and Lu, 2021), Issues of ICT (Raišienė and Jonušauskas, 2013), long work hours and stress (Holden and Sunindijo, 2018), techno-invasion and job anxiety during non-work time (Wu, Wang, Mei and Liu, 2020). Whereas, this examination of the literature raises a question on whether technostress does have implications on an employee's work life balance or are there other factors i.e. mental health and technological readiness contributing to its amplification

The focus of this study will be on the effects of technostress on the work life balance of employees, contributing to the literature in the following ways. The role of mental health has not been studied in this relationship before, therefore, it will help in assessing if their state of mental health amplifies or diminishes the effect of techno stress on the work life balance aspect. Specifically focusing on the non-work domain of "family life". Moreover, this will be moderated by the technological readiness of employees, which has scant literature available on how the nature of relationship between techno stress and work life balance will be affected.

Furthermore, the need to more actively control the boundary between work and non-work responsibilities has grown as the permeability between them has increased. Therefore, boundary management theory will be used to outline the ways for managing the essential boundaries between the various life domains, either through integration segmentation. This will contribute to the

boundary management literature by further deepening the understanding of these concepts with regards to mental health.

1.8. Operational Definition

1.8.1. Technostress

Brod (1984) described techno stress as a "contemporary illness of adaptation caused by an incapacity to adapt to new computing technologies in a healthier way".

1.8.2. Mental Health

Mental health is defined by the WHO (2004) as "a condition of well-being in which an individual recognizes his or her own potential, can cope with typical pressures of life, can work effectively and constructively, and can provide for his or her society". Kendrick and Pilling (2012) define those common mental disorders as "Depression, panic disorder, social anxiety disorder, generalized anxiety disorder, obsessive-compulsive disorder, phobias, and post-traumatic stress disorder".

1.8.3. Work-Life Balance

Work life balance can be defined as "a healthy work–life balance may be characterized as a well-functioning at work and at home, with a little role conflict," (Clark, 2000).

1.8.4. Technology Readiness

A person's general predisposition to accept technological solutions and services can be determined by a person's level of technology readiness, which is a collection of thoughts and feelings towards technology. The technology readiness index is a scale developed by Parasuraman (2000).

1.9. Practical Significance

By focusing on employees' experiences, additional theories about this topic in modern employment may be developed, as well as future policy aims regarding the triggers for their mental health conditions due to the techno stressors around will gauge how individuals eventually handle

their work life balance. This will eventually aid organizations in devising better policies to cater to the problems of technostress, mental health and work-life balance with varying.This will further assist the organization in providing guidance and resources to employees who need assistance mentally and physically when implementing and integrating new technologies in the company, which are adapted to the employees' personalities and unique demands from an organizational standpoint.

1.10. Organization of the thesis

This chapter will be followed by Chapter 2 which is the Literature Review. It will include the review of. It includes how the pretesting was done, the sample size, sampling techniques and the model used existing literature and show how the relationships have been hypothesized between the variables. It also includes the past studies and the conceptual model. Moving on to Chapter 3, which is the Methodology along with ethical considerations. Chapter 4 is the Analysis of the results where the results are displayed and explained. Lastly, Chapter 5 is the Discussion which gives an explanation as to what the results mean and how the literature review conducted earlier support what results have been received.

CHAPTER 2: LITRETAURE REVIEW

2.1. Introduction

This chapter provides the literature review. It has been divided into 4 main sub sections. The articles addressed in this chapter have helped us in explaining how technostress impacts work life balance. This boundary management theory helped in defining how blurring of the divisions between work and life due to technology paves way for techno stress. The evaluation of literature also looked at how these various techno stressors, mental health issues and technology readiness dimensions were studied in the past and how they differ from this study.

2.2. Conceptualization

2.2.1 Technostress

The word stress was viewed in early scholarly theories as either a reaction or a trigger (McGrath, 1976). The occurrence of stress as a process involving an interaction between the person and their environment. The occurrence of external stressors is a process that causes stress in which the person perceives a need or stressor that considerably depletes his or her capabilities, which triggers their coping mechanisms that results in psychological, psychosocial, and physiologic results that the person experiences (Galluch et al., 2015). Learning technostress can be theoretically addressed with knowing how the stress process works. Thus, over the course of numerous studies, the phenomenon of technostress, which discusses the frame of reference in which the stress process is initiated due to the use of technology has been conceptualized in this characterization as a process. Technostress is an approach that begins with the existence of environmental conditions pertaining to technology, which are assessed as techno stressors that are burdening on the employee and necessitate a change, which then forces one to look for coping strategies and this eventually leads to outcomes that impacts them psychologically Barber & Santuzzi, 2015).

Psychologist Craig Brod coined the term "technostress," which he defined as "a modern disease of adaptation caused by an inability to cope with new computer technologies in a healthy manner" (Brod, 1984). In technostress studies, the disposition of stress is presumed to be negative, following Brod. Whereas, it has also been defined as "our reaction to technology and how we are changing due to its influence"(Weil and Rosen, 1997 as cited in Mahboob, 2016). It is also characterized as any unfavourable impact on attitudes, perceptions, behaviours, or bodily physiology induced by technology, whether explicitly or implicitly (Tarafdar et al., 2007). Consequently, techno stress is characterized as "a negative psychological state associated with the use of "threat" of new technologies," which leads to "worry, mental fatigue, skepticism, and a sense of ineffectiveness" (Salanova et al., 2007 as cited in Brivio et al., 2018). Technostress is a modern condition of adjustment, which Ragu-Nathan et al. (2008) believe is caused by struggling to manage new information and computer systems, which impacts mental health in a variety of ways, including a reluctance to acknowledge computer technology or greatly rely on computer technology. The proliferation of technology induced what Fuglseth and Sorebo (2014) defined as "negative psychophysical effects of the use of ICT at work", which was being termed as a behavioural hazard.

Many elements, according to Tarafdar et al. (2007), have been shown to contribute to techno stress, which includes the likes of techno-uncertainty, techno-complexity, techno-insecurity, techno-invasion and techno-overload. For example, techno-insecurity is the belief that information and communication technologies, as well as the persistent need to stay current, pose a risk to an employee's job (Tarafdar et al., 2007). Moreover, employees receive information from several channels at the same time, resulting in techno-overload. This knowledge can be tough to handle because it's not always evident how to focus or make the greatest use of it (Tarafdar et al., 2007). Techno-uncertainty produces perceptual instability due to the changing nature of work and related systems, as well as the ongoing implementation of novel ICTs (Tarafdar et al., 2007). Techno-invasion is characterized as continuous connectedness that transcends geography and time, ensuring that workers are always available to respond to work obligations (Tarafdar et al., 2007; Ragu-Nathan et al., 2008; Gaudioso et al., 2017). Lastly, the uncomfortable notion that modern ICTs are multidimensional and need a great deal of work to comprehend is known as techno-complexity (Tarafdar et al., 2007).

On the other hand, an individual might experience stress in a positive manner following their use of information systems. Both strain and stress have a bad ring to them. The existing collection of research, which concentrates on the stresses produced by information and communication systems that are considered distressing and have detrimental effects, emphasizes this (Tarafdar et al., 2017). Despite the fact that there is a plethora of research on the advantages of information and communication systems, there aren't many studies looking at the advantages of technostress. In one article, the advantages of technostress were referred to as techno eustress (Tarafdar et al., 2017). Eustress happens when external circumstances are seen favourably and produce favourable results (O'Sullivan, 2011). Therefore, eustress is a healthy form of stress that people might feel. Good stress is how eustress has been framed. According to the law of Yerkes-Dodson, increasing stress is advantageous to productivity until some optimal level is obtained (Le Fevre et al.,2003). According to research (O'Sullivan, 2011; González-Morales & Neves, 2015), people who encounter a certain amount of stress are more efficient than they would be if the stress were removed from their surroundings. This is in line with Selye's theory that eustress happens when challenges are viewed as difficult and inspire drive and a desire for success in a person (Selye, 1978). Depending on whether information and communication technology traits are viewed as a problem or threatening stimulus, the way that an individual experiences technostress varies. Different strategies for assessing and dealing with each type of stress event exist. By taking into account the positive characteristics and results of technostress, a different theoretical perspective on the subject is introduced in the form of techno eustress (Tarafdar et al., 2017). The techno-eustress cycle is supposed to result in outcomes that are advantageous to the user. The results reflect on the person that are good and self-reinforcing. These might consist of things like enhanced invention, enhanced results, and efficiency gains at job activities when using information and communication systems. Recent research demonstrates that when workers use information and communication systems under energizing or positive pressures, the results can include greater productivity and effectiveness, which increases in performance (Wajcman & Rose, 2011).

2.2.2. Mental Health

William Sweetser was the first to create the term mental hygiene in the mid-nineteenth century, and it can be considered as a forerunner to today's efforts to encouraging mental health (Mandell, 1995). Erikson (1959) and Frankl (1963) described mental health as a feeling of security in one's own skin, which is often drawn from an inner quest for meaning as well as a sense of wholeness and self-cohesion. Additionally, mental health has also been described as the ability to perform effectively and successfully, relate to people in a mutually rewarding manner, and feel at ease when alone, generally through the cultivation of a rich and meaningful emotional experience (Gilmore, 1973). Davison and Neale (1990) have emphasized on mental health being a goal, such as self-actualization, that only a small percentage of people actually accomplish in their life. The world health organization (2001) described psychological well-being, perceived self-efficacy, independence, ability, intergenerational reliance, and self-actualization of one's cognitive and affective potential as just a few of the factors that go into mental health. Furthermore, it has been defined as a person's capacity to experience life and strike the right balance between daily activities and attempts to acquire psychological resilience (Lopez et al., 2011). More recently, it has been described as a construct that covers emotional, cognitive, and social well-being. It has an impact on the brain's function, cognition, and action. It also influences how a person deals with stress, social communication, and making choices (CDC, 2021).

2.2.3. Work-Life Balance

The notion of work-life balance has been conceptualized in different ways over the years. Kirchmeyer (2000) described it as when an individual's time, effort, and dedication are evenly dispersed across life domains, they attain balance. Whereas, the two basic views in the existing research, role conflict and role enrichment, were initially used to conceptualize work–life balance. work-life balance was typically defined in these ways as the lack of work family conflict along with strong levels of work family enrichment (Higgin and Duxbury, 2001; O'Driscoll et al., 2006). It has also been defined as "the extent to which an individual is engaged in an equally satisfied with his or her work role and family role" (Greenhaus et al., 2003). Moreover, individuals' opinions of whether demands are met, which are conveyed and consented upon by their work–home role counterparts have led Grzywacz and Carlson (2007) to theorise work-life balance as an

"accomplishment of role-related expectations that are negotiated and shared between an individual and his/her role-related partners in the work and family domains". Timms et al. (2015) depicted work–life balance as supplementary rather than compatibility of subdomains, implying that having several positions can improve a person's general impression of well-being. Casper et al. (2018) indicated that this idea should be more correctly described as a "work–non-work" balance in a recent modification. Employees' evaluations of how personally beneficial the blend of work and non-work duties was for them were emphasized.

An individual's inclination either towards their work domain or life domain depends upon certain factors. Prakash (2018) found that balancing pressures from work and home life was somewhat influenced by gender, relationship status, and having kids. If they preferred personal care, women with children felt more emotionally worn out and unable to focus on their personal lives. Men who were single and chose recreational activities as well as those who were involved in group activities had the same sentiment about missing leisure activities because of employment. This can be as a consequence of the failure to commit adequate time and effort to their extracurricular activities because they must prioritize employment. Employees with more personal preferences were substantially more pleased with the work-life stability programs of their organization than were those for whom family was not a significant non-work element of life. Moreover, Binder and Coad (2016) discovered that satisfaction with work-life balance was much less for workers with kids who prioritized friendships or personal care.

Furthermore, an individual's inclination towards their work can be explained by a concept called 'work related extended availability (WREA)'. Work related extended availability alludes to an employee's accessibility for tasks outside the scope of their normal work responsibilities. It is more particularly referred to as when employees take job calls, review or maybe respond to emails, or text messages during their free time. The broad adoption of contemporary technology for information and communication is a crucial enabler for 'work related extended availability' since it makes it easier for people to communicate about their jobs across different spheres of life (Dettmers, 2017). Workers can frequently check their business emails from any location at any time in addition to being reachable by phone around the clock. Chats, emails, or quick messaging from the workplace during downtime are likely to cause a psychological shift from the present

role, for e.g. husband, to the workplace role and result in the development of work ideas (Dettmers et al., 2016).

2.2.4. Technological Readiness

The concept of technology readiness was first conceptualized by Parasuraman (2000) as "people's propensity to embrace and use new technologies for accomplishing goals in home life and at work". It was described by Meuter et al. (2003) as a "relatively broad construct focusing on such issues as innovativeness and the tendency to be a technology pioneer". Whereas, Westjohn et al. (2009) labelled technology readiness as a trait, which is situational in nature, that outlines long-term tendencies to act in certain areas i.e. technology-related behaviours.

Individuals generate good or unpleasant attitudes about technical products during the adoption stage of new technologies, based on their favourable or negative opinions about the product. These emotions are dissected into four sub-dimensions namely, innovativeness, optimism, insecurity and discomfort. Innovativeness is a propensity to be a technological trailblazer and idea leader (Parasuraman, 2000; Parasuraman and Colby, 2014). Optimism is having a good outlook toward technology and the assumption that it gives individuals more autonomy, mobility, and effectiveness in their daily lives (Parasuraman, 2000; Parasuraman and Colby, 2014). Discomfort is a sense of being overwhelmed by technology and a presumed loss of control over it (Parasuraman, 2000; Parasuraman and Colby, 2014). Insecurity is mistrust of technology, based on doubts about its functioning effectively and fears about its inherent danger (Parasuraman, 2000; Parasuraman and Colby, 2014).

2.3. Boundary Management Theory

Ashforth et al. (2000) developed the boundary management theory explaining how individuals construct and maintain borders between living domains such as work and home. Appropriate boundary management methods can aid in the attainment of the desired balance. Boundary management, according to Clark (2000) is a philosophy in which workers cope with the borders

between their professional and personal lives by separating and merging distinct living areas. It is a collection of rationale and strategies that people use to cope with the boundaries that exist in many aspects of their lives. Geographic, temporal, relational, and mental boundaries all exist (Malaterre and Rothbard, 2015). Clark (2000) explains how the domains are basically "worlds that people have associated with different rules, thought patterns and behaviour". The theory concentrates on the transition process, formulating hypotheses on the psychological transfer amongst roles. The assumption is that role transitions are a boundary crossing action, whereby one departs and embraces roles by overcoming boundaries (Schein, 1971; Van Maanen, 1982). The major factors influence how a person performs, maintains, and negotiates their place within a socially constructed mechanism: (a) the social rules, actions, and conditions imposed on the person playing the role, (b) the person playing the role, and (c) the workplace rules or technology that promote boundary crossing (Golden, 2013).

For a variety of reasons, the act of establishing mental boundaries is critical. To begin with, disconnection from our environment is necessary for the development of individual identity and personality on a basic level (Zerubavel, 1991). Boundaries help to organize and streamline such structures. Domains such as "work" and "home" are instances of areas determined by boundaries (Nippert-Eng, 1996). An Individuals' level of integration vs. segmentation between the work and non-work spheres may vary depending on their desires. Even though it is crucial to remember that there are limits in the general framework of each individual's circumstances, which are moulded by work, family, gender, status, race, life course, society and so on (Noon & Blyton, 2002). Nippert-Eng, (1996) explains when domains are divided when their boundaries are precise and clear. The domains, on the other hand, are integrated when the borders are weak; in such circumstances, the areas intersect and overlap. Researchers have maintained that role boundary integration and segmentation are on a spectrum, with strong integrators and strong segmentors anchoring the opposite ends of the spectrum and majority of the people lying in the middle. (Ashforth et al., 2000; Rothbardet al., 2005) Two of the major factors that can impact a person's choice to segment or integrate domains are their gender and family situation (Kossek, Noe & DeMarr, 1999).

Segmentors see work and family as two separate aspects of their lives, and they may want to utilize separate email accounts, as well as have transition routines to indicate leaving one domain and

entering the other, for e.g. changing clothes (Kreiner etal., 2009). Integrators, on the other hand, are more likely to blend work and family roles, such as exhibiting family photos at work, working after hours at home, and mingling with co-workers beyond work (Nippert-Eng, 1996). Furthermore, boundary management is bilateral, just like work–life conflict or work–life enhancement, with some people dividing or merging in one way but not the other, such as work to non-work (Kossek, Ruderman, Braddy, &Hannum, 2012; Hecht & Allen, 2009)

The work-non-work boundary management fit concept helps to capture workers' psychological experiences of alignment between their own boundary management choices and the boundary management support provided by their workplace. This concept advances the contribution of work-family balance toward enhancing workers' well-being, in terms of diminishing stress, and corporate success (Bogaerts et al., 2018). Work-to-family enrichment is indicated by boundary management. Work-to-family enrichment is positively connected to an employee's inclination to incorporate mentally or behaviourally work into the family sphere (Daniel and Sonnentag, 2015).

It is widely acknowledged that technology is changing the essence of the work–family interaction, especially in terms of blurring the lines between work and family functions (Barnett & Hyde, 2001; Diaz et al., 2012). Considering employees can receive job-related messages anytime and anywhere owing to uninterrupted internet connection and the widespread use of mobile devices, the traditional work day has been stretched (Macik-Frey et al., 2007). Thus, by maintaining rigorous control over work and home areas and establishing additional boundaries surrounding the utilization of information technology, a person's psychological work-life incursion may be maintained (Jex and Park, 2011). Technological advancements have infiltrated the temporal, geographical, and relational barriers between work and life. Research has noticed these patterns in a number of settings. In studies as disparate as virtual teams in major businesses and intra-family interaction patterns among college students and deployed military members, we find similar characteristics. We argue that boundary management is best viewed as a multidimensional concept including time, location, and relationships, and that adapting to a more densely linked world necessitates a significant amount of work to manage a set of boundaries (Ollier-Malaterre et al., 2019). In summary, boundary management considers the notion that the blurring of divisions due to technology might have adverse ramifications for employees' work-life.

2.4. Hypothesis Development

2.4.1 Techno Stress and Mental Health

The term 'Technostress' was used to describe psychological reactions to unpleasant computer encounters. Brod (1984) described techno stress as a "contemporary illness of adaptation caused by an incapacity to adapt to new computing technologies in a healthier way". Various constructs have been dubbed as techno stress creators. Techno-overload refers to the feeling that they are working more and faster, techno-invasion refers to the feeling that one's private life is being sacrificed, techno complexity refers to the perception that the technological environment is very complicated, techno-uncertainty refers to the perception that technology is continuously changing, and techno-insecurity refers to the stress of losing their jobs to someone that is better equipped technologically (Tarafdar, Tu and Ragu-Nathan, 2010; Marchiori et al., 2018). Digital technology usage is linked to particular psychosocial pressures e.g., increased work burden, complexities, tensions between work and other life domains and psychobiological mental distress (Dragano and Lunau, 2020). In a scientific experiment Riedl et al. (2012) discovered that following a computer system failure, people's cortisol levels and skin conductance rose. This lends credence to the theory that techno stress triggers stress responses.

Anxiety alerts people to the existence of a perceived danger and motivates them to take measures that lessen their susceptibility to it. Dispositional anxiety can have a big impact on the mental processes that happen when people interact with technology (Barlow, 1988). Due to workers' perceptions of a lack of cooperation and workplace stress because of the excess and frequent usage of new Information and communication technologies, which can end up putting an organization and its personnel at risk, resulting in techno stress. This developing danger appears to have significantly impacted workers' mental health (Bondanini et al., 2020). It has been seen that when contrasting needs are created by Information and communication technologies, such as having traditional job expectations vs. new learning demands, which often leads to a conflict and becomes the eventual cause of stress (Ayyagari et al., 2011).

As precursors to job overload, technology elements such as practicality such as usability, intricacy, and durability, dynamic features such as rate of development, and invasive features like

presenteeism were postulated. The findings show that continuous connectivity offered by information and communication technologies raises load by increasing work cycle pace and performance expectations which eventually raises stress (Ayyagari et al., 2011). Fischer et al. (2019) explained that because information communication technologies are complicated, require rapid and strenuous learning, are effortful, constantly evolving, push one to multitask, are rife with technical difficulties and defects, and often lead to exorbitant control, which is why they develop into a cause of stress. Individual variances such as social anxiety, consumerism and external locus of control are directly correlated to techno stress linked to increased smartphone utilization (Lee et al., 2014). The fact that anxiety encourages negative assessments of future developments is another reason to believe that anxiety is linked to perceived techno stress. Anxious people usually expect significant degrees of stress in reaction to an incident that undermines their prosperity or one that demands adaptation (Shepperd et al., 2005). Therefore, it is hypothesized that:

H1: Technostress is negatively associated with mental health.

2.4.2. Mental Health and Work-Life Balance

Mental health is defined by the WHO (2004) as "a condition of well-being in which an individual recognizes his or her own potential, can cope with typical pressures of life, can work effectively and constructively, and can provide for his or her society". Kendrick and Pilling (2012) define those common mental disorders as "depression, panic disorder, social anxiety disorder, generalized anxiety disorder, obsessive-compulsive disorder, phobias, and post-traumatic stress disorder". Whereas, work-life balance can be defined as "a healthy work–life balance may be characterized as a well-functioning at work and at home, with a little role conflict," (Clark, 2000). Workers who acquire feelings of mental availability, which leads to good energy at work, are more likely to achieve work-life balance (Russo, Shteigman and Carmeli, 2015). A company whose culture supports work-life balance, their workers will be more engaged in their jobs, resulting in long-term growth (Rao, 2017).

There is a detrimental effect of emotional labour on work-life balance, which in consequence has a negative impact on job satisfaction and engagement (Hofmann and Stokburger, 2017). Work-life balance was shown to be linked positively to job and life happiness. Whereas, depression and anxiety were found to be adversely associated with work life balance (Haar, Russo and Ollier-

Malaterre, 2014). The dissolving of work-life and family-life borders had a substantial effect on anxiety. Because people's assets such as energy and time are finite, more tensions between work and family domains put them under more stress (Ayyagari et al., 2011). Hammer et al. (2011) explained how work life balance could be the solution to improved career and life contentment as well as fewer mental health difficulties. Where Lunau et al. (2014) found that poor work life balance is linked to low self-reported health and mental health. A potential issue with technology being found everywhere, especially at home, is that the cross over generated by physically working at home might lead to mental health issues, such as overwork. For instance, after the computer has been turned off, you may still be pondering about your job (Grant et al., 2013).

The non-work domain, which is family life, has been adversely affected due to the idea of "always being on" due to technology. Employees who were merely a phone call or message away from their boss, for them uncertainty and family time added to the stress. To find out if employees had any additional household obligations and how their workload altered in terms of household work amount throughout COVID-19, researchers investigated how family life affected their capacity to execute work duties. Women between the ages of 18 and 44, as well as those with small children in the home, were more likely to struggle with family life (Lonska et al., 2021). Work-life balance deteriorating had serious ramifications for healthcare providers' lives and relationships. During the covid-19 pandemic, a range of influences such as unusual working time, long shifts, role conflict, excessive workload arising from the work situation all had critical effects on health professionals. (Althobaiti et al., 2020). As a result of all of these issues, health workers suffer from anxiety, experience exhaustion, fear, isolation, fatigue, sleep difficulties, and psychological issues (Bao et al., 2020; Cullen et al., 2020).

Therefore, it is hypothesized that:

H2: Low mental health is negatively associated with work-life balance.

2.4.3. Mediating effect of Mental Health

If technostress has an impact on mental health and mental health in turn affects work-life balance, it goes on to show that mental health might mediate the relationship between technostress and

work-life balance. Organizational commitment, work happiness, and work outcomes (e.g., turnover, absenteeism) are all impacted by technostress. Employees with fatigue, burnout, skepticism and anxiety on the other hand, have low self-efficacy about information and communication technology (Salanova et al., 2014; Tarafdar et al., 2011). Burnout is significant in this topic because information technology utilization has the potential to cause increased stress overload. Maslach et al. classified burnout into three categories: emotional exhaustion, detachment and finally impaired work effectiveness. By favourable or unfavourable assessments, technostress producers are likely to affect employment outcomes and therefore lead to burnout (Berg-Beckhoff et al., 2017).

Zacher et al. (2012) found that employees who offer in-home care for a senior relative, where mental health was used as mediator, showed that interventions aimed at improving employee's satisfaction with eldercare activities may shield workers from the detrimental impacts of high eldercare demands on mental health and, as a result, on job performance. Work-to-family and family-to-work conflict perspectives were both shown to be negatively connected to Chinese women's mental health. Psychological distress and perceived stress were found to be adversely linked with mental health. Work–family problems appeared to have an impact on their mental health (Zhou, Da, Guo and Zhang, 2018). Therefore, it is hypothesized that:

H3: Mental health will mediate the relationship between technostress and work-life balance.

2.4.4. Technology Readiness as a Moderator

Technology readiness refers to a person's entire mental state when it comes to technology in general. Technology readiness is a set of ideas and sentiments about technology that, when combined, define a person's overall tendency to accept technological solutions and services. The technology readiness index is a scale developed by Parasuraman (2000) to assess an individual's technological readiness. It has four dimensions, 'optimism' refers to a favourable attitude toward technology and the notion that it provides individuals with more control, flexibility, and efficiency in their everyday routines. 'Innovativeness' refers to a propensity for becoming a technological trailblazer and idea leader. 'Discomfort' refers to a sense of being overpowered by technology and

a lack of control over it. Insecurity refers to a fear of technology and mistrust about its capacity to function correctly.

The impact of technology readiness on technology adoption in the e-HRM area revealed that the optimism and innovativeness aspects of technology readiness positively and significantly impacted perceived utility and perceived ease of use, while the discomfort and insecurity dimensions did not (Erdoğmuş and Esen, 2011). Employees in the self-service industry demonstrate anxiety and technophobia when it comes to technology. When they use technology, they feel uneasy and irritated. When confronted with Technology, those who lack attributes like technology readiness will experience unpleasant sentiments like anxiety and technophobia. When some individuals' capabilities are inadequate, growing demands drive a wedge between capability and expectations, resulting in higher technostress (Meuter et al., 2003; Parasuraman, 2000 as cited in Ibrahim and Yusoff, 2015). Primarily in the sphere of e-services, technological readiness has been discovered to be a fairly good predictor of technical attitudes, intents and behaviours (Chang and Chen, 2021).

Tsourela and Roumeliotis (2015) demonstrated that technology readiness plays a vital part in increasing an individual's intention behaviour to try modern technology. Individuals who rank high on technology readiness are skilled, eager, and at ease with emerging technologies. Furthermore, they have no challenges using this advanced technology. Individuals with poor technology readiness are more prone to be distrustful and apprehensive, and hence resist adopting new technologies (Chang and Chen, 2021). Moreover, the quality of an information system has a direct impact on an organization's performance. Technology readiness, in particular, has a moderating influence on the link between the quality of information systems and organizational performance. Technology readiness has the potential to improve the beneficial impact of information system quality on organizational performance. (Kuo, 2013). Moreover, a study on experts in Human Resource Management Information System revealed that components of technostress were connected to three major characteristics of the user, namely attitude, technological readiness, and willingness for change (Ibrahim and Yusoff, 2015). Therefore, it is hypothesized that:

H4: Technological readiness will moderate the relationship between techno stress and mental health.

2.5. Past Studies

Ozgur (2020) examined the connection between teachers' degrees of techno stress and gender, age, school support, and TPACK (Technological Pedagogical Content Knowledge) characteristics. This research, which was conducted using the SEM method, is to determine the causal relationship between variables such as individual characteristics such as age and gender, along with their TPACK level, and school support including manager, parent, community support and colleague, and technical support that are believed to influence the teacher's techno stress levels, as well as the effects of these variables on techno stress. The data was collected from 349 service high school teachers in Turkey. SPSS 23 for used for descriptive statistics and AMOS 18 tested the model. In this research, the relationships between the degrees of technostress among teachers and the factors of gender, age, school support, and TPACK were examined. The study's findings showed a strong and unfavourable correlation between teachers' degrees of technostress, school support, and TPACK. On the contrary hand, another research conclusion showed that there is a positive and substantial association between teachers' technostress levels and the age variable. This means that, as instructors' ages who utilize technology in the classroom get older, their levels of technological stress also get older. However, the current study uses an employee's mental health as a mediator along how their technological readiness impacts their relationship with techno stress.

Hwang et al. (2018) sought to incorporate the notion of techno stress and role stress in order to comprehend the situations and perspectives of employees in an organization in regards to information security. Moreover, it focused on assessing how employees' perspectives correspond to techno stress creators and how the subsequent role stress impacts their conformance intent via organizational commitment; and lastly, investigating a moderating variable assessing the conformance intent through organizational commitment. Suggesting regulatory focus such as promotion and prevention, as a moderator. This study's findings can be summed up as follows. First, information security compliance was adversely affected by security-related technostress producers due to commitment to the organization. Second, it was discovered that security-related technological stress generators were linked to some other form of stress, role stress pertaining to one's work, and that the elevated amount of security-related role stress caused by security-related technological stress generators even farther delivered as a predictor to reduce commitment to the organization. Lastly, how workers responded to security-related technostress generators was

highly influenced by their concentration on promotion. Employees who had a significant promotion emphasis had less role stress than employees with a weak promotion mindset, despite the fact that security-related technostress generators generally raised security-related role stress. Whereas, the focus of this current study is on using technological readiness as a moderator to study the relationship between techno stress, mental health and work life balance.

Tarafdar et al. (2007) studies the impact of stress caused by information and computer technology (ICT)—that is, techno stress, on role stress and productivity are investigated in this research using ideas from sociotechnical theory and role theory. Tarafdar et al. (2007) begins by describing how Information systems might cause stress in people and identifying characteristics that cause techno stress. Structural equation modelling was used. Data was collected from 223 organizations. The finding reveals that the various aspects of technostress that have been found here contribute to the knowledge already known about the stress that people experience in businesses. The research furthers the idea that failure to control the impacts of ICT-induced stress can counteract anticipated advances in productivity by demonstrating how technostress negatively affects output. Thirdly, the literature examining the connection between technology and organizational roles and structure gains a new theoretical link with the substantiation of the significant link between technostress and role stress. Whereas, the current study uses the notion of boundary management theory to assess how techno stress impacts the work life balance of an individual.

Nimrod (2017) focus is to discuss the conceptual underpinning and creation of a self-enumerated instrument to evaluate techno stress in elderly adults, as well as to investigate the magnitude and effects of this potential risk element connected with technology use in later life. For usage with older persons, a new test was developed that identifies important stress-inducing factors previously found in studies. A 14-item scale consisting of techno-overload, techno-invasion, techno-complexity, privacy, and inclusion are among the five techno stressors included in the scale, which is built on components uncovered in earlier studies. The results of this study, which is the first to examine technostress exclusively among elder ICT users, show that it is not just a problem for the workforce and younger consumers. Additionally, regardless of their demographic traits, it shows a substantial correlation between technostress and subjective wellbeing among older ICT users. Therefore, this difficulty of adjustment should be viewed as a risk to wellbeing at all stages of life, including older age. Whereas, the current study only focuses on 3 techno stressors which are

techno-complexity, techno-overload and techno-uncertainty. Also, the focus of the current study is not only on older workers but younger workers too.

Tarafdar et al. (2010) identifies mechanisms that can mitigate the negative consequences of techno stress on end users' perceptions of the devices they use and their ability to use them to enhance their work results. The model that examines the effects of elements that cause techno stress on a person's contentment with, and task performance using technology. The model also looks at how user participation in Information technology advancement and innovation might be used to reduce techno stress-causing elements and their consequences. The findings suggest that technology-induced stress reduces productivity and inventiveness in jobs requiring the use of ICT, both directly and indirectly, resulting in lowering user acceptance with the systems they operate. Secondly, user engagement procedures lessen technological stress-inducing elements and counteract their impact on user satisfaction by boosting the other. Thirdly, organizational innovation techniques that facilitate user involvement and support innovation implicitly boost employee efficiency and creativity in ICT-mediated activities through their favourable impact on end-user satisfaction. Whereas, the current study focuses on how techno stress impacts an employee's mental health and work life balance.

Ma et al. (2020) examined how technostress affects work-life balance and how job self-efficacy can mitigate this harm through the numbing effect of emotional exhaustion. The study carried out two surveys. Study 1 gathered information through a paper and pencil survey in China from 316 employees working in the IT sector. The second study confirmed and improved Study 1 by obtaining longitudinal data from 646 southern Chinese respondents by conducting an online survey. The study used confirmatory factor analysis through M plus 7.0. The findings indicated that technostress had a negative impact on work-life, employment self-efficacy protected workers against this adverse effect by lowering their emotional balance exhaustion. This research broadens knowledge of how techno-stressors affect people's non-work spheres and offered some light on how to handle technostresses. However, the current study uses an employee's mental health as a mediator along how their technological readiness impacts their relationship with techno stress

Wang et al. (2008) study the impact of various organizational environment settings, centralization and decentralization, on employee's techno stress levels. Also, it investigates the effect of an innovative organizational context on techno stress. Lastly, it focuses on all five dimensions of techno stress, namely techno invasion, techno overload, techno-complexity, techno-uncertainty and techno insecurity. However, the current study only focuses on 3 dimensions of technostress which are techno-complexity, techno-overload and techno-uncertainty.

Güğerçin (2019) links how work stress prompted because of technology to non-business pursuits during work, using the neutralization theory as a foundation. As a result, the goal of this research is to see how work stress prompted because of technology i.e. techno-stress affects non-business internet habits during work hours i.e. minor cyber slacking. Whereas, the current study focuses on using boundary management theory as a means to assess the relationship between technostress and work life balance.

Salanova et al. (2013) oversees the framework and indicators of two psychological experiences of techno stress affiliated through the use of information and communication technologies, namely, techno strain, where individuals express anxiety, tiredness, cynicism, and feelings of inefficacy in relation to technology use. The other psychological experience being techno addiction where excess and obsessive usage of technology makes users feel miserable. Whereas, the focus of this study is how the current mental health or psychological state of individuals mediate the relationship between technostress and work-life balance.

2.6. Conceptual Framework

The framework presented below showcases how techno stress impacts the work-life balance of employees while mental health mediates this relationship. Technology readiness acts as a moderator.
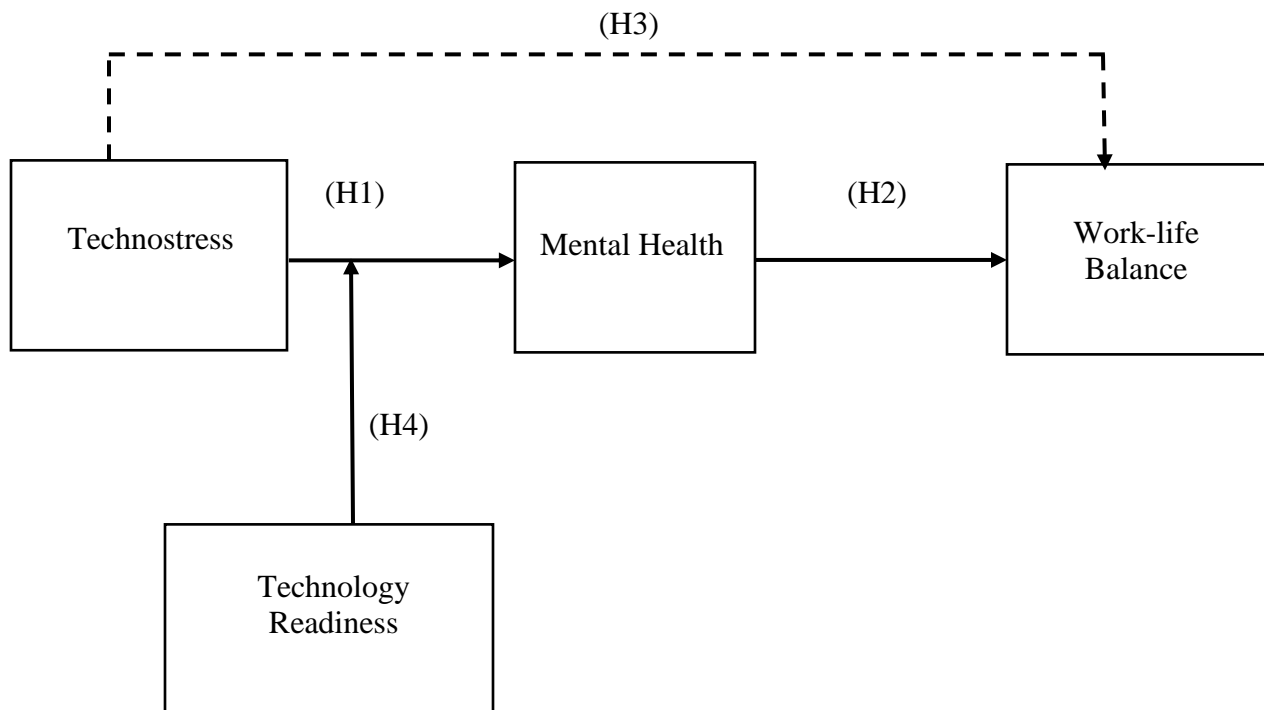
Figure 1: Conceptual Framework

→ Full line shows a direct relationship

- - -► Dotted line shows an indirect relationship

2.7. Summary

The focus of this chapter is to develop the relationships between the four variables of which are technostress, mental health, work life balance and technology readiness. This chapter provided a

great depth of how these constructs have been studies in the past and how the new constructs have been hypothesized. The general understanding from all the past studies is that technostress does have an impact and, in most cases, it has been found to be negative. The following chapter will help us asses what research methodology will be followed to study the current study.

CHAPTER 3: METHODOLOGY

3.1. Introduction

The goal of the study is covered in this chapter, with reference to the unresolved questions discovered during the literature review. It starts off with explaining the research design in depth. After the section on the research design, the methods for selecting samples, sampling techniques, data collection and analysis, target population, questionnaire administration are described.

3.2. Research Design

3.2.1 Research philosophy

The research philosophy adopted here is a positivist one with the ontology being an objectivist one as it is based on a study of previous literature. A deductive strategy will be employed to arrive at the desired results. Quantitative research is best served by a positivist viewpoint. Measurements of the objective truth that exist in the real world serves as the foundation for the information attained. It's possible that human behaviour will never be clearly grasped in its entirety (Creswell, 2014).

3.2.2 Quantitative Research

Quantitative methods will be utilized to evaluate the hypothesis in subsequent iterations of this study. This study will concentrate on how the findings might be generalized to a larger audience. Since then, the validity and existence of this research have been carefully established. Quantitative research uses random sampling and bigger sample sizes with the goal of defining, analysing, and testing hypotheses of a phenomena (Cooper and Schindler, 2006 as cited in Khalid et al., 2012).

3.2.3. Survey Research

A closed-ended survey was used to administer this research. Quantitative non-experimental approaches were used in this study. A survey is a non-experimental, descriptive research method that works well for obtaining respondents' opinions (Babbie, 1990). Because the aim of experimental quantitative methods is not to influence or alter the variables or participants' opinions (Tolmie, 2011). Also, due to the scope and duration of the study, observations and in-person interviews could not have elicited the same level of candour as the anonymous survey. In addition, the administration of the survey instrument cannot be influenced by opinions and bias, which isn't the case with observations, interviews and the data gathered would not have offered the specific information required for statistical analysis.

3.3. Population and Sampling

3.3.1. Target Population

Population is the group in which the researcher is interested and for which the researcher intends to generalize the outcomes of the research (Frankel et al., 2012).The target population is the Banking and IT sector of Pakistan, particularly focusing on the 3 major cities of Pakistan namely Islamabad, Rawalpindi and Lahore. The target population consisted of working men and working women, who were single, married or divorced, which consisted of both younger and older workers. The target population consisted of individuals from both the Private and Public sectors, who had had an experience that ranged from 1 year to 16 years. The job type included clerical, non-managerial and managerial roles with a work type that was temporary, part time and full time.

3.3.2. Unit of Analysis

The unit of analysis for this research was individual. Kumar (2018) explained that each time, the individual, mostly likely an employee, is serving as the analytical unit is being discussed and explained. When the employee is the unit of analysis, it can aid in shedding light on issues in business including human resource management. The attitudes, actions, views, and judgments of employees are examined. The unit of analysis in each instance will be an individual if the

researcher is willing to investigate buyer behaviour or views toward online shopping. Whereas, in this research, the employees' attitude towards technology was being assessed and how it in return impacted their own mental health and work life balance.

3.3.3 Sampling technique

Purposive Sampling

On the organizational level, purposive sampling was first adopted as it entails selecting and choosing people or groups who are knowledgeable and experienced about the topic of interest (Creswell, 2011). So, for this research, purposive sampling was used in order to sift through various organizations and choose those organizations that were Technology relevant and had heavy reliance on technology in order to carry out their operations.

Convenience sample

On the individual level, both snowball and convenience sampling were used to reach out to the relevant participants for this study. A convenience sample includes a set of people who are easily accessible for the study is known as a convenience sample (Frankel et al., 2012, p. 99). It is where the respondents of the target population are added for the study's objectives if they fit specific practical requirements, such as convenient access, geographic closeness, accessibility at a specific time, or a desire to take part (Etikan, 2016).

3.3.4. Sample size

A sample size of 300 was the set target with an equal number of data gathered from both working men and working women. As this research used the SmartPLS 3.0, a sample size of 300 was

determined because anything below 100 or 200 is considered small when it comes using SEM (Kline, 2016 as cited in Memon et al., 2020).

3.4. Data Collection

3.4.1 Questionnaire Design

Technostress

Adopting a 10-item scale will be used to quantify technostress (Alam, 2015). It measures the two elements of technostress—techno overload and techno complexity. A five-point Likert scale is used to score statements, with 0 denoting "strongly disagree" and 5 denoting "strongly agree."

Mental Health

The General Health Questionnaire (GHQ-12) with 12 items, each assessing the severity of a mental condition on a 5-point Likert-type scale (Goldberg and Williams, 1988 as quoted in Loretto et al., 2010), will be used to measure the scale for mental health.

Work Life balance

Work life balance was measured by using Brough et al. (2014) scale that has 4 items in total.

Technology Readiness

The technology readiness index was used to gauge technology readiness (Chung, 2015). The scale consisted of 10 items with each dimension having different items. Only two dimensions—"optimism" (5 questions; alpha =.78) and "innovativeness" (5 items; alpha =.82)—were chosen, with 1 signifying "strongly disagree" and 5 signifying "strongly agree."

3.4.2. Instrument Validation

The validity of the questionnaire adopted was ensured by making sure that the Cronbach alpha was more than 0.07.

3.4.3. Instrument Language

The questionnaire is in English as that is the language spoken and used in all the organizations in Pakistan and it is widely understood by the working individuals.

3.4.4. Pretesting

The pretesting was conducted in two phases. The individuals who were selected for pretesting each received two tests: a pre-test administered prior to treatment of the questionnaire and a posttest administered following the feedback received in phase 1. The individuals read the questions thoroughly before responding to a few questions about it. There are 40 items in total. Post feedback, there were changes made by rephrasing items to make them easier for the reader to comprehend and the questionnaire was tested again.

3.4.5. Pilot Study

A pilot study was conducted to assess the validity and reliability of the questionnaire and results.

3.4.6. Time Horizon

The study is cross sectional in nature. Spector (2019) stated that the cross-sectional design is advantageous because it makes appropriate use of the limited resources available to researchers. It makes sense to launch new fields of investigation using the most effective techniques to offer preliminary proof that a research subject is worthy of consideration.

3.4.7. Questionnaire Administration

After getting approval from the senior management, this primarily targeted personnel of different IT (Information Technology) organizations. This was evaluated by administering surveys distributed via emails and in person. The participant was made aware of how the data will be used and how much time will be required to complete it for their convenience. The first wave involved collecting data by distributing questionnaires in various IT and banking organizations. Whereas, the second wave involved reaching out to those organizations via email and gathering data via

Google form because they had employees who were working from home or the organizations had restrictions put in place that restricted access to the firm. Most of these restrictions were due to Covid-19 and allowed limited access to the organization for outsiders.

3.4.8. Response Rate

The response rate was 93%.

3.4.9. Initial Screening and Final Sample size

The final sample size was 253 full time employees from banking, IT and telecommunication industry.

3.4. Common Method Bias

Common method bias was tested for run for the instrument.

3.5. Data Analysis

3.5.1. Descriptive Statistics

The surveys were coded before being entered into SPSS for descriptive analysis as part of the survey data analysis. All hypothesis testing involved data analysis using SPSS software, version 22.0. The software offered automatic statistical measure analysis. The mean, variance and standard deviation of the Likert items were produced using the analyses function of SPSS and descriptive sub-function. The mean displays the typical response to the Likert question and reveals the primary patterns of the sample for each question and the variance measures how far apart from the mean each data set is on average (Wrench et al., 2016). Whereas, the standard deviation demonstrates how widely apart the numerical responses are from the mean (Mertler & Vanatta, 2016).

3.5.2. Structural Equation Modelling

The Structural Equation Modelling analysis was carried out in two parts, the initial of which concentrated on the measurement models, i.e. internal consistency reliability, convergent validity, and discriminant validity, and the next on the structural model which included R^2 and f^2 (Hair et al., 2017; Ramayah et al., 2018).

3.6. Ethical Consideration

Every participant in the research had the option to participate or not at any stage. Before they chose whether or not to partake, respondents were aware of the study's goals, advantages and concerns. Although the identity of the participants was known during data collection, this information will be concealed from the others. In order to prevent others from connecting personal information to other data, it has been secured. It is crucial that respondents participate voluntarily in the study. Additionally, if they choose to, participants are free to leave the research at any time. Participants were asked for their permission in order to participate. The participants were provided with enough knowledge and guarantees regarding their involvement to enable them to fully comprehend its ramifications and make an educated choice, free from any compulsion. They were clearly explained who the researcher is, what the purpose of the study is, what information will be gathered, and other pertinent information. The degree of participation that is needed from them and how the information will be collected and utilized. Also, when creating the questionnaire, it was necessary to refrain from using derogatory, intolerant, or other undesirable terminology.

Moreover, this research is original and free from unethical conduct and plagiarism, and the findings have been communicated accurately. APA referencing is used to credit any other scholars' works that were used in the thesis. Maximum level of objectivity was aimed to be achieved throughout the research in discussions and interpretations. Lastly, all resources and techniques used to gather and evaluate the data were properly reported in order to ensure effective data processing. It was ensured that purposeful leaving out of the results is not done as it will lead to confusion and lead the readers astray.

3.7. Chapter Summary

The study of this data and the outcomes will help in assessing how technostress impacts an individual and the extent to which it affects their mental health and work-life balance. The research design, demographic characteristics and sample techniques, data collection process, and analysis methods employed in this study were all covered in this chapter. The next chapter of this study presents the findings.

CHAPTER 4: ANALYSIS AND RESULTS

4.1. Introduction

The following chapter gives an overview of the targeted population, the final sample on which the study was conducted, and the demographic information collected. It then goes on to show the validity and reliability of the models and the results from the hypothesis testing.

4.2. Initial Screening

The initial screening was based on how many respondents in the sample meet the criteria. The sample excluded were based on that some were not full-time workers or had not filled the questionnaire properly.

4.3. Demographic Information

4.3.1 Gender

The final sample comprised n=169 (66.8%) Male participants and n=84 (33.2%) female participants. This low female representation in the sample can be accounted for low participation of women in the workforce compared to men. The labour force participation for men in Pakistan was 82.5%, which was three folds more than working women who were only 24.5% (Tribune, 2018). This can help in shedding some light as to why there has been an unequal representation of gender in the sample.

4.3.2. Age

The minimum age of the participants was 20 and the maximum age was 59. The mean age was 29.72%.

4.3.3 Marital Status of participants

The number of single individuals within the sample was n=148 (58.5%) and the number of married individuals was n=103 (40.7%). There was n=2 (0.8%) individuals who chose the "Others" category signifying that they might be separated or divorced.

4.3.4. Education level of participants

Out of the total sample of n=253, there were n=148 (58.5%) individuals who had a Bachelor's degree, n=94 (37.2%) had a Master's degree, n=2 (0.8%) had a PhD and n=9 (3.6%) individuals had completed their Chartered Accountancy. This shows that all the study participants were well-educated and had 16 years and above education.

4.3.5. Work Experience of participants

The participants' work experience ranged from 1 to 16 years and above. By further breaking it down, around n=158 (62.5%) had an experience of 1-5 years, n=51 (20.2%) had an experience of 6-10 years, n=30 (11.9%) had an experience of 11-15 years and n=14 (5.5%) had an experience of 16 years and above.

4.3.6. Work type

All the n=253 participants were full-time workers.

Table 1: Demographic Information

		Frequency	**%**
Gender of Participant	Male	169	66.8%
	Female	84	33.2%
	Other	0	0.0%
Marital Status of Participant	Single	148	58.5%
	Married	103	40.7%
	Other	2	0.8%
Education level of Participant	Matric	0	0.0%
	Intermediate	0	0.0%
	Bachelors	148	58.5%
	Masters	94	37.2%
	PhD	2	0.8%
	Chartered Accountancy	9	3.6%
Work experience of Participant	0-5 years	158	62.5%
	6-10 years	51	20.2%
	11-15 years	30	11.9%
	16 years and above	14	5.5%
Work Type	Full time	252	100.0%
	Part time	0	0.0%
	Temporary	0	0.0%

4.4. Multicollinearity

Prior to doing a structural model analysis, it is necessary to evaluate the variance inflation factor (VIF) in order to determine multicollinearity in conjunction with reliability and validity. A Variance inflation factor value exceeding 10.0 is deemed to be a sign of multicollinearity (Burns and Burns, 2008). Whereas, a cut-off number for multicollinearity of 5.0 has also been suggested (Hair et al.,2014). As the findings for each construct showed variance inflation factor results that were lower than the threshold value of 5.0, demonstrating that there were no multicollinearity concerns in this research.

4.5. Common Method Bias

Studies that are based on a survey have an issue known as Common Method Bias (Podsakof et al., 2003; Schwarz et al., 2017). Due to the fact that the data were gathered from only one source, Common Method Bias refers to the level of covariance among the tested items (Podsakof et al., 2003; Hair et al., 2014). Both procedural and statistical methods were used to handle the Common Method Bias problem. Measures were made to guarantee the respondents' anonymity and privacy, items were tested prior to the actual data collection phase to avoid unclear and challenging questions, and explicit directions were given to help them complete the questionnaire (Podsakof et al., 2003; Reio, 2010; Schwarz et al., 2017). To ascertain the presence of Common Method Bias, Harman's (1967) single-factor test was also run. Principal component analysis with varimax rotation was used in the exploratory factor analysis to incorporate all 40 items. Three components were identified by the exploratory factor analysis, with the first factor responsible for 23% of the variance, which falls below the cut-off value of 40% (Babin et al., 2016). Consequently, Common Method Bias had no significant effects on the current study.

4.6. Structural Equation Modelling

To assess the research hypotheses, partial least squares structural equation modelling (PLS-SEM) was employed. Because of its reliability, the PLS-SEM technique of analysis is frequently (Penga and Lai, 2012). A two-stage analytical process was used, as suggested by Andersen and Gerbing (1988). The measurement model, which includes the internal consistency reliability, convergent and discriminant validity is assessed in the initial step, and the structural model is examined in the second step, which includes the hypotheses testing.

4.7. Measurement Model

The measuring model underwent testing to determine the degree of validity, convergent validity, and internal consistency reliability of the constructs employed in this investigation. The extent to which the items are an indicator of the constructs is evaluated by internal consistency reliability (Hair et al., 2014; Ramayah et al., 2016). Internal consistency was evaluated with composite reliability (Hair et al., 2017).

4.8. Convergent Validity

The Convergent Validity measure, which evaluates the degree to which a measurement corresponds favourably with alternative measures of the same construct, is another to be cognizant of (Hair et al., 2017, p. 112). By examining the item's outer loading and calculating the average variance, Convergent Validity is evaluated (AVE). According to standard guidelines, outer loadings should be at least 0.708, and an acceptable AVE score is 0.5. (Avkiran, 2017). Also, items having an appropriate outer loading of 0.6 may also be permitted (Chin et al., 1997). Moreover, it was suggested that in case other indicators with higher loadings can explain at least 50% of the variance, it is advised to keep indicators with lower factor loadings (Hair et al., 2017). The results were as follows Mental health (0.519), Techno Complexity (0.643), Techno Overload (0.638), TR1 (0.643), TR0 (0.661) and Work-life balance (0.654). A few of the constructs were removed which were MH1, MH2, MH6 and MH7. After they were removed, the remaining constructs gained the desirable AVE. The results are shown in Table 2.

4.9. Internal Consistency Reliability

A measurement model is deemed adequate if its composite reliability is greater than the threshold value of 0.7 for each construct (Nunnally, 1978; Nunnally and Bernstein, 1994; Richter et al., 2016). The findings showed that all of the components' composite reliability exceeded the cut-off value (0.7) demonstrating the measurements' great internal consistency. They were mental health (0.894), techno-complexity (0.899), techno-overload (0.897), TR1 (0.899), TR0 (0.886) and work-life balance (0.882). The results are shown in Table 2.

Table 2: Internal Consistency Reliability

Constructs	Items	Loadings	AVE	CR
MH	MH3	0.605	0.519	0.894
	MH4	0.544		
	MH5	0.608		
	MH8_R	0.754		
	MH9_R	0.763		
	MH10_R	0.809		
	MH11_R	0.825		
	MH12_R	0.796		
Techno Complexity	TC1	0.855	0.643	0.899
	TC2	0.841		
	TC3	0.71		
	TC4	0.723		
	TC5	0.865		
Techno Overload	TO1	0.682	0.638	0.897
	TO2	0.86		
	TO3	0.883		
	TO4	0.778		
	TO5	0.775		
TRI	TRI1	0.619	0.643	0.899
	TRI2	0.809		
	TRI3	0.905		
	TRI4	0.853		
	TRI5	0.794		
TRO	TRO1	0.818	0.661	0.886
	TRO2	0.794		
	TRO3	0.77		
	TRO4	0.868		
WLB	WLB1	0.848	0.654	0.882
	WLB2_R	0.684		
	WLB3	0.818		
	WLB4	0.871		

Note: TS: Technostress, MH: Mental Health, WLB: Work-life Balance, TR: Technology Readiness, TC: Techno complexity, TO: Techno overload

4.10. Discriminant Validity

Discriminant Validity measures how different a construct is from all other of the model's constructs (Hair et al., 2017). Discriminant Validity was verified using the Heterotrait-Monotrait Ratio (Henseler et al., 2015). An HTMT value greater than 0.90 denotes the absence of Discriminant Validity (Hair et al., 2017). For HTMT, a cut-off value of 0.85 is considered to be more conservative (Henseler et al., 2015).

Table 3: Discriminant Validity (HTMT Criterion)

Constructs	MH	TRI	TRO	TSC	TSO	WLB
Mental Health						
TRI	0.22					
TRO	0.323	0.639				
Techno Complexity	0.505	0.384	0.299			
Techno Overload	0.39	0.106	0.152	0.67		
WLB	0.533	0.273	0.316	0.199	0.174	

Note: TR: Technology Readiness, WLB: Work-Life Balance

4.11. Structural Model

The structural model examines the reasons for the connections amongst the constructs (Sang et al., 2010).

Hypothesis testing (Direct effect)

Table 4 depicts the outcomes of the structural model examination. The findings show that Technostress (H1: β = -0.337, p < 0.001, LL: −0.444, UL: −0.191) has a significant negative association with Mental Health, as was hypothesised. Also, mental health (H2: β=0.485, p<0.000, LL: 0.388, UL: 0.55) is negatively related to Work-life balance, as was hypothesised. Moreover, the results for the PLS path coefficients showed that Technology Readiness (H4: β =−0.106, p>0.192, LL: −0.196, UL: 0.22) did not moderate and had no significant effect on the relationship of technostress and work-life balance. The results are shown in Table 4.

Hypothesis testing (indirect effect)

The mediating effect of Mental health between technostress and work-life balance was examined. The indirect effect method of Preacher and Hayes (2004, 2008) was utilised. The results for indirect effect indicated that Mental health (H3: β=−0.164, p<0.0000, LL: −0.226, UL: -0.083) mediated the relationship between technostress and work-life balance. The results are shown in Table 5.

Table 4: Hypothesis Testing (Direct)

Hypotheses	Beta	STDEV	T	P	CI LL	CI UL	Decision
TS-> MH	-0.337	0.103	3.288	0.001	-0.444	-0.191	Supported
MH -> WLB	0.485	0.047	10.326	0.000	0.388	0.55	Supported
TS*TR -> MH	-0.106	0.122	0.872	0.192	-0.196	0.22	NS

Note: TS: Technostress, MH: Mental Health, WLB: Work-life Balance, TR: Technology Readiness

Table 5: Mediation Analysis

Hypotheses	Beta	STDEV	T values	P Values	CI LL	CI UL	Decision
TS -> MH -> WLB	-0.164	0.054	3.043	0.0000	-0.226	-0.083	Supported

Note: TS: Technostress, MH: Mental Health, WLB: Work-life Balance, TR: Technology Readiness

R-Square

According to Hair et al. (2017), researchers should also report the coefficient of determination (R) and effect size (f). The findings can be seen in Table 5. R relates to the capacity of the independent variable to explain the connection with the dependent variable. The R value depicts that the mental health of employees shows 24.5 % of their work-life balance and work-life balance depicts 25.1%. The results are shown in Table 6.

Table 6: R-Square

Construct	R-square
Mental Health	0.249
WLB	0.251

Note: WLB: Work-life Balance

Effect Size

F2 indicates effect size which depicts what proportion of the dependent variable's R an independent variable contributes to. Cut-off values for determining effect size were given as follows: 0.02, 0.15, and 0.35, which, respectively, represent low, moderate, and high effect sizes (Cohen,1988). The findings show that technostress has a medium to large effect on mental health (f 2 =0.122) and a large effect on work-life balance (f =0.309). The results are shown in figure 7.

Table 7: f-Square

Hypotheses	F-square
Technostress -> Mental Health	0.122
Mental Health -> WLB	0.309
TS*TR -> Mental Health	0.019

Note: MH: Mental Health, WLB: Work-life Balance, TR: Technology Readiness

4.12. Summary of results

In order to address the study questions and evaluate the hypotheses, this chapter offered the statistical analysis of the data. The description of the hypothesis and the results of the hypothesis testing were given. 253 employees made up the sample of this study. The results showed that technostress is negatively associated with mental health and that low mental health is negatively associated with work-life balance.

CHAPTER 5: DISCUSSION

5.1. Introduction

The focus of this chapter will be giving a recap to of what the objectives and methods used were, along with the hypothesis and the results of which hypothesis were supported and rejected. Moreover, it provides a detailed discussion of the results along with supporting material from the literature. It goes onto describe what contributions this study has made both theoretically and practically. It mentions what limitations caused this study to not achieve its full potential and how future studies can pick up.

5.2. Objectives, Methods and Recap

This study aimed to assess the impact of technostress on an employee's mental and work-life balance. All while keeping in mind how their Technological Readiness impacted this. The goal was to see how these factors differ between working men and women. The gap in the literature showed the little focus that there was on employees' mental health and technological readiness. The aim of this quantitative and non-experimental study was to assess how the technostress, particularly its two dimensions called techno complexity and techno overload, impacts the work-life balance of employees.

This quantitative study used a survey to collect data majorly from the banking, IT and telecommunication industries, with a small quantity of data collected from other industries too. The questionnaire had a total of seven sections in total. After data analysis, it was discovered that Technostress is negatively associated with mental health and work-life balance. Thus, these results showcase that technostress faced by employees does in fact impact their mental health and work-life in a negative manner.

5.3. Table of hypothesis

Table 8: Summary of Hypothesis

	Hypothesis	**Supported? (Yes/No)**
H1	Technostress is negatively associated with mental health	Yes
H2	Low mental health is negatively associated with work-life balance	Yes
H3	Mental health will mediate the relationship between technostress and work-life balance	Yes
H4	Technological readiness will moderate the relationship between technostress and mental health.	No

5.4. Discussion

Technostress and mental health.

This is what Bondanini et al. (2020) found in their study addressing that technostress, which affects mental health in a way that it may emerge as a struggle to embrace technology, is often understood to be an inability to cope with new technologies. Whereas Salanaova et al. (2014) described technostress as a psychological condition associated with utilizing or misusing technology. This can be further linked to how technostress has also been linked to worry, mental stress and mental exhaustion with the perception of uselessness being thought to be multifaceted. It has been characterized as a poor psychological condition connected with the usage or fear to adopt new technology (Salanova et al., 2007 as cited in Brivio et al., 2018). Experiencing these various unpleasant emotions as a result of technostress is what Borle (2021) also found was that various

technological stressors also repeatedly demonstrated detrimental effects on unpleasant emotions, tension or stress and self-rated health.

Moreover, La Torre et al. (2019) believed that technostress has the potential to predict a decline in life happiness, and is frequently linked to the onset of mental and behavioural problems. A negative effect on mental health eventually impacts one's work life as Boonjing and Chanvarasuth (2017) researched that technostress provides more chances for people to experience stress at work. Employing more technological devices increases employee stress. As a result, the constant stress may hinder or even intensify work-related stress. Stress related to the workplace has been linked to mental health issues and disorders like depression, anxiety and burnout (O'Connor et al., 2018; Aronsson et al., 2017). Therefore, showing that employees can be stuck in a vicious loop of mental health problems. From the viewpoint of occupational health and safety, it's critical to pinpoint the precise components of the digitization practices that cause stress and subsequently have a negative impact on mental health (Stacey et al., 2018).

Low mental health and work-life balance.

Haar et al. (2014) observed that work-life balance is favourably related to both job and life satisfaction. However, it was discovered that depression and anxiety had a detrimental impact on work-life balance. According to the data collected in this study, employees felt that the state of the mental health did have an impact on their work life balance. A poor mental health condition meant that work-life balance was also not in a great condition. Moreover, Ayyagari et al. (2011) researched that anxiety significantly increased as the lines between job and personal and family life began to blur. Because people only have so much energy and time, increasing conflicts between their personal and professional lives stress them.

Moreover, Ayyar (2022) stated that the imbalance between work and life leads to stress, and that negatively impacts the quality of work and family life as well as the health of the worker. This is in line with what Health and Safety Executive (2020) reported that stress was responsible for approximately fifty percent of all working days lost due to illness. Poor mental health has a clear impact on how individuals interact at work. This shows that mental health problems, that too in the form of stress have been a hindrance for employees. Furthermore, a survey carried out by

mental health foundation (2021) showed that one in three employees are unsatisfied with the amount of time they spend working, which they would have directed to doing other things. It also stated that a loss of personal growth, a miserable home life, and problems with their physical and mental health are just a few examples of how working has adversely impacted the daily lives of nearly two thirds of employees. Therefore, these studies are in line with our hypothesis that mental health is negatively associated with work life balance and supports it.

Mental Health as a mediator

After an analysis of the data, it showed that mental health does mediate the relationship between technostress and work life balance. Salanova et al. (2014) observed that technostress has an effect on organizational commitment, work satisfaction, and work results, such as turnover and absenteeism. On the other hand, employees who experience exhaustion, stress, doubt, and anxiety have poor self-efficacy about their use of communication and information technology. This goes onto show that technostress creates an environment where potential motivators for employees i.e. work satisfaction can be disrupted a lead to an unfavorable situation for both the organization and employee resulting in absenteeism and turnover.

Whereas, how mental health connected to this relationship Zhou et al. (2018) found that Chinese women's mental health was found to be negatively linked with opinions on conflict between the family and the workplace. It was discovered that perceived stress and psychological discomfort were negatively correlated with mental health. Their mental health looked to be affected by work and family issues. Therefore, these previous studies seem to be in line with the results of the study that outline how mental health does mediate and how controlling the harmful effects of technostress may reduce the harmful effects on an employee's work-life balance.

Technology Readiness as a moderator

Technology readiness was found to show no significant role as a moderator between technostress and mental health after an analysis of the collected data. This can also be because of that fact that the two dimensions of technology readiness, innovativeness and optimism, do not have an impact

on the role of technostress and mental health. It shows that an indiviual's optimistic attitude and their need to be innovative and an idea blazer does not play a significant role when the technostress they face overpowers the very two factors that pushes one towards technology acceptance. Since they are domain specific and may be influenced by a person's current surroundings and past experiences, situational characteristics like technology readiness are far less reliable and are vulnerable to change (Blut and Wang, 2020).

There are a few antecedents to technology readiness that might explain why technology readiness was not able to moderate the relationship. The type of technology used, be it technology used at home or work, impacts one's readiness. Venkatesh et al. (2012) compared technology readiness in consumer setting vs. organizational setting. The study indicated that consumer technology usage seems to occur due to personal reasons, as opposed to when working in an organizational setting. Irrespective of how employees feel about it, organizations frequently impose requirements on the usage of technology. Whereas, a customer's own opinions about technology are relevant to both technology readiness motivating factors and constraints. An individual's views on technology readiness and usage are more impacted by motivators and constraints when utilized at home as opposed to at work. Therefore, showing that the technology readiness did not moderate over here because the employees who participated in this study felt that their readiness is probably not accounted for when organizations imposes it upon them and therefore, their technsotress overbears their technology readiness and does not regulate the relationship technostress has with their mental health.

Building on the previous point, an individual's technology readiness can be impacted by the fact that if their usage of technology is voluntary or mandatory. Voluntary action is a major modifying factor in the relationship between technology usage and beliefs (Venkatesh et al. 2012). When an individual uses technology willingly, their desire to utilize it and their actual usage indicate their opinions and views about it, but in non-voluntary circumstances, they adhere to company rules.

Moreover, another influencing factor is firm support. On how people perceive and use technology, there is a negative relationship impact between the help that is offered and technology readiness. Individuals with high technology readiness motivators i.e. optimism and innovativeness, do not

gain from firm support compared to individuals who are low in technology readiness motivators (Blut and Wang, 2020). This goes onto show that the employees who were a part of this study might have been indifferent to how they perceived their technology usage and readiness because their firms provided support and that nullified the impact on their technology readiness.

Rosenbaum and Wong (2015) believed that technology readiness refers to a person's attitudes, convictions, and emotions toward technological items and services. A person may concurrently express both positive and negative technology dependence, and the balance between these beliefs determines whether they are more likely to accept or reject a modern technology. Therefore, this might be able to explain why technology readiness did not moderate the relationship because largely the beliefs of the majority of employees could have been that they had to adopt new technology or maybe their during the data collection revealed during discussion that their technology readiness wasn't a big factor because their organization would first run a pilot test of the software that they had to introduce, this would allow them to get used to the new software while still using their old one. Plus, they would give readiness wasn't an important factor when their organizations introduced new technology. Once employees gave ample feedback to the software engineers to make changes that suited their needs that by the time the organization would roll out the software officially, they would have used it a couple of time. Moreover, another employee stated that the changes in their organizations were not that constant, so when a new software was being introduced they would give them ample trainings that acclimatized them.

On the other hand, (Chang & Chen, 2021) believed that technology readiness has been found to be a reasonably excellent predictor of technical attitudes, intents, and behaviours, mostly in the context of e-services. Tsourela and Roumeliotis (2015) revealed that a person's willingness to try out current technologies is significantly influenced by their level of technology readiness. High technology readiness individuals are knowledgeable, enthusiastic, and at comfort with new technologies. Whereas, on the other end of the spectrum, people who are not high on technology readiness are more likely to be hesitant and uneasy, which prevents them from embracing new technologies (Chang & Chen, 2021). Therefore, raising questions about the fact that if technology readiness of employee of always important when introducing new technology into organizations or if there are other factors. This can be explained by Blut and Wang (2020) who mentioned that

the type of technology i.e. hedonic or utilitarian, firm features i.e. voluntary versus required use and firm support, and nation environment all affect how strong technology readiness-technology utilization connections are. Finally, technology readiness is influenced by the age, expertise and education level.

Based on this literature review, it was believed that technology readiness will moderate the relationship between technostress and mental health but results from the primary data show that this hypothesis is not supported.

5.5. Theoretical contributions

The review of the literature prompted the question of whether technostress indeed affects an employee's ability to balance work and life. This led to the inclusion of mental health being studied as a mediator, which is also the first contribution. It showed the technostress does have a negative relationship with an employee's mental health. Also, mental health does mediate the relationship between technostress and work-life balance.

Secondly, the other contribution is the use of the boundary management theory. In order to describe how to control the crucial boundaries between the different life domains, either through integration or segmentation, boundary management theory was used. By further strengthening our understanding of these notions in relation to how working men and women defined their boundaries. In doing so, it contributes insights about whose work-life balance is more effected due to technological stresses. The inclusion of this theory helps us in contributing how work-life balance can further be improved when an individual recognizes the importance of setting up their relational, geographical, spatial and temporal boundaries. This can be further applied to how setting up these boundaries eventually impact an employee's relationship with their use of technological gadgets at their disposal and how that eventually helps them in overcoming low mental health as a result of technostress.

Thirdly, this is the first time that technological readiness was used in the relationship of technostress and work-life balance. This helps in drawing insight into how much an individual's readiness to accept and adopt technology can or cannot impact their levels of technostress and how

that readiness determines whether their relationship with technology and it's use will be a positive one or not.

Lastly, Ollier-Malaterre and Lu (2021) examination of the constantly evolving link between family, career, and technology made a future recommendation for a comparative analysis between men and women which was adopted in this study.

5.6. Practical Contributions

Firstly, our results show that managers should focus on how techno stress has a negative impact on mental health in their organization. These results might persuade managers to tread carefully when implementing new job-related software or equipment and controlling the regular IT use (Richardson, 2017). A specified email policy which involved trying to check email only at predetermined time, was found to reduce stress and improve mental health in an experiment (Kushlev and Dunn, 2015).

Also, factors that lead to stress should be addressed. Korner et al. (2019) researched that technical issues, poor functionality, a lack of context awareness, and the demand for new abilities lead to stress. When staff were unable to resolve technical issues within their own capacity, the work process was hindered and there was more time pressure. Hence, by assisting workers in coping with the effects of technostress, companies can considerably benefit from reducing the mental health concerns that arise from technostress among their workforce. Also, Richardson (2017) advised to assist employees who experience technostress and prevent the waste of resources, firms could also provide stress prevention strategies and plans.

Park et al. (2020) found a link between burnout and using a smartphone for professional purposes after hours. To avoid burnout, the ability to detach after work should be exercised. Since a lack of work-life balance is a factor in employee turnover and burnout, encouraging work-life balance may also assist companies to keep qualified workers (Marie, 2019).

5.7. Practical Implications

Given the value of both technostress and stress overall, it is crucial that enterprises understand the negative effects of technologies. Thus, companies might estimate the degrees of technostress using the model created in this research. The concept can be altered to meet the demands of various groups or departments because it is not technology-specific. Each corporate group could get more understanding of the primary causes of technostress by concentrating on a given technology or combination of technologies that are used in the organization. An important step in devising improved management initiatives to cope with technostress would be to recognize the specific contributing factors.

Educating employees about potential coping behaviours based on the findings of this analysis and giving them a variety of alternatives for action to take is a crucial first step for organisations to help employees in adopting effective coping strategies. From there, businesses can provide training for employees to advance their IT skills and personal coping mechanisms. Trainings might also improve IT control, autonomy, awareness, and self-efficacy in relation to individual resources to lessen work-related technostress.

Moreover, given that technostress has a negative impact on mental health, managers should delve deeper into treating the contributing factors of technostress on mental health and also priorities focusing on employee's mental health in general. Managers should focus on having conversations with employees about how they feel about the type of support they need when new technology is implemented rather than putting everyone into the same type of training. This will help ease the pressure off of the employees who might have different needs based on their expertise, tech knowledge and confidence level to operate those information and communication systems. This will eventually help in improving their mental health too as the pressure would ease off.

Allowing employees to select technologies other than the technology that is required for their jobs may boost their perception of autonomy and control. In order to reduce technostress, it is important to take into account both the interplay of technology and organisational elements as well as a variety of other aspects, such as organizational setting, work environment, and technical equipment. The perceived usefulness and usability of a technology might promote acceptability, according to the technological acceptance theory (Rohwer et al.,2022). To avoid technostress, this

can be accomplished, for instance, by communication between software developers and users and clarified in training sessions. According to a finding, functionality, which is dependability, utility, and convenience of use can lessen technological overload and stress associated to IT (Gaube et al., 2021).

5.8. Limitations

Firstly, there are restrictions to information gathering through self-reports. When reporting on their personal experiences, people are frequently prejudiced (Devaux and Sassi, 2016). Therefore, future research should focus on using a mixed method to reduce biasness.

Secondly, the data of mental health was self-reported and was captured in specific point in time via a cross sectional study. While this may have accurately captured stress-related elements, it does limit it how accurately an employee's mental health was tracked over a longer period of time or if it was just something the employee felt in that very specific point in time. This something that can be judged accurately via a longitudinal study in the future.

Thirdly, studies in the future should expand the model's determinants and mediators. Another limitation for this study is that just two technostress dimensions were pertinent in our situation, but a larger number of technological stressors may be pertinent in other contexts and should be investigated.

Moreover, it is possible that managers from different industries and sectors will have different information and communication technology requirements, priorities and type of technology used within the organization. The investigated occupational groupings comprise a wide range of employees from various job environments, particularly banking and IT. As a result, it is possible that employees from different sectors within the group will have different expectations in terms of Information and communication technology. It should be highlighted that if assessed, other factors, such as personality characteristics, besides those that were considered in this research may have affected the outcome.

Also, the distinction between distress and eustress, as well as the division of technostressors into challenge and impediment, have not been made in this study. The focus of this thesis was on the dark side of technostress. The area of how stress can translate into eustress has not been explored. Our findings are therefore restricted to technostressors that cause distress and impediment, whereas alternative techniques may be taken to promote eustress or confront technostressors. Moreover, this study concentrated on the detrimental psychological effects of technostress, while the fact that stress can also be seen favourably and that it can be studied from a physiological standpoint has not been looked at in this study (Califf et al,. 2020; Riedl et al. 2012).

5.9. Future Directions

Firstly, it is important to conduct more research to determine whether properly developed digital and software tools along with a supportive organizational structure can improve the mental health of employees who often use these tools.

Secondly, in light of the constraints mentioned earlier, it can be evaluated that there is a connection between some forms of workplace technostress and poor mental health. Research points to a connection between mental health and stress caused by technology. Future research must have stronger methodologies in order to properly examine the risks associated with the pervasive technology, tools and software in the workplace with other spheres of life.

Thirdly, this study only focuses on two technostress dimensions, namely techno-overload and techno-complexity. Future studies can focus on adding all five dimensions to see how this model varies. Also, it is also recommended that future studies examine the effect of individual traits in technostress in relation to the utilization of information and communication technology in businesses in terms of either its full usage and implementation in the organization and hybrid or partial use.

Future studies should use the socio technical theory of job design for technostress intervention. First, there should be a thorough system assessment of the organizational social and technological requirements. This is one of the fundamental tenants of sociotechnical system theory of job design, which can be implemented for technostress intervention. According to the researchers of

sociotechnical design, employment should be structured to meet the organization's goals (Pasmore et al. 1982). Employee participation in the work redesign phase is encouraged in order to meet this objective. Research has demonstrated that involving employees in the implementation and intervention cycle boosts their feelings of ownership over the transition, and that businesses can benefit from their knowledge. It has been demonstrated that involvement lowers resistance to change. A change in the organization of task and other aspects of job structure are part of a technological intervention. Technostress, according to some academics, is a result of opposition to technological change. Therefore, it can lessen potential opposition when employees are engaged in the process of technology transformation and job design. This research implies that employee involvement in the process of designing jobs that take advantage of technology and in technological change may lessen the effects of technostress (Okolo et al., 2019)

Moreover, future study can use the theory of planned behavior to assess the technology readiness of individuals. Based on whether or not technology use is voluntary, the effects of one's mindset and norms can vary in the field of ICT. This context may inspire fresh investigations into Theory of Planned Behavior and how it can be linked to technology readiness. According to this theory, behaviour is controlled by perceptions of intent, disposition, performance expectancy, and behaviour. It means that a person's intention is influenced by their attitude and how positively or negatively they regard the activity in issue, the subjective norm, and whether they feel under societal pressures to engage in the behaviour or not (Salazar-Concha et al., 2021).

Furthermore, the sole emphasis of this research study was technological stress at work. Technology use at work is more purpose-driven than recreational, despite the fact that technostress can also result from technology use in the private sphere of life. Workers may consequently have few or no options to control their contact with or of technology at work, which emphasizes the significance of learning about mitigation and coping mechanisms in this situation. Future research can focus on comparing how technostress at work compares to technostress that might arise due technology used for entertainment purposes.

Lastly, it would be intriguing to examine the effectiveness of technical assistance or skills training in lowering technostress among various employees who have differing levels of information and communication technology expertise.

5.10. Conclusion

The rapid adoption of technology by organizations has led to its employees feeling pressurized and stressed by the need to stay updated and ahead of others. This stress has dawned upon them in the form of various techno stressors that were highlighted in this study. Not only stress of adopting technology but how its onset had led to having detrimental impacts on their mental health and work-life balance. Drawing upon, the boundary management theory, this study advises organization on how these minute stresses and concerns can result in a bigger issue which can eventually affect both employees and organizations id not addressed timely.

References

Adisa, T., Gbadamosi, G., & Osabutey, E. (2017), "What happened to the border? The role of mobile information technology devices on employees' work-life balance", *Personnel Review*, *46*(8), 1651-1671. doi: 10.1108/pr-08-2016-0222

Ahmad, Iftikhar. (2018). 'No Country for Working Women'. *Tribune.* Retrieved from https://tribune.com.pk/story/1655699/no-country-working-women, Retrieved on April 18, 2022.

Ahmed, R., Salik, S., & Atif, M. (2021), Pakistan Banking Perspective 2021 [Ebook], *KPMG,* Retrieved from http://file:///C:/Users/Hp/Downloads/Pakistan-BankingPerspective-2021-unlocked.pdf , Retrieved on May 19, 2022.

Alam, M. A. (2016), "Techno-stress and productivity: Survey evidence from the aviation industry", *Journal of Air Transport Management*, *50*, 62-70.

Althobaiti, S., Alharthi, S., & AlZahrani, A. M. (2020), "Medical systems' quality evaluated by perceptions of nursing care: Facing COVID-19 pandemic", *International Journal for Quality Research*, 14(3), 895–912.

Andersen, J.C. and Gerbing, D.W. (1988), "Structural equation modelling in practice. A review and recommended two-step approach", *Psychological Bulletin*,103, 411-423.

Aronsson, G., Theorell, T., Grape, T., Hammarström, A., Hogstedt, C., Marteinsdottir, I., ... & Hall, C. (2017), "A systematic review including meta-analysis of work environment and burnout symptoms", *BMC public health*, *17*(1), 1-13.

Aruldoss, A., Kowalski, K., & Parayitam, S. (2020), "The relationship between quality of work life and work-life-balance mediating role of job stress, job satisfaction and job commitment: evidence from India". *Journal Of Advances In Management Research*, *18*(1), 36-62.

Ashforth, B., Kreiner, G., & Fugate, M. (2000), "All in a Day's Work: Boundaries and Micro Role Transitions". *Academy Of Management Review*, *25*(3), 472-491.

Avkiran, N.K. (2017), "An in-depth discussion and illustration of partial least squares structural equation modeling in health care", Health Care Management Science, pp. 1-8,

Ayar, D., Karaman, M. A., & Karaman, R. (2022) , "Work-Life balance and mental health needs of health professionals during COVID-19 pandemic in Turkey", *International Journal of Mental Health and Addiction*, 20(1), 639-655.

Ayyagari, Grover, & Purvis. (2011), "Technostress: Technological Antecedents and Implications", *MIS Quarterly*, 35(4), 831.

Babbie, E. (1990), *"Survey research methods (2nd ed.)",* Belmont, CA: Wadsworth Publishing.

Babin, B.J., Griffin, M. and Hair, J.F. (2016), "Heresies and sacred cows in scholarly marketing publications", *Journal of Business Research*, Vol. 69, pp. 3133-3138

Bao, Y., Sun, Y., Meng, S., Shi, J., & Lu, L. (2020) , "2019-nCoV epidemic: Address mental health care to empower society", *Lancet,* 395(10224), 37–38.

Barlow, D. H. (1988), "*Anxiety and its disorders: The nature and treatment of anxiety and panic",* New York, NY: Guilford Press.

Barnett, R. C., & Hyde, J. S. (2001), "Women, men, work, and family: An expansionist theory", *American Psychologist*, 56, 781–796.

Barber, L. K., & Santuzzi, A. M. (2015), "Please respond ASAP: Workplace telepressure and employee recovery", *Journal of Occupational Health Psychology*, 20(2), 172–189

Beer, P., & Mulder, R. H. (2020) , "The effects of technological developments on work and their implications for continuous vocational education and training: A systematic review", *Frontiers in Psychology*, 11, 918.

Beham, B., Drobnič, S., Präg, P., Baierl, A., & Eckner, J. (2018) , "Part-time work and gender inequality in Europe: a comparative analysis of satisfaction with work–life balance", *European Societies*, *21*(3), 378-402.

Berg-Beckhoff, G., Nielsen, G., & Ladekjær Larsen, E. (2017), "Use of information communication technology and stress, burnout, and mental health in older, middle-aged, and younger workers – results from a systematic review", *International Journal Of Occupational And Environmental Health*, *23*(2), 160-171.

Bhat, S.K., Pande, N. and Ahuja, V. (2017), "Employee profile configurator: a tool to improve effectiveness of a virtual team", *International Journal of Networking & Virtual Organisations*, 17(4), 392.

Bhui, K., Dinos, S., Galant-Miecznikowska, M., de Jongh, B., & Stansfeld, S. (2016), "Perceptions of work stress causes and effective interventions in employees working in public, private and non-governmental organisations: A qualitative study", *Bjpsych Bulletin*, 40(6), 318–325.

Binder, M., & Coad, A. (2016), "How satisfied are the self-employed? A life domain view", *Journal of Happiness Studies*, 17(4), 1409-1433.

Blut, M., & Wang, C. (2020), "Technology readiness: a meta-analysis of conceptualizations of the construct and its impact on technology usage", *Journal of the Academy of Marketing Science*, *48*(4), 649-669.

Bogaerts, Y., De Cooman, R., & De Gieter, S. (2018), "Getting the Work-Nonwork Interface You Are Looking for: The Relevance of Work-Nonwork Boundary Management Fit", *Frontiers In Psychology*, *9*.

Bondanini, G., Giorgi, G., Ariza-Montes, A., Vega-Muñoz, A., & Andreucci-Annunziata, P. (2020), "Technostress Dark Side of Technology in the Workplace: A Scientometric Analysis", *International journal of environmental research and public health*, *17*(21), 8013.

Boonjing, V., & Chanvarasuth, P. (2017), "Risk of overusing mobile phones: Technostress effect", *Procedia Computer Science*, *111*, 196-202.

Borle, P., Reichel, K., Niebuhr, F., & Voelter-Mahlknecht, S. (2021) , "How are techno-stressors associated with mental health and work outcomes? A systematic review of occupational exposure to information and communication technologies within the technostress model", *International Journal of Environmental Research and Public Health*, *18*(16), 8673.

Brivio, E., Gaudioso, F., Vergine, I., Mirizzi, C., Reina, C., Stellari, A., & Galimberti, C. (2018), "Preventing Technostress Through Positive Technology", *Frontiers In Psychology*, *9*.

Brod, C. (1984), "*Technostress: The human cost of the computer revolution",* Reading, Mass.: Addison-Wesley.

Brough, P., Timms, C., O'Driscoll, M. P., Kalliath, T., Siu, O. L., Sit, C., & Lo, D. (2014) , "Work–life balance: A longitudinal evaluation of a new measure across Australia and New Zealand workers", *The International Journal of Human Resource Management*, *25*(19), 2724-2744.

Burns, R.B. and Burns, R.A. (2008), "*Business Research Methods and Statistics Using SPSS",* SAGE, Los Angeles, CA.

Casper, W. J., Vaziri, H., Wayne, J. H., DeHauw, S., & Greenhaus, J. (2018) , "The jingle-jangle of work–nonwork balance: A comprehensive and meta-analytic review of its meaning and measurement", *Journal of Applied Psychology*, *103*(2), 182.

Califf, C. B., Sarker, S., and Sarker, S. 2020. "The Bright and Dark Sides of Technostress: A Mixed-Methods Study Involving Healthcare IT," *MIS Quarterly* (44:2), pp. 809-856.

CDC. (2021). Retrieved from https://www.cdc.gov/mentalhealth/learn/index.htm, Retrieved on 13 June 2022,

Chang, Y. W & Chen J. (2021), "What motivates customers to shop in smart shops? The impacts of smart technology and technology readiness", *Journal of Retailing and Consumer Services*, 58, 1-11.

Chin, W.W., Gopal, A. and Salisbury, W.D. (1997), "Advancing the theory of adaptive structuration: the development of a scale to measure faithfulness of appropriation", *Information Systems Research*, 8,342-367.

Cho, Y., Park, J., Ju, B., Han, S., Moon, H., & Park, S. et al. (2016), "Women Leaders' Work-Life Imbalance in South Korean Companies: A Collaborative Qualitative Study", *Human Resource Development Quarterly*, *27*(4), 461-487.

Christ-Brendemühl, S., & Schaarschmidt, M. (2020). "The impact of service employees' technostress on customer satisfaction and delight: A dyadic analysis", *Journal Of Business Research*, *117*, 378-388.

Chung, N., Han, H., & Joun, Y. (2015) , "Tourists' intention to visit a destination: The role of augmented reality (AR) application for a heritage site", *Computers in Human Behavior*, *50*, 588-599.

CIPD. (2020), "Workplace technology: the employee experience", London: Chartered Institute of Personnel and Development.

Clark, S. C. (2000). "Work/Family Border Theory: A New Theory of Work/Family Balance", *Human Relations*, 53(6), 747–770.

Çoklar, A. N., & Sahin, Y. L. (2011., "Technostress levels of social network users based on ICTs in Turkey", European Journal of Social Sciences, 23(2), 171-182.

Cresswell, J. W., & Plano Clark, V. L. (2011), *"Designing and Conducting mixed method research (2nd ed.)"*, Thousand Oaks, CA: Sage.

Creswell, J. W. (2014), *"Research design. (4th ed.)",* Los Angeles, CA: Sage.

Cullen, W., Gulati, G,. & Kelly, B. D. (2020), "Mental health in the Covid-19 pandemic", *QJM: An International Journal of Medicine*, *113*(5), 311–312.

Daniel, S., & Sonnentag, S. (2015), "Crossing the borders: the relationship between boundary management, work–family enrichment and job satisfaction", *The International Journal Of Human Resource Management*, *27*(4), 407-426.

Davies, A. (2021), "COVID-19 and ICT-supported remote working: Opportunities for rural economies", *World*, *2*(1), 139-152.

Davison, G. C., & Neale, J. M. (1990), "*Abnormal psychology*", Wiley.

Devaux, M., & Sassi, F. (2016), "Social disparities in hazardous alcohol use: self-report bias may lead to incorrect estimates*", The European Journal of Public Health,* 26(1), 129-134*.*

Dettmers J, Bamberg E and Seffzek K (2016), "Characteristics of extended availability for work: The role of demands and resources", *International Journal of Stress Management* 233(3): 276–297.

Dettmers J (2017), "How extended work availability affects well-being: The mediating roles of psychological detachment and work-family-conflict", *Work & Stress* 31(1): 24–41.

Diaz, I., Chiaburu, D. S., Zimmerman, R. D., & Boswell, W. R. (2012), "Communication technology: Pros and cons of constant connection to work", *Journal of Vocational Behavior*,80(2), 500–508.

Dragano, N., & Lunau, T. (2020). "Technostress at work and mental health: concepts and research results", *Current opinion in psychiatry*, *33*(4), 407–413.

Duxbury, L., & Higgins, C. (2001). Work-Life Balance in the New Millennium: Where Are We? Where Do We Need To Go? CPRN Discussion Paper

Egbuta Olive, U., Akinlabi Babatunde, H., & Nanle, M. (2019), "Work-Life Balance and Employee Performance: A Study of Selected Deposit Money Banks in Lagos State, Nigeria", *The Journal of Social Sciences Research*, *5*(12), 1787-1795.

Erdoğmuş, N., & Esen, M. (2011). "An investigation of the effects of technology readiness on technology acceptance in e-HRM", *Procedia-Social and Behavioral Sciences*, *24*, 487-495.

Erikson, E. H. (1959), "Identity and the life cycle. Psychological Issues, (Monograph 1)", *New York International University.*

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016), "Comparison of convenience sampling and purposive sampling", *American journal of theoretical and applied statistics*, *5*(1), 1-4.

Fischer, T., Pehböck, A., & Riedl, R. (2019), "Is the Technostress Creators Inventory Still an Up-To-Date Measurement Instrument? Results of a Large-Scale Interview Study", *14th International Conference on Wirtschafts informatik*, 1820–1852.

Frankel, J. R., & Norman, E. Wellen., HHY (2012), *"How to Design and Evaluate Research in Education"*. New York: McGraw-Hill. (8th-ed ed., pp. 1–642).

Frankl, V. (1963), "*Man's search for meaning",* New York: Washington Square

Fuglseth, A., & Sørebø, Ø. (2014), "The effects of technostress within the context of employee use of ICT", *Computers In Human Behavior*, 40, 161-170.

Galluch, P. S., Grover, V., & Thatcher, J. B. (2015), "Interrupting the workplace: Examining stressors in an information technology context", *Journal of the Association for Information Systems*, 16(1), 1–47.

Gaudioso, F., Turel, O., & Galimberti, C. (2017), "The mediating roles of strain facets and coping strategies in translating techno-stressors into adverse job outcomes", *Computers In Human Behavior,* 69, 189-196.

Gaube, S., Cecil, J., Wagner, S., & Schicho, A. (2021), "The relationship between health IT characteristics and organizational variables among German healthcare workers*", Scientific reports*, 11(1), 1-11.

Gilmore, S. K. (1973), *"The counselor-in-training",* New York Appleton-Century-Crofts.

Glasgow, S., & Sang, K. (2016), "Gender and work-life balance. In N. Arshed, J. McFarlane, & R. Macintosh (Eds.)", *Enterprise and its business environment* (pp. 135–150). Good fellow Publishers.

Golden AG (2013), "The structuration of information and communication technologies and work–life interrelationships: Shared organizational and family rules and resources and implications for work in a high-technology organization", *Communication Monographs* 80(1): 101–123.

George, D., & Mallery, P. (2019). *IBM SPSS statistics 26 step by step: A simple guide and reference.* Routledge.

González-López, Ó. R., Buenadicha-Mateos, M., & Sánchez-Hernández, M. I. (2021), "Overwhelmed by Technostress? Sensitive Archetypes and Effects in Times of Forced Digitalization", *International journal of environmental research and public health*, *18*(8), 4216.

González-Morales, M. G., & Neves, P. (2015), "When stressors make you work: Mechanisms linking challenge stressors to performance", *Work & Stress*, 29(3), 213-229.

Grant, C., Wallace, L., & Spurgeon, P. (2013), "An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and work-life balance", *Employee Relations*, *35*(5), 527-546.

Graveling, R. (2020), "The mental health of workers in the digital era"

Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003), "The relation between work–family balance and quality of life", *Journal of vocational behavior*, *63*(3), 510-531

Grzywacz, J., & Carlson, D. (2007), "Conceptualizing Work—Family Balance: Implications for Practice and Research", *Advances In Developing Human Resources*, *9*(4), 455-471.

Güğerçin, U. (2019), "Does techno-stress justify cyberslacking? An empirical study based on the neutralisation theory", *Behaviour &Amp; Information Technology*, 39(7), 824-836.

Haar, J. M., Russo, M., Suñe, A., & Ollier-Malaterre, A. (2014), "Outcomes of work–life balance on job satisfaction, life satisfaction and mental health: A study across seven cultures", *Journal of Vocational Behavior*, *85*(3), 361-373.

Haar, J., & Brougham, D. (2020), "Work antecedents and consequences of work-life balance: A two sample study within New Zealand", *The International Journal Of Human Resource Management*, 1-24.

Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2014), "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)", *SAGE,* Los Angeles, CA.

Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2017), "*A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM), 2nd ed*", SAGE, Thousand Oaks, CA.

Hartford. (2021), "*2021 Future of Benefits* [Ebook]. Retrieved from https://s24.q4cdn.com/306296537/files/doc_downloads/2021/The_Hartford_2021Future_of_Benefits_Executive_Summary.pdf, Retrieved on June 15, 2022.

Hammer, L. B., Kossek, E. E., Anger, W. K., Bodner, T., & Zimmerman, K. (2011), "Clarifying work-family intervention processes: The roles of work-family conflict and family supportive supervisor behaviors", *Journal of Applied Psychology*, 96, 134–150.

Harman, H.H. (1967), "*Modern Factor Analysis",* University of Chicago Press, Chicago, IL

Harris, K., Harris, R., Valle, M., Carlson, J., Carlson, D., Zivnuska, S., & Wiley, B. (2021), "Technostress and the entitled employee: impacts on work and family", *Information Technology & People*.

Hecht, T. D., & Allen, N. J. (2009), "A longitudinal examination of the work–nonworkboundary strength construct", *Journal of Organizational Behavior*, 30, 839–862.

Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of the Academy of Marketing Science*,43(1),115-135.

Hill, T., & Needham, B. (2013), "Rethinking gender and mental health: A critical analysis of three propositions", *Social Science & Amp; Medicine,* 92, 83-91.

Hofmann, V., & Stokburger-Sauer, N. E. (2017), "The impact of emotional labor on employees' work-life balance perception and commitment: A study in the hospitality industry", *International Journal of Hospitality Management*, 65, 47–58.

Holden, S., & Sunindijo, R. (2018), "Technology, Long Work Hours, and Stress Worsen Work-life Balance in the Construction Industry", *International Journal of Integrated Engineering*, *10*(2).

Hsiao, K. L., Shu, Y., & Huang, T. C. (2017), "Exploring the effect of compulsive social app usage on technostress and academic performance: Perspectives from personality traits", *Telematics and Informatics*, 34(2), 679-690.

Hwang, I., & Cha, O. (2018), "Examining technostress creators and role stress as potential threats to employees' information security compliance", *Computers In Human Behavior*, *81*, 282-293. doi: 10.1016/j.chb.2017.12.022

Ibrahim, H., & Yusoff, Y. M. (2015), "User characteristics as antecedents of techno stress towards EHRM: From experts' views", *Procedia-Social and Behavioral Sciences*, *172*, 134-141.

Jena, R. K., & Mahanti, P. K. (2014), "An empirical study of Technostress among Indian academicians", *International Journal of Education and Learning*, 3(2), 1-10.

Johnson, A., Dey, S., Nguyen, H., Groth, M., Joyce, S., Tan, L., ... & Harvey, S. B. (2020), "A review and agenda for examining how technology-driven changes at work will impact workplace mental health and employee well-being", *Australian Journal of Management*, 45(3), 402-424

Keino, D. C., & Kithae, P. P. (2016). "Effects of Work Life Balance on Staff Performance in the Telecommunication Sector in Kenya", *Archives of Business Research*, *4*(1).

Kendrick, T., & Pilling, S. (2012), "Common mental health disorders — identification and pathways to care: NICE clinical guideline", *British Journal of General Practice*, *62*(594), 47-49.

Khalid, K., Abdullah, H. H., & Kumar M, D. (2012), "Get along with quantitative research process". *International Journal of Research in Management*, *2*(2), 15-29.

Kirchmeyer, C. (2000), "Work–life initiatives: greed or benevolence regarding workers' time? In: Cooper CL, Rousseau DM (eds) Trends in organizational behavior: time in organizational behavior", *Wiley*. 79–94.

Körner, U., Müller-Thur, K., Lunau, T., Dragano, N., Angerer, P., & Buchner, A. (2019), "Perceived stress in human–machine interaction in modern manufacturing environments—Results of a qualitative interview study*", Stress and Health,* 35(2), 187-199.

Kossek, E. E., Ruderman, M. N., Braddy, P. W., & Hannum, K. M. (2012), "Work-nonworkboundary management profiles: A person-centered approach", *Journal of Vocational Behavior,* 81, 112–128

Kossek, E.E., Noe, R.A., & De Marr, B.J. (1999), "Work-family conflict, policies, and the job-life satisfaction relationship: a review and directions for organizational behaviour human resources research", *Journal of Applied Psychology*, 83, 139-149.

Kotera, Y., & Correa Vione, K. (2020), "Psychological impacts of the new ways of working (NWW): A systematic review", *International journal of environmental research and public health*, *17*(14), 5080.

Kotera, Y., Green, P., & Sheffield, D. (2019), "Work-life balance of UK construction workers: relationship with mental health", *Construction Management And Economics*, *38*(3), 291-303.

Kraak, J., Russo, M., & Jiménez, A. (2018), "Work-life balance psychological contract perceptions for older workers", *Personnel Review*, *47*(6), 1194-1210.

Kreiner, G. E., Hollensbe, E. C., & Sheep, M. L. (2009), "Balancing borders and bridges: Negotiating the work-home interface via boundary work tactics", *Academy of Management Journal*, 52(4), 704–730.

Krishnan, S. (2017), "Personality and espoused cultural differences in technostress creators", Computers *in Human Behavior*, *66*, 154-167.

Kumar, S. (2018), "Understanding different issues of unit of analysis in a business research", *Journal of General Management Research*, *5*(2), 70-82.

Kuo, Y. (2013), "Technology readiness as moderator for construction company performance", *Industrial Management & Data Systems*, *113*(4), 558-572.

Kushlev, K., & Dunn, E. W. (2015), "Checking email less frequently reduces stress*", Computers in Human Behavior,* 43, 220-228.

La Torre, G., Esposito, A., Sciarra, I., & Chiappetta, M. (2019), "Definition, symptoms and risk of techno-stress: a systematic review", *International archives of occupational and environmental health*, *92*(1), 13-35.

Laumer, S., Maier, C., Eckhardt, A., & Weitzel, T. (2016), "User personality and resistance to mandatory information systems in organizations: A theoretical model and empirical test of dispositional resistance to change", *Journal of Information Technology*, 31(1), 67– 82. doi:10.1057/jit.2015.17

Lee, T., & Cho, G. (2020), "Effect of office worker's work-life balance and work environment on job satisfaction and mental health". *Journal Of The Korean Data And Information Science Society*, *31*(6), 1021-1035.

Lee, Y.-K., Chang, C.-T., Lin, Y., & Cheng, Z.-H. (2014), "The dark side of smartphone usage: Psychological traits, compulsive behavior and technostress", *Computers in Human Behavior*, 31, 373–383.

Le Fevre, M., Matheny, J., & Kolt, G. S. (2003), "Eustress, distress, and interpretation in occupational stress", *Journal of Managerial Psychology,* 18(7), 726-744.

Leineweber C., Baltzer M., Magnusson Hanson LL. (2013), "Work-family conflict and health in Swedish working women and men: a 2-year prospective analysis (the SLOSH study)", *Eur J Public Health*. 23:710–6.

Lonska, J., Mietule, I., Litavniece, L., Arbidane, I., Vanadzins, I., Matisane, L., & Paegle, L. (2021), "Work–Life Balance of the Employed Population During the Emergency Situation of COVID-19 in Latvia", *Frontiers In Psychology*, *12*.

Le Fevre, M., Matheny, J., & Kolt, G. S. (2003), "Eustress, distress, and interpretation in occupational stress", *Journal of Managerial Psychology*, 18(7), 726-744.

Lopez, S., Pedrotti, J., & Snyder, C. (2011), "*Positive psychology: the scientific and practical explorations of human strengths"*, SAGE.

Loretto, W., Platt, S., & Popham, F. (2010), "Workplace change and employee mental health: Results from a longitudinal study", *British Journal of Management*, *21*(2), 526-540.

Lunau, T., Bambra, C., Eikemo, T., van der Wel, K., & Dragano, N. (2014), "A balancing act? Work–life balance, health and well-being in European welfare states", *European Journal Of Public Health*, *24*(3), 422-427.

Luturlean, B., Prasetio, A., Anggadwita, G., & Hanura, F. (2021), "Does work-life balance mediate the relationship between HR practices and affective organisational commitment Perspective of a telecommunication industry in Indonesia", *International Journal Of Learning And Intellectual Capital*, *18*(2), 154.

Ma, J., Ollier-Malaterre, A., & Lu, C. (2021), "The impact of techno-stressors on work–life balance: The moderation of job self-efficacy and the mediation of emotional exhaustion", *Computers In Human Behavior*, 122, 106811.

Macik-Frey, M., Quick, J. E., & Nelson, D. L. (2007), "Advances in occupational health; from a stressful beginning to a positive future. *Journal of Management*, 33, 809–840

Mahboob, A. (2016), "Technostress and Its Management Techniques: A Literature Review", *Journal Of Human Resource Management*, *4*(3), 28.

Mahmoud, A., Fuxman, L., Mohr, I., Reisel, W., & Grigoriou, N. (2021), *"*We aren't your reincarnation!" workplace motivation across X, Y and Z generations", *International Journal of Manpower*

Maier, C., Laumer, S., & Eckhardt, A. (2015), "Information technology as daily stressor: pinning down the causes of burnout", *Journal of Business Economics*, *85*(4), 349-387.

Marchiori, D., Mainardes, E., & Rodrigues, R. (2018), "Do Individual Characteristics Influence the Types of Technostress Reported by Workers?", *International Journal Of Human–Computer Interaction*, *35*(3), 218-230.

Marchiori, D., Mainardes, E., & Rodrigues, R. (2018), "Do Individual Characteristics Influence the Types of Technostress Reported by Workers?", *International Journal Of Human–Computer Interaction*, *35*(3), 218-230.

Marie, H. (2019), "Tech workers would quit jobs for better work-life balance", Retrieved from [https://workplaceinsight.net/tech-workers-quit-jobs-for-better-work-life -balance/](https://workplaceinsight.net/tech-workers-quit-jobs-for-better-work-life-balance/)*, Retrieved on May18, 2022.*

Matthews, R. A., & Barnes-Farrell, J. L. (2010), "Development and initial evaluation of an enhanced measure of boundary flexibility for the work and family domains", *Journal of Occupational Health Psychology*, *15*(3), 330.

McGrath, J. E. (1976), *"Stress and behavior in organizations", Handbook of industrial and organizational psychology*. Chicago: Rand McNally

Memon, M. A., Ting, H., Cheah, J. H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020), "Sample size for survey research: review and recommendations", *Journal of Applied Structural Equation Modeling*, *4*(2), 1-20.

Mertler, C. A., Vannatta, R. A., & LaVenia, K. N. (2016), "Advanced and multivariate statistical methods: Practical application and interpretation", *Routledge.*

Meuter, M. L., Ostrom, A. L., Bitner, M. J., & Roundtree, R. (2003), "The influence of technology anxiety on consumer use and experiences with self-service technologies", *Journal of Business Research, 56*(11), 899–906

Montañez, R. (2021), "This Work-Life Balance Study Reveals 3 Major Problems: Here's What We Need To Ask", Forbes. Retrieved 19 October 2021, from https://www.forbes.com/sites/rachelmontanez/2020/02/10/this-work-life-balance-study-reveals-3-major-problems-heres-what-we-need-to-ask/?sh=48d1f6007277. Retrieved on August 20, 2022.

Nimrod, G. (2017), "Technostress: measuring a new threat to well-being in later life", *Aging &Amp; Mental Health*, *22*(8), 1086-1093.

Nippert-Eng, C.E. (1996), "Home and work: negotiating boundaries through every-day life", *Chicago: University of Chicago Press.*

Noon, M., & Blyton, P. (2002), "*The realities of work"*, Palgrave, New York

Nunnally, J.C. (1978), "*Psychometric Theory",* McGraw-Hill, New York, NY.

Nunnally, J.C. and Bernstein, I.H. (1994), "*Psychometric Theory, 3rd ed",* McGraw-Hill, New York, NY

Nwagbara, U. (2020), "Institutions and organisational work-life balance (WLB) policies and practices", *Journal Of Work-Applied Management*, *12*(1), 42-54.

O'Connor, K., Neff, D. M., & Pitman, S. (2018), "Burnout in mental health professionals: A systematic review and meta-analysis of prevalence and determinants", *European Psychiatry*, *53*, 74-99.

Okolo, D., Kamarudin, S., & Ahmad, U. N. U. (2019), "Employing the Sociotechnical System Theory of Job Design for Technostress Intervention: An Integration of Technological and Social Job Characteristics", *Change Management: An International Journal*, *19*(1), 11–23.

Ollier-Malaterre, A., Jacobs, J., & Rothbard, N. (2019), "Technology, Work, and Family: Digital Cultural Capital and Boundary Management". *Annual Review Of Sociology*, *45*(1), 425-447.

Otten, D., Tibubos, A., Schomerus, G., Brähler, E., Binder, H., & Kruse, J. et al. (2021), "Similarities and Differences of Mental Health in Women and Men: A Systematic Review of Findings in Three Large German Cohorts", *Frontiers In Public Health*, *9.*

Özgür, H. (2020), "Relationships between teachers' technostress, technological pedagogical content knowledge (TPACK), school support and demographic variables: A structural equation modeling", *Computers In Human Behavior*, *112*, 106468.

O'Sullivan, G. (2011), "The Relationship Between Hope, Eustress, Self-Efficacy, and Life Satisfaction Among Undergraduates", Social Indicators Research, 101(1), 155-172.

Parasuraman, A. (2000), "Technology Readiness Index (Tri): A Multiple-Item Scale to Measure Readiness to Embrace New Technologies", *Journal of Service Research*, 2(4), 307–320.

Parasuraman, A. (2000), "Technology Readiness Index (Tri)", *Journal Of Service Research*, 2(4), 307-320.

Parasuraman, A., & Colby, C. (2014), "An Updated and Streamlined Technology Readiness Index", *Journal Of Service Research*, 18(1), 59-74.

Park, Y., & Jex, S. M. (2011), "Work-home boundary management using communication and information technology", *International Journal of Stress Management*, 18(2), 133–152.

Park, Y., Liu, Y., & Headrick, L. (2020), "When work is wanted after hours: Testing weekly stress of information communication technology demands using boundary theory", *Journal Of Organizational Behavior*, 41(6), 518-534.

Penga, D.X. and Lai, F. (2012), "Using partial least squares in operations management research: a practical guideline and summary of past research", *Journal of Operations Management,* 30(6),467-480.

Podsakoff, P.M., MacKenzie, S., Lee, J. and Podsakoff, N.P. (2003), "Common method biases in behavioural research", *MIS Quarterly,*30(1),115-141.

Prakash, V. (2018), "Work-life balance: Perceptions of the non-work domain. IIM Kozhikode", *Society & Management Review*, 7(2), 97-108.

PSEB. (2020). Pakistan's IT Industry Overview. Retrieved from http://www.moit.gov.pk/SiteImage/Misc/files/Pakistan%27s%20IT%20Industry%20Report-Printer.pdf?tdxbjsbmpldeihmp?cvqxbcojsriotmfi?qqnynhfkluojqgkl?omfrpegmfbclgkum?mpcvxldgtdgwqgdg, Retrieved on August 25, 2022.

Ragu-Nathan, T., Tarafdar, M., Ragu-Nathan, B., & Tu, Q. (2008), "The Consequences of Technostress for End Users in Organizations: Conceptual Development and Empirical Validation", *Information Systems Research*, *19*(4), 417-433.

Raišienė, A., & Jonušauskas, S. (2013), "Silent issues of ICT era: impact of techno-stress to the work and life balance of employees", *Entrepreneurship And Sustainability Issues*, *1*(2), 108-115.

Ramayah, T., Cheah, J., Chuah, F., Ting, H. and Memon, M.A. (2016),"*Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3.0: An Updated Guide and Practical Guide to Statistical Analysis*", Pearson, Kuala Lumpur

Ramayah, T., Cheah, J., Chuah, F., Ting, H. and Memon, M.A. (2018),"*Partial Least Squares Structural Equation Modeling (PLS-SEM) Using Smartpls 3.0: An Updated Guide and Practical Guide to Statistical Analysis, 2nd ed.,* Pearson, Kuala Lumpur.

Rao, I. (2017), "Work-life balance for sustainable human development: Cultural intelligence as enabler", *Journal of Human Behavior in the Social Environment*, 27(7), 706–713.

Reio, T.G.J. (2010), "The threat of common method variance bias to theory building", *Human Resource Development Review*, Vol. 9 No. 4, pp. 405-411.

Richardson, K. M. (2017), "Managing employee stress and wellness in the new millennium", *Journal of Occupational Health Psychology*, 22(3), 423–428.

Richter, N.F., Sinkovics, R.R., Ringle, C.M. and Schlägel, C. (2016), "A critical look at the use of SEM in international business research", *International Marketing Review*, Vol. 33 No. 3, pp. 376-404

Riedl, R., Kindermann, H., Auinger, A., & Javor, A. (2012), "Technostress from a neurobiological perspective", *Business & Information Systems Engineering*, *4*(2), 61-69.

Rosenbaum, M. S., & Wong, I. A. (2015), "If you install it, will they use it? Understanding why hospitality customers take "technological pauses" from self-service technology", *Journal of Business Research*, 68(9), 1862-1868

Rohwer, E., Flöther, J. C., Harth, V., & Mache, S. (2022), "Overcoming the "Dark Side" of Technology—A Scoping Review on Preventing and Coping with Work-Related Technostress", *International Journal of Environmental Research and Public health,* 19(6), 3625.

Rosenfield, S., & Mouzon, D. (2013), "*Gender and mental health. In Handbook of the sociology of mental health*", (pp. 277-296). Springer, Dordrecht.

Rosenfield, S., & Smith, D. (2012), "*Gender and Mental Health: Do Men and Women Have Different Amounts or Types of Problems? In T. Scheid & T. Brown (Eds.), A Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems",* Cambridge: Cambridge University Press. (pp. 256-267).

Rothbard, N. P., & Ollier-Malaterre, A. (2015), "*Boundary Management*", Oxford Handbooks.

Rothbard, N. P., Phillips, K. W., & Dumas, T. L. (2005), "Managing multiple roles: Work family policies and individuals' desires for segmentation", *Organization Science,* 16(3),243–258.

Ross, A., & Willson, V. (2017), "*Independent Samples T-Test",* Basic And Advanced Statistical Tests, 13-16.

Russo, M., Shteigman, A., & Carmeli, A. (2015), "Workplace and family support and work–life balance: Implications for individual psychological availability and energy at work", *The Journal of Positive Psychology*, 11(2), 173–188.

Salanova, M., Llorens, S., & Cifre, E. (2013), "The dark side of technologies: Technostress among users of information and communication technologies", *International Journal Of Psychology*, *48*(3), 422-436.

Salanova, M., Llorens, S., & Ventura, M. (2021), "Technostress: The Dark Side of Technologies", *The Impact of ICT on Quality of Working Life* (pp.87-103). Retrieved on October 20, 2021, Retrieved from http://dx.doi.org/10.1007/978-94-017-8854-0_6.

Salanova, M., Llorens, S., Cifre, E., and Nogareda, C. (2007). El Tecnoestrés: Concepto, Medida e Intervención Psicosocial. [Technostress: Concept, Measurement and Prevention]. Madrid: Nota Técnica de Prevención. Instituto Nacional de Seguridad e Higiene en el Trabajo.

Salazar-Concha, C., Ficapal-Cusí, P., Boada-Grau, J., & Camacho, L. J. (2021), "Analyzing the evolution of technostress: A science mapping approach", *Heliyon*, *7*(4), e06726.

Sánchez-Hernández, M. I., González-López, Ó. R., Buenadicha-Mateos, M., & Tato-Jiménez, J. L. (2019), "Work-Life Balance in Great Companies and Pending Issues for Engaging New Generations at Work", *International journal of environmental research and public health*, *16*(24), 5122.

Saquib, A. (2021), 'Digitalization – redefining the telecommunications industry'. *Dawn*. Retrieved from https://www.dawn.com/news/1646129, Retrieved on March 12, 2022.

Schein, E. H. (1971), "The individual, the organization, and the career: A conceptual scheme", *Journal of Applied Behavioral Science*, 7: 401-426.

Schnettler, B., Miranda-Zapata, E., Grunert, K., Lobos, G., Lapo, M., & Hueche, C. (2020), "Testing the Spillover-Crossover Model between Work-Life Balance and Satisfaction in Different Domains of Life in Dual-Earner Households", *Applied Research In Quality Of Life*, *16*(4), 1475-1501.

Schwarz, A., Rizzuto, T., Carraher-Wolverton, C., Roldán, J.L. and Barrera-Barrera, R. (2017), "Examining the Impact and detection of the 'Urban Legend' of common method bias", *Data Base for Advances in Information Systems*, 48(1),93-119.

Senarathne Tennakoon, K. (2021), "Empowerment or enslavement: The impact of technology-driven work intrusions on work–life balance", *Canadian Journal Of Administrative Sciences / Revue Canadienne Des Sciences De L'administration*.

Selye, H. (1978), "*The stress of life",* Maidenhead: Mcgraw-Hill Education - Europe

Shepperd, J. A., Grace, J., Cole, L. J., & Klein, C. (2005), "Anxiety and outcome predictions", *Personality & Social Psychology Bulletin,* 31(2), 267–275.

Soomro, A., Breitenecker, R., & Shah, S. (2018), "Relation of work-life balance, work-family conflict, and family-work conflict with the employee performance-moderating role of job satisfaction", *South Asian Journal Of Business Studies*, *7*(1), 129-146.

Spector, P. E. (2019), "Do not cross me: Optimizing the use of cross-sectional designs", *Journal of Business and Psychology*, *34*(2), 125-137.

Stacey, N., Ellwood, P., Bradbrook, S. (2018), "Foresight on new and emerging occupational safety and health risks associated with digitalisation by 2025", *European Risk Observatory.*

Statistics.(2020). Working days lost in Great Britain. Retrieved from https://www.hse.gov.uk/statistics/dayslost.htm, Retrieved on March 12, 2022.

Suseno, Y., Hudik, M., Fang, E., & Guo, Z. (2020), "Employee Attitudes, Technological Anxiety, and Change Readiness for Artificial Intelligence Adoption", *Academy of Management Proceedings*, 2020(1), 20045.

Syed, S., Arain, G., Schalk, R., & Freese, C. (2015), "Balancing Work and Family Obligations in Pakistan and the Netherlands: A Comparative Study", *Global Business and Organizational Excellence*.

Tarafdar, M., Pirkkalainen, H., Salo, M., & Makkonen, M. (2020), "Taking on the "Dark Side"— Coping With Technostress", *IT Professional*, *22*(6), 82-89.

Tarafdar, M., Tu, Q., & Ragu-Nathan, T. (2010), "Impact of Technostress on End-User Satisfaction and Performance", *Journal Of Management Information Systems*, *27*(3), 303-334.

Tarafdar, M., Tu, Q., Ragu-Nathan, B., & Ragu-Nathan, T. (2007), "The Impact of Technostress on Role Stress and Productivity", *Journal Of Management Information Systems*, *24*(1), 301-328.

Tarafdar, M., Tu, Q., Ragu-Nathan, T. S., & Ragu-Nathan, B. S. (2011), "Crossing to the dark side: examining creators, outcomes, and inhibitors of technostress", *Communications of the ACM*, *54*(9), 113-120.

Tarafdar, M., Cooper, C. L., & Stich, J.-F. (2017), "The technostress trifecta - techno eustress, techno distress and design: Theoretical directions and an agenda for research*", Information Systems Journal*, 29(1), 6-42.

Tarafdar, M., Tu, Q., Ragu-Nathan, T., & Ragu-Nathan, B. (2021). Crossing to the dark side. Retrieved from http://dx.doi.org/10.1145/1995376.1995403, Retrieved on 20 October 2021.

Timms, C., Brough, P., Siu, O. L., O'Driscoll, M., & Kalliath, T. (2015), "*Cross-cultural impact of work–life balance on health and work outcomes. In Handbook of research on work–life balance in Asia*", Edward Elgar Publishing.

Toffoletti, K., & Starr, K. (2016), "Women Academics and Work-Life Balance: Gendered Discourses of Work and Care", *Gender, Work &Amp; Organization*, *23*(5), 489-504.

Tolmie, A., Muijs, D., & McAteer, E. (2011), "*Quantitative methods in educational and social research using SPSS",* McGraw-Hill Education (UK).

Tsourela, M. & Roumeliotis, M. (2015), "Exploring the Degree of Consumer Readiness for Self Service Technologies", *International Journal of E-Services and Mobile Applications, IGI Global,* 7(2),25-42.

Van Maanen, J. (1982), "*Boundary crossings: Major strategies of organizational socialization and their consequences",* Englewood Cliffs, NJ: Prentice-Hall. 85-115.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012), "Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology", *MIS Quarterly*, 36(1), 157–178.

Walia, P. (2015), "Gender and age as correlates of work-life balance", *Journal of Organisation and Human Behaviour.*

Wajcman, J., & Rose, E. (2011), "Constant connectivity: Rethinking interruptions at work", *Organization Studies*, 32(7), 941–961.

Wang, B., Liu, Y., & Parker, S. (2020), " How Does the Use of Information Communication Technology Affect Individuals? A Work Design Perspective", *Academy Of Management Annals*, *14*(2), 695-725.

Wang, K., Shu, Q., & Tu, Q. (2008), "Technostress under different organizational environments: An empirical investigation", *Computers In Human Behavior*, *24*(6), 3002-3013.

Westjohn, S. A., Arnold, M. J., Magnusson, P., Zdravkovic, S., & Zhou, J. X. (2009), "Technology readiness and usage: A global-identity perspective", *Journal of the Academy of Marketing Science, 37*(3), 250–265.

Why Pakistan | STZA. STZA. (2022). Retrieved from https://www.stza.gov.pk/why-pakistan/, Retrieved on 3 August 2022,

Wiltink, J., Beutel, M., Till, Y., Ojeda, F., Wild, P., & Münzel, T. et al. (2011), "Prevalence of distress, comorbid conditions and wellbeing in the general population", *Journal Of Affective Disorders*, *130*(3), 429-437.

Witters, D., & Liu, D. (2014), "Using Mobile Technology for Work Linked to Higher Stress. *Gallup*. Retrieved from http://www. gallup.com/poll/168815/using-mobile-technology-work-linked-higher-stress.aspx, Retrieved on April 25, 2022.

Wong, K., Lee, F., Teh, P., & Chan, A. (2021), "The Interplay of Socioecological Determinants of Work–Life Balance, Subjective Wellbeing and Employee Wellbeing". *International Journal Of Environmental Research And Public Health*, *18*(9), 4525.

Work-life balance. Mental Health Foundation. (2021). Retrieved 24 July 2022, from https://www.mentalhealth.org.uk/explore-mental-health/a-z-topics/work-life-balance*,* Retrieved on May 25, 2022.

World Health Organization. (2001). The World Health Report 2001: Mental health: new understanding, new hope. Retrieved from https://www.who.int/publications/i/item/9789240003927?gclid=CjwKCAiA_6yfBhBNEiwAkmXy5ziwW5mjM4TpDMJbm4kqD8F0T-_E7fiiYOTd7iJ2XmUZ0tZwl2txnBoCdvMQAvD_BwE, Retrieved on June 25, 2022.

World Health Organization. (2004). Promoting mental health: Concepts, emerging evidence, practice: Summary report. World Health Organization. Retrieved from https://www.who.int/mental_health/evidence/en/promoting_mhh.pdf, Retrieved on June 24, 2022.

Wrench, J. S., Thomas-Maddox, C., Richmond, V. P., & McCroskey, J. C. (2016*). Quantitative research methods for communication: A hands-on approach (Third ed.)*. New York, New York: Oxford University Press.

Wu, J., Wang, N., Mei, W., & Liu, L. (2020), "Technology-induced job anxiety during non-work time: examining conditional effect of techno-invasion on job anxiety", *International Journal Of Networking And Virtual Organisations*, *22*(2), 162.

Zacher, H., Jimmieson, N. L., & Winter, G. (2012), "Eldercare demands, mental health, and work performance: The moderating role of satisfaction with eldercare tasks", *Journal of Occupational Health Psychology, 17*(1), 52–64.

Zaman, J. (2022),'What Special Technology Zones mean For Pakistan's Tech Industry'. *Forbes.* Retrieved from https://www.forbes.com/sites/forbestechcouncil/2022/05/31/what-special-technology-zones-mean-for-pakistans-tech-industry/?sh=28a62c372e08, Retrieved on June 25, 2022.

Zerubavel, E. (1991). *The fine line: making distinctions in everyday life.* Chicago: University of Chicago Press.

Zhou, S., Da, S., Guo, H., & Zhang, X. (2018), "Work–Family Conflict and Mental Health Among Female Employees: A Sequential Mediation Model via Negative Affect and Perceived Stress", *Frontiers In Psychology*, *9*. 1z cd

Appendix A

Questionnaire

A: Demographic Information

Please describe yourself by circling the relevant answer below:

Are you working from home?	☐ Yes ☐ No
Gender	☐ Male ☐ Female ☐Other
Age	_____ *(please specify)*
Marital Status	☐ Single ☐ Married ☐ Other
Education	_____ *(please specify)*
Industry	_____ *(please specify)*
Sector	☐ Private ☐ Public
Job Category	☐ Senior Management ☐ Middle Management ☐ Line Management ☐ non-Managerial ☐ Clerical
Work Experience	☐ 0-5 years ☐ 6-10 years ☐ 11-15 years ☐ 16 years and above
Work Type	☐ Part time ☐ Full time ☐ Temporary
Position	_____ *(please specify)*
City	_____ *(please specify)*

Section B: Please indicate the extent to which you agree or disagree with each of the statements given below:

Techno-Overload	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. When new technological applications are introduced in my organization, I am pressurized to work much faster and adapt to the new system.	1	2	3	4	5
2. When new technological applications are introduced in my organization, I am forced to do more work than I can handle because of increased work demands.	1	2	3	4	5

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3.	I am forced by the technological systems and applications in my organization to work with very tight time schedules.	1	2	3	4	5
4.	I am forced to change my work habits to adapt to new technologies.	1	2	3	4	5
5.	I have a higher workload because of increased technology complexity.	1	2	3	4	5

Techno-Complexity		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	I do not know enough about the technological systems and applications used in my organization to handle my job satisfactorily.	1	2	3	4	5
2.	I need a long time to understand and use new technologies used in my organization.	1	2	3	4	5
3.	I do not find enough time to study and upgrade my technology skills.	1	2	3	4	5
4.	I find that new employees in this organization know more about computer technology than I do.	1	2	3	4	5
5.	I often find it too complex for me to understand and use new technologies introduced in my organization.	1	2	3	4	5

Techno-Uncertainty		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	There are always new developments in the technologies we use in our organization.	1	2	3	4	5
2.	There are constant changes in computer software in our organization.	1	2	3	4	5
3.	There are constant changes in computer hardware in our organization	1	2	3	4	5
4.	There are frequent upgrades in the computer networks in our organization.	1	2	3	4	5

Mental Health		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	I have been able to concentrate on whatever I was doing.	1	2	3	4	5
2.	I felt that I was playing a useful part in my day-to-day activities.	1	2	3	4	5
3.	I felt capable of making decisions in my life.	1	2	3	4	5
4.	I enjoyed normal day-to-day activities.	1	2	3	4	5

5. I have been able to face up to my problems.	1	2	3	4	5
6. I felt reasonably happy, all things considered.	1	2	3	4	5
7. I lost much sleep by worrying.	1	2	3	4	5
8. I felt constantly under strain.	1	2	3	4	5
9. I felt I could not overcome my difficulties.	1	2	3	4	5
10. I have been feeling unhappy and depressed.	1	2	3	4	5
11. I have been losing confidence in myself.	1	2	3	4	5
12. I think of myself as a worthless person.	1	2	3	4	5

Work-Life Balance	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I currently have a good balance between the time I spend at work and the time I have available for non-work activities.	1	2	3	4	5
2. I have difficulty balancing my work and non-work activities.	1	2	3	4	5
3. I feel that the balance between my work demands and non-work activities is currently about right.	1	2	3	4	5
4. Overall, I believe that my work and non-work life are balanced.	1	2	3	4	5

Technology Readiness: Optimism	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Technology gives me more control in my daily life.	1	2	3	4	5
2. Products and services that use the newest technologies are much more convenient for me to use.	1	2	3	4	5
3. I prefer to use the most advanced technology available.	1	2	3	4	5
4. Technology gives me more freedom and mobility in my job.	1	2	3	4	5

Technology Readiness: Innovativeness	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. In general, I am among the first in my circle of friends/colleagues to acquire new technology when it appears.	1	2	3	4	5
2. I can usually figure out new high-tech products and services without help from others.	1	2	3	4	5

3. I can keep up with the latest technological developments in my areas of interest.	1	2	3	4	5
4. I enjoy the challenge of figuring out high-tech gadgets.	1	2	3	4	5
5. I find I have fewer problems than other people in making technology work for me compared to others.	1	2	3	4	5