

**The influence of technostress and work life balance on Burnout among employees in the
Banking sector in the Free State**

By

Agnes

Akwa Nde

Student number: 2009103587

A mini-dissertation in accordance with the requirements for the degree

Master of Industrial Psychology

Faculty of Economic and Management Sciences

University of the Free State

Supervisor: Mr Thinus Delport

Bloemfontein, 2022

DECLARATION

I declare that this dissertation hereby submitted by me for a master's degree in the Department of Industrial Psychology at the University of the Free State is my independent work and has not been previously submitted by me at another university/faculty. I furthermore cede copyright of the dissertation in favour of The University of the Free State.

.....

Signature

.....

Date

ACKNOWLEDGEMENTS

A project of this nature could not have been complete without a good support system. Firstly, I would like to thank the Almighty God for his wisdom and strength throughout the process. I would also like to recognise the assistance of people who made indispensable contributions towards the realisation of this work.

I express gratitude to my supervisor Mr Thinus Delport for his technical support throughout this journey. I appreciate all the efforts he made in seeing that this study is diligently done. I remain particularly indebted to him.

Special gratitude goes to my entire family especially my parents Mr & Mrs Nde for their moral support. I am thankful to my sister, Adeline and my brothers Davidson and Jeff for the constant love, concern and encouragement they showed me during my studies.

ABSTRACT

The growing concerns from employees regarding health challenges in the workplace especially in the banking sector post-pandemic in light of burnout, technostress and work-life balance challenges demands attention. The current study examines the effects of technostress and work-life balance on burnout among employees in the banking sector. The study, which also explores relationships, draws on data gathered through a cross-sectional technique and analysed using a statistical modelling approach (covariance-based structural equation modelling). Three questionnaires (Burnout Assessment Tool (BAT), Technostress Questionnaire (TSQ), and Work-Family Conflict Scale (WAFCS) were used to collect the data. All constructs had acceptable levels of reliability, as evident from the values obtained from Cronbach's alpha. A convenient sampling method was used to recruit respondents for the study, and the sample comprised 245 employees from organisations in the banking sector.

The study arrives at various findings and suggestions. The covariance-based structural equation modelling let to the finding by establishing that the structural model was a good fit i.e., SRMR is $0.0326 < 0.05$, GFI is $0.998 > 0.95$ and AGFI is $0.997 > 0.95$. Also, the squared multiple correlation of 0.584 indicated that the structural model explained 58.4% of the variation in burnout. Furthermore, technostress had a statistically significant positive relationship with burnout ($\beta = 0.316$). This was also the case with the relationship between work-life balance and burnout ($\beta = 0.315$; $p = 0.001$), and the relationship between technostress and work-life balance ($\beta = 0.697$; $p = 0.001$).

This thesis suggests several theoretical implications. The study expands our understanding of the combined effect of technostress and work-life balance on burnout. In terms of managerial implications, the study brings to light the influence of technostress and work-life balance as contributing factors to employees' experience of burnout. Therefore, the interactions between the various constructs (technostress, work-life balance) experienced by employees will influence the extent to which they will experience various levels of burnout in the organisation. As a result, implementing coping strategies to assist employees in the banking sector deal with issues relating to technostress and work-life balance especially post-pandemic is imperative.

One of the limitations of the study is that there is not sufficient research on the combined effect of technostress and work-life balance on burnout in South Africa. Thus, a challenge when testing the model as it was difficult to compare hypothesised directions for some of the proposed paths. One of the limitations of the current study was that it focused mostly on the banking sector and used a convenience sampling method. This implies that the findings can only be generalised in the banking industry. Therefore, to have a wider understanding of the interaction between the various variables, future research should consider adopting a multi-sample or use a probability sampling method that is more representative and can permit generalisation.

Keywords: Burnout, technostress, work-life balance

TABLE OF CONTENTS

DECLARATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT.....	iv
1. GENERAL INTRODUCTION.....	1
1.1. PROBLEM STATEMENT	7
1.2. RESEARCH QUESTIONS.....	8
1.3. RESEARCH OBJECTIVES	9
1.4. RESEARCH HYPOTHESES	9
1.5. OUTLINE OF THE STUDY	10
1.6. SUMMARY	11
CHAPTER TWO	12
BURNOUT	12
2.1. INTRODUCTION	12
2.2. NATURE AND DEFINITION OF BURNOUT	13
2.3. DIMENSIONS OF BURNOUT.....	14
2.3.1 Exhaustion.....	14
2.3.2 Mental distancing.....	15
2.3.3. Cognitive impairment	15
2.3.4 Emotional impairment.....	16
2.4. THEORIES UNDERLYING THE NOTION OF BURNOUT.....	16
2.4.1. Job Demands-Resources Model (JD-R).....	16
2.4.2 Conservation of Resources model (COR).....	17
2.5. ANTECEDENTS OF BURNOUT IN THE WORKPLACE.....	19
2.5.1 Work stress.....	19
2.5.2 Long working hours	19
2.5.3 Work-life balance.....	19
2.6 BURNOUT AMONG EMPLOYEES IN THE BANKING SECTOR	20
2.7 DEMOGRAPHIC FACTORS INFLUENCING BURNOUT IN THE WORKPLACE.....	22
2.7.1. Gender.....	22
2.7.3. Occupational level	23
2.8 OUTCOMES OF BURNOUT	24
2.8.1 Individual outcome	24

2.8.2 Organisational outcome	24
2.8 Summary	24
WORK LIFE BALANCE	25
3.1. INTRODUCTION	25
3.2. NATURE AND DEFINITION	26
3.3 TYPES OF WORK CONFLICT.....	26
3.4 A THEORETICAL APPROACH UNDERPINNING THE DEVELOPMENT OF WORK LIFE BALANCE.....	27
3.5. WORK LIFE BALANCE AMONG EMPLOYEES IN THE BANKING SECTOR.....	28
3.6. OUTCOMES OF WORK LIFE BALANCE	28
3.7. THE RELATIONSHIP BETWEEN WORK LIFE BALANCE AND BURNOUT	28
3.8 THE RELATIONSHIP BETWEEN WORK-LIFE BALANCE AND BURNOUT.....	29
3.9 SUMMARY	30
TECHNOSTRESS	31
4.1. INTRODUCTION	31
4.2. NATURE AND DEFINITION	31
4.3. DIMENSIONS TECHNOSTRESS.....	32
4.3.1 Techno-overload	32
4.3.2 Techno-invasion.....	33
4.3.3 Techno-complexity	33
4.3.4 Techno-insecurity	34
4.3.5 Techno-uncertainty	34
4.4.1. Transactional Approach	34
4.4.2 Person-environment fit approach.....	35
4.5. CONCEPTUAL MODELS ON TECHNOSTRESS MODELS	36
4.5.1 A Model of technostress in organisations	36
4.5.2 A Technostress model.....	37
4.6. TECHNOSTRESS AMONG EMPLOYEES IN THE BANKING SECTOR	38
4.7 OUTCOMES OF TECHNOSTRESS	39
4.8. THE RELATIONSHIP BETWEEN TECHNOSTRESS AND BURNOUT	40
4.9. THE RELATIONSHIP BETWEEN TECHNOSTRESS, WORKLIFE BALANCE AND BURNOUT	40
4.10 A PROPOSED CONCEPTUAL MODEL.....	42
4.11 SUMMARY	42

RESEARCH METHODOLOGY	43
5.1 Introduction.....	43
5.2 Research design	43
5.3 Survey Research.....	44
5.4. Sampling method	44
5.5. Selection of test persons.....	45
5.6. Data gathering methods	45
5.6.1. Data gathering process	45
5.6.2. Measuring instruments	46
5.6.2.1 Biographical Questionnaire.....	46
5. 6.2.2 Burnout Assessment Tool (BAT)	46
5.6.2.3 Technostress Questionnaire	48
5.6.2.4 Work Family Conflict Scale (WAFCS)	49
5.6.3 Ethical consideration.....	50
5.7 Statistical methods	50
5.7.1 Descriptive statistics	50
5.7.2 Inferential statistics	51
CHAPTER SIX.....	56
RESULTS, INTERPRETATIONS AND DISCUSSIONS.....	56
6.1 Introduction.....	56
6.2 Descriptive Statistics.....	57
6.2.1 Biographical characteristics of the sample.....	57
6.2.2 Descriptive statistics for burnout, technostress, and work-life balance	60
6.3 Inferential Statistics	63
6.3.1 Cronbach Alpha	63
6.4 Factor and reliability analysis	65
6.4.1 Factor and reliability analysis for burnout	65
6.4.2 Factor and reliability analysis for technostress	70
6.4.3 Factor and reliability analysis for work-life balance.....	74
6.4.4 Measurement Model	77
6.4.5 Structural model.....	79
6.5 Hypotheses testing: The technostress and work-life balance on burnout hypothesis	81
6. 5.1 Hypothesis 1: Actual Model Fit.....	81

6.5.2 Hypothesis 2: The technostress on burnout hypothesis	81
6.5.3 Hypothesis 3: The work-life balance on burnout hypothesis	81
6.5.4 Hypothesis 4: The technostress on work-life balance hypothesis.....	82
6.5.5 Stepwise regression analysis for technostress and work-life balance on burnout.....	82
6.5.6 Investigating Mean differences of the demographical variables on burnout	84
6.6 Summary	88
CHAPTER SEVEN	89
CONCLUSIONS AND RECOMMENDATIONS	89
7.1 Introduction.....	89
7.2 Discussion of results	89
7.2.1 Structural model.....	89
7.3. Conclusions regarding contributions to the field of Industrial Psychology	93
7.4 Limitations of the study	93
7.5 Recommendation for Future Research.....	94
7.6 Summary	95
REFERENCES	96

LIST OF TABLES

TABLE 5. 1: GENERAL GUIDELINES FOR INTERPRETING RELIABILITY COEFFICIENTS	51
TABLE 5. 2: DETERMINING THE STRENGTH OF CORRELATIONS (R)	52
TABLE 6.1: BIOGRAPHICAL DISTRIBUTION OF RESPONDENTS	57
TABLE 6.2: DESCRIPTIVE STATISTICS FOR BURNOUT	61
TABLE 6.3: DESCRIPTIVE STATISTICS FOR TECHNOSTRESS.....	62
TABLE 6.4: DESCRIPTIVE STATISTICS FOR WORK-LIFE BALANCE.....	63
TABLE 6.5: CRONBACH’S ALPHA TEST ON THE RELIABILITY OF BURNOUT, TECHNOSTRESS, AND WORK-LIFE BALANCE.....	64
TABLE 6.6: THE BURNOUT CONFIRMATORY FACTOR ANALYSIS AND INTERNAL CONSISTENCY OUTPUT.....	66
TABLE 6.7: THE FITNESS MEASURES ASSESSMENT FOR BURNOUT MEASUREMENT MODEL	70
TABLE 6.8: THE TECHNOSTRESS CONFIRMATORY FACTOR ANALYSIS AND INTERNAL CONSISTENCY OUTPUT.....	71
TABLE 6.9: THE FITNESS MEASURES ASSESSMENT FOR TECHNOSTRESS MEASUREMENT MODELS ...	73

TABLE 6.10: THE WORK-LIFE BALANCE CONFIRMATORY FACTOR ANALYSIS AND INTERNAL CONSISTENCY OUTPUT	74
TABLE 6.11: THE FITNESS MEASURES ASSESSMENT FOR WORK-LIFE BALANCE MEASUREMENT MODEL	76
TABLE 6.12: THE FITNESS MEASURES ASSESSMENT FOR BURNOUT, WORK-LIFE BALANCE, AND TECHNOSTRESS MEASUREMENT MODEL	78
TABLE 6.13: THE FITNESS INDEXES ASSESSMENT FOR THE TECHNOSTRESS AND WORK-LIFE BALANCE ON BURNOUT STRUCTURAL MODEL	79
TABLE 6.14: SCALE-FREE LEAST SQUARES UNSTANDARDISED AND STANDARDISED ESTIMATES FOR THE REGRESSION WEIGHTS FOR THE TECHNOSTRESS AND WORK-LIFE BALANCE ON BURNOUT STRUCTURAL MODEL	80
TABLE 6.15: INDEPENDENT SAMPLES T-TEST FOR MEAN GENDER DIFFERENCES ON BURNOUT	84
TABLE 6.16: SUMMARY OF THE INDEPENDENT-SAMPLES KRUSKAL-WALLIS TEST FOR DIFFERENCES OF THE MEAN RANKINGS OF BURNOUT BY EMPLOYEE’S AGE.....	85
TABLE 6.17: SUMMARY OF THE INDEPENDENT-SAMPLES KRUSKAL-WALLIS TEST FOR DIFFERENCES OF THE MEAN RANKINGS OF BURNOUT BY OCCUPATIONAL LEVEL.....	87

List of Figures

FIGURE 2.1: JOB DEMANDS-RESOURCES MODEL.....	17
FIGURE 2.2: CONSERVATION OF RESOURCES MODEL	18
FIGURE 3.1: MODEL OF TECHNOSTRESS IN ORGANISATIONS.....	36
FIGURE 3.2: A TECHNOSTRESS MODEL	38
FIGURE 4.1: A PROPOSED MODEL FOR THE STUDY	42
FIGURE 6.1: DISTRIBUTION OF RESPONDENTS ACCORDING TO GENDER.....	58
FIGURE 6.2: DISTRIBUTION OF RESPONDENTS ACCORDING TO AGE	59
FIGURE 6.3: DISTRIBUTION OF RESPONDENTS ACCORDING TO OCCUPATIONAL LEVEL	60
FIGURE 6.7: THE PATH DIAGRAM FOR THE TECHNOSTRESS AND WORK-LIFE BALANCE ON BURNOUT STRUCTURAL MODEL.	ERROR! BOOKMARK NOT DEFINED.
FIGURE 6.8: THE PATH DIAGRAM FOR THE INDIVIDUAL CONSTRUCTS OF TECHNOSTRESS ON BURNOUT STRUCTURAL MODEL	ERROR! BOOKMARK NOT DEFINED.

FIGURE 6.9: THE PATH DIAGRAM FOR THE WORK-LIFE BALANCE CONSTRUCTS ON BURNOUT

STRUCTURAL MODEL **ERROR! BOOKMARK NOT DEFINED.**

FIGURE 6.10: BOX-PLOT FOR THE MEAN DISTRIBUTION OF BURNOUT BY EMPLOYEE'S AGE . **ERROR!**

BOOKMARK NOT DEFINED.

FIGURE 6.11: BOX-PLOT FOR THE MEAN DISTRIBUTION OF BURNOUT BY OCCUPATIONAL LEVEL.

..... **ERROR! BOOKMARK NOT DEFINED.**

CHAPTER ONE

INTRODUCTION AND PROBLEM STATEMENT

1. GENERAL INTRODUCTION

There has been a growing concern in the health and welfare of the workforce in recent years (Hagelstam, 2017). Most businesses depend on the human capital of employees to drive the business and its operations (Chenoweth, 2011). People go into the workplace with high hopes, passion, and the desire to succeed. Over time, things have changed, and people now feel exhausted, frustrated, angry, and cynical, as well as a sense of ineffectiveness and failure (Maslach & Leiter, 2017). These are causes of burnout which impair both personal and social functioning on the job and also carries some real costs for individual employees, for the individuals affected by him or her, and for the organisation as a whole. This may lead to employees quitting their jobs, and for others who stay back, they will only do the bare minimum rather than their very best. Burnout is a syndrome of emotional exhaustion caused by long-term stress (Leiter et al., 2014). It is characterised by low motivation, fatigue, and reduced personal accomplishment.

According to Harvard Business Review (2017), the psychological and physical problems of burned-out employees cost an estimated \$125 billion to \$190 billion a year in healthcare spending in the US. Zeijlemaker and Moosa (2019) emphasise that burnout affects both personal and professional life. Hence, Salvagioni et al. (2017) state that burnout has detrimental effects on employees and the organisation and significantly predicts the following physical consequences: hypercholesterolemia, type 2 diabetes, coronary heart disease, hospitalisation due to cardiovascular disorder, musculoskeletal pain, changes in pain experiences, prolonged fatigue, headaches, gastrointestinal issues, respiratory problems, severe injuries and mortality below the age of 45 years. The psychological effects include insomnia, depressive symptoms, use of psychotropic and antidepressant medications, hospitalisation for mental disorders and psychological ill-health symptoms (Bakker, Demerouti, & Sanz-Vergel, 2014). Job dissatisfaction, exhaustion, absenteeism, new disability pension, job demands, job resources, low job commitment, high job turnover and presenteeism are also identified as some professional outcomes of burnout (Cox et al., 2017; Maslach & Leiter, 2016; Salvagioni et al., 2017). Thus, the true cost of burnout

to business can be far greater, leading to low productivity across organisations, high turnover and the loss of the most capable talent.

In South Africa, research conducted by PPS South Africa shows that 22% of employees feel overworked emanating from long hours and shortage of staff (BusinessTech, 2019). The data also showed that South Africans often take their problems home with them, with 50% of professionals stating that they are depressed due to a combination of being overworked, working long hours, and burnout. The workplace demands are extensive, and the constant level of stress and anxiety is leading to burnout and breakdowns. Issues such as unfair demands from senior-level management, restructuring and increased hours, unqualified individuals promoted to positions of seniority have all impacted South African corporates (BusinessTech, 2019). These workplace pressures cause other conditions such as alcoholism, dependency on sleeping tablets and sedatives as well as gambling, internet and sex addictions among South Africans.

Furthermore, post-pandemic, employees have to deal with the new normal which is characterised by the increase in work from home and hybrid working options that might put additional strain on employees work life (Queen & Harding, 2020). Also, the new normal involves some families and employees to continuously battle with health issues (i.e., aftermath of Covid-19), loss of loved ones, unemployment, job insecurity, work-life imbalance, financial difficulties arising from mortgage payments, as well as other asset and insurance payments and costs. All these factors can cause work stress leading to burnout (Blumenthal et al., 2020; Blustein et al., 2020; Hjálmsdóttir & Bjarnadóttir, 2021).

Due to the changes in the way work is done especially post-pandemic, technology has become an integral part of employee tasks (Ancona, & Caldwell, 2014). The use of technologies such as: cloud and mobile computing, big data and machine learning, sensors and intelligent manufacturing, advanced robotics and drones, and clean-energy technologies, have transformed the foundation of global businesses and organisations that drive them (Cascio, & Montealegre, 2016). These technologies have drastically assisted employees to do work better and faster and have also facilitated the way that work is done in organisations. New technologies have also facilitated organisational communication practices and knowledge sharing and advanced external networking with stakeholders (Bergdall et al., 2012). The advent of new technologies is not just helping people do things better and faster than in previous eras, but it is enabling new ways of

control, coordination, and collaboration on activities more readily, at lower costs (Form, et al., 2017). Corporate leaders that are astute understand that they must either figure out how new technologies will transform their businesses or risk being disrupted by those who do it first. Also, as digital resources become accessible, processed, transferred, and stored regardless of location or time, borders and geographical distances are no longer as critical as they once were, and wholly new, invisible electronic spaces are now available.

However, these positive effects of technology do not come without some negative consequences. For example, as technology develops, robots and machines will take over many jobs and employees will lose their jobs (Trakhtenberg, 2012). As employees lose their jobs, they will find it difficult getting money which would make it hard for them to continue to meet living expenses. This can cause stress and eventually burnout as employees struggle to make ends meet (Sirgy & Lee, 2018). Furthermore, these technological changes are also characterised by other challenges such as increased work pace, multiple interruptions at work, blurred lines between work and family etc (Spagnoli et al., 2020). These factors may lead to technostress which is a possible major contributor of burnout.

Research shows that stress emanating from the inability to cope with various technology is called technostress (Maier et al., 2019). In recent years, technostress has become a persistent challenge in organisations (Tarafdar et al., 2020). Technostress may occur when employees use technology for different purposes including working (Khedhaouria & Cucchi, 2019), learning (Wang et al., 2020), collaborating (Jena, 2015), and communicating with others (Brooks & Califf, 2017). It is considered a multidimensional construct consisting of five dimensions: techno-overload, techno-invasion, techno-complexity, techno-uncertainty and techno-insecurity (Hwang & Cha, 2018). According to Jena (2015) too much technostress can lead to physical discomforts, such as heart disorder, blood pressure elevation, and muscle tension; induces negative psychological state, such as worry, depression, anxiety, and frustration (Salanova et al., 2013); even cause job burnout and intentions to quit, if not properly managed (Zhao et al., 2021).

Moreover, one of the most common results of technostress is work life conflict due to the tendency of technology to blur the boundaries between work and home life, and in turn further impacts burnout (Kluczyk, 2013). A negative effect of technology that can also influence work-life balance and burnout is work intensification. Work intensification refers to the increasing amount of effort

an employee must invest during the working day that oftentimes results from increased economic pressure and other societal changes (Bunner et al., 2018). Following the Covid 19 pandemic, work from home has become more prevalent (work extension). Thus, private life may be interrupted by work tasks and meetings, while work meetings are disturbed by family life. These blurred boundaries have caused employees not to have sufficient time to recuperate due to the constant connectivity which has led to work-life conflict, and in turn, exhaustion, stress or burnout (Oksanen et al., 2021). Also, the omnipresence of Information Communication Technologies (ICT) can cause exhaustion with push notifications, emails, messages, and the possibility for constant connectivity (Van Zoonen et al., 2016). This exhaustion, if not properly managed can lead to burnout (Berg-Beckhoff et al., 2017; Maslach et al., 2016).

Working from home may also cause work-life conflicts that may impact individual's lives in several ways (French et al., 2018; Michel et al., 2011). Previous research which examined the health and wellbeing of working at home found high levels of work-family conflict, particularly among mothers, with mothers feeling rushed or time pressured (48%), nervous, and stressed (46%) more than half of the time (Shafer et al., 2020). Similarly, women without children also felt nervous and stressed (46%), however this was not the case for men without children. Employees who work at home and who are also parents are required to combine and balance their work commitments with parental responsibilities which might affect them (Graham et al., 2021). Chung et al. (2020) found for those without children, the most common negative experience of working from home was the blurring of the boundary between work and home. Additionally, those without children also reported increased stress, workload, or working hours. These factors put together with technostress and burnout can drastically affect employees' wellbeing. Burnout emanating from these is therefore seen as contagious in the work environment and has a negative spillover effect on people's home lives. Also, Neto et al. (2016) propose that work-family imbalance decreases employee psychological wellbeing.

Srivastava et al. (2015) support that employees with high technostress are more likely to experience job burnout. Burnout and its features are characteristics of negative wellbeing. The constant use of technology causes technostress and eventually, burnout which can influence or put a strain on work-life balance and employee wellbeing (Ter Hoeven et al., 2016).

Put together, burnout includes the individual and other social factors. Psychological stress is reaction to an evident threat of losing one's potential or actual resources (Hobfoll, 2011). This is the basis for the Conservation of Resources theory (COR) which postulates that stress can be defined as a person's reaction to the environment under three conditions called "threats": (1) when resources are threatened with loss; (2) when resources are actually lost; and (3) when the individual lacks the ability to gain resources following investment of personal resources (e.g., time and knowledge) (Hobfoll et al., 2018; Hobfoll, 1989).

Many industries have been impacted by technological advances and the new normal (post covid), one such industry of interests is the banking industry. There are radical changes in the banking sector over a period of time. Especially in the recent years, there are significant changes in the product & service portfolio of the banks. Due to increasing competition in banking sector with the dominance of private sector banks and the entry of foreign banks, there is clear shift in focus towards customers. To survive and thrive in competitive environment, banks are trying out new strategies to attract and satisfy the customers. There is increasing pressure on the employees of the banks in the form of increased deadlines & targets. They have to meet rising expectations of the bank in the process of satisfying the customers. Employees find their jobs more challenging and if such challenges are not properly met it may lead to stress, frustration and dissatisfaction among the employees with their job (Rama & Nagini, 2014).

The banking sector has also experienced downsizing due to the advent of technological advancements which has led to job stress, increased job demands and feelings of insecurity for employees as a result of these organisational changes (Greenhalgh & Rosenblatt, 2010). This has also had a spillover effect on employee wellbeing in the banking sector because many employees now work from home (due to Covid19) and have to deal with managing flexible work arrangements (Caligiuri & De Cieri, 2021). However, these flexible arrangements are not necessarily the solution because there exist no clear boundaries between work and home life as employees continuously check emails even after work and late at night using technological appliances such as laptops and phones. Therefore, the attempt to balance work and life while using technology at home can cause technostress which if not properly managed will lead to burnout.

In terms of gender, emotional and other effects of pandemic-related burnout were worse for female employees: 75% of women reported feeling stressed, compared with 59% of men (Gewin, 2021). By contrast, in 2019, that number was 34% for female respondents. Around eight out of ten women also indicated that their workload had increased as a result of the pandemic, compared with seven out of ten men. Almost three-quarters of female employees reported that their work-life balance deteriorated in 2020, compared with just less than two-thirds of male respondents. Stress and burnout from competing demands arise from multiple roles, which may differ in women and men (Hagqvist et al., 2017).

Also, gender is known to be one of the main predictors of burnout among employees in the banking sector as a result of their working hours, demanding work and due to a decline in their job resources and an increase in their job demands (Acker, 2011; Ballenger-Browning et al., 2011; Khattak et al., 2011; Koonce, 2014; Ten Brummelhuis et al., 2011). Valente, et al. (2016) found high levels of burnout among employees working in the banking sector irrespective of their gender. Due to gender role expectations women are expected in some communities to look after the households while maintaining paid work. Family responsibilities, inflexible working arrangements and childbirth can cause high stress levels and burnout among women in human-capital-intensive jobs struggling with high family demands (Chung & Van der Lippe, 2018). Organisations with non-discriminatory policies against women can foster work-life balance which can reduce stress/burnout levels and increase the wellbeing of female employees. In terms of work-life balance, men use and are expected to employ flexible working to better their performance, work harder and longer hours, and receive more pay (Lott & Chung 2016). This might lead to an increase in work-family conflicts as a result of the increased workload. On the other hand, when working flexibly, women are (supposed to) take on more responsibility for the family, which may result in an increase in work-family conflict. However, unlike males, women are not rewarded for this because of the differing expectations (Chung & Lippe, 2020).

A number of studies have established that age does seem to play a role in the burnout levels of employees (e.g., Garner et al., 2007; James et al., 2011). According to Marchand et al. (2018), age is negatively related to burnout among young women but positively related to burnout among aging women and middle-aged men. A possible reason for this is that as people age, they are faced with more life responsibilities and challenges such as ill-health and increased personal and

professional demands. Also, burnout is differently associated with age in different age groups. Ahola et al. (2006) posit that burnout seemed to increase somewhat with age and that there were very small differences between different population groups. In Addition, Breward & Shapard (2004) also found negative correlations between employee age and emotional exhaustion, one of the components of burnout. In terms of work-life balance, research shows that older age groups are more likely to indicate the maintenance of work-life balance. A possible reason for this is because they have better coping mechanisms. Also, for individuals with kids, there is more flexibility as children grow older. Moreover, considering technostress, Tams et al. (2018) found that technostress is more likely to affect older workers more than it is for younger workers because many of them struggle to use technology effectively.

Furthermore, job level may influence individual experience of burnout (Kim et al., (2017). Studies have indicated that employees with high job levels within an organisation, such as professional and managerial staffs, experience less burnout than other employees (Berkeley Planning Associates, 1977; Kanste et al., 2007). Kanste et al. (2007) have pointed out that lower job levels function as an exposing factor for emotional exhaustion and a decreasing factor for professional efficacy. They also noted that a higher job level protects from increased cynicism and decreased professional efficacy. In turn, the active management of higher-level jobs protects from increased cynicism and reduced professional accomplishment. In addition, other researchers (Tracey and Hinkin, 1996) have mentioned in their experimental research that higher levels of job have a positive influence on commitment and performance at work. This is because an individual with a higher job level is able to act with autonomy and can articulate clearly his or her role; this may decrease the experience of burnout (Tracey and Hinkin, 1996). In contrast, Weinberg, Edwards, and Garove (1983) reported no significant difference in burnout frequency among professionals, administrators, and personnel. Similarly, Riggat et al. (1984) found no systemic differences in levels of burnout between administrators and employees.

1.1. PROBLEM STATEMENT

New technologies especially in the Fourth Industrial Revolution (4IR) has led to a lot of job losses in various sector including the banking sector (Khatri & Gupta, 2019). As a result of this, employees working in the banking sector are battling to stay relevant with these changes. The current high unemployment rates are putting pressure on employees in the banking sector to

perform since technology has led to work intensification and work extension in the banking industry (Guest, 2017). For example, South Africa now has the Tyme Bank that is entirely digital, that means, lesser employees to attend to clients. The job losses in the banking industry might affect the wellbeing of employees in the sector leading to stress/burnout.

Following the Covid-19 pandemic, working from home has become much more prevalent, which also poses certain challenges such as work-life balance, and dealing with technostress as employees remain tethered to their workplace. Thus, blurring the boundaries between work and family. Moreover, employees in the banking sector struggle with long working hours and stressors that arise from dealing with clients (Owusu-Ansah et al., 2016). This can lead to burnout which is driven by the always-on digital workplace, too many priorities, and the expectation that employees can use their digital tools to multitask and power through their workloads (Harvard business Review, 2017). Multitasking turns out to be exhausting and counterproductive as individuals switch back and forth between tasks (Crews & Russ, 2020).

More so, research also shows that when employees experience high technostress which can partly be influenced by struggling to balance between work and family life, this can lead to burnout (Ma et al., 2021). Furthermore, there is limited research on the influence of technostress and work-life balance on burnout specifically in the banking sector within the South African context. Considering the crucial role burnout plays on technostress and work-life balance, it is important to explore the relevance of burnout in the banking sector given that service delivery and service quality are crucial to the survival of the banking sector (Yavas et al., 2008). Therefore, in light of the negative effects of burnout, organisations are urged to focus on strategies to improve on the productivity of their employees. Hence, the aim of this study is to assess the influence of technostress and work life balance on burnout among employees in the banking sector.

1.2. RESEARCH QUESTIONS

Primary research question

Does technostress and work life balance influence burnout among employees working in the banking sector in the Free State?

Secondary research question

Do differences exist in levels of burnout among employees working in the banking sector in the Free State with regards to gender, age, and occupational level?

1.3. RESEARCH OBJECTIVES

Primary research objective

To determine by means of a structural equation modeling whether technostress and work life balance influences burnout among employees working in the banking sector in the Free State.

Secondary research objective

To determine by means of a non-experimental research design whether differences exist in levels of burnout with regards to gender, age, and occupational level among employees working in the banking sector in the Free State.

1.4. RESEARCH HYPOTHESES

H₀₁: The proposed structural model does not demonstrate acceptable fit ($SRMR > 0.06$).

H_{a1}: The proposed structural model demonstrates acceptable fit ($SRMR \leq 0.06$).

H₀₂: $\beta = 0$ There is no statistically significant relationship between technostress and burnout among employees working in the banking sector in the Free State.

H_{a2}: $\beta > 0$ There is a statistically significant relationship between technostress and burnout among employees working in the banking sector in the Free State.

H₀₃: $\beta = 0$ There is no statistically significant relationship between work-life balance and burnout among employees working in the banking sector in the Free State.

H_{a3}: $\beta > 0$ There is a statistically significant relationship between work-life balance and burnout among employees working in the banking sector in the Free State.

H₀₄: $\beta = 0$ There is no statistically significant relationship between technostress and work-life balance among employees working in the banking sector in the Free State.

H_{a4}: $\beta > 0$ There is a statistically significant relationship between technostress and burnout work-life balance among employees working in the banking sector in the Free State.

H₀₅: The differences of the mean ratings on burnout by gender is not significantly different from zero among employees working in the banking sector in the Free State.

H_{a5}: The differences of the mean ratings on burnout by gender is significantly different from zero among employees working in the banking sector in the Free State.

H₀₆: The mean rankings of burnout by employee's age are significantly the same among employees working in the banking sector in the Free State.

H_{a6}: The mean rankings of burnout by employee's age are not significantly the same among employees working in the banking sector in the Free State.

H₀₇: The mean rankings of burnout by occupational level are significantly the same among employees working in the banking sector in the Free State.

H_{a7}: The mean rankings of burnout by occupational level are not significantly the same among employees working in the banking sector in the Free State.

1.5. OUTLINE OF THE STUDY

Chapter 1: This section introduces the study as well as provide a background to the topic under discussion. The chapter also lays out the problem formulation under which the importance of the study is explained, the objective, research questions and the research hypotheses formulated for the study.

Chapter 2: The chapter describes the dependent variable (burnout). It defines and explains the nature of burnout. The chapter also explores some burnout theories, models of burnout and outcomes associated with burnout. Finally, the chapter concludes with how burnout can be avoided in the workplace especially for employees working in the banking sector.

Chapter 3: This is an extension of the literature review that specifically focuses on the work life balance. A broad discourse of the variable is given from an introduction of work life balance to exploring the nature and definition of work life balance. The chapter also explores types of work conflict and conceptual theories. Finally, the chapter explores some outcomes associated with work life balance and concludes with a discussion on the theoretical commonalities between work

life balance and burnout. The relationship between technostress, work-life balance and burnout is also explored and a proposed model presented.

Chapter 4: This is made up of the fourth chapter in the literature review. The chapter concentrates on the independent variable, which is technostress. It identifies and discusses technostress theories and models. The chapter also considers the outcomes associated with the construct, and the relationship between technostress and burnout.

Chapter 5: This chapter discusses the research methodology used for the study. This includes the research approach and design, selection of test persons, data gathering, sampling methods, and describes the questionnaires used to collect data, and the statistical methods used to analyse the data.

Chapter 6: The chapter presents the results as well as the interpretation of the results and discussions. It focuses on the results on the reliability of the instruments used and descriptive statistics indicating the demographic characteristics of the sample. Then, presents the results for the research question. The chapter presents diagrams, discussions and an interpretation of the research findings.

Chapter 7: This is the last chapter of the study which includes the conclusions, recommendations, and limitations of the study. It also provides recommendations for future research in this field.

1.6. SUMMARY

The primary focus of this section was to introduce burnout and explain why it is a prominent issue in the workplace. People join organisations with the aim of having work-life balance while achieving organisational goals. However, in the 21st century, especially post-pandemic, technostress and work-life appear to affect employee livelihood as they battle with burnout which emanates when these factors are not properly managed. The chapter also provided a problem statement for the studies as well as research questions, objectives, hypotheses and an outline of the study.

CHAPTER TWO

BURNOUT

2.1. INTRODUCTION

The word “burnout” was first used by Christina Maslach, a social psychology researcher in the US in the 1970s among individuals working in the human services profession (Maslach et al. (2001). Maslach studied how doctors and nurses cope with emotional arousal on the job and observed how a number of them detached and disengaged psychologically from recipients (Maslach, 1978). Maslach observed that doctors and nurses often displayed a negative shift in terms of their feelings towards patients over time, and as a result, appeared to emotionally detach themselves from their patients. This detachment prevented their ability to perform their work according to initial expectations they had set for themselves and resulted in feelings of failure and hopelessness (Maslach & Schaufeli, 1993). Maslach referred to these symptoms as burnout and only later discovered that the term had been colloquially used in the legal profession by people working with people in need. She then she began to examine the concept across a range of occupations within the helping professions. Later, between 1977 and 1980, Maslach and her colleague Ayala Pines discovered the first two dimensions of burnout, namely exhaustion and depersonalization (Maslach, 1993). Through a number of subsequent studies, a third component of burnout called reduced feelings of personal accomplishment was added (Maslach & Jackson, 1984).

Leiter et al. (2014) suggest the changing nature of the workplace as one of the primary contributing factors to the prevalence of burnout, which, according to them, is reaching “epidemic proportions”. It should be noted that although Maslach’s original conceptualization of burnout played a great role in the history of burnout, this definition has received some criticism due to its narrow focus on people interaction industries and hence other definitions have started to emerge which are more refined in their approaches. As the workplace becomes economically and psychologically more hostile and demanding, the negative psychological and behavioural effects of burnout will assume a central position on organisation behavioural research studies (Maslach & Leiter, 2017).

Burnout has become a matter of global concern for working people. Numerous studies show that burnout has negative consequences for both individuals and organisations but also for society at large, especially in welfare states where sickness absence and work incapacitation are covered by

social funds (Maslach & Schaufeli, 2018). In fact, the World Health Organisation (2019) includes burnout in the recent 11th revision of the International Classification of Diseases as a global occupational phenomenon that influences health (World Health Organisation, 2019). It does not, however, classify burnout as a medical condition but raises awareness of the importance of early assessment and appropriate treatment for burnout. Prolonged exposure to stressful working environments may lead to burnout.

Organisations have realised the need to prioritize employee wellbeing for high productivity and simultaneously strive to work on the quality of life of every employee (Tandon, 2019). Studies have shown that several factors are responsible for the rise in corporate health costs. For example, burnout is associated with poor physical and mental health of employees, such as type-2 diabetes, cardio-vascular disease, anxiety and depression (Ahola & Hakanen, 2014). In addition, it leads to high replacement costs due to turnover and sickness absence and work incapacitation, and to poor business outcomes in terms of job performance, safety, productivity and quality of care (Castellano et al., 2019; Cox et al., 2017; Gong et al., 2019). Moreover, burnout is not only an individual and organisational problem, but also a problem for society at large, especially in welfare states where sickness absence and work incapacitation are covered by social funds.

This chapter describes the dependent variable (burnout). It defines and explains the nature of burnout. The chapter also explores the types of burnouts, as well as some theories and models of burnout. Burnout among employees in the financial sector will also be addressed. Finally, the chapter concludes with some outcomes associated with burnout.

2.2. NATURE AND DEFINITION OF BURNOUT

Over the years, several definitions of burnout have been proposed by researchers. Maslach et al. (2001) first defined burnout as a prolonged response to chronic emotional and interpersonal stressors on the job which consists of three dimensions namely, emotional exhaustion, depersonalisation, and reduced personal accomplishment. Myron (2003) defines burnout as a kind of stress and emotional tidiness, frustration, exhaustion occurring due to the fact that the summary of certain events concerning relationships, mission, lifestyle or employment of the individual concerned will not bring the expected results. Kebza and Šolcová (2003) define burnout as characterized by a prolonged response to chronic interpersonal stressors at work, or situational induced stress reaction, or also as the last phase of the stress response, thus exhaustion. For

Křivohlavý (2009), burnout is a state of total alienation, both to work and to other people and also oneself.

Burnout develops over time in response to conditions that place undue demands on the individual. These demands ultimately result in a number of adverse attitudinal, cognitive and behavioural outcomes that carry direct consequences for performance at work. As a result, burnout can be defined as a work-related state of exhaustion and mental distancing among employees, characterised by extreme tiredness, reduced ability to regulate cognitive and emotional processes, (Hadzibajramović et al., 2020; Schaufeli et al., 2019). For the purpose of this study, this definition will be focused on. This is because burnout is conceptualised as comprising four components, namely exhaustion, mental distance, cognitive impairment, and emotional impairment. This definition expands on to the original definition of burnout developed by Maslach (1982) and corresponds to the four components as measured by the Burnout Assessment Tool (BAT). Furthermore, this definition also lays emphasis on the cognitive impairment that burnout inflicts on employees while using technological appliances or while attempting to balance work and life (which is mostly absent from other measures like the Maslach Burnout Inventory). It should be noted that Maslach and Jackson (1981) focused mostly on three characteristics (emotional exhaustion, cynicism and personal accomplishment) not considering other factors such as exhaustion of physical and mental resources, malaise of spirit, feelings of helplessness and hopelessness which further describe the state of a burned-out individual (Schaufeli & Enzmann, 1998).

2.3. DIMENSIONS OF BURNOUT

According to the Burnout Assessment Tool (BAT), four dimensions of burnout exists namely exhaustion, mental distance, cognitive impairment, and emotional impairment. (Schaufeli et al., 2019).

2.3.1 Exhaustion

Burnout is described as a work-related state of exhaustion that occurs among employees, characterized by extreme tiredness, reduced ability to regulate cognitive and emotional processes, and mental distancing. Emotional exhaustion refers to feelings of being emotionally overextended and depleted of one's emotional resources e.g., feeling extremely tired, worn out and depleted (De Beer et al., 2020). The major sources of this exhaustion are work overload and personal conflict at

work. Employees feel drained and used up, without any source of replenishment. They lack enough energy to face another day or another person in need. Because of the exhaustion experienced, the necessary energy is lacking to adequately regulate one's emotional and cognitive processes. In other words, when experiencing burnout, the functional capacity for regulating emotional and cognitive processes is impaired. The exhaustion component of burnout is related to a range of negative outcomes for individuals and organisations, such as poor physical and mental health, low organisational commitment, turnover, poor performance, demanding or stressful aspects of work such as a high workload (Hopkins, 2011).

2.3.2 Mental distancing

Mental distancing refers to the unwillingness to perform through increased resistance and aversion to work, reduced commitment, lack of interest, and disengagement (Vîrgă et al., 2019). Dissatisfied with the never-ending demands of their jobs, employees with burnout may ruminate about escaping stressors by any means possible. Employees in the banking sector in particular sense psychological distancing due to physical distancing from their colleagues and workplace (Syed et al., 2021).

2.3.3. Cognitive impairment

Cognitive impairment refers to the reduced functional capacity to adequately regulate one's cognitive processes, such as memory or attention (De Beer et al., 2020). Chronic stress affects several brain structures including the hippocampus, amygdala and prefrontal cortex (He et al., 2017). These structural changes have also been found to cause impaired memory, executive functioning and issues in other cognitive domains. Employees with burnout frequently report cognitive problems, such as difficulties with concentration and memory (Oosterholt et al., 2016), and these self-reported cognitive problems are accompanied by actual cognitive impairments (Van Dam, 2016). A study addressing the relationship between burnout and cognitive impairments showed impaired attention in people with high burnout (He et al., 2017). Some studies have demonstrated that patients with chronic stress/burnout showed impaired short-term memory tasks (Sandstrom et al., 2011), executive performance and working memory (Jonsdottir et al., 2013).

2.3.4 Emotional impairment

Emotional impairment refers to the reduced functional capacity to adequately regulate one's emotional processes such as anger or sadness (De Beer et al., 2020). This can leave the individual to have a sense of reduced effectiveness, decreased motivation, and dysfunctional attitude and behaviours. According to Maslach & Schaufeli (2018) for individuals working in the human services the emotional demands of the work can exhaust the individual's capacity to be involved with and responsible to the needs of clients.

It should be noted that the Burnout Assessment Tool (BAT) also has two secondary subdimensions namely, psychological complaints and psychosomatic complaints (Angelini et al., 2021). These symptoms often occur together with burnout but are not specific to burnout.

2.3.4.1 Psychological complaints: Psychological complaints refer to the non-physical consequences of psychological problems.

2.3.4.2 Psychosomatic complaints: While psychosomatic complaints are physical problems (e.g., palpitations, headaches, and sickness) caused or intensified by psychological issues. Researchers and practitioners can assess the emotional, psychological, and psychosomatic elements of the burnout experience by combining all of these characteristics in a single instrument.

2.4. THEORIES UNDERLYING THE NOTION OF BURNOUT

2.4.1. Job Demands-Resources Model (JD-R)

The core idea of the JD-R model is that high job demands (mental, emotional or physical) produce high levels of stress and subsequent health impairment, whereas high job resources (support, autonomy and feedback) lead to high levels of motivation and subsequent superior job performance (Sakakibara et al., 2020). Job demands may become stressors in situations which require maximum effort to sustain an expected performance level, thereby eliciting negative responses, such as burnout (Demerouti et al., 2001). Thus, the JD-R model proposes that high job demands, and a lack of job resources form the breeding ground for burnout and for reduced engagement, respectively (Demerouti et al., 2001). Previous studies have confirmed job demands to be antecedents of burnout (Schaufeli and Salanova, 2014), and burnout predicts organisational outcomes.

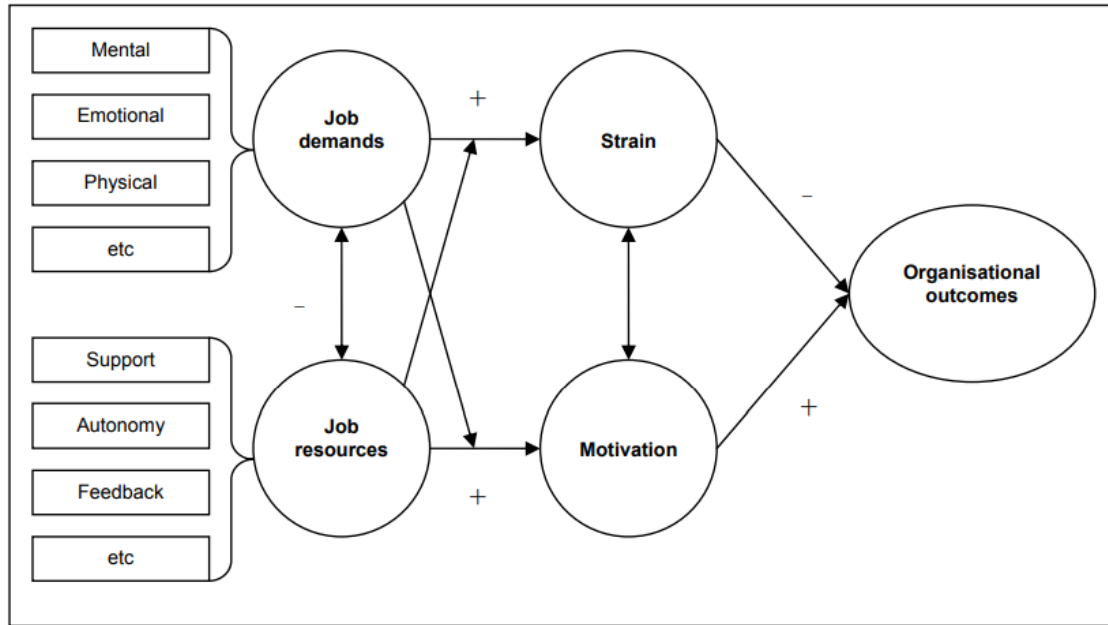


FIGURE 2.1: JOB DEMANDS-RESOURCES MODEL (BAKKER & DEMEROUTI, 2017)

The JD-R model also demonstrates that multiple work demands, in the absence of sufficient resources, cause emotional tension (Bakker & Demerouti, 2017). It may also lead to exhaustion, burnout, physical and psychological illnesses. As such, it may provide useful diagnostic framework for improving working conditions and employee well-being and productivity (Bakker & Demerouti, 2018). In the context of this study, the JD-R model help clarify why certain job demands like technostress and lack of certain resources (such as work-life balance) may lead to burnout among employees.

2.4.2 Conservation of Resources model (COR)

In light of the Conservation of Resources model (COR) burnout may arise as a result of persistent threats to available resources (Hobfoll et al., 2016). The COR suggests that when individuals perceive that the resources they value are threatened, they strive to maintain those resources because people are motivated by the net gain of resources and may put up with temporary stressful states to gain resources (Hobfoll, 2011). This model explains behaviour when people retain, protect, and build resources. The loss of resources or even the impending loss of resources may amplify the experience of burnout (Maslach & Leiter, 2016). However, people react to stressful situations (loss or potential loss of resources) by employing other resources to offset the loss. Perceived and actual losses are both valid sources of strain.

Loss of a resource makes people engage in coping responses as people are motivated to mitigate the loss, resulting in the use of other resources, which can further exacerbate the situation since resources are linked to one another (Hobfoll & Freedy, 1993). If the condition continues and other resources are depleted, people may become burned out (Park et al., 2014). People with high demands and high resources may not burnout because they have a sufficient amount of resources to deal with the demands. People with low resources and low demands will not burnout because they do not have demands placed on them and are not using up the low resources at their disposal (Hobfoll et al., 2018). On the other hand, people with high demands, such as long work hours, and low resources will burnout because there is a high demand and little or no resources to combat the demands. It should be noted that these demands can be mental, emotional, or cognitive in form. So mental and cognitive demands can emanate from the constant use of technology which can cause technostress.

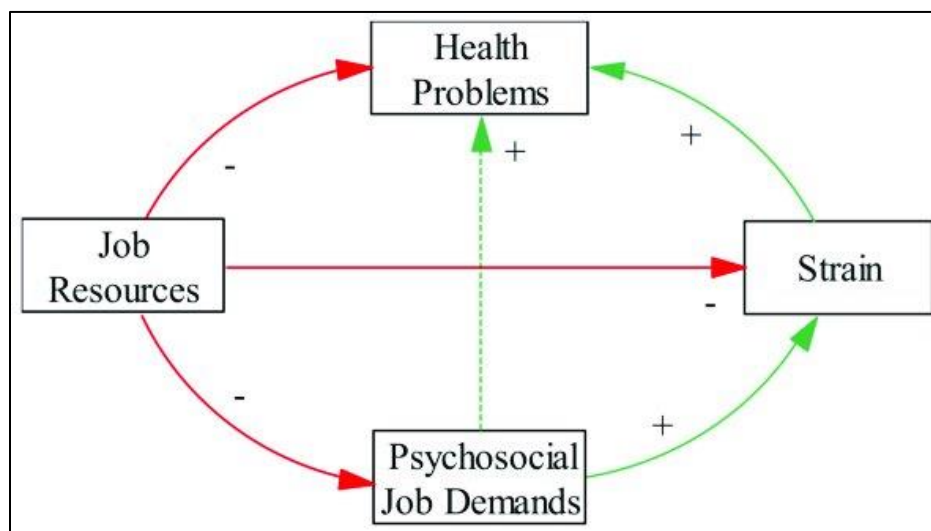


FIGURE 2.2: CONSERVATION OF RESOURCES MODEL (ADAPTED FROM MAYERL, STOLZ, WAXENEGGER, RÁSKY, & FREIDL, 2016)

The COR model emphasizes that major stressful conditions are objective elements of a life event or series of events (e.g., a divorce or firing is not an event so much as it is a series or cascade of events) that are shared within a culture and have a common level of impact (Holmgreen et al., 2017). For example, being fired from work probably entails earlier warnings or feedback, and perhaps a period of burnout; it may include having other strong job possibilities (or not) and having money in savings (or not); and it will be different depending on the individual's age. Although

perceptions will play a role, these objective elements, according to COR theory, will be the prevailing influences on any outcome (Zeidner et al., 2011).

2.5. ANTECEDENTS OF BURNOUT IN THE WORKPLACE

2.5.1 Work stress

Workplace stress as the adverse reaction people have to excessive pressures or other types of demand placed on them at work (Health and Safety Executive (HSE), 2018). Stress occurs when employees are unable to cope with work demands or the work environment, such as high workloads and a lack of resources. As a result, this affects their physical, psychological and emotional wellbeing (Quick & Henderson, 2016). Moreover, most high stressed jobs require the extensive interaction with technology (Tarafdar et al., 2020). This can lead to technostress and eventually, burnout if not properly managed (Ter Hoeven et al., 2016). The strain emanating from techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty can lead to burnout (Khedhaouria & Cucchi, 2019). Also, the attempt to juggle work and home life can lead to stress and eminent burnout (Starmer et al., 2016).

2.5.2 Long working hours

Longer hours do not necessarily translate to higher productivity, but many organisations try to push employees to put in more time (Hu et al., 2016). Hourly employees may appreciate the opportunity to get overtime, but salaried staff members do not see personal reward when they come in early and stay late. The Covid-19 pandemic has resulted in many employees working from home using computers and cellphones (Christian et al., 2020). The time spent on these platforms tend to be extensive as one can easily lose track of time which may result in technostress, and ultimately burnout (Hu et al., 2020).

2.5.3 Work-life balance

According to Hoffmann-Burdzińska & Rutkowska (2015), strain caused by work-family interference and family-work interference could result in higher stress levels leading to e.g., depression, burnout, higher absenteeism rates, less organisational commitment, higher employee turnover, and poor employee wellbeing. Also, using a computer or phone to work at home can easily blur the boundaries between work and family time especially when employees check or respond to emails outside of work time (Fleck et al., 2015). This so-called tethering of the

workplace has resulted in lower levels of work life balance (Fleck et al., 2015). This is one of the key focus areas of the present study and will be elaborated on more in the following chapters.

2.5.4 Technostress

Too much technostress can cause physical discomforts like heart disorder, blood pressure elevation, and muscle tension (Jena, 2015); Induce negative psychological states like worry, depression, anxiety, and frustration (Salanova et al. 2013); even results in job burnout and intention to quit the job. According to some experts, burnout is a consequence of technostress (Wang et al. 2020). It consistently results in subpar performance and productivity (Brooks & Califf, 2017). For instance, Srivastava et al. (2015) suggested that managers are more likely to experience job burnout in the context of high technostress. For example, the overuse of the internet leads to burnout (Peterka-Bonetta et al. 2019; Salmela-Aro et al. 2017).

2.6 BURNOUT AMONG EMPLOYEES IN THE BANKING SECTOR

Burnout is a major problem for employees in the banking sector (Khalid, Pan, Li, Wang, & Ghaffari, 2020). Burnout has been identified not only in law enforcement officers, doctors, nurses, and teachers, but also in bank employees (Young-Hee, 2013; Zhang et al., 2014). The banking sector is going through an unprecedented period as a result of changes in the work organisation and the global economic crisis (Giorgi, et al., 2017).

Due to everyday stressors of a highly competitive work environment brought on by the challenging economic crisis that countries have been going through recently, burnout has become more severe (Kalandatzis, 2021). According to Voegtlin and Greenwood (2016) increased job stress associated with the lack of employment security and work intensification, has led to wellbeing issues in organisations, including the banking sector. The banking sector is driven by high performance, high client involvement and high commitment which promotes individual performance at the expense of employee wellbeing (Guest, 2017). As a result, many employees report feeling exhausted and want to leave their jobs due to the extra pressure and workload from their superiors and clients (Khalid et al., 2020). They also report not being well compensated for their hard work, which they believe they do to provide the best service to their clients (Khalid et al., 2020).

The banking sector has also experienced downsizing due to the advent of technological advancements which has led to job stress, increased job demands and feelings of insecurity for employees as a result of these organisational changes (Greenhalgh & Rosenblatt, 2010). The decline in human resources has increased pressure and competitiveness in the day-to-day work of bank employees, causing many of them to feel depleted (Kalandatzis, 2021). This has also had a spillover effect on employee wellbeing in the banking sector. Research shows that employees who stayed in organisations after downsizing also experience problems with their mental and physical wellbeing (Bamberger et al., 2012).

According to Çoban and İrmış (2016), work overload, long and irregular working hours, continuous pressures to improve performance, job insecurity as a result of financial risk factors, experiencing work-family conflict and burnout may seem common for employees working in the banking sector. Rehman et al. (2015) suggest that burnout has a significant negative impact on the performance of employees in the financial sector. Also, Abate et al. (2018) state that satisfied employees report less job burnout and are more likely to remain in their job. Meanwhile Lu and Gursoy (2016) propose that service workers in many industries show signs of high job burnout rates, but there are additional complications to turnover in the banking sector because inexperienced employees may make mistakes, leading to costly fines. According to Kalandatzis (2021), burnout in the banking sector might be particularly prevalent among employees dealing directly with customer services and those with less than 20 years working experience.

To conclude, because banks are service industries, and as such, involves a lot of interpersonal stress, which depletes energy over time. Burnout will eventually result from an inability to effectively manage this stress. Therefore, it is essential to learn about the prevalence and causes of job burnout in order to both prevent and reduce the effect it has on bank workers' ability to perform their jobs (Khalid et al., 2020). Research has recommended that banks adopt corporate policies that include stress prevention initiatives, with general goal of improving workers' mental health (Giorgi et al., 2019).

2.7 DEMOGRAPHIC FACTORS INFLUENCING BURNOUT IN THE WORKPLACE

2.7.1. Gender

Generally, men and women are exposed differently to work and non-work stressors with men, on average, being more often exposed to better work conditions and lower work–family conflicts (Wu et al., 2016). Working men and women also tend to react differently to work and non-work stressors (Yi et al., 2015) as well as to work-family conflicts (Landolfi et al., 2015). Women appear to report higher levels of burnout than men, but the difference appears greater for emotional exhaustion than for depersonalization (Marchand et al., 2018; Purvanova & Muros, 2010). Generally, existing evidence on the relation between gender and burnout is mixed: some studies show higher rates among females than males (Spataro et al., 2016), other studies show the opposite pattern (Canadas-De la Fuente et al., 2018).

According to research conducted in the medical field, women physicians differ from their male counterparts in that they may lack role models in the workplace, face challenges of dual-career couples, have to reconcile having only a finite number of years for childbearing, face lack of parity in salaries, receive a lower number of promotions to leadership positions, confront both conscious and unconscious biases, and experience higher rates of sexual harassment (Robinson, 2003; Templeton et al., 2019). These are challenges faced by women in almost every other sector. Roskam and Mikolajczak (2020) found that mothers experienced higher levels of parental burnout than fathers. As men and women may experience differential work and life stressors (Theorell et al., 2014), the way gender shapes the relationship between age and burnout may be important. Furthermore, Marchand et al. (2018) found that women reported significantly higher levels of emotional exhaustion, low professional efficacy and total burnout.

2.7.2. Age

According to Marchand et al. (2015) as well as Norlund et al. (2010), age is negatively associated with burnout. Marchand et al., (2018) report that burnout levels reduced with increasing age in men, but the association was bimodal in women, with women aged between 20-35 and over 55 years showing the highest burnout level. Other studies have found higher levels of burnout only in older employees (Lindblom et al., 2010). Overall, prior research produced conflicting findings about the relationship between age and burnout and whether non-linear relationships were significantly different from linear relationships. Marchand et al. (2018) found age to be positively

associated with emotional exhaustion and burnout until the age of 30, then negatively associated until the age of 55, and finally associated again after the age of 55.

According to Marchand et al. (2018), emotional exhaustion and cynicism levels are low when employees are 20 years old, and then tended to increase until 30 years old. Between 30 and 55 years old, emotional exhaustion and cynicism levels declined, while after 55 years old, they appear to increase sharply. They add that for men, age was associated with lower levels of emotional exhaustion. For women, emotional exhaustion levels were low at the age of 20 years old, then increased until the age of 30. Between ages 30–50, emotional exhaustion levels were lower. However, after age 50, emotional exhaustion levels appeared to increase sharply. The same pattern was seen for cynicism, but younger women had lower levels of cynicism compared with younger men. Cynicism among women increased sharply between ages 20–35.

Younger employees may be more susceptible to resource depletion and exhaustion in the early stages of their employment when they get an initial mastery of their job requirements and demands (Lim et al., 2010). Additionally, younger employees may struggle with work-family problems, which are known to increase the risk of burnout (Ahola et al., 2006). Burnout may begin to decrease as employees age if they have successfully mastered their jobs because they have become more accustomed to the demands and expectations of their jobs. Moreover, work-family conflict may also decline (Matthews, et al., 2010), thus lessening their influence on burnout. For older workers, however, adaptation to stressors tends to decline, increasing the risk of burnout. Also, new forms of work–family conflicts may appear, such as caring for elderly relatives, which have been associated with burnout (Pines et al., 2011). To conclude, there is an association between age and burnout that is strongly moderated by gender (Marchand et al., 2018).

2.7.3. Occupational level

Burnout is predicated on the subjective meanings that individuals attribute to their work-related experiences (Handy, 1988; Perrewe & Zellars, 1999). According to Whitehead (1885), burnout is worst for employees past their initial period of employment and lowest for the newly hired and for the most experienced. It should be noted that there is very little research on burnout and occupational level. Most research conducted lay emphasis on burnout and different occupations (e.g., Huri et al., 2017; Küçüksüleymanoğlu, 2013; Lee et al., 2019) than on occupational levels within organisations.

2.8 OUTCOMES OF BURNOUT

The outcomes of burnout can be classified into three categories: individual and organisational outcomes. These will be discussed below.

2.8.1 Individual outcome

On an individual level, burnout can cause psychological, physical and behavioural damage to an employee. For example, burnout is associated with stress, anxiety/depression, lower job engagement, self-esteem and job satisfaction (psychological factors) (de Beer, 2021). Physically, individuals can also suffer from heart diseases and musculoskeletal problems as a result of burnout (Dall'Ora et al., 2020). Behaviourally, the individual may tend to alcohol and drug abuse (Kipperman et al., 2017).

2.8.2 Organisational outcome

At the organisational level, burnout has been linked to job withdrawal behaviours such as turnover intention (and replacement), absenteeism/presenteeism, reduced organisational commitment, a decrease in job performance and health insurance costs (Maslach & Schaufeli, 2018). The negative effects of employee burnout can be particularly devastating in client service organisations such as the financial sector, since burnout has been shown to significantly reduce the quality of interpersonal work-related relationships (Rodríguez-Mantilla & Fernández-Díaz, 2017). Therefore, employer will benefit from investing in employee well-being, as employees that are well taken care of remain productive, focused and energised, and, despite setbacks experienced, they develop the ability to increase their resilience (Van Strateen, 2014).

2.8 Summary

This section addressed burnout by first defining and conceptualizing burnout according to the Burnout Assessment Tool (BAT). It also emphasised the cognitive impairment aspect of burnout and COR and JD-R were proposed as theoretical frameworks to help explain how burnout manifests. Then, work life balance and technostress were positioned as significant antecedents of burnout. Burnout among employees in the financial sector was also explored, as well as how burnout affects certain demographics i.e., gender, age and seniority level. The chapter concluded by providing some possible outcomes of burnout.

CHAPTER THREE

WORK LIFE BALANCE

3.1. INTRODUCTION

Employees have always faced the challenge of balancing their time between work and their personal life (kluczyk, 2013). In the modern work environment, employees face many pressures in their jobs. Changes in consumer behaviour, the economy, information technologies, and the global market put heavy time-demands on workers (Sirgy, 2021). Competing in the marketplace requires a steady improvement in the skills and abilities of individual employees and the companies for which they work. This is because there are positive outcomes for individuals and for organisations derived from a satisfactory work-life balance (Poulose & Sudarsan, 2018). This is true for most businesses, including financial institutions. The current generation of workers places greater attention on work-life balance than the prior generation. Millennials are making choices that prioritise their relationships and lifestyle rather than work (Trapero et al., 2017). Organisations will have to take this into consideration if they are to effectively compete in the marketplace for employees.

The COVID-19 pandemic was not only a health emergency and economic hazard but has also resulted in dramatic changes in people's personal lives and roles within families have been disrupted (Hjálmsdóttir & Bjarnadóttir, 2021). Children and adults alike have been forced to stay at home and upturn their lives as the home became the school, the workplace, the playground, sports facility, and family sanctuary. The pandemic has also affected companies and businesses as they have been forced to adopt to the circumstances with more working from home and telecommuting opportunities for their workers (Alon et al., 2020). Juggling childcare and paid work has been very challenging for parents. While this has increased flexibility for some employees as a solution to a better work-life balance, especially for women, for others, this is not the case (Gatrell et al., 2014). The division between work and home can become more blurred when the employees bring their work home and take care of family matters during working hours (Hjálmsdóttir & Einarsdóttir, 2019; Wheatley, 2012). Studies have found that, when parents manage to balance family and working life, they are more satisfied with their life, which positively impacts their mental and physical health (Haar et al., 2014).

This chapter will focus on work life balance. A broad discourse of the variable will be provided from an introduction of work life balance to exploring the nature and definition of work life balance. The chapter will explore some work life balance theories and models. Finally, the chapter will provide some outcomes associated with work life balance and concluded with a discussion on the theoretical commonalities between work life balance and burnout, the relationship between technostress, work-life balance and burnout. A proposed model for the study will also be provided. It should be noted that work-life balance will serve as a partial mediator between technostress and burnout in the current study.

3.2. NATURE AND DEFINITION

The focus on the domains of work and family is vital as family and work are regarded as the most important elements of everyone's life, and any competing demands from work and family life cause conflict and negatively affect the wellbeing of workers (Kluczyk, 2013).

According to Greenhaus et al. (2003) work-life balance is the allocation of time and psychological energy in a balanced way in work and non-work life while deriving much satisfaction from both work and non-work life. Smith (2010) refers work-life balance to people spending sufficient time at their jobs while also spending adequate time on other pursuits, such as family, friends, and hobbies. Work life balance can be defined as the integration between work and life, in such a way that neither significantly interferes with the other (Muthukumar et al., 2014). According to Kelliher (2016) the term "work-life balance" refers to the relationship between work and non-work aspects of individuals' lives, where achieving a satisfactory work-life balance is normally understood as restricting one side (usually work), to have more time for the other. This definition will be focused on for the purpose of this study because it sufficiently captures the essence of the construct. The definition also highlights the dimensions e.g., time-based conflict of the measuring instrument used to measure the variable. It should be noted that work in this context is not limited to physical or paid labour, but also to the psychological activities carried out by individuals.

3.3 TYPES OF WORK CONFLICT

There are three types of work-family conflict (WFC). These include time-based conflict, strain-based conflict, and behaviour-based conflict. However, directionality also plays an important role when it comes to an individual's overall experience of work-life balance. For example, in WFC, individuals have some difficulties at work that affect their functioning at home; in contrast, in the

Family-work conflict (FWC), their functionality at work is impaired due to some issues experienced at home (Kossek & Lee, 2017). These three dimensions will be further explained below. *Time-based conflict* refers to the time required by one of the two domains (i.e., work-family or family-work) which prevents the possibility of fulfilling the other role's expectations (Loscalzo et al., 2019). *Strain-based conflict* describes a situation in which strain, fatigue, tension, anxiety, or dissatisfaction in one domain affects the performance in the other one (Loscalzo et al., 2019). In the *behaviour-based conflict*, specific behaviours, expectations, or rules required by one role are incompatible with those needed for the other role (Loscalzo et al., 2019).

It is important to note the difference between work-family- conflict (WFC) and family-work conflict (FWC). In the WFC, people have problems at work that influence their ability to operate at home; in the FWC, people's ability to function at work is hampered by problems at home (Greenhaus & Beutell, 1985). Then, Carlson et al. (2000) proposed the following six forms of W-F-C by combining the three types of W-F-C with their two directions (WFC and FWC): time-based work interference with family (time-based WIF), time-based family interference with work (time-based FIW), strain-based work interference with family (strain-based WIF), strain-based family interference with work (strain-based FIW), behavioural-based work interference with family (behaviour-based WIF), and behavioural-based family interference with work (behaviour-based FIW).

3.4 A THEORETICAL APPROACH UNDERPINNING THE DEVELOPMENT OF WORK LIFE BALANCE

3.4.1 Conservation of Resources approach (COR)

Many researchers have considered the Conservation of Resources (COR) model as an appropriate framework for work-family studies. As previously indicated, the COR model proposes that individuals seek to acquire and maintain resources (Hobfoll, 1989). If resources are lost or are threatened, individuals experience distress and decreased well-being. In an attempt to manage both work and family roles, obligations in one domain can deplete resources in another domain (e.g., time, energy) thus, leading to exhaustion, restlessness, and even depression. As a result, individuals experience less well-being and mental health when the demands are too high.

3.5. WORK LIFE BALANCE AMONG EMPLOYEES IN THE BANKING SECTOR

The financial sector is noted as being notorious for its poor work-life balance in recent times, being recognised for long hours, weekend work, and an intensely stressful working environment (Talukder et al., 2018). The existence of WLB practices independent of actual use, appear to produce positive work-related attitudes. For instance, the availability of organisational resources such as flexible work hours have been linked to job satisfaction and organisational commitment for all employees with family responsibilities, regardless of whether these resources were being used (Scandura & Lankau, 1997).

3.6. OUTCOMES OF WORK LIFE BALANCE

Some consequences of poor WLB include depression and distress, leading to lower productivity, reduced work quality, higher absenteeism and staff turnover (Seligman, 2011). Carlson et al. (2009) suggest that work-life balance leads to important outcomes such as job satisfaction, family satisfaction, family performance, and family functioning. Research shows that people who perceive balance between their work and life roles tend to be more satisfied of their life and report better physical and mental health (Brough et al., 2014). Also, by enabling employees to schedule their time in order to better balance competing demands from work and from home, and by helping employees to procure third-party assistance with care giving responsibilities, such practices will reduce or eliminate levels of work-life conflict, reduce stress/burnout, thereby augmenting employee performance and organisational effectiveness.

3.7. THE RELATIONSHIP BETWEEN WORK LIFE BALANCE AND BURNOUT

Nowadays with increasing demands in the workplace, employees are experiencing more stress which is invading their personal life (Rama Devi & Nagini, 2014). Any competing demands of work and family life cause conflict and negatively affect the wellbeing of workers (Kluczyk, 2013). Employees can suffer from negative consequences from work–family conflict, such as burnout, decreased physical health, diminished emotional well-being, and increased life distress (Pangemanan, Pio, & Tumbel, 2017); Starmer et al., 2016). According to Neto et al. (2016), work-family conflict decreases employee psychological wellbeing leading to burnout. Also, Karatepe et al. (2006) found that work-family conflict increased emotional exhaustion, while Umene-Nakano et al. (2013) suggest that poor work-life balance leads to burnout. Moreover, inter-role conflict

may have an adverse effect on an individual and his or her psychological well-being by causing stress and subsequent burnout (Dwi, 2018).

The pressure on employees to work longer hours under inflexible work schedules is ever increasing. The literature also suggests that lack of balance between work and non-work activities is related to reduced psychological and physical well-being (Sparks et al., 1997; Frone et al., 1997; Felstead et al., 2002). For example, empirical research in the UK. (Hyman et al., 2003) indicates that intrusion of work demands into personal life (e.g., working during the weekend) was related to the reports of heightened stress and emotional exhaustion for employees. Hence, Karatepe and Mehmet (2008) as well as Rama-Devi and Nagini (2014) suggest that work-family conflict increases emotional exhaustion and decreases job satisfaction among employees. Employees perceived that intrusion of work obligations into their personal lives negatively affected health (Hyman et al., 2003). Siw et al. (2008) indicate that there is a bi-directional relationship between work-life balance and burnout. That is, both work family interaction and burnout may be either antecedent or outcome, resulting in further loss spirals as suggested by the Conservation of Resources Theory (COR). Consequently, employees believe that the intrusion of work responsibilities and pressures into their personal lives has a negative impact on their health (Hyman et al., 2003). According to Hughes and Boziones (2007), the absence of work-life balance causes anxiety and withdrawal behaviours, comprising turnover intention and absenteeism due to sickness among individuals.

3.8 THE RELATIONSHIP BETWEEN WORK-LIFE BALANCE AND BURNOUT

According to Starmer et al. (2016), individuals with higher likelihood of work-life balance tend to experience low levels of burnout. Another study found that there is a significant relationship between work-family enrichment with reduced personal achievement and between work-family conflict with emotional exhaustion, depersonalisation and reduced personal achievement (Mahendran et al., 2019). Moreover, Soelton et al. (2020) found that workload has a significant positive effect on burnout, work family conflict has a significant positive effect on burnout and work life balance has a significant negative effect on burnout. In addition, Keeton et al. (2007) indicate that the strongest predictor of work-life balance and burnout was having some control over schedule and hours worked respectively.

3.9 SUMMARY

This chapter focused on work life balance which was conceptualized as having two directions i.e., work to family and family to work. A broad discourse of the variable was provided from an introduction of work life balance to exploring the nature and definition of work life balance. The chapter also explored some types of work life conflict, theories and models. Finally, the chapter provided some outcomes associated with work life balance and concluded with a discussion on the theoretical commonalities between work life balance and burnout.

CHAPTER FOUR

TECHNOSTRESS

4.1. INTRODUCTION

The current organisational environment requires knowledge-intensive work, outsourcing, and collaborative work arrangements. These require individuals to continually increase their day-to-day interaction with ICTs, leading to aggravation of the potential negative effects associated with their use (Ragu-Nathan et al., 2008). The sudden and forced remote working situation that came about as a result of the COVID-19 crisis has also increased levels of technostress (Spagnoli et al., 2020). Even though it is no longer remote working, there has been an increase in flexible work arrangement as a result of the pandemic. Technology can improve workplace efficiency, productivity, and flexibility; nevertheless, it can also have negative consequences for individuals' cognitive, psychological, and physical health, as well as for organisations (e.g., decreased employee wellbeing, satisfaction, commitment and burnout) (Atanasoff & Venable, 2017).

Workplace stress seems to be exacerbated by the usage of information and communication technologies (ICT). ICT has led to work intensification which in turn, has produced negative outcomes such as poor work performance, emotional exhaustion and decreased work-life balance (Ang et al., 2018). Hence, the use of ICT changes not only the way people complete their work but also the work environment and culture. The increased use of ICTs has also engendered work extension expectations about employees being always available and working faster and better (World Health Organisation, 2005; 2019). In Europe alone, the proportion of workers who reported a frequent use of digital technologies increased from 36 to 57% between 2005 and 2015.

This chapter will explore technostress. It will identify the definition and nature of technostress and discuss the dimensions, theories and models of technostress. The chapter will also address possible outcomes associated with the construct, and the relationship between technostress and burnout.

4.2. NATURE AND DEFINITION

Knani (2013) states that technostress emanates from the use of information and communications technologies (ICT), such as cell phones, voice mail, e-mail, and instant messaging. It is caused by an individual's attempts to deal with constantly evolving ICTs and the changing physical, social, and cognitive responses demanded by their use. The use of ICT can challenge employees by

creating a range of stressors, including overload, role ambiguity, and job insecurity. Technostress manifests itself in two distinct and related ways: in the struggle to accept computer technology, and in the more specialised form of over-identification with computer technology.

According to Brod (1984), technostress is an ineffectiveness to cope with technology that results in distress. For Arnetz and Wiholm (1997) it is a state of arousal observed in certain employees who are heavily dependent on computers in their work”. Tarafdar et al. (2017) define technostress as a phenomenon of stress experienced by end users in organisations as a result of their use of ICTs. Atanasoff and Venable (2017) define technostress as a mental stress from technology and includes psychological and emotional arousal. For the purpose of this study, this definition will be focused on because it contains elements related to burnout i.e., mental, psychological and emotional aspects. These aspects are known to either improve or decrease burnout and can also be measured on the instrument used in measuring technostress.

4.3. DIMENSIONS TECHNOSTRESS

According to Ragu-Nathan et al. (2008) and Pflügner et al. (2021) technostress consists of five dimensions: Techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. These dimensions can be used to measure levels of technostress experienced by employees in organisations. They will be explained below.

4.3.1 Techno-overload

Techno-overload describes an increase in the pace and volume of work which causes employees to work faster and longer. The quantities and volumes of information users ‘absorb’ from ICTs can have detrimental effects on their health. For instance, in the financial sector, switching between diverse devices and performing different activities reduces task quality and efficiency as the employee’s brain needs time to process captured data. According to Ingusci et al. (2021) work overload has a positive relationship with behavioural stress. Maslach and Leiter (2016) suggest that both qualitative and quantitative work overload contribute to burnout by depleting the capacity of people to meet the demands of the job. When this kind of overload is a chronic job condition, there is little opportunity to rest, recover, and restore balance. The long-term interaction with technologies could contribute to the development of anxiety and stress if it leads to an increase in job demands (work overload, time pressure, cognitive and emotional demands) (Ingusci et al., 2021). Many recent studies highlight how remote working, pre-covid and during the COVID-19

emergency, has increased workload (Wang et al., 2020) and techno overload (Molino, et al., 2020) from the employee point of view.

4.3.2 Techno-invasion

Techno-invasion is the pervasive invasion of an employee's personal life by ICTs, therefore blurring the boundaries between work and private life (La Torre et al., 2020). Mahapatra and Pati (2018) found techno-invasion to be positively related to burnout in employees. Techno invasion in addition to deficiency of regular management and discipline, create distortion lines that separate occupation from an individual's life. The pandemic has modified the quality of life at work and has accelerated the use of work from home, often generating confusion and misunderstanding between employees and employers (Marchiori et al., 2019). Financial sector employees and others working from home have been confronted with several difficulties to organise their own working time; for instance, spaces, devices, internet connection, and coffee breaks have been forcefully shared with the family, a test that may make it difficult to respect the boundaries between work and private life (Ingusci et al., 2021). An attempt to balance all of these aspects might lead to stress and subsequent burnout (Ingusci et al., 2021).

4.3.3 Techno-complexity

Techno-complexity is the high complexities of new ICTs which causes an employee to feel incompetent (Barber & Santuzzi, 2015). The more complex the devices and software are, the more they evoke frustration and demoralise in an individual. In the workplace, this can negatively affect a person's productivity. For example, when the technology is too complex to carry out a task, or too complex to incorporate into work, an employee may experience the techno-stressor called techno-complexity (Day et al., 2012). Such techno-complexity is therefore associated with a misfit in terms of an employee's ability to use technology to carry out the task at hand. This misfit can then manifest in strain. In previous stress research, burnout has been instantiated as a strain variable (Diebig et al., 2017), and has been conceptually linked to techno strain (Salanova et al., 2013). Califf and Brooks (2020) propose that techno-complexity is significantly related to burnout. Thus, greater technical experience or a high level of computer self-efficacy may decrease the perceived amount of complexity and burnout (Califf & Brooks, 2020).

4.3.4 Techno-insecurity

Techno-insecurity refers to contexts where employees fear they may lose their job and be replaced by a new Information Systems (IS) or other employees with better understanding of the IS (Ibrahim & Yusoff, 2015). Thus, employees feel threatened by job loss due to automation or other people who have a better knowledge of ICT. With the speed at which technology is evolving, younger generations are more comfortable understanding the mechanism of new technology (Tarafdar et al., 2019). However, this evolution increases older employees' lack of self-confidence and morale, making them susceptible to techno-insecurity. Mahapatra and Pati (2018) found techno-insecurity to be positively related to burnout in employees. The negative work outcomes associated with job stress such as job dissatisfaction, absenteeism and reduced job involvement and commitment are similar to the outcomes associated with techno-insecurity (Tilakdharee et al., 2010). Hence, techno-insecurity is a work stressor that can cause emotional exhaustion which is a component of burnout (Piccoli & De Witte, 2015).

4.3.5 Techno-uncertainty

Techno-uncertainty involves the continuous changes or upgrades in ICTs that cause ambiguity, stress, and disturbs employees. Constant alteration in devices and software causes frustration, vagueness and nervousness among individuals as the change always requires the acquisition of new technological knowledge to efficiently use and operate it. Employees experience techno-uncertainty as a stressor when they feel that information systems (IS) change quickly (Maier et al., 2015; Tarafdar et al., 2007), important technology related decisions are not communicated to them (Barber & Santuzzi, 2015; Day et al., 2012), and they do not have control over IS use policies around, for instance, IS security (Cram et al., 2017).

4.4. APPROACHES TO TECHNOSTRESS

There are a few theoretical frameworks that help explain how technostress manifests within individuals. The following section will briefly highlight the transactional approach of stress and the person-environment fit approach, to give insight into the potential manifestation of technostress.

4.4.1. Transactional Approach

The transactional approach of stress (Lazarus & Folkman, 1984) is the theoretical foundation underlying most technostress research into how individuals perceive and handle stressful

Information Technology-related events. According to this approach, stress takes place during transactions between the individual and the environment (Pflügner et al., 2021). When individuals are confronted with external conditions, they engage in appraisal processes to evaluate whether these conditions constitute a threat, harm or challenge and evaluate their ability to alter the conditions or manage negative reactions (Biggs et al., 2017). Following the appraisals, individuals engage in coping efforts, which are actions or emotions applied to handle the perceived threat and alter the reactions to the external conditions.

From the transactional perspective, technostress is not associated with the individual or the environment alone, but with the ongoing transaction of the user with his or her environment. Techno-enabled conditions that are appraised by the user as threatening result in a user's perception of techno-stressors (Tarafdar et al., 2011). Perceived techno-stressors, in turn, foster adverse user reactions, called techno-strain. When users perceive techno-stressors they engage in coping strategies, which are actions or emotions users applied to handle the perceived threat from techno-stressors (Tarafdar et al., 2017). These coping strategies alter the reactions to perceived techno-stressors which may either increase or decrease techno-strain. Thus, technostress is a transactional process consisting of the perception of techno-stressors – stimulating conditions caused by IS that are appraised as threatening – and techno-strain – users' reactions to perceived techno-stressors (Tarafdar et al., 2017), such as job burnout.

4.4.2 Person-environment fit approach

The Person-environment (PE) fit approach highlights the extent to which a person and the environment match. Taking the perspective of person-environment (P-E) fit approach, which has been essential in technostress research (Wang & Li, 2019), technostress is basically the consequence of misfit between a person and the environment surrounding the person. Considering that the person-environment misfit has multiple dimensions (Chuang et al., 2016), technostress is not only related to the ICT that causes it, but it is also related to organisations that set requirements on the use of ICT (Tarafdar et al., 2011) and colleagues within organisations who often have influence on individuals' use of ICT (Avanzi et al., 2018). Consequently, technostress caused by misfits between employees and multiple dimensions of the work environment could negatively affect employees' performance at work, leading to job burnout and even intentions of quitting the job (Pignata et al., 2016). Moreover, Edwards and Harrison (2013) state that poor person–

environment fit can result in physiological and psychological strains leading to burnout. This approach will be used to guide the technostress model. The approach mentions a misfit between employees and aspects of the work environment that can affect the performance. As indicated by the definition of technostress, the psychological, mental and emotional aspects of employees, if not looked after can cause this mismatch between employees and the work environment.

4.5. CONCEPTUAL MODELS ON TECHNOSTRESS MODELS

Two conceptual technostress models will be discussed and will help clarify how technostress emerges in organisations to make an impact and create awareness.

4.5.1 A Model of technostress in organisations

This model originates from the transactional model of stress which explains human stress reactions (Adam et al., 2017). Stress is generated as a dynamic process that is triggered by a set of acute and chronic stressors (i.e., stress-creating factors and conditions), and involves individual stress reactions, which, in turn, have a number of consequences on wellbeing and health, performance and productivity, burnout, and user satisfaction (Lazarus 1991; Riedl 2013).

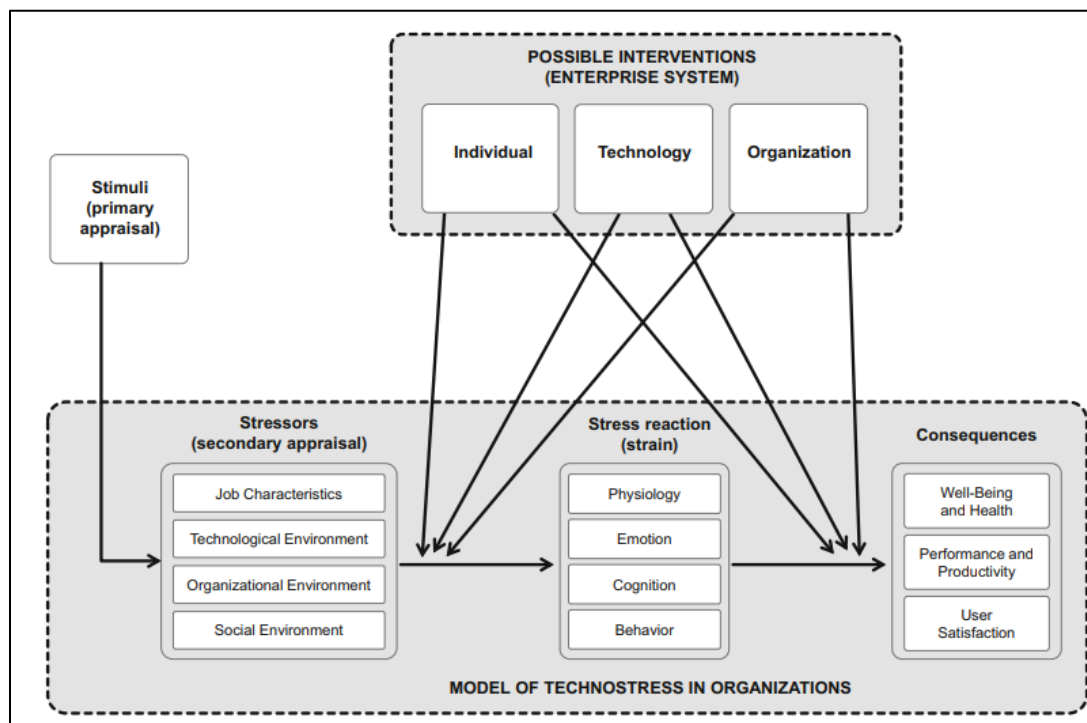


FIGURE 4.1: MODEL OF TECHNOSTRESS IN ORGANISATIONS (ADAM, GIMPEL, MAEDCHE & RIEDL, 2017)

Several distinctions can be made regarding stress related to job characteristics, technological environment, organisational environment, and social environment. These categories have recently been described as crucial in organisational technostress (Fischer & Riedl 2015). These stressor types can induce stress reactions in the users, both individually and collectively. In the context of a specific task (i.e., job characteristics), possible stressors are, for example, task monotony, task complexity, and multi-tasking (Tarafdar et al. 2011; Riedl 2013). Organisational stressors refer to the potential causes of stress originating in the organisational structure. This covers, for example, role overload (i.e., level of difficulty or amount of work exceeding capacity) and role conflict (i.e., contradictory and incongruent role requirements) (Tarafdar et al. 2007). The social environment may also affect the employees' stress levels (e.g., social pressure to use specific system features).

4.5.2 A Technostress model

This model is useful for organisations to raise awareness of technostress- especially, technostressors, strains, inhibitors, and impacts. The model constitutes four components: stressors, strains, inhibitors and impacts. The model represents a causal effect diagram between its components (Nisafani et al., 2020). Techno-stressors exemplify the causes of technostress in working spaces. The use of technology for work purposes introduces technostress. For example, when workers face usability issues (Sellberg & Susi, 2014). The software may contain hidden functionalities that mandate a user to memorise how to operate them (Sellberg & Susi, 2014). A user needs to deal with a sophisticated graphical user interface, which shows how usability issues can produce technostress (Sellberg & Susi, 2014).



FIGURE 4.2: A TECHNOSTRESS MODEL (NISAFANI, KIELY & MAHONY, 2020)

A *strain* is considered an individual's responses to technostress (Ayyagari, Grover, & Purvis, 2011). Strain can manifest as an output of constant technostress exposure. A user continuously receives error messages because he/she enters wrong inputs in the weak graphical user interface system. As he/she cannot figure out how to fix these errors, this user experience technostress which strain is emotionally exhausting (Nisafani, et al., 2020). The *inhibitors* act as situational factors that either reduce or increase the causal effect between stressors and strains (Brown et al., 2014; Turel & Gaudio, 2018). Here, the technical support helps the user to alleviate the problem he/she experiences (Sellberg & Susi, 2014). Hence, this can be seen as an effort to reduce 'technostress' strain. Lastly, the *impact* is the outcome of technostress. Having a negative experience using technology in working space may affect the individual (Farler & Broady-Preston, 2012). This model helps to guide the current study as it contains all the dimensions used to measure technostress.

4.6. TECHNOSTRESS AMONG EMPLOYEES IN THE BANKING SECTOR

In the context of employees in the banking sector, several workplace stressors have been highly correlated with burnout (Montgomery & Rupp, 2005). Although ICT improves productivity and communication possibilities at workplaces, it creates adaptation demands not only on the person

and the tasks performed, but also in the physical and organisational context (Yener et al., 2020). Work is no longer bound to a certain time or place, and this is expected to have negative consequences on employees' health such as burnout. For example, intensive use of ICT by employees working in the banking sector requires more work time and work speed (Berg-Beckhoff et al., 2017), enhances multi-tasking, and causes disturbances to working routines and overexposure to information (Mano & Mesh, 2010), which may cause anxiety and frustration that potentially leads to burnout over time (Hu et al., 2021).

Employees in the banking sector are frequent users of ICT with a large majority using computers at work and can experience strain associated with several techno-stressors (Odoh et al., 2013; Syvanen et al., 2016). Research shows that employees in the banking sector reported that ICTs created mental pressure, a sense of anxiety and pessimism, as they had to keep up with the fast-advancing pace of the new ICTs (Owusu-Ansah et al., 2016). Technostress has a negative impact on employee performance. According to Embi (2007), banks are experiencing rapid changes in technology with the introduction of new computer applications over the past years and these have brought changes to the nature of work among the employees. With the innovations of new features in technologies and their capabilities to provide various services and transactions, many banks are investing money to gain advantages offered by these new computer technologies. It has been suggested that the use of computers can lead to exhaustion and psycho-physiological stress reactions due to occupational strain, and that these reactions can become conditioned to the work environment, leading to symptoms associated with computer use (Owusu-Ansah et al., 2016; Sharma and Gill, 2016).

4.7 OUTCOMES OF TECHNOSTRESS

The effects of techno-stress manifest psychologically through disagreeable feelings, undesirable self-image, undesirable opinions regarding work or supplementary computer operators, and in certain cases even psychosomatic complaints (Corradini et al., 2015). Other outcomes include memory loss, sleep complications and incapacity to focus on recreational activities (Ragu-Nathan, et al., 2008). Employees who suffer from technostress may also experience poor health, negative self-image and even depression (Erasmus, 2014). These implications may ultimately result in technological avoidance, where users seek to avoid any form of interaction with technology. This is of primary concern as it impacts their career prospects.

Moreover, perceived techno-stressors can lead users to have less organisational commitment, job satisfaction and satisfaction with IS use (Fuglseth & Sørenbø, 2014; Jena, 2015; Tarafdar et al., 2010) and to problems with concentration, sleep, identity, and social relations (Salo et al., 2019). Finally, users can also have physiological reactions to perceived techno-stressors, such as increased stress hormones and skin conductance response (Tams et al., 2014; Weinert et al., 2020).

4.8. THE RELATIONSHIP BETWEEN TECHNOSTRESS AND BURNOUT

A university study showed that students' technostress significantly predicted their learning burnout. According to Ayyagari et al. (2011), Srivastava et al. (2015), and Wang et al. (2020), there is a relationship between technostress and burnout. According to Zhao et al. (2021), when techno-overload is reduced, this will in turn reduce emotional exhaustion emanating from burnout. Technostress has been shown to result in job burnout and decreased employee performance (Ayyagari et al., 2011; Srivastava et al., 2015). Techno-strain refers to adverse reactions to perceived techno-stressors (Tarafdar et al., 2010) that manifest on a behavioural, psychological, or physiological level. Users perceiving techno-stressors may have behavioural reactions, such as low job performance (Tarafdar et al., 2010, 2015), or psychological reactions, such as job burnout or exhaustion (Maier et al., 2015, 2017; Srivastava et al., 2015). Techno-stressors such as work-home conflict, invasion of privacy, work overload, role ambiguity and job insecurity have been shown to intensify stress within a person (Ayyagari et al., 2011; Tarafdar et al., 2007, Tarafdar et al., 2015) and to result in job burnout (Srivastava et al., 2015).

Techno-invasion entails that work-related tasks may spill into the employees' private life, thus, endangering their work-life balance and causing stress/burnout. Technostress causes fatigue, exhaustion and decreased levels of job satisfaction and lowered commitment to the organisation, performance and productivity (Ayyagari et al., 2011).

4.9. THE RELATIONSHIP BETWEEN TECHNOSTRESS, WORKLIFE BALANCE AND BURNOUT

Employees spent a lot of time in the workplace and at home using computers. They use computers to browse the Internet, check messages, and interact with online colleagues regarding work. Technology that facilitates a higher workload on these individuals has developed the problem of technostress. With techno-invasion entails that work-related tasks may spill into the worker's private life, endangering their work-life balance (Brivio et al., 2018). At organisational levels,

communication information overload (or techno-overload) results from employees' receipt of information from multiple channels simultaneously. This information can be difficult to manage, as it may be unclear how to prioritize or best use the information received (Tarafdar et al., 2007; Gaudio et al., 2017).

The effects of techno-stressors on work-life balance have not yet been investigated, although achieving work-life balance is becoming an important goal for both employees and employers across the world (Casper et al., 2018; Ma et al., 2021; Wayne et al., 2017), and is negatively affected by job demands (Brough et al., 2014; Casper et al., 2018; Greenhaus & Powell, 2017; Syrek et al., 2013). As techno-stressors are a form of job demand, and job demands negatively affect work-life balance, it is expected that techno-stressors will negatively influence work-life balance. For instance, techno-invasion means that employees will deal with work-related issues while they are at home, which can reduce their ability to be as involved as they wish to be at home and induce negative affect at home. Likewise, techno-complexity implies that employees must invest time and cognitive effort into learning to use technology and keep up to date with new tools. This investment of time and effort, whether during work or leisure time, may reduce individuals' effectiveness in work and life roles that they value and thus affect their assessment of how well they combine work and non-work life (Ma et al., 2021). In sum, techno-stressors are job demands that undermine employees' work-life balance.

Technostress stress is undoubtedly one of the employees' most significant problems, especially involving computer technology such as mobile phone technology, car alarms, emails, calls, and voicemails. Employees' attempt to juggle work and family life while using technological appliances can cause several stressors which can lead to burnout if not properly managed (Gabirele et al., 2017); Hadziroh et al., 2014; Okebaram et al., 2013; Srivastava et al., 2015). Also, technostress can inhibit recovery due to the blurring of the boundaries between work and family life, and as such increases burnout.

4.10 A PROPOSED CONCEPTUAL MODEL

Below is a proposed model that will be used to established relationships between the various variables in the study.

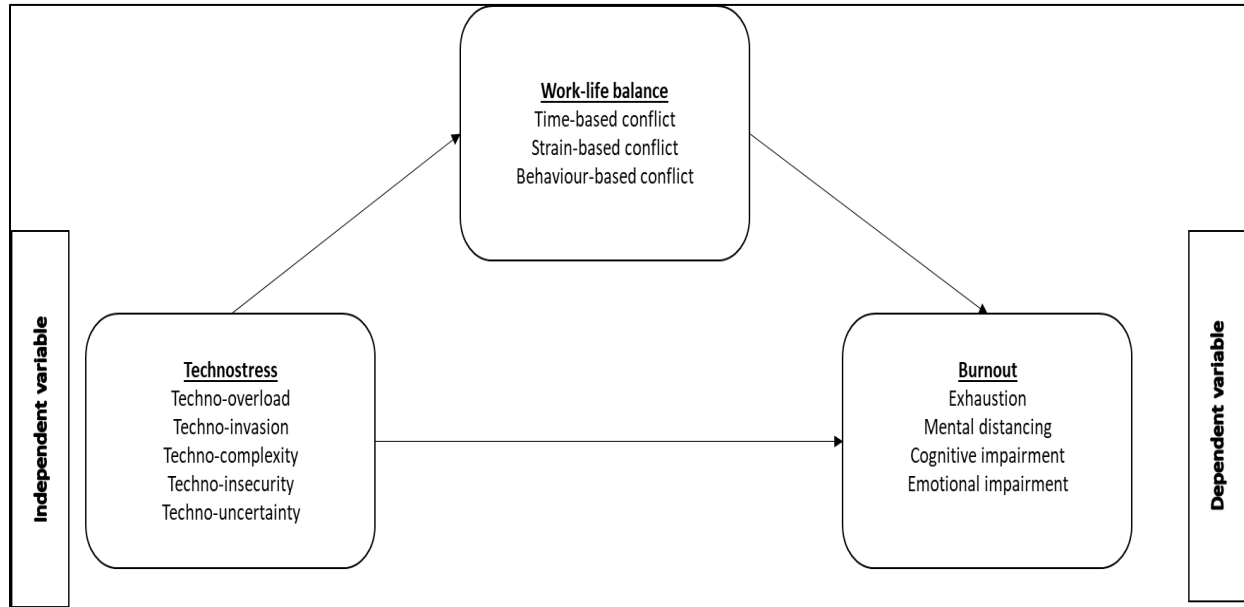


FIGURE 4.1: A PROPOSED MODEL FOR THE STUDY

4.11 SUMMARY

This chapter explored technostress and conceptualized it as a strain that has five types. It explored the definition and nature of technostress. Some theories and models of technostress were also discussed. The chapter also addressed possible causes and outcomes associated with technostress, as well as its presence in the banking sector. The chapter concluded by establishing the relationship between technostress, work-life balance and burnout. A proposed model for the study was also provided.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 Introduction

This chapter discusses the research methodology used for the study. This includes the research approach and design, selection of test persons, data gathering, sampling methods, and describes the questionnaires used to collect data, and the statistical methods used to analyse the data. Finally, a description of the ethical considerations involved in carrying out this study is presented.

5.2 Research design

The overarching structure for the processes that the research will follow is provided by the research design (Leedy & Ormrod, 2013). The design of the present study therefore, defined the study type, research questions, hypotheses, independent and dependent variables, data collection methods and statistical analysis (Small, 2011). The research design used was non-experimental because it aimed at developing descriptive and inferential data about a relationship based on existing conditions and associations between variables (Picardi & Masick, 2014; Swanson & Holton, 2005). Survey research, which is a method of collecting data in a consistent way to examine thought, opinions, and feelings about a specific issue (Muijs, 2011), is one of the non-experimental research methods that was used in the study. An advantage of using survey research is that large amounts of data can be collected in a more cost effective and time-effective manner (Botha, 2010). An example of survey research method that was used in the current study is self-report measures such as questionnaires (Muijs, 2011) which was used to collect data from a representative sample of a population (Picardi & Masick, 2014).

The present study used a quantitative survey research design to seek objective truth of whether there exists a relationship that is scientific in nature (Sekaran & Bougie, 2016). Quantitative research is “a process that is systematic and objective in its ways of using numerical data from only a selected subgroup of the population to generalise the findings to the universe that is being studied” (Maree & Pietersen, 2012, p. 145). Because the quantitative method can be used to assess relationships between variables and to predict the value of a variable based on levels of other variables or combinations thereof (Burns & Burns, 2013), therefore, it was suitable for this study. The study is also explanatory.

5.3 Survey Research

Survey research is part of quantitative research, which necessitated the carrying out of a survey using questionnaires to answer the research questions and hypothesis stated earlier in the thesis. Questionnaires are used to get information from people regarding their attitudes, behaviours, opinions and beliefs (Doane & Seward, 2016; Fowler Jr, 2013). Burnout, technostress, and work-life balance were measured through the use of questionnaires. Data obtained from these questionnaires were used to establish predictions and relationships between the variables and determine the predictive power of the various independent variables. The study comprised a survey of employees working in the financial sector. It also sought to gain insight into how the employees experience burnout, technostress, and work-life balance.

Quantitative research, using questionnaires, is suitable for this study because quantitative data information gathered was precise and familiar to the participants taking part in the study. Moreover, the researcher has some information on possible responses likely to surface from the results of other previous studies and theoretical suggestions that have been made by other researchers (Bhattacharjee, 2012). Survey research is advantageous because the findings can be generalised especially when there is a larger number of respondents as is the case with this study (Blalock Jr., 2018).

An electronic survey was administered. The electronic survey method was the most feasible, time-efficient and quicker way to accomplish the study. The questionnaires were structured using a computer survey software called EvaSys. The advantages of this method, in comparison with other data collection techniques, is that it is more cost-saving, produces more candid responses and has a high response rate (System for Survey-Based Evaluation in Education, 2004). A drawback of this method, based on the current study, was that it took a lengthy amount of time to get responses from employees because of their busy and hectic work schedules. A solution that worked sending reminder emails to employees who were still to complete the questionnaires.

5.4. Sampling method

Sampling is the statistical process of selecting a group of respondents that will be used to collect data from in the research study to make observations and statistical inferences about that group (Bhattacharjee, 2012). A non-probability convenience sampling method was used to draw data based on the availability of the respondents. Convenience sampling occurs when the sample is

drawn based on the availability of the test persons. An advantage of the convenient sampling method is that it is cheap, efficient, and easy to implement ((Etikan et al., 2016; Gianfrate & Peri, 2019). This sampling method was chosen because it does not require the availability of a sampling frame (Gianfrate & Peri, 2019). One disadvantage of this method is that it is difficult to replicate the results (Berndt, 2020).

5.5. Selection of test persons

Employees working in the banking sector in the Free State, South Africa were selected for the study. A sample size of 246 bottom, middle, and top-level employees was drawn. Questionnaires were issued to persons in over 15 financial institutions which were accessible to the researcher (based on proximity and acceptance to partake in the study). The largest financial institutions provided over 60 respondents each, while the smallest provided just about 5 respondents each. A financial institution is any public or private institution that collects funds (from the public or other institutions) and invests them in financial assets. Financial institutions in this study include banks, credit unions, insurance companies, pension funds, and asset management firms among others. According to Kline (2015) a typical sample size in studies where SEM is used is about 200 cases. Therefore, for the purpose of this study, a sample size of 300 employees is representative of the total population and is subsequently applicable to the research hypothesis.

5.6. Data gathering methods

This section describes the data gathering process, various measuring instruments used in the study and the reasons for using these instruments. The administration of the questionnaire, the scoring and interpretation of the data, as well as the reliability and validity of the results are also discussed in this section.

5.6.1. Data gathering process

Data gathering for the study was done after ethical clearance has been approved by the Faculty of Economic and Management Sciences (Ethical clearance number: UFS-HSD2021/1567/21). Informed consent forms were issued to seek consent from participants. The consent form addressed issues regarding anonymity and confidentiality. Questionnaires were drafted using the Evasys system and a link to the questionnaires was created and emailed to participants. Email addresses of participants were obtained through the HR departments of various organisations (after permission was granted). This method is most adequate considering that covid19 was still ongoing.

However, one downside of surveys is that there may be data collection error and data processing error (Babbie & Mouton, 2015). The researcher endeavored to use a big sample size as a way to minimise sampling error as indicated by Bryman and Bell (2009). Data was collected directly by the researcher and respondents were provided enough time to complete the questionnaires, and shorter versions of the scales were used to limit response load that could have been imposed by the survey. Some questionnaires were also sent to respondents on LinkedIn via private messages based on their voluntary/personal interest to take part in the study (an informed consent form as well as the link to the questionnaire was administered). Seventy percent of the respondents came from employees in the private sector.

Out of over 300 questionnaires that were voluntarily and electronically issued out, the researcher obtained responses from 246 respondents. Some respondents did not take part in the study because of their tight work schedules and time constraints. A few respondents did not answer a few questions on the biographical questionnaire. A few participants requested the outcome of the study, which will later be sent to them after the study is completed.

5.6.2. Measuring instruments

The following questionnaires will be used to gather data for the study, Burnout Assessment Tool (BAT), Technostress questionnaire (TSQ), Work-Family Conflict Scale (WAFCS) and a biographical questionnaire.

5.6.2.1 Biographical Questionnaire

A Biographical Questionnaire will be administered to determine the biographical characteristics of employees in terms of gender, age, and job level (i.e., bottom, middle, or top level in the organisation).

5. 6.2.2 Burnout Assessment Tool (BAT)

5.6.2.2.1 Nature and composition

According to the BAT, burnout is conceived as a work-related state of exhaustion among employees, characterised by extreme tiredness, reduced ability to regulate cognitive and emotional processes, and mental distancing (Hadzibajramović et al., 2020). The BAT is a self-report questionnaire consisting of 23 items grouped in four subscales: exhaustion (8 items - e.g., ‘When I get up in the morning, I lack the energy to start a new day at work’), mental distance (5 items-

e.g., ‘I feel indifferent about my job’), cognitive impairment (5 items- e.g., ‘At work I struggle to think clearly’), and emotional impairment (5 items- e.g., ‘At work I may overreact unintentionally’). All items are expressed as statements with five frequency-based response categories (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always). The total burnout score is calculated as a mean of all 23 items, and a high score is indicative of high levels of burnout (range 1–5) (De Beer et al., 2020). The BAT also contains two subscales for secondary symptoms of psychosocial distress and psychosomatic complaints (five items each). It should also be noted that the BAT consists of the BAT-C (core dimensions of burnout- mental distance, cognitive impairment, and emotional impairment: question 1 – 23) and the BAT-S (secondary dimensions of burnout- psychological complaints and psychosomatic complaints: question 24 – 33) (Schaufeli et al., 2019).

5.6.2.2.2 Reliability

Reliability describes the consistency and accuracy of measurement over time and shows the degree of impartiality in the measurement (Meeker et al., 2022). According to Schaufeli et al. (2020), the internal consistencies of the BAT-C (i.e., core dimensions of burnout) and its four subscales are above 0.70. Cronbach’s alpha ranged from 0.90 to 0.92 for the subscales (i.e., exhaustion: 0.92, mental distance: 0.91, cognitive impairment: 0.92, and emotional impairment: 0.90) and was 0.95 for the total BAT. For the composite BAT-S (i.e., secondary dimensions of burnout), Cronbach’s alpha was 0.90, whereas for psychological and psychosomatic complaints values for alpha were 0.81 and 0.85, respectively. Thus, the BAT and its subscales show adequate reliability. The scale has also been used extensively in many countries like Germany, Austria, Japan, Ireland, Finland, and The Netherlands and was proven to have excellent internal consistencies (De Beer et al., 2020). Also, research done in South Africa shows that the BAT operationalised burnout as well and all its sub-dimensions were reliable with a reliability score of at least 0.71 (De Beer, 2021).

5.6.2.2.3 Validity

Validity indicates the extent to which a concept under study is accurately measured by a measuring instrument (McEwan, 2020). The BAT has convergent validity and discriminant validity with other burnout measures as well as discriminant validity with other well-being constructs, such as work engagement and workaholism (Schaufeli et al., 2020). In light of the content validity of the BAT, it is also associated with various job demands, job resources and personal resources as

predicted by the job demands-resources model. In a South African sample, the measure shows discriminant validity (De Beer, 2021).

5.6.2.2.4 Rationale for inclusion

The BAT works invariantly for women and men, younger and older respondents, and across several countries. Hence, the BAT can be used in organisations for screening and identifying employees who are at risk of issues related to burnout (Hadzibajramović et al., 2020). The measurement adequately measures burnout in line with the conceptual definition of the construct. The instrument is also reliable, valid and is backed by theory (Schaufeli et al., 2019). For the purpose of this study, it was also important to use a measurement that adequately captured the cognitive impairment competent of burnout, which many of the other burnout instruments lack.

5.6.2.3 Technostress Questionnaire

5.6.2.3.1 Nature and composition

The Technostress Questionnaire measures five dimensions of technostress i.e., techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty (Tarafdar et al., 2007). The scale consists of 23 items measured on a 5-point Likert scale, with 1 indicating “strongly disagree” and 5 indicating “strongly agree”. Example of sample items on the technostress scale are Techno-overload ‘I am forced by this technology to do more work than I can handle’, Techno-invasion ‘I have to be always available due to this technology’, techno-complexity ‘I need a long time to understand and use new technologies’ (Westermann, 2017). According to the transactional approach, this measure positions technostress as an organisational stressor and is therefore suitable in the context of this measure.

5.6.2.3.2 Reliability

According to Tarafdar et al. (2017), the Cronbach’s alpha for all the dimensions were above 0.80 i.e., techno-overload (0.89), techno-invasion (0.81), techno-complexity (0.84), techno-insecurity (0.84) and techno-uncertainty (0.82).

5.6.2.3.3 Validity

The measure is proven to have content and convergent validity across factors (Tarafdar, et al., 2016). In a South African sample, the instrument was known to have convergent validity (Verkijika, 2018).

5.6.2.3.4 Rationale for inclusion

The reason for using the questionnaire is because it adequately measures technostress. The measurement adequately measures technostress in line with the conceptual definition of the construct. The instrument is also reliable, valid and is backed by theory.

5.6.2.4 Work Family Conflict Scale (WAFCS)

5.6.2.4.1 Nature and composition

This scale measures an individual's experience of work-family conflict (WFC) and family-work conflict (FWC) (Chen et al., 2021). Some of the items in these two scales that focus on FIW include (e.g., "I have to miss work activities due to the amount of time I must spend on family responsibilities" and "The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career"). The entire scale contains a total of 18 items with six factors (i.e., time-based WIF, strain-based WIF, behaviour-based WIF, time-based FIW, strain-based FIW, and behaviour-based FIW, three items for each factor), and is considered a theoretically sound measure of work-family conflict (Matthews et al., 2010). The scale is made up of three dimensions (Time-based conflict, strain-based conflict, and behaviour-based conflict) (Greenhaus & Beutell, 1985; Carlson et al., 2000). It is also measured on a 7-point Likert scale, with 1 indicating "strongly disagree" and 7 indicating "strongly agree".

5.6.2.4.2 Reliability

The internal reliability estimates (Cronbach's alpha) for the Work-family Conflict Scale measure for each sample is acceptable and ranging from 0.84 to 0.94 (Brough et al., 2014). The reliabilities exceeded the conventional level of acceptance of 0.70 (Nunnally, 1978): time-based WIF 0.87; time-based FIW 0.79; strain-based WIF 0.85; strain-based FIW 0.87; behaviour-based WIF 0.78; behaviour-based FIW 0.85 (Allen and Armstrong, 2006; Annor & Amponsah-Tawiah, 2017; Carlson et al., 2000). In a South African sample, the internal reliability of the WAFCS was as follows: WIF 0.76; FIW 0.72; WFC 0.82 (Breyer & Bluemke, 2016).

5.6.2.4.3 Validity

The Work-Family Conflict Scale has discriminant validity (Chen et al., 2021) and can be used to accurately evaluate the level of work-family conflict. The measure is negatively related to job satisfaction and family satisfaction, and positively related to depression. In a South African sample, the instrument showed to have criterion validity (Breyer & Bluemke, 2016).

5.6.2.4.4 Rationale for inclusion

The measure adequately measures work life balance and has been used for research in many organisational contexts (Spector et al., 2007; Lim et al., 2011). The measurement adequately measures work-life balance in line with the conceptual definition of the construct. The instrument is also reliable, valid and is backed by theory.

5.6.3 Ethical consideration

To pursue this study, ethical clearance was obtained from the University of the Free State (The General/Human Research Ethics Committee (GHREC) and approved. This procedure aimed at ensuring that the study was conducted in accordance with the ethical guidelines and standards. It also sought to guarantee that the study was feasible among the chosen group of participants. Participants were also notified of the aim of the study and an informed consent which highlighted the reason for the study and possible beneficial outcomes it would have on the private sector provided as well.

The participants were told about their rights to partake in the study and how the data obtained would be used. They were informed that taking part in the study was voluntary and anonymous. They also had the freedom to withdraw at any point if they felt they wished not to take part further in the study. The questionnaires were administered using software called EvaSys, access to the completed questionnaire was granted only to the researcher and the supervisors involved. Participants were also informed that they were free to ask for the results of the study if they wished.

5.7 Statistical methods

Two kinds of statistical methods will be used in the study and involve descriptive and inferential statistics.

5.7.1 Descriptive statistics

Descriptive statistics is a collection of methods used in organizing and summarizing data (Kaur et al., 2018). However, descriptive statistics do not involve inferences or generalisations that are used to describe the data. It included the mode, median, mean, range and variance. The mode describes the observed data that appears the most. The mean is the sum of sample observations divided by the number of sample observations. The median is the midpoint of the observations when they are arranged in increasing order and divides the observations into two equal parts. The range is the highest value minus the lowest value. Finally, the variance measures how far an observation differs

from the mean (Didusov & Kochueva, 2017). In the current study, descriptive statistics will be used to describe the data and its basic features by using frequency tables, measures of central tendency, as well as measures of dispersion. All the demographic variables, including gender groups, which form part of the survey, will be displayed by means of frequency tables, as instructed by (Fowler & Floyd, 2012).

5.7.2 Inferential statistics

Inferential statistics are used to test hypotheses and test theories (Lowry, 2014). The postulated research seeks to find whether technostress and work-life balance affect burnout. Inferential statistics are used in the current study to establish differences, test relationships that exist between variables and make predictions. This section focuses on the various techniques used to obtain information to answer the research questions. These techniques include reliability coefficients, multiple regression analysis, Pearson moment product correlation and the covariance-based method of structural equation modelling, using Maximum Likelihood estimation.

5.7.2.1 Reliability coefficient

Reliability is the ability of a measure to consistently perform its intended or required purpose on demand without failure (Meeker & Escobar, 2022). A measure is considered to have high reliability if it yields comparable results under stable conditions. The current study uses Cronbach's alpha to determine the reliability of burnout, technostress, and work-life balance. The reliability coefficient ranges from 0.00 to 1.00 and has four types (Strangor, 2011). These are inter-item, test-retest, split-half, alternative forms and inter and intra-scorer reliability. Table 5.1 below shows some general guidelines used to interpret reliability for measures (Deardorff, 2011; Ursachi et al., 2015). Table 5.1 below indicates reliability measures from below 0.60 and above 0.90.

TABLE 5. 1: GENERAL GUIDELINES FOR INTERPRETING RELIABILITY COEFFICIENTS

Reliability coefficient values	Interpretation
Below 0.60	Limited applicability
0.60 – 0.69	Acceptable
0.70 – 0.79	Adequate
0.80 – 0.89	Good

0.90 and above	Excellent
----------------	-----------

5.7.2.2 Pearson moment product correlation

The Pearson product-moment correlation coefficient often called the Pearson correlation coefficient measures the strength of an association between two variables (Sahu et al., 2015). The Pearson correlation coefficient is represented by r , which shows how distant data points are to the line of best fit (Cohen et al., 2017). The Pearson correlation ranges from +1 to -1, with a value of 0 indicating that there is no relationship between the two variables. A value above 0 shows a positive relationship; that is, an increase in the value of one variable also leads to an increase in the value of the other variable. On the contrary, a value less than 0 shows a negative relationship; that is, a decrease in the value of one variable also leads to a decrease in the value of the other variable (Matthias, 2015). The Pearson Product Moment correlation was used in this study to explore the relationship that exists between technostress, work life balance, and burnout. Guilford (1956) provides a guideline on how to interpret correlation values as shown below.

TABLE 5. 2: DETERMINING THE STRENGTH OF CORRELATIONS (R)

Value of r (+/-)	Interpretation
Less than 0.20	Slight, almost no relationship
$r = 0.21$ to 0.40	Low, correlation, definite but small relationship
$r = 0.41$ to 0.70	Moderate/acceptable correlation, substantial relationship
$r = 0.71$ to 0.90	High correlation, strong relationship
$r = 0.91$ to 1.00	Very high correlation, very dependable relationship

Guilford (1956) indicates that these guidelines work in both positive and negative directions. However, the negative sign only pertains to the relationship's direction, and not its strength. Therefore, the strength of a correlation $r = 0.4$ and $r = -0.4$ is similar but have different directions. A high correlation means a strong relationship exists, while a low correlation means a weak relationship exists.

5.7.2.3 Stepwise Multiple regression analysis

Stepwise multiple regression is a semi-automated process of constructing a model by successfully including or excluding variables based primarily on the t-statistics of their 160 estimated coefficients (Zhou et al., 2012). If it is statistically significant, it can be achieved either by testing and adding one independent variable at a time in the regression model, or by including all possible independent variables in the model and excluding non-statistically relevant variables, or by combining the two approaches. For the purpose of this study, all the independent variables (Technostress and Work-life balance) were incorporated in the model to compute the stepwise multiple regression. Stepwise multiple regression is very useful when interpreting a collection of dependent variables from a broad set of independent variables (Jin & Xu, 2012). Stepwise multiple regression analysis was used in this study to determine the extent to which various dimensions of technostress and work life balance predicted or contributed to burnout.

5.7.2.4 T-test for Independent samples

The independent t-test, also called the two-sample t-test, is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups (Ross & Willson, 2017). In other words, it is used when comparing the means of two groups. The independent t-test was used in the current study to determine whether there is a difference between males and females with regards to how they experience burnout. This statistical method was used to address the second research objective.

5.7.2.5 Kruskal-Wallis H Test

To evaluate whether there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable (i.e., demographic variables) the Kruskal-Wallis test was used (MacFarland & Yates, 2016). The Kruskal-Wallis Test, as a nonparametric test, is used with ranked data, particularly for when: (1) the data are ordinal and do not meet the precision of interval data, (2) there are serious concerns about extreme deviation from normal distribution, and (3) there is considerable difference in the number of subjects for each comparative group.

5.7.2.6 Confirmatory factor analysis

Confirmatory factor analysis (CFA) is a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs (Shek & Yu, 2014). Confirmatory factor analysis specifies the number of factors required in the data and which measured variable is related to which latent variable. Confirmatory factor analysis (CFA) is a tool that is used to confirm or reject the measurement theory. Therefore, in this study, CFA will be used to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists. Also, as suggested by Hair et al. (2006), CFA was employed in the current study to test how well measured variables represent a small number of constructs. Additionally, it was used to demonstrate statistically whether each variable identified is properly defined in terms of the common variance among the indicators in a measurement model, as recommended by (MacKenzie et al., 2005).

5.7.2.7 Structural Equation Modelling (Covarianced-Based-SEM)

Structural equation modelling is a method of multivariate statistical analysis used for the analysis of structural relationships (Lowry & Gaskin, 2014). The approach is a combination of factor analysis and multiple regression analysis and is used to evaluate the structural association between observable variables and latent constructs. (Kline, 2015). In this study, a Covarianced-Based Structural Equation Modelling was used (CB-SEM). CB-SEM has several appealing features relative to some other frequently used analytical methods. First, it is an integration of several multivariate techniques – for example, regression analysis, path analysis and confirmatory factor analysis (Cheung, 2015). It can perform a simultaneous analysis of observed variables and latent structures, their relations and their impact on the corresponding outcomes (Hair et al., 2017). Second, CB-SEM can account for measurement error in both the predictive and outcome variables (Bagozzi & Yi, 2012), providing a more accurate estimate of the model parameters and effects and offering a better control for both the measured and the latent factors (Hair et al., 2014). Third, CB-SEM allows a series of contrasting models to be tested, interpreted and compared quantitatively (Wang & Wang, 2012). In doing so, it can help researchers identify the best approximating models that are theoretically precise and parsimonious (Burnham and Anderson, 2013). As a result of the above stated qualities, CB-SEM will be used for the study.

5.7.3. Summary

The chapter outlined the various computing descriptive and descriptive statistics and emphasised descriptive statistics' mean, mode, median, range and variance that are used in this study. Emphasis on inferential statistics was also indicated in terms of Pearson product-moment correlation, stepwise multiple regression analysis, covariance-based structural equation modelling (CB-SEM), with an underscoring of Maximum Likelihood for model estimation. Finally, the chapter also described the ethical issues that were considered during this study.

The next chapter discusses the results of the current study and its findings.

CHAPTER SIX

RESULTS, INTERPRETATIONS AND DISCUSSIONS

6.1 Introduction

Chapter six reports on the results and findings of the study. The chapter presents the results of descriptive statistics containing the respondents' biographical details (diagrammatically presented using bar charts, pie charts, and tables) and the averages and standard deviations of the different variables used in the analysis. It also presents the results of inferential statistics consisting of correlations, measurement reliability coefficients, stepwise multiple regression, and structural equation modelling dependent on covariance. Finally, the model (both measurement and structural) will be assessed with CB-SEM, using maximum likelihood estimation. A discussion of the empirical testing of the proposed theoretical model ends with the chapter.

SPSS version 27 and AMOS were used for the analysis. Firstly, Confirmatory Factor Analysis (CFA) using AMOS was used to determine the items that load to specific theoretical constructs for the research instrument in the study. The first-order and second-order CFA measurement models were examined and established. Cronbach's alpha coefficient was used to assess the reliability of the established constructs. A descriptive analysis was used to describe the study's demographic features as well as the study's theoretical constructs and variables. For mean comparisons of burnout by gender, an independent samples T-Test was used due to its robustness in relatively moderate to large sample sizes. In order to determine if there are statistically significant differences between multilevel groups of independent demographic variables on the hypothesised frameworks, the Kruskal-Wallis H test, which is a rank-based nonparametric test, was used. The Pearson's correlation coefficient was used to examine the nature, strength and direction of the correlations that exist between the established constructs and variables. To quantify the direct effects and the amount of variation explained by the predictor variables, a multiple linear regression model using structural equation modelling (SEM) was utilised coupled by a stepwise linear regression model.

6.2 Descriptive Statistics

This section focuses on descriptive statistics, average means and standard deviations of the data obtained from the biographical variables used in the analysis. Summaries of the data obtained for this analysis are described using descriptive statistics. (Lombard et al., 2010; Strangor, 2011). In addition, tables (used to demonstrate the mean averages and standard deviations of the variables' dimensions), bar charts (used to illustrate sample frequency distributions) and pie charts are used to graphically illustrate the distribution of the research sample information calculated using TSQ, WAFC & BAT.

6.2.1 Biographical characteristics of the sample

Biographical information based on the respondents' age, gender, and occupational levels. The results are summarised below using tables and graphs.

TABLE 6.1: BIOGRAPHICAL DISTRIBUTION OF RESPONDENTS

Variable	Levels	Frequency	Valid %
Gender	Male	130	52.8
	Female	116	47.2
Age	19 - 25 years	42	16.7
	26 - 30 years	83	32.9
	31 - 40 years	60	23.8
	41 - 50 years	27	10.7
	51 - 60 years	27	10.7
	61 years & above	13	5.2
Occupational level	Bottom	123	53.2
	Middle	103	44.6
	Top	5	2.2

A graphical presentation and description of the descriptive statistics of the demographic information is outlined below.

6.2.1.1 Distribution of respondents according to gender

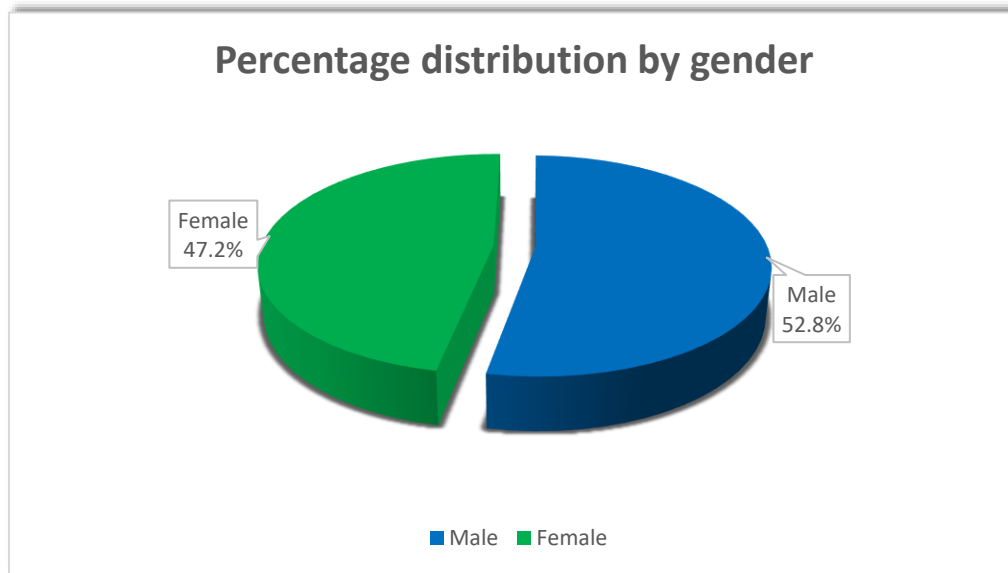


FIGURE 6.1: DISTRIBUTION OF RESPONDENTS ACCORDING TO GENDER

Figure 6.1 above shows the gender distribution of respondents. The respondents consisted of 52.8% ($n = 130$) males which were the majority of the participants. On the other hand, they were 47.2% ($n = 116$) female participants. The figure reflects that gender was almost equally distributed among the respondents.

6.2.1.2 Distribution of respondents according to age

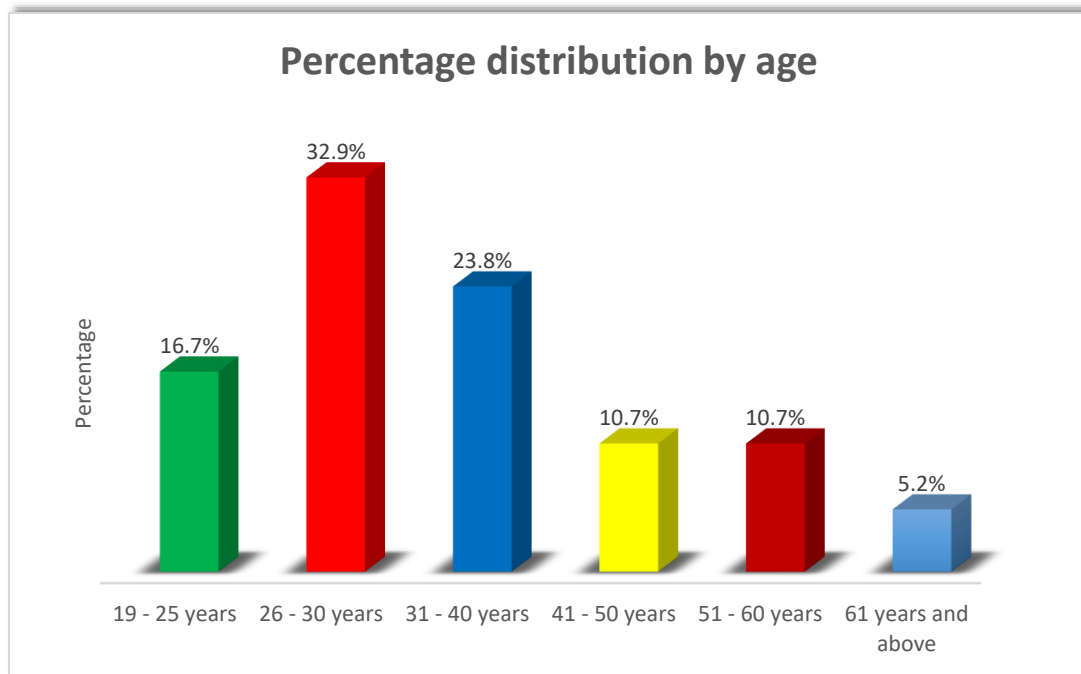


FIGURE 6.2: DISTRIBUTION OF RESPONDENTS ACCORDING TO AGE

Figure 6.2 above shows that most of the respondents (32.9%, $n = 83$) were in the age group between 26 to 30 years, 23.8% ($n = 60$) of the respondents were in the 31 to 40 years age group, and 16.7% ($n = 42$) were of the age between 19 to 25 years old. Twenty-seven respondents (10.7%) were in the 41-to-50-year category with a similar number reporting to be in the 51- to 60-year-old age group. Only thirteen participants (5.2%) were 61 years and older. This indicates that most respondents belonged to the early and middle adulthood career stages.

6.2.1.3 Distribution of respondents according to occupational level

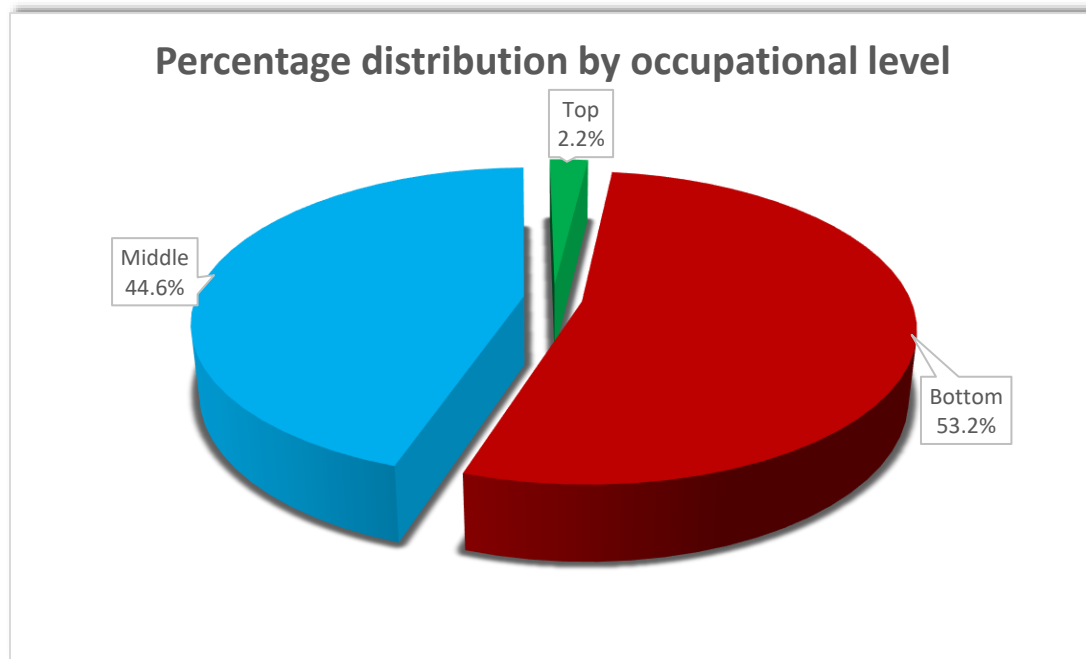


FIGURE 6.3: DISTRIBUTION OF RESPONDENTS ACCORDING TO OCCUPATIONAL LEVEL

Figure 6.3 above depicts the distribution of respondents in relation to their occupational levels within the sampled organisation. The majority of the respondents (53.2%, $n = 123$) were at the bottom level within the organisation followed by 44.6% ($n = 103$) who reported to be in the middle level. Five participants (2.2%) were in the top level of the occupational positions within the organisation. Having few respondents in the top-level means that the results cannot be generalised at the top level. A possible reason for the low response rate is because employees at that level are difficult to come by besides their hectic work schedules as management.

6.2.2 Descriptive statistics for burnout, technostress, and work-life balance

The following section presents results with regards to the respondents' perceptions of their levels of burnout, technostress, and work-life balance. Using descriptive statistics, these results were obtained precisely by evaluating the mean, standard deviation, skewness, and kurtosis for the dimensions of each variable. The mean score in a data set is the average score, while the standard deviation represents the degree to which the scores vary from the mean. The more the data spread apart, the higher the deviation and vice versa. A description of the results is presented below.

6.2.2.1 Descriptive statistics on burnout

This section presents the means analysis on ratings of respondents on burnout and its respective constructs.

TABLE 6.2: DESCRIPTIVE STATISTICS FOR BURNOUT

Variable	Mean	Standard deviation (SD)	Skewness	Kurtosis
Burnout	2.9695	1.23485	0.418	-0.932
Exhaustion	3.2322	1.21807		
Mental distancing	2.7439	1.39904		
Cognitive impairment	2.8364	1.40891		
Emotional impairment	2.6791	1.48433		
Psychological complaints	3.1178	1.21755		
Psychosomatic complaints	3.0498	1.25226		

Note: Burnout was measured on a 5-point Likert scale, i.e., Never (1), Rarely (2), Sometimes (3), Often (4) and Always (5)

Table 6.2 above shows the summary of the descriptive statistics for the variable and constructs. Data is displayed in terms of the mean scores and standard deviation as well as the skewness and kurtosis coefficients. It should be noted that burnout was measured on a 5-point Likert scale, i.e., Never (1), Rarely (2), Sometimes (3), Often (4) and Always (5). The findings show that the overall mean rating of burnout (Mean = 2.9695; SD = 1.23485) was moderate. This was also the case for the rating for exhaustion (Mean = 3.2322; SD = 1.21807), psychological complaints (Mean = 3.1178; SD = 1.21755) and psychosomatic (Mean = 3.0498; SD = 1.25226). The mean levels for mental distancing (Mean = 2.7439; SD = 1.39904), cognitive impairment (Mean = 2.8364; SD = 1.40891) and emotional impairment (Mean = 2.6791; SD = 1.48433) were somehow the least rated. The skewness and kurtosis coefficient revealed that burnout is not consistent to the normal distribution.

6.2.2.2 Descriptive statistics on Technostress

It was also imperative to conduct a means analysis on perceptions of respondents on technostress and its respective constructs. Table 6.3 below shows the summary of the descriptive statistics for technostress. Data is displayed in terms of the mean scores, standard deviation as well as the skewness and kurtosis coefficients. It should be noted that each of the statements measuring

technostress were measured on a 5-point Likert scale (i.e., Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly agree (5)).

TABLE 6.3: DESCRIPTIVE STATISTICS FOR TECHNOSTRESS

Variable	Mean	Standard deviation (SD)	Skewness	Kurtosis
Technostress	3.2987	1.19406	-0.198	-1.054
Techno overload	3.4743	1.21883		
Techno invasion	3.4440	1.26688		
Techno complexity	3.4063	1.23929		
Techno insecurity	2.9937	1.31486		
Techno uncertainty	3.1729	1.30342		

Note: Technostress was measured on a 5-point Likert scale, i.e., Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly agree (5)

The findings as shown on Table 6.3 above indicates that overall mean for some of the established theoretical variable and constructs for technostress were moderate. This was the case for the overall rating of technostress (Mean = 3.2987; SD = 1.19406). In terms of the individual constructs of technostress, techno overload (Mean = 3.4743; SD = 1.21883), techno invasion (Mean = 3.4440; SD = 1.26688) and techno complexity (Mean = 3.4063; SD = 1.23929) were all highly moderately rated as compared to the other constructs. Techno insecurity was the least rated (Mean = 2.9937; SD = 1.31486). The skewness and kurtosis coefficients showed that technostress is not consistent to the normal distribution.

6.2.2.3 Descriptive statistics on Work-life balance

This section presents the means analysis on ratings of respondents on work-life balance and its respective constructs. Table 6.4 below shows the summary of the descriptive statistics for these variables and constructs. It should be noted that work-life balance was measured on a 7-point Likert scale, i.e., Strongly Disagree (1), Disagree (2), Disagree somewhat (3), Neutral (4), Agree somewhat (5), Agree (6) and Strongly agree (7).

TABLE 6.4: DESCRIPTIVE STATISTICS FOR WORK-LIFE BALANCE

Variable	Mean	Standard deviation (SD)	Skewness	Kurtosis
Work-life balance	4.6245	1.96590	-0.438	-1.198
Time-based work interference with family	4.5652	2.02362		
Time-based work interference with work	4.5178	2.04691		
Time-based family interference with work	4.6772	1.99335		
Strain-based work interference with family	4.5995	2.03483		
Strain-based family interference with work	4.7174	1.98461		
Behaviour-based work interference with family	4.7391	1.98235		

Note: Work-life balance was measured on a 7-point Likert scale, i.e., Strongly Disagree (1), Disagree (2), Disagree somewhat (3), Neutral (4), Agree somewhat (5), Agree (6) and Strongly agree (7)

The findings on Table 6.4 above shows that overall mean rating for work-life balance (Mean = 4.6245; SD = 1.96590) was somewhat moderately high. This was also the case for the rating of work-life balance constructs. The skewness and kurtosis coefficients revealed that work-life balance is not consistent to the normal distribution. Inferential statistics were used to answer the research questions and achieve the objectives of the study. The results are discussed next.

6.3 Inferential Statistics

This section focuses on the results of the current study using Maximum Likelihood estimation and multi-linear regression analysis to answer the research question. To address the objective of the study, both sets of inferential statistics were used. The following discussion focuses on the results of the research question.

6.3.1 Cronbach Alpha

This section addresses Cronbach's alpha, which is used to assess the reliability of the measuring instruments used in the study. Usually, the accepted Cronbach's alpha value for research in social sciences could range from 0.60 (Ursachi et al., 2015) to 0.70 and above (Tavakol & Dennick, 2011). Table 6.5 presents the Cronbach's alpha of burnout, technostress, and work-life balance.

TABLE 6.5: CRONBACH'S ALPHA TEST ON THE RELIABILITY OF BURNOUT, TECHNOSTRESS, AND WORK-LIFE BALANCE

Variable	Number of items	Cronbach's alpha	Reliability
BURNOUT			
Exhaustion	8	0.996	High internal consistency
Mental distancing	5	0.979	High internal consistency
Cognitive impairment	5	0.995	High internal consistency
Emotional impairment	5	0.997	High internal consistency
Psychological complaints	5	0.980	High internal consistency
Psychosomatic complaints	5	0.983	High internal consistency
TECHNOSTRESS			
Techno-overload	6	0.987	High internal consistency
Techno-invasion	3	0.994	High internal consistency
Techno-complexity	5	0.977	High internal consistency
Techno-insecurity	5	0.965	High internal consistency
Techno-uncertainty	4	0.963	High internal consistency
WORK-LIFE BALANCE			
Time-based work interference family	3	0.996	High internal consistency
Time-based family interference with work	3	0.998	High internal consistency
Strain-based work interference with family	3	0.992	High internal consistency
Strain-based family interference with work	3	0.991	High internal consistency
Behaviour-based work interference with family	3	0.988	High internal consistency

Behaviour-based family interference with work	3	0.995	High internal consistency
---	---	-------	---------------------------

Table 6.5 above shows the reliability of burnout, technostress, and work-life balance. According to Ursachi et al. (2015), a Cronbach alpha that ranges from 0.6 to 0.7 can be considered as reliable. The reason for this is that Cronbach's Alpha is widely used as an estimator for reliability tests and it has been criticized for its lower bound value which underestimates the true reliability (Peterson & Kim, 2013). Cronbach's alpha scores show that all three constructs, burnout, technostress, and work-life balance, have high internal consistencies. Thus, the data from these dimensions are considered reliable with the lowest alpha value being $\alpha = 0.963$ and the highest being $\alpha = 0.998$.

6.4 Factor and reliability analysis

SPSS version 27 and AMOS were used for the analysis. Firstly, confirmatory factor analysis (CFA) using AMOS was used to determine the items that load to specific theoretical constructs for the research instrument in the study. The first-order and second-order CFA measurement models were examined and established.

6.4.1 Factor and reliability analysis for burnout

A confirmatory factor analysis was conducted to assess the validity and reliability of the burnout measuring tool. The second-order CFA was also conducted to validate whether the established subdimensions of burnout (as theorised by the authors of the instrument) can be explained by a common underlying higher order construct (i.e., burnout). Various model fit indices and relevant criteria were used to examine the goodness-of-fit of the established model. Thus, the overall fit of the models was deemed acceptable based on several model fit indices such as SRMR, GFI and AGFI (see table 6.7).

To determine the empirical factors for the first-order CFA for the burnout tool, a confirmatory factor analysis was conducted on the 33 items. The most parsimonious model was achieved with all the 33 items loading on six factors. All factor loadings were above 0.90 (see Table 6.6). The established factor structure shows 8 items for exhaustion (Factor 1) and 5 items each for mental distancing (Factor 2), cognitive impairment (Factor 3), emotional impairment (Factor 4), psychological complaints (Factor 5) and psychosomatic complaints (Factor 6). The value of the average variance extracted (AVE) for all the constructs is greater than the required minimum of

0.50 i.e., exhaustion (AVE = 0.971), mental distancing (AVE = 0.903), cognitive impairment (AVE = 0.974), emotional impairment (AVE = 0.984), psychological complaints (AVE = 0.912) and psychosomatic complaints (AVE = 0.927). A minimum cut-off point of 0.50, thus the convergent validity for all the factors is deemed adequate. For measuring internal consistency of these factors, Cronbach alpha was used and the value is more than 0.90 for all the constructs i.e. exhaustion (alpha = 0.996), mental distancing (alpha = 0.979), cognitive impairment (alpha = 0.995), emotional impairment (alpha = 0.997), psychological complaints (alpha = 0.980) and psychosomatic complaints (alpha = 0.983). Assessing the Joreskog rho for measuring composite reliability (CR), the values of CR are also more than 0.90 for all the constructs i.e., exhaustion (CR = 0.996), mental distancing (CR = 0.979), cognitive impairment (CR = 0.995), emotional impairment (CR = 0.997), psychological complaints (CR = 0.981) and psychosomatic complaints (CR = 0.984). Thus, composite reliability is adequate for the established first-order measurement model; hence, there is a highly satisfactory level of construct reliability.

Lastly, the reliability and validity of the second-order model was examined. Regarding the internal reliability in the model, the Cronbach's alpha and composite reliability values were all above 0.90 with the average variance extracted value of 0.867. These results demonstrated that burnout, as a measurement tool was reliable. Examining the overall assessment criteria for model fitness, the model was acceptable for the 33 items using second-order CFA measurement model. In Table 6.7 the fit indices indicated that the model had a good fit to the data, i.e., SRMR is $0.0541 < 0.08$, GFI is $0.996 > 0.95$ and AGFI is 0.995, which is also greater than 0.95. Thus, the CFA model has fulfilled all the model fit requirements, thus is suitable for building linkage between factors and determining contribution of constructs in measuring burnout. Figure 6.4 shows the path diagram for the second-order CFA of the burnout tool.

TABLE 6.6: THE BURNOUT CONFIRMATORY FACTOR ANALYSIS AND INTERNAL CONSISTENCY OUTPUT

Factors and respective items	1 st Order Model		2 nd Order Model
	CFA Loadings	Alpha if Item Deleted	CFA Loadings
Factor 1. Exhaustion			
BATCS1: At work, I feel mentally exhausted.	0.986	0.995	

BATCS2: Everything I do at work requires a great deal...	0.982	0.996	0.875
BATCS3: After a day at work, I find it hard to recover ...	0.985	0.995	
BATCS4: At work, I feel physically exhausted.	0.986	0.995	
BATCS5: When I get up in the morning, I lack the ...	0.982	0.995	
BATCS6: I want to be active at work, but somehow I ...	0.988	0.996	
BATCS7: When I exert myself at work, I quickly get ...	0.993	0.997	
BATCS8: At the end of my working day, I feel mentally ...	0.980	0.995	

Cronbach's Alpha = 0.996; Joreskog rho = 0.996; Average Variance Extracted = 0.971

Factor 2. Mental distancing

BATCS9: I struggle to find any enthusiasm for my ...	0.957	0.987	
BATCS10: At work, I do not think much about what I am ...	0.942	0.974	
BATCS11: I feel a strong aversion towards my job.	0.952	0.969	0.939
BATCS12: I feel indifferent about my job.	0.950	0.969	
BATCS13: I'm cynical about what my work means to ...	0.951	0.970	

Cronbach's Alpha = 0.979; Joreskog rho = 0.979; Average Variance Extracted = 0.903

Factor 3. Cognitive impairment

BATCS14: At work, I have trouble staying focused.	0.975	0.996	
BATCS15: At work I struggle to think clearly.	0.994	0.993	
BATCS16: I'm forgetful and distracted at work.	0.987	0.993	0.938
BATCS17: When I'm working, I have trouble concentrating.	0.991	0.992	
BATCS18: I make mistakes in my work because I have ...	0.988	0.993	

Cronbach's Alpha = 0.995; Joreskog rho = 0.995; Average Variance Extracted = 0.974

Factor 4. Emotional impairment

BATCS19: At work, I feel unable to control my emotions.	0.992	0.995	
BATCS20: I do not recognize myself in the way I react ...	0.992	0.996	
BATCS21: During my work I become irritable when ...	0.989	0.996	0.904
BATCS22: I get upset or sad at work without knowing why.	0.994	0.995	
BATCS23: At work I may overreact unintentionally.	0.994	0.998	

Cronbach's Alpha = 0.997; Joreskog rho = 0.997; Average Variance Extracted = 0.984

Factor 5. Psychological complaints

BATSS1: I have trouble falling or staying asleep.	0.964	0.982	
BATSS2: I tend to worry.	0.949	0.972	
BATSS3: I feel tense and stressed.	0.947	0.973	0.975
BATSS4: I feel anxious and/or suffer from panic attacks.	0.962	0.973	
BATSS5: Noise and crowds disturb me.	0.952	0.974	

Cronbach's Alpha = 0.980; Joreskog rho = 0.981; Average Variance Extracted = 0.912

Factor 6. Emotional impairment

BATSS6: I suffer from palpitations or chest pain.	0.970	0.979	
BATSS7: I suffer from stomach and/or intestinal complaints.	0.963	0.979	
BATSS8: I suffer from headaches.	0.961	0.981	0.953
BATSS9: I suffer from muscle pain, for example in the ...	0.956	0.977	
BATSS10: I often get sick.	0.964	0.978	

*Cronbach's Alpha = **0.983**; Joreskog rho = **0.984**; Average Variance Extracted = **0.927***

Note: Overall Cronbach Alpha = **0.994**; Joreskog rho = **0.975**; Average Variance Extracted = **0.867**

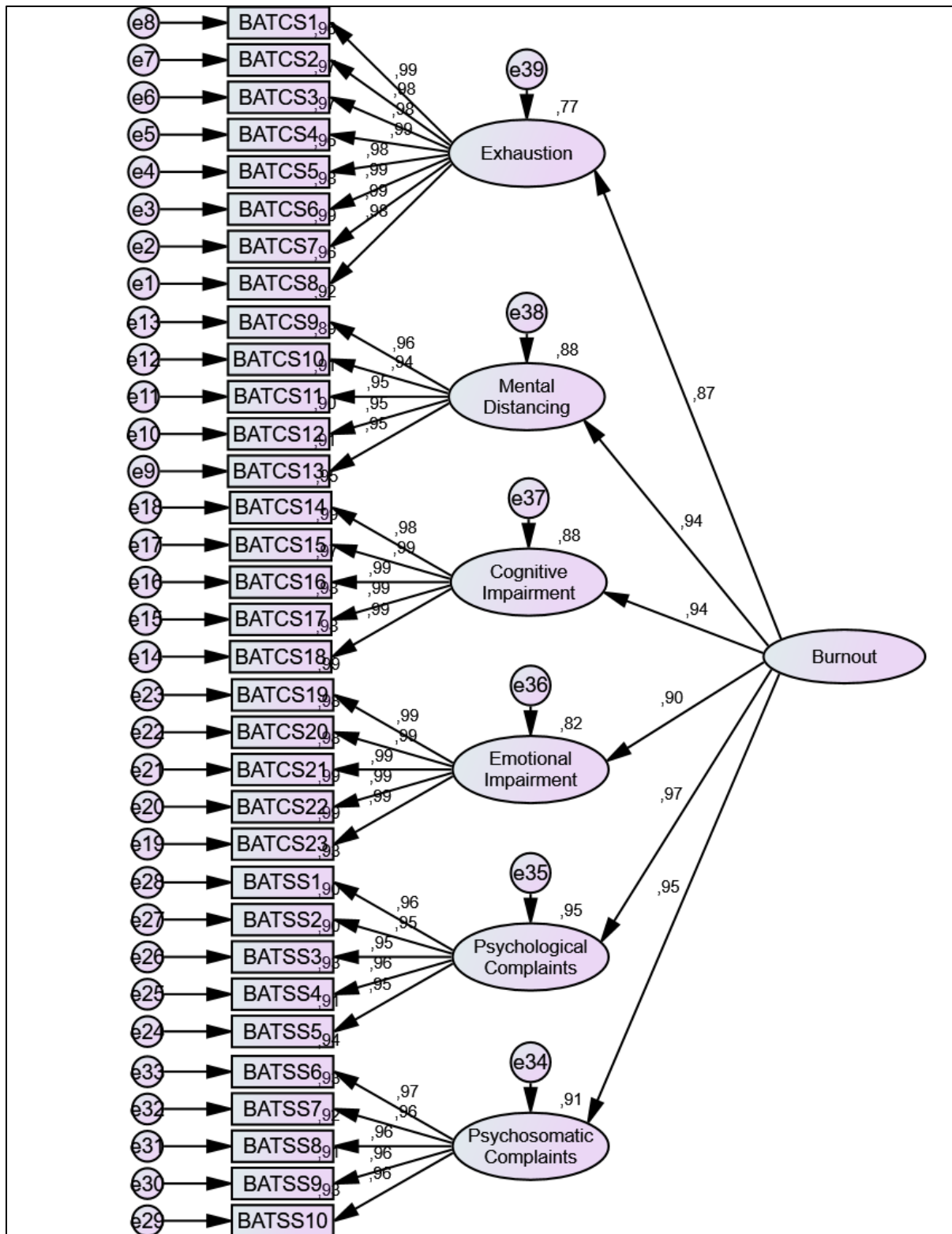


FIGURE 6.4: THE PATH DIAGRAM FOR THE SECOND-ORDER CFA MEASUREMENT MODEL OF THE BURNOUT SCALE

TABLE 6.7: THE FITNESS MEASURES ASSESSMENT FOR BURNOUT MEASUREMENT MODEL

Name of index	Index value	Cut-off points	Comments
SRMR	0.0541	< 0.08	Acceptable fit
GFI	0.996	> 0.95	Good fit
AGFI	0.995	> 0.95	Good fit

6.4.2 Factor and reliability analysis for technostress

A confirmatory factor analysis followed by a reliability analysis were also conducted to assess the validity and reliability of technostress as a measuring tool. Firstly, a first-order CFA using literature as a guide on the empirical factors for the technostress tool was conducted. The second-order CFA was then conducted to validate technostress scale by assessing whether the established subdimensions of technostress can be explained by a common underlying higher order construct (i.e., technostress). Similar indices and criteria used in the previous section were used to examine the goodness-of-fit of the established model.

For the first-order loading, out of the initial 23 items, the most parsimonious model was achieved with all the 23 items loading on five factors. All factor loadings were above 0.80 (see Table 6.8) indicating acceptable fit for these loadings. The value of the AVE for all the constructs is more than 0.80 i.e., techno overload (AVE = 0.927), techno invasion (AVE = 0.981), techno complexity (AVE = 0.896), techno insecurity (AVE = 0.847) and techno uncertainty (AVE = 0.867). A minimum cut-off point of 0.50 is recommended, thus the convergent validity for all the factors is deemed adequate. For measuring internal consistency, Cronbach alpha was also used and the value is more than 0.90 for all the constructs i.e., techno overload (alpha = 0.987), techno invasion (alpha = 0.994), techno complexity (alpha = 0.977), techno insecurity (alpha = 0.966) and techno uncertainty (alpha = 0.996). Assessing the Joreskog rho for measuring composite reliability, the values of CR are more than 0.90 for all the constructs i.e., techno overload (CR = 0.987), techno invasion (CR = 0.994), techno complexity (CR = 0.977), techno insecurity (CR = 0.965) and techno uncertainty (CR = 0.963). Thus, composite reliability is achieved for the established first-order model hence; there is a highly acceptable level of construct reliability.

The reliability and validity of the second-order model was also examined. Regarding the internal reliability in the model, the Cronbach's alpha and composite reliability values were all above 0.90

with the average variance extracted value of 0.890. These results demonstrated that technostress, as a measurement tool was reliable. Examining the overall assessment criteria for model fitness, the model was acceptable for the 23 items using second-order CFA measurement model. In Table 6.9 the fit indices indicated that the model had a good fit to the data, i.e., SRMR is $0.0742 < 0.08$, GFI is $0.995 > 0.95$ and AGFI is 0.994, which is also greater than 0.95. The model has fulfilled all the requirements, thus is suitable for building linkage between factors and determining contribution of constructs in measuring technostress. Thus, the measurement model has fulfilled all the model fit requirements, thus is suitable for building linkage between factors and determining contribution of constructs in measuring technostress. Figure 6.5 shows the path diagram for the second-order CFA model of the technostress tool.

TABLE 6.8: THE TECHNOSTRESS CONFIRMATORY FACTOR ANALYSIS AND INTERNAL CONSISTENCY OUTPUT

Factors and respective items	1 st Order Model		2 nd Order Model
	CFA Loadings	Alpha if Item Deleted	CFA Loadings
Factor 1. Techno overload			
TSO1: I am forced by this technology to work much faster.	0.961	0.983	0.959
TSO2: I am forced by this technology to do more work than ...	0.987	0.982	
TSO3: I am forced by this technology to work with very tight ...	0.982	0.982	
TSO4: I am forced to change my habits to adapt to new ...	0.860	0.992	
TSO5: I have a higher workload because of increased ...	0.993	0.982	
TSO6: I spend less time with my family due to technology.	0.986	0.984	
<i>Cronbach's Alpha = 0.987; Joreskog rho = 0.987; Average Variance Extracted = 0.927</i>			
Factor 2. Techno invasion			
TSI1: I have to be always available due to this technology.	0.995	0.986	0.968
TSI2: I have to sacrifice time to keep current on new ...	0.993	0.991	
TSI3: I feel my personal life is being invaded by this ...	0.983	0.994	
<i>Cronbach's alpha = 0.994; Joreskog rho = 0.994; Average Variance Extracted = 0.981</i>			
Factor 3. Techno complexity			
TSC1: I do not know enough about this technology to handle ...	0.965	0.967	0.994
TSC2: I need a long time to understand and use new ...	0.964	0.967	
TSC3: I do not find enough time to study and upgrade my ...	0.950	0.969	
TSC4: I find others know more about computer technology ...	0.936	0.971	

TSC5: I often find it too complex for me to understand and ...	0.917	0.982	
<i>Cronbach's Alpha = 0.977; Joreskog rho = 0.977; Average Variance Extracted = 0.896</i>			
Factor 4. Techno insecurity			
TSIN1: I feel constant threat to my job security due to new ...	0.989	0.964	
TSIN2: I have to constantly update my technology skills to ...	0.973	0.964	
TSIN3: I am threatened by co-workers with newer ...	0.910	0.951	0.871
TSIN4: I do not share my knowledge with my co-workers for ...	0.858	0.954	
TSIN5: I feel there is less sharing of knowledge among ...	0.863	0.955	
<i>Cronbach's Alpha = 0.966; Joreskog rho = 0.965; Average Variance Extracted = 0.847</i>			
Factor 5. Techno uncertainty			
TSU1: There are always new developments in the ...	0.967	0.995	
TSU2: There are constant changes in computer software in ...	0.984	0.993	0.921
TSU3: There are constant changes in computer hardware in...	0.781	0.994	
TSU4: There are frequent upgrades in computer networks in ...	0.978	0.995	
<i>Cronbach's Alpha = 0.996; Joreskog rho = 0.963; Average Variance Extracted = 0.867</i>			
Note: Overall Cronbach Alpha = 0.991; Joreskog rho = 0.976; Average Variance Extracted = 0.890			

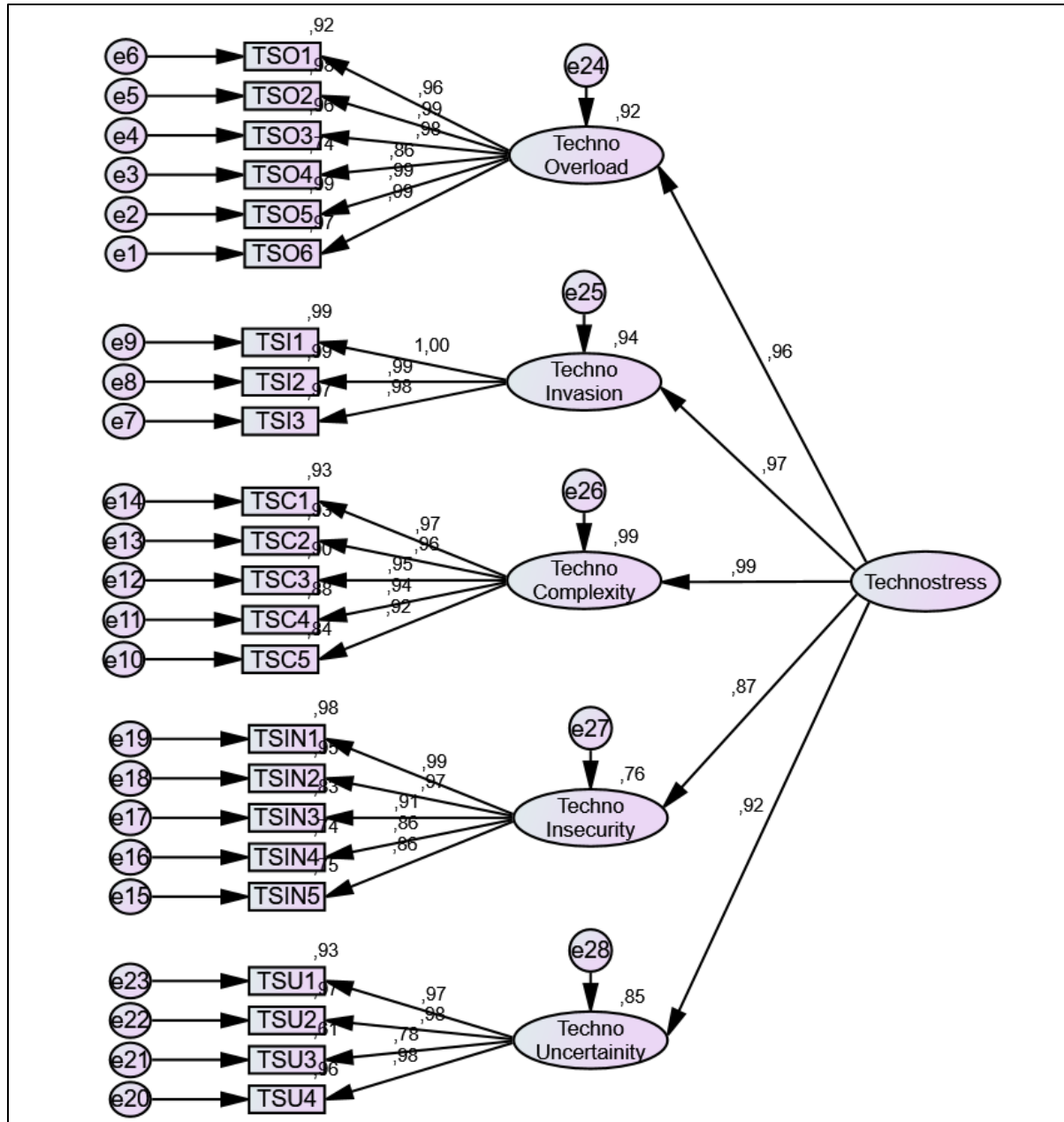


FIGURE 6.5: THE PATH DIAGRAM FOR THE SECOND-ORDER CFA MEASUREMENT MODEL OF THE TECHNOSTRESS SCALE

TABLE 6.9: THE FITNESS MEASURES ASSESSMENT FOR TECHNOSTRESS MEASUREMENT MODELS

Name of index	Index value	Cut-off points	Comments
SRMR	0.0742	< 0.08	Acceptable fit
GFI	0.995	> 0.95	Good fit
AGFI	0.994	> 0.95	Good fit

6.4.3 Factor and reliability analysis for work-life balance

To determine the factor structure for the work-life balance tool, a confirmatory factor analysis was conducted collectively on the 18 items of the scale. The most parsimonious result was achieved with 16 items retained for the resultant factor structure. For the first-order loadings, all factor loadings were above 0.90 (see Table 6.10) indicating an acceptable fit of these constructs. The value of the AVE for the established factors are all greater than 0.90. A minimum cut-off point of 0.50 is recommended, thus the convergent validity of the work-life balance constructs is adequate. Cronbach alpha was also adopted for measuring internal consistency, and the value is more than 0.90 for all the established first-order factors. This indicates a highly acceptable reliability for these factors. Assessing the Joreskog rho for measuring composite reliability, the value is above 0.90 for all the constructs of work-life balance. Thus, composite reliability is achieved for the established model; hence, there is an acceptable level of construct reliability. The reliability and validity of the second-order model was also examined. Regarding the internal reliability in the model, the Cronbach's alpha and composite reliability values were all above 0.90 with the average variance extracted value of 0.952.

These results demonstrated that work-life balance, as a measurement tool was reliable. Examining the overall assessment criteria for model fitness, the model was acceptable for the 16 items using second-order CFA measurement model. The fit indices indicated that the model had a good fit to the data, i.e., SRMR is $0.0368 < 0.05$, GFI is $0.999 > 0.95$ and AGFI is 0.999, which is also greater than 0.95 (see Table 6.11). Hence the model has fulfilled all the requirements, thus is suitable to be used in the measurement and structural model of the study. Figure 6.6 shows the path diagram for the second-order CFA model of the work-life balance tool.

TABLE 6.10: THE WORK-LIFE BALANCE CONFIRMATORY FACTOR ANALYSIS AND INTERNAL CONSISTENCY OUTPUT

Factors and respective items	1 st Order Model		2 nd Order Model
	CFA Loadings	Alpha if Item Deleted	CFA Loadings
Factor 1. Techno overload			
WFC1: My work keeps me from my family activities more ...	0.994	0.990	0.969
WFC2: The time I must devote to my job keeps me from ...	0.990	0.992	

WFC3: I have to miss family activities due to the amount ...	0.997	0.999	
<i>Cronbach's Alpha = 0.996; Joreskog rho = 0.996; Average Variance Extracted = 0.987</i>			
Factor 2. Techno invasion			
WFC4: The time I spend on family responsibilities often ...	0.986	0.997	
WFC5: The time I spend with my family often causes me not ...	0.986	0.996	0.990
WFC6: I have to miss work activities due to the amount of ...	0.894	1.000	
<i>Cronbach's alpha = 0.998; Joreskog rho = 0.970; Average Variance Extracted = 0.915</i>			
Factor 3			
WFC7: When I get home from work I am often too frazzled to...	0.993	0.989	
WFC8: I am often so emotionally drained when I get home ...	0.987	0.983	0.979
WFC9: Due to all the pressures at work, sometimes when ...	0.982	0.989	
<i>Cronbach's Alpha = 0.992; Joreskog rho = 0.991; Average Variance Extracted = 0.975</i>			
Factor 4			
WFC10: Due to stress at home, I am often preoccupied with ...	0.991	0.986	
WFC11: Because I am often stressed from family ...	0.984	0.986	0.989
WFC12: Tension and anxiety from my family life often ...	0.985	0.988	
<i>Cronbach's Alpha = 0.991; Joreskog rho = 0.991; Average Variance Extracted = 0.974</i>			
Factor 5			
WFC13: The problem-solving behaviours I use in my job are ...	0.992	n/a	0.971
WFC14: Behaviour that is effective and necessary for me at ...	0.984	n/a	
<i>Cronbach's Alpha = 0.988; Joreskog rho = 0.988; Average Variance Extracted = 0.976</i>			
Factor 6. Techno complexity			
WFC16: The behaviours that work for me at home do not ...	0.994	n/a	0.955
WFC17: Behaviour that is effective and necessary for me at ...	0.997	n/a	
<i>Cronbach's Alpha = 0.995; Joreskog rho = 0.995; Average Variance Extracted = 0.991</i>			
Note: Overall Cronbach Alpha = 0.996; Joreskog rho = 0.992; Average Variance Extracted = 0.952			

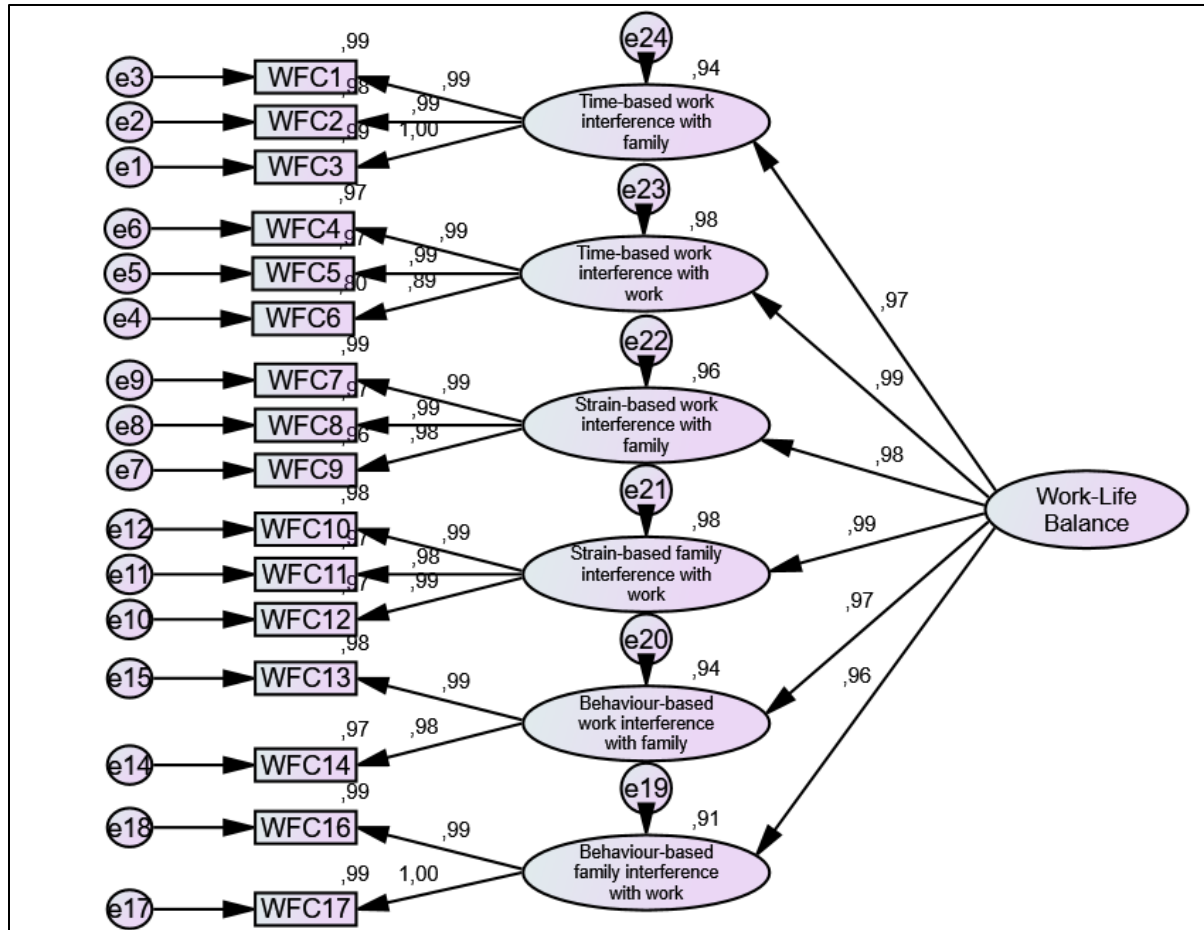


FIGURE 6.6: THE PATH DIAGRAM FOR CONFIRMATORY FACTOR ANALYSIS OF THE WORK-LIFE BALANCE SCALE

TABLE 6.11: THE FITNESS MEASURES ASSESSMENT FOR WORK-LIFE BALANCE MEASUREMENT MODEL

Name of index	Index value	Cut-off points	Comments
SRMR	0.0368	< 0.05	Good fit
GFI	0.999	> 0.95	Good fit
AGFI	0.999	> 0.95	Good fit

6.4.4 Measurement Model

After it was established that the three measurement instruments were operationalised successfully, the full measurement for the study could be evaluated. The researcher used facet-representative parceling to calculate parcels to be used as the indicator variables of the measurement model.

Parceling is pre-modeling strategy to create fewer and more reliable indicators of constructs for use with latent variable models. Parceling is particularly useful for researchers because longitudinal models can become quite complex and even intractable when measurement models of items are fit (Little et al., 2021). When a theory-guided parceling scheme is followed (e.g., using facet-representative parcels), the resulting indicators provide meaningful information that is more reliable, better distributed, and are more robust estimation-wise than are equivalent models fit to item-level data. Briefly put, the use of parcels has several psychometric and model-level benefits. parcels tend to have better distributional properties. Indeed, when items are averaged, non-normal distributions become more normally distributed and scales become more continuous since intervals increase in number while also becoming smaller and more equal. Compared to item-level data, parcels also have higher reliability and communality, as well as a higher ratio of common-to-unique factor variance (Chien, 2015; Little et al., 2002). This confirmed model is presented below.

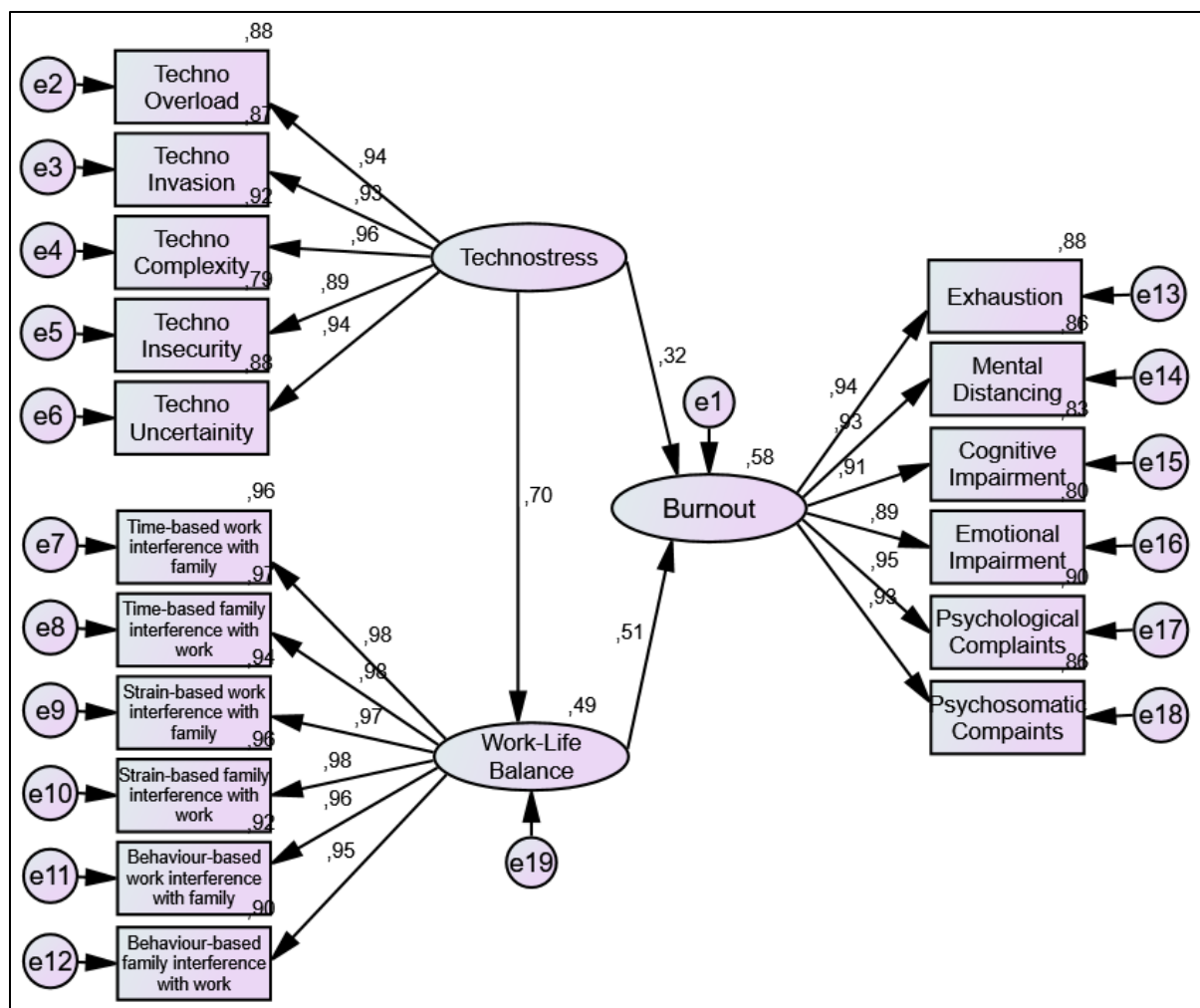


FIGURE 6.7: THE PATH DIAGRAM FOR CONFIRMATORY FACTOR ANALYSIS OF BURNOUT, WORK-LIFE BALANCE AND TECHNOSTRESS SCALE

TABLE 6.12: THE FITNESS MEASURES ASSESSMENT FOR BURNOUT, WORK-LIFE BALANCE, AND TECHNOSTRESS MEASUREMENT MODEL

Name of index	Index value	Cut-off points	Comments
SRMR	0.033	0.04	Good fit
GFI	0.998	≥ 0.95	Good fit
AGFI	0.997	≥ 0.95	Good fit
NFI	0.998	≥ 0.95	Good fit
RFI	0.997	≥ 0.95	Good fit

SRMR = The Standardised Root Mean Square Residual. **GFI/AGFI** = The (Adjusted) Goodness of Fit. **NFI** = The (Non) Normed Fit Index. **RFI** = The Relative Fit Index, also known as RHO1.

The model fit summary on Table 6.6 above shows that the complete measurement model demonstrates good fit, SRMR is $0.033 < 0.05$, GFI is $0.998 > 0.95$, AGFI is $0.997 > 0.95$, NFI is $0.998 > 0.95$, and RFI is $0.997 > 0.95$. Covariance between the latent variables were also satisfactory ranging from 0.67 to 0.73. This suggests that there likely exists some communality amongst them, which will be further investigated by the structural model.

6.4.5 Structural model

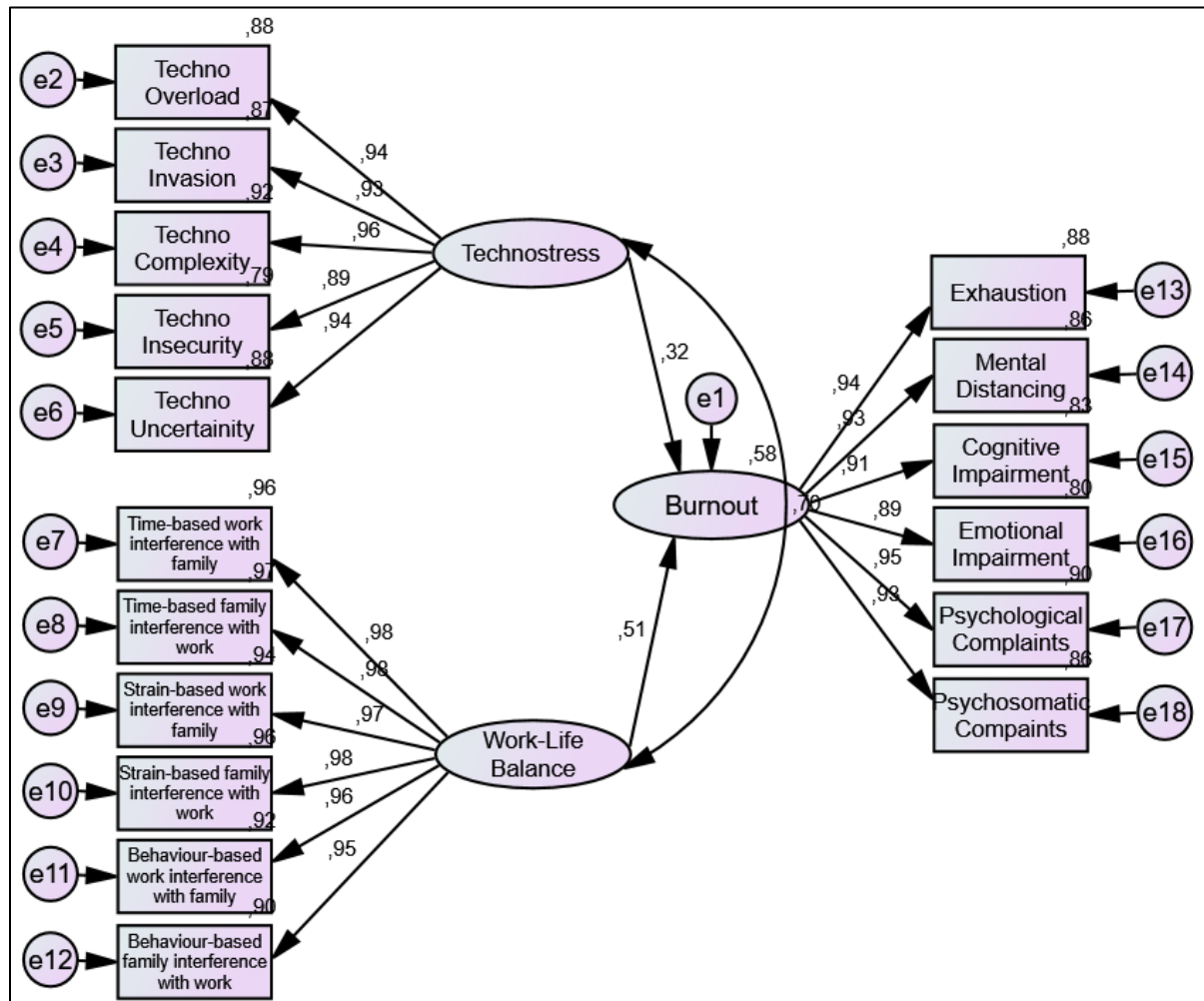


FIGURE 6.8: THE PATH DIAGRAM FOR THE TECHNOSTRESS AND WORK-LIFE BALANCE ON BURNOUT STRUCTURAL MODEL.

TABLE 6.13: THE FITNESS INDEXES ASSESSMENT FOR THE TECHNOSTRESS AND WORK-LIFE BALANCE ON BURNOUT STRUCTURAL MODEL

Name of index	Index value	Cut-off points	Comments
SRMR	0.0326	< 0.05	Good fit

GFI	0.998	> 0.95	Good fit
AGFI	0.997	> 0.95	Good fit

TABLE 6.14: SCALE-FREE LEAST SQUARES UNSTANDARDISED AND STANDARDISED ESTIMATES FOR THE REGRESSION WEIGHTS FOR THE TECHNOSTRESS AND WORK-LIFE BALANCE ON BURNOUT STRUCTURAL MODEL

Path			Unstandardized			Standardized	p-value
			^a Estimate	LL	UL	^b Estimate	
Burnout	←	Work-life	0.315	0.252	0.375	0.510	0.001*
Burnout	←	Technostress	0.299	0.207	0.386	0.316	0.002*
Work-life	←	Technostress	1.069	0.949	1.182	0.697	0.001*
BURNOUT_1	←	Burnout	0.985	0.946	1.028	0.939	0.001*
BURNOUT_2	←	Burnout	1.120	1.054	1.194	0.930	0.001*
BURNOUT_3	←	Burnout	1.104	1.049	1.169	0.910	0.001*
BURNOUT_4	←	Burnout	1.144	1.077	1.214	0.894	0.001*
BURNOUT_5	←	Burnout	0.996	0.967	1.032	0.950	0.001*
BURNOUT_6	←	Burnout	1.000	1.000	1.000	0.927	
WFC_1	←	Work-life	1.056	1.023	1.107	0.979	0.001*
WFC_2	←	Work-life	1.074	1.041	1.120	0.984	0.001*
WFC_3	←	Work-life	1.029	0.995	1.075	0.969	0.001*
WFC_4	←	Work-life	1.064	1.035	1.109	0.981	0.001*
WFC_5	←	Work-life	1.014	1.003	1.032	0.959	0.001*
WFC_6	←	Work-life	1.000	1.000	1.000	0.947	
TECSTRESS_1	←	Technostress	0.933	0.874	1.000	0.937	0.001*
TECSTRESS_2	←	Technostress	0.962	0.905	1.033	0.930	0.001*
TECSTRESS_3	←	Technostress	0.969	0.917	1.029	0.957	0.001*
TECSTRESS_4	←	Technostress	0.952	0.890	1.005	0.887	0.001*
TECSTRESS_5	←	Technostress	1.000	1.000	1.000	0.939	

(*) Statistically significant effects. (^a) Represents the unstandardized estimates for the structural model. S.E. and C.R. are the standard error and the crude ratio for the unstandardized estimate respectively. (^b) Represents the standardized estimates for the structural model. Note R-Squared (Squared Multiple Correlation) = 0.584 for the default structural model.

6.5 Hypotheses testing: The technostress and work-life balance on burnout hypothesis

6.5.1 Hypothesis 1: Actual Model Fit

H₀₁: The proposed structural model does not demonstrate acceptable fit ($SRMR > 0.06$).

H_{a1}: The proposed structural model demonstrates acceptable fit ($SRMR \leq 0.06$).

In order to establish whether the proposed theoretical relationships exist between burnout, technostress and work-life balance the structural model was examined. Figure 6.8 above shows the resultant structural model. The model fit summary (Table 6.13) shows that the model is a good fit, i.e., $SRMR$ is $0.0326 < 0.05$, GFI is $0.998 > 0.95$ and $AGFI$ is $0.997 > 0.95$. The squared multiple correlation of 0.584 indicates that the structural model explains 58.4% of the variation in burnout. Table 6.14 above reveals the scale-free least squares standardised parameter estimates of the regression weights. Thus, as indicated, the results of the proposed structural model fit demonstrates acceptable fit ($SRMR \leq 0.06$). Therefore, the null hypothesis will be rejected, and the alternative hypothesis accepted. This implies that there is evidence to support that the priori model fits the sample data.

6.5.2 Hypothesis 2: The technostress on burnout hypothesis

H₀₂: $\beta = 0$ There is no statistically significant relationship between technostress and burnout.

H_{a2}: $\beta > 0$ There is a statistically significant relationship between technostress and burnout.

The standardised direct effect of technostress to burnout path ($\beta = 0.316$; $p = 0.002$) is also positive and statistically significant ($\beta = 0.316$; $p = 0.002$). Thus, the regression weight for technostress in the prediction of burnout is significantly different from zero at the 5% level (two-tailed). This implies that the null hypothesis is rejected as there is enough evidence to support the relationship between technostress and burnout.

6.5.3 Hypothesis 3: The work-life balance on burnout hypothesis

H₀₃: $\beta = 0$ There is no statistically significant relationship between work-life balance and burnout.

H_{a3}: $\beta > 0$ There is a statistically significant relationship between work-life balance and burnout.

There is a standardised parameter estimate for the work-life balance to burnout path ($\beta = 0.510$; $p = 0.001$) is positive and statistically significant. Thus, the regression weight for work-life balance in the prediction of burnout is significantly different from zero at the 5% level (two-tailed). This

also implies that the standardised direct effect of work-life balance on burnout is statistically significant. Therefore, the null hypothesis is rejected as there is enough evidence to support the relationship between work-life balance and burnout.

6.5.4 Hypothesis 4: The technostress on work-life balance hypothesis

H₀₄: $\beta = 0$ There is no statistically significant relationship between technostress and work-life balance.

H_{a4}: $\beta > 0$ There is a statistically significant relationship between technostress and burnout work-life balance.

The standardised direct effect of technostress to work-life balance is statistically significant ($\beta = 0.697$; $p = 0.001$). Thus, the regression weight for technostress in the prediction of work-life balance is significantly different from zero at the 5% level (two-tailed). In conclusion, there is sufficient evidence at 5% level of significance to reject the null hypothesis and conclude that variances in levels of burnout can be statistically explained by technostress and work-life balance among employees working in the banking sector in the Free State.

Summarily, all the null hypotheses are rejected and it is concluded that variances in levels of burnout can be statistically explained by technostress and work-life balance among employees working in the banking sector in the Free State.

6.5.5 Stepwise regression analysis for technostress and work-life balance on burnout

In order to determine amount of unique variance that is accounted for by the individual explanatory variables in predicting burnout, a stepwise multiple linear regression model was used and yielded two significant models. Tables 6.15 and 6.16 show that the first significant model was the one with work-life balance as the predictor variable on burnout ($F\Delta = 276.217$; $df = 251$; $p = <0.0001$). The unstandardised β coefficients in Table 6.16 show that work-life balance had a significant and positive effect on burnout ($\beta_1 = 0.326$; $t = 9.133$; $p = <0.0001$). From Table 6.15, the $R^2 = 0.524$ shows that this model explains 52.4% of the variation in burnout. The second and last significant predictor variable that was added to the model was technostress which yielded a significant model ($F\Delta = 28.033$; $df = 250$; $p = <0.0001$). They were no issues of multi-collinearity in this 2nd linear regression model. Parameter estimates show that technostress had a significant and positive effect on burnout and the unstandardised regression coefficient is $\beta_2 = 0.311$ ($p = <0.0001$). From Table

6.15, the $R^2\Delta = 0.048$ for the second model, revealing that adding technostress to work-life balance significantly increases the variance explained by the model. Thus, using the stepwise regression approach both work-life balance and technostress adds unique variance ($R^2 = 0.572$, Adjusted $R^2 = 0.568$) in predicting burnout. Thus, the final unstandardised regression equation is:

$$\text{Burnout} = 0.439 + 0.326*\text{Work-life balance} + 0.311*\text{Technostress} + \text{residual } \varepsilon$$

TABLE 6.15: A SUMMARY OF THE STEPWISE REGRESSION ANALYSES FOR TECHNOSTRESS AND WORK-LIFE BALANCE ON BURNOUT.

Independent variable/s included in the model	Dependent variable: Burnout					
	R^2	Adjusted R^2	$R^2\Delta$	$F\Delta$	$df2$	Sig. $F\Delta$
^a Work-life balance	0.524	0.522	0.524	276.217	251	<0.0001*
^b Technostress	0.572	0.568	0.048	28.033	250	<0.0001*

*Significant change in the amount of variation of dependent variable being explained by the predictor/s.

a. Predictors: (Constant), Work-life balance

b. Predictors: (Constant), Work-life balance, Technostress

TABLE 6.16: PARAMETER ESTIMATES FOR THE STEPWISE REGRESSION ANALYSES FOR TECHNOSTRESS AND WORK-LIFE BALANCE ON BURNOUT.

Model	Parameter	Unstandardised Coefficients		Standardised Coefficients	t	Sig
		Beta	SE	Beta		
1	Constant	0.867	0.137		6.308	<0.0001*
	Work-life balance	0.455	0.027	0.724	16.620	<0.0001*
2	Constant	0.439	0.154		2.860	<0.0001*
	Work-life balance	0.326	0.036	0.518	9.133	<0.0001*
	Technostress	0.311	0.059	0.300	5.295	<0.0001*

(*)Significant fit. Note: Independent variables: Constant, Work-life balance, Technostress; Dependent variable: Burnout.

6.5.6 Investigating Mean differences of the demographical variables on burnout

6.5.6.1 Hypothesis 5: Differences between Genders

H₀₅: The differences of the mean ratings on burnout by gender is not significantly different from zero among employees working in the banking sector in the Free State.

H_{a5}: The differences of the mean ratings on burnout by gender is significantly different from zero among employees working in the banking sector in the Free State.

Table 6.17 below depicts an independent-samples test, which compared the means between male and female employee's mean levels on burnout. Levene's test for homogeneity of variance (homoscedasticity) was used. This test verified that the assumption of equal variances holds in the sample. The results revealed that there was no statistically significant difference in mean levels of burnout between males and females ($t = 0.131$; $df = 244$; $Pr > |t| = 0.896$). Thus, the mean ratings on burnout for males (Mean = 2.9667; SD = 1.18501) and females (Mean = 2.9459; SD = 1.29960) were the same. Since the mean difference is not statistically significant, thus there is sufficient evidence at 5% level of significance not to reject the null hypothesis and conclude that the differences of the mean ratings on burnout by gender is not significantly different from zero among employees working in the banking sector in the Free State.

TABLE 6.17: INDEPENDENT SAMPLES T-TEST FOR MEAN GENDER DIFFERENCES ON BURNOUT

Gender	Mean	SD	Levene's Test for Equality of Variances		T-Test for Equality of Means				
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Male	2.9667	1.18501	1.986	0.160	0.131	244	0.896	0.02074	0.15842
Female	2.9459	1.29960							

Equal variances assumed

6.5.6.2 Hypothesis 6: Differences between Ages

H₀₆: The mean rankings of burnout by employee's age are significantly the same among employees working in the banking sector in the Free State.

H_{a6}: The mean rankings of burnout by employee's age are not significantly the same among employees working in the banking sector in the Free State.

In order to determine if there are statistically significant differences between the multilevel groups for employee's age on the mean rankings of burnout, the Kruskal-Wallis H test, which is a rank-based nonparametric test, was used. This test was opted as it is considered the nonparametric alternative to the one-way ANOVA. Table 6.18 shows the Kruskal-Wallis tests for mean differences of burnout by employee's age. The results reveals that there existed statistically significant evidence to suggest that there were differences between the different groups of employee's age on the mean ratings of burnout (Kruskal-Wallis $H = 62.614$; $df = 4$; $p = <0.0001$) among the sampled employees. Since the mean differences are statistically significant, thus there is sufficient evidence at 5% level of significance to reject the null hypothesis and conclude that the mean rankings of burnout by employee's age are not significantly the same among employees working in the banking sector in the Free State.

TABLE 6.18: SUMMARY OF THE INDEPENDENT-SAMPLES KRUSKAL-WALLIS TEST FOR DIFFERENCES OF THE MEAN RANKINGS OF BURNOUT BY EMPLOYEE'S AGE.

Employee's age categories	N	Mean	Mean Rank	Test Statistic	Sig.
19 - 25 years	42	2.0065	65.61	62.614	<0.0001*
26 - 30 years	83	2.6528	109.14		
31 - 40 years	60	3.2414	146.18		
41 - 50 years	27	3.5196	159.59		
51 - 60 years	27	3.6880	169.11		
61 years and above	13	4.0559	186.04		

*The significance level is 0.050. Asymptotic significance is displayed. The test statistic is adjusted for ties.

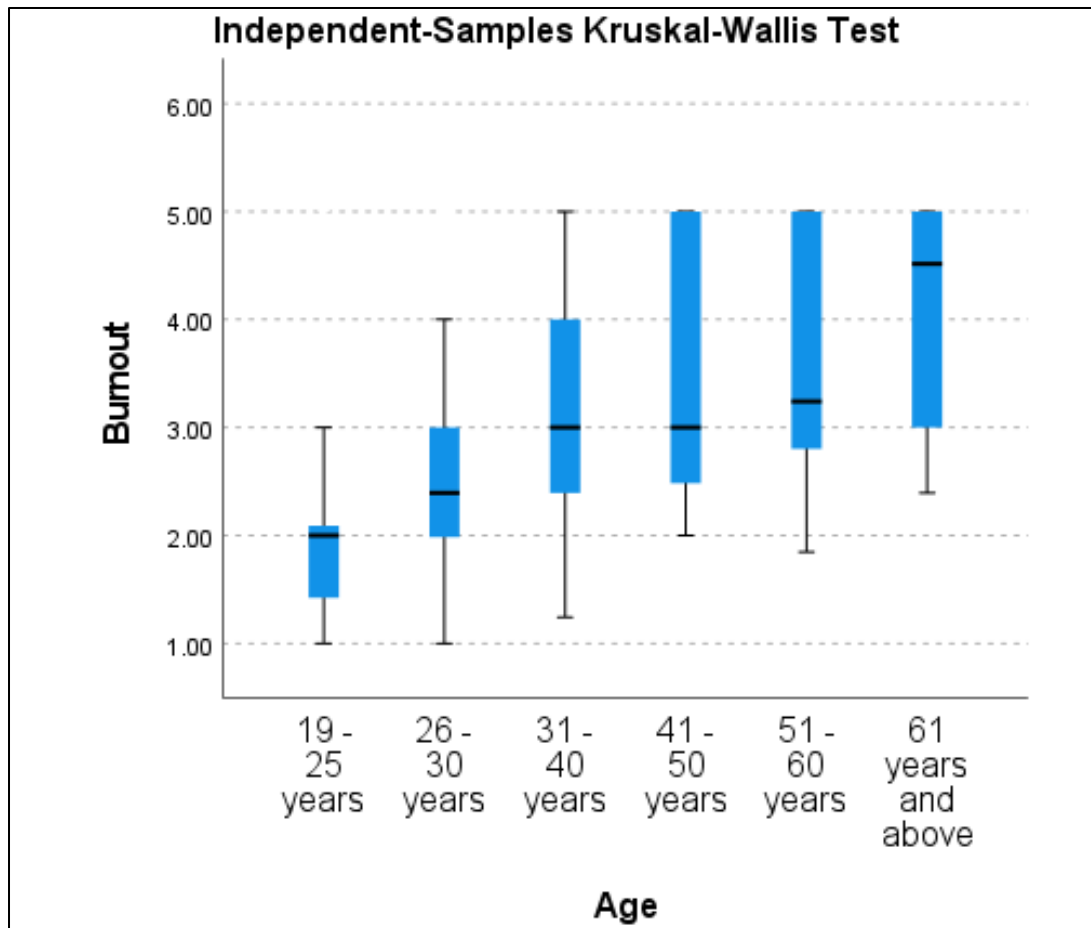


FIGURE 6.9: BOX-PLOT FOR THE MEAN DISTRIBUTION OF BURNOUT BY EMPLOYEE'S AGE.

Table 6.18 and Figure 6.9 above show the pairwise comparisons for the independent-samples Kruskal-Wallis test and the box-plot for the mean distribution of burnout by employee's age respectively. The findings suggests that older employees experience more burnout compared to younger employees. That is, the older the employee, the higher the levels of burnout.

6.5.6.3 Hypothesis 7: Differences between Occupational levels

H₀₇: The mean rankings of burnout by occupational level are significantly the same among employees working in the banking sector in the Free State.

H_{a7}: The mean rankings of burnout by occupational level are not significantly the same among employees working in the banking sector in the Free State.

Table 6.18 shows the Kruskal-Wallis H tests for mean differences of burnout by occupational level. The Kruskal-Wallis H test showed that there was a statistically significant difference in the levels of burnout in the different categories of occupational level (Kruskal-Wallis H = 39.452; df

= 5; $p = <0.0001$). Since the mean differences are statistically significant, thus there is sufficient evidence at 5% level of significance to reject the null hypothesis and conclude that the mean rankings of burnout by occupational level are not significantly the same among employees working in the banking sector in the Free State.

TABLE 6.19: SUMMARY OF THE INDEPENDENT-SAMPLES KRUSKAL-WALLIS TEST FOR DIFFERENCES OF THE MEAN RANKINGS OF BURNOUT BY OCCUPATIONAL LEVEL.

Occupational categories	level	N	Mean	Mean Rank	Test Statistic	Sig.
Bottom		123	2.5119	90.30	39.452	<0.0001
Middle		103	3.5310	145.27		
Top		5	3.5879	145.40		

The significance level is 0.050. Asymptotic significance is displayed. The test statistic is adjusted for ties.

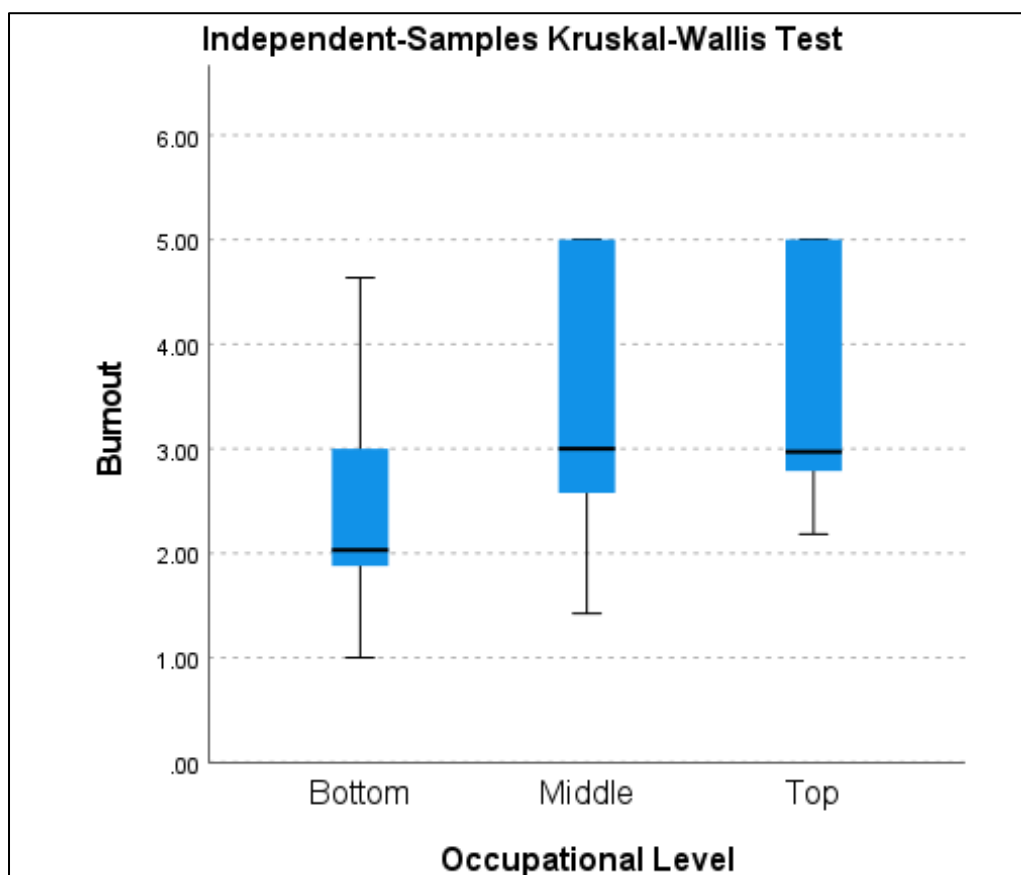


FIGURE 6.10: BOX-PLOT FOR THE MEAN DISTRIBUTION OF BURNOUT BY OCCUPATIONAL LEVEL

Table 6.19 and Figure 6.10 above shows the pairwise comparisons for the independent-samples Kruskal-Wallis test and the box-plot for the mean distribution of burnout by occupational level respectively. The findings suggests that employees in the top-level experience more burnout compared to those in the lower levels. That is, the higher the occupational position, the higher the levels of burnout.

6.6 Summary

This chapter presented and interpreted the results of the study. The initial interpretations concentrated on the constructs' reliability. Separately, the findings for each research question were discussed. The interpretations of the regression analysis were presented to determine the significant predictors of burnout. The structural model showed good fit. The pathways of the relationships between all the variables were also statistically significant. Also, the mean scores differed across age and occupational levels, but there were no differences with regards to gender.

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

The present study aimed to determine whether technostress and work-life balance have an effect on burnout among employees working in the banking sector. The previous chapter provided statistical answers to the research questions that were formulated for the current study. The current chapter highlights some conclusions and possible recommendations related to the current study. Conclusions on the literature review, research methodology used, descriptive statistics and inferential statistics are drawn here. Recommendations for future studies are also suggested based on the results obtained from the current study.

7.2 Discussion of results

The results obtained from the studies will be highlighted in the following section.

7.2.1 Structural model

7.2.1.1 The relationship between technostress and work-life balance on burnout

The complete measurement model demonstrates good fit, i.e., SRMR is $0.0326 < 0.05$, GFI is $0.998 > 0.95$ and AGFI is $0.997 > 0.95$. In other words, the proposed model of the study demonstrated a reasonable representation of the theory. The squared multiple correlation of 0.584 indicated that the structural model explained 58.4% of the variation in burnout. Therefore, the null hypothesis was rejected, and the alternative hypothesis accepted. This implied that there was evidence to support that the priori model fits the sample data.

7.2.1.2 The relationship between technostress on burnout

The results showed a statistically significant positive relationship between technostress to the burnout path ($\beta = 0.316$; $p = 0.002$). This implied that the null hypothesis was rejected as there was enough evidence to support the relationship between technostress and burnout. Mahapatra and Pati (2018) confirms this relationship by stating that technostress can lead to burnout. Research findings by Zhao et al. (2021), as well as Califf and Brooks (2020), also suggest that technostressors (i.e., techno-overload, techno invasion, techno -complexity, techno insecurity, and techno uncertainty) result in burnout. With the availability of multiple banking data platforms such as internet banking, smart phone banking apps, internal company sources etc., banking employees are exposed to unlimited information at a faster pace that they can handle and use effectively

(Fisher & Wesolkowski, 1999; Mahapatra & Pati, 2018). This can result to the problem of information overload where it becomes difficult to identify relevant information and to set practical cut-offs and priorities regarding new information (Chandra et al., 2015; Tarafdar et al., 2010). Subsequently, this information overload that comes from the use of these technological devices may have substantial influences on employees' experience of burnout in the workplace (Bawden & Robinson, 2009; Klausegger et al., 2007).

7.2.13 The relationship between work-life balance on burnout

The results showed a statistically significant positive relationship for the work-life balance to burnout path ($\beta = 0.510$; $p = 0.001$). Hence, the null hypothesis was rejected as there was enough evidence to support the relationship between work-life balance and burnout. Consistent with this, Starmer et al. (2016) confirm that individuals with lower likelihood of work-life balance tend to experience high levels of burnout. Moreover, Soelton et al. (2020) found that work family conflict has a significant positive effect on burnout and work life balance has a significant negative effect on burnout. In addition, Keeton et al. (2007) indicate that the strongest predictor of work-life balance and burnout was having some control over schedule and hours worked respectively.

7.2.1.4 The relationship between technostress on work-life balance

The results showed a statistically significant positive relationship for the technostress to work-life balance path ($\beta = 0.697$; $p = 0.001$). Therefore, the null hypothesis was rejected, and it was concluded that variances in levels of burnout can be statistically explained by technostress and work-life balance among employees working in the banking sector in the Free State. Consistent with this, Brivio et al.. (2018) suggest that techno-invasion entails that work-related tasks may spill into the worker's private life, endangering their work-life balance. Techno-invasion means that employees will deal with work-related issues while they are at home, which can reduce their ability to be as involved as they wish to be at home and induce negative affect at home – which if not properly managed can lead to burnout (Ma et al., 2021). It should be noted that the effects of techno-stressors on work-life balance have not yet been fully investigated, although achieving work-life balance is becoming an important goal for both employees and employers across the world (Casper et al., 2018; Ma et al., 2021; Wayne et al., 2017).

7.2.1.5 Demographic Differences on burnout

7.2.1.5.1 Genders differences in burnout

In terms of gender differences in burnout, the results revealed that there was no statistically significant difference in mean levels of burnout between males and females ($t = 0.131$; $df = 244$; $Pr > |t| = 0.896$). Thus, the mean ratings on burnout for males (Mean = 2.9667; SD = 1.18501) and females (Mean = 2.9459; SD = 1.29960) were the same. Since the mean difference was not statistically significant, there was sufficient evidence not to reject the null hypothesis and conclude that the differences of the mean ratings on burnout by gender was not significantly different from zero among employees working in the banking sector in the Free State. To support this argument, several researchers are of the opinion that no differences exist between males and females in terms of burnout (Bola, 2010; Brake et al., 2003; Leiter et al., 1994). This might be the case because both men and women are actively involved in the workforce and face similar stressors on a daily basis either as employees or parents. Contrary to this, other researchers are of the opinion that males and females differ significantly in terms of their experience of burnout (Adekola, 2012; Galanakis, 2020; Kalimo et al., 1997). This might be the case because women have a wider range of relationship than men and that they use these networks to build up strength with which they cope with burnout.

7.2.1.5.2 Age differences in burnout

In terms of age differences in burnout, the results revealed that there existed statistically significant evidence to suggest that there were differences between the different groups of employee's age on the mean ratings of burnout (Kruskal-Wallis $H = 62.614$; $df = 4$; $p = <0.0001$) among the sampled employees. Since the mean differences were statistically significant, there was sufficient evidence to reject the null hypothesis and it was concluded that the mean rankings of burnout by employee's age was not significantly the same among employees working in the banking sector in the Free State. Also, the findings revealed that older employees experienced more burnout compared to younger employees. That is, the older an employee was, the higher his or her levels of burnout became. A possible reason for this is that dealing with stressors related to the after effect of the pandemic might have had more strain on older employees especially in terms of health challenges, as well as using technology to work from home (which most older employees struggle with).

Contrary to this result, Haley et al. (2013), Hamdan and Hamra, (2017), as well as Mauno et al. (2019) found that younger employees experienced more burnout than older employees. This is because older employees use more positive emotional regulation strategies and are more engaged, hence, experiencing less burnout. Furthermore, NG and Feldman (2010) are also of the opinion that older employees experience fewer problems with burnout with age negatively related to emotional exhaustion, depersonalisation, and a reduced sense of personal accomplishment because the older an individual gets, the more likely they develop coping mechanisms to deal with burnout. In addition, Johnson et al. (2013), (2017) found no difference between older and younger employees in terms of burnout.

7.2.1.5.3 Occupational levels differences in burnout

In terms of occupational level differences in burnout, the results showed that there was a statistically significant difference in the levels of burnout in the different categories of occupational level (Kruskal-Wallis $H = 39.452$; $df = 5$; $p = <0.0001$). Since the mean differences were statistically significant, there was sufficient evidence to reject the null hypothesis and to conclude that the mean rankings of burnout by occupational level were not significantly the same among employees working in the banking sector in the Free State. Also, the results revealed that employees in the top-level experienced more burnout compared to those in the lower levels. That is, the higher the occupational position, the higher the levels of burnout. This is likely the case because the more experience employees amass in the workplace, the more workload they are likely to get. Also, older employees are more likely to have more family responsibilities and health challenges than younger employees. Other researchers also support this argument by indicating that top level employees (especially those without support) are more likely to experience burnout than lower and middle level employees (Gashmard et al., 2015; Rezaei et al., 2015; Thangavhuelelo, 2013).

In conclusion, the above results of the study should be used to inform management and Human Resources in the banking sector about the importance of providing support mechanisms as well as a work environment where employees can deal with issues relating to technostress, work-life balance, and burnout. For example, providing flexible working hours, training courses to those who need assistance with using technological devices and softwares, implementing Employee

Assistance Programs (EAP) to promote engagements especially for those working from home, as well as reducing the workload of employees who are at the verge of getting burnt out.

7.3. Conclusions regarding contributions to the field of Industrial Psychology

Both the literature review and empirical findings of the study contribute new knowledge to the field of industrial and organisational psychology with specific reference to confirming the role burnout plays in the South African banking sector. New insight was also provided into the conceptualisation of the constructs (burnout, work-life balance, and technostress) used in the study. In addition, possible relationships between the constructs and how the combined effect of these constructs can contribute to employees' experience of burnout in the workplace were explored. Literature and empirical findings recommend that the sub-dimensions of technostress and work-life balance can be used as a theoretical foundation for assisting employees and leaders in understanding and tackling possible causes of burnout. The theoretical relationships between the variables also provided a new perspective into the significance of these variables in light of burnout in the banking sector. Furthermore, from the empirical results, a conclusion can be drawn that the interaction between the various constructs (burnout, work-life balance, and technostress) exhibited by individuals influence the extent to which they will experience burnout in the organisation. Thus, the banking sector can focus on developing strategies to assist employees deal with the negative challenges of technostress and work-life balance.

7.4 Limitations of the study

A few limitations accrued from the literature review, empirical study and methodology. Some of these limitations are discussed below. Although there has been research done on burnout, there has been limited research done on burnout in the financial sector in South Africa. Considering that most studies carried out on burnout are centered on different sectors, there is, therefore, a need for more research centered on burnout in the financial sector in South Africa in particular to be conducted.

Moreover, there have been little or no studies on the combined effects of technostress, work-life balance on burnout. As a result, there was a challenge when testing the model as for some of the suggested directions, it was challenging to compare hypothesised paths.

The study specifically focused, with regards to the limitations on the empirical findings, on employees working in the banking sector in a particular geographical location. Furthermore, the

number and length of the three questionnaires administered were very long and might have affected the response rate of the study. This was mitigated by encouraging participants to answer the questionnaires during their free time or lunchtime. Moreover, in the study, a convenient non-probability sampling approach was used, which made it highly susceptible to selection bias and factors outside the control of the researcher. Future research should consider using convenience sampling with probability sampling to reduce bias. In addition, the limitations of the sample restrict the generalisation of the findings. Furthermore, another limitation was that very few employees at the top level in organisations participated in the study. Hence, it was challenging to draw conclusions based on that specific occupational level.

Also, the low participation rate required constant reminders to respondents to answer the questionnaires. In addition to this, there was the possibility that the same people accidentally filled in the questionnaire more than once which might justify why the results are unrealistically high.

Furthermore, only the banking sector was under focus in this study. Thus, the data was only made up of employees from the banking sector, which means the findings can only be carefully generalised to the banking sector at best. Therefore, future studies should focus on using other sampling methods, such as multi-sampling, which are representative of all employees in the banking sector to achieve generalisability. The study presents new insight into the field of burnout, despite the limitations raised, and can be used as a framework for understanding the relationships between the assessed constructs.

7.5 Recommendation for Future Research

Based on the conclusions, limitations and recommendations provided in the previous discussion, this section highlights the possible direction for future research. One of the limitations of the current study was that it focused mostly on the financial sector and used a convenience sampling method. This implies that the findings can only be generalised in the banking industry. Therefore, future studies should consider implementing a multi-sample or using a probability sampling approach that is more representative and can permit generalisations to provide a broader understanding of the interaction between the different variables.

Another recommendation for future studies is that other researchers can attempt to replicate the current study in a different context. Replicability entails properties of test results that allow future

researchers to investigate whether the findings of the study can be replicable in other sectors using different samples.

In addition, since work-life balance and technostress are contributors to burnout, future research should explore possible ways that organisations can use to intervene by implementing coping strategies/mechanisms to assist employees deal with technostress and work-family challenges.

Furthermore, the current research was cross-sectional and restricted to a small group of banking sector employees in one specific province. It is proposed that using a probability sampling method, a longitudinal study discussing the same topic should be carried out to validate the research findings and to achieve a better generalisation of the results. The current study was conducted using three constructs and thus, future research could include more constructs which could provide an in-depth insight into burnout and how these constructs influence burnout.

7.6 Summary

The current chapter focused on the conclusions derived from the results of the current study as well as its limitations. It also concentrated on the conclusions derived from the literature review and empirical study that were considered to address the limitations. The chapter also provided recommendations for future research in organisations. The chapter ended by proposing a few pointers for future research.

REFERENCES

- Abate, J., Schaefer, T., & Pavone, T. (2018). Understanding generational identity, job burnout, job satisfaction, job tenure and turnover intention. *Journal of Organisational Culture, Communications and Conflict*, 22(1), 1-12.
- Acker, G. (2011). Burnout among mental health care providers. *Journal of Social Work*, 22(5), 475-490
- Adekola, Bola. "Work burnout experience among university non-teaching staff: A gender approach." *International Journal of Academic Research in Business and Social Sciences* 2, no. 1 (2012): 128.
- Ahola, K., & Hakanen, J. (2014). Burnout and health. In *Burnout at work* (pp. 18-39). Psychology Press.
- Ahola, K., Honkonen, T., Isometsä, E., Kalimo, R., Nykyri, E., Koskinen, S., ... & Lönnqvist, J. (2006). Burnout in the general population. *Social psychiatry and psychiatric epidemiology*, 41(1), 11-17.
- Albers, S. (2009). PLS and success factor studies in marketing, in *Handbook of Partial Least Squares: Concepts, Methods and Applications in Marketing and Related Fields*, Springer, Berlin.
- Alby, F., & Fatigante, M. (2014). Preserving the respondent's standpoint in a research interview: Different strategies of 'doing' the interviewer. *Human Studies*, 37(2), 239-256.
- Alon, T. M., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020). *The impact of COVID-19 on gender equality* (CRC TR 224 Discussion Paper Series). University of Bonn and University of Mannheim. Retrieved from <https://www.crctr224.de/en/research-output/discussion-papers/discussion-paper-archive/2020/the-impact-of-covid-19-on-gender-equality-titan-alon-matthias-doepke-jane-olmstead-rumsey-michele-tertilt>
- Alvi, M. (2016). A manual for selecting sampling techniques in research.
- Ancona, D. G., & Caldwell, D. F. (2014). *Information technology and work groups: The case of new product teams* (pp. 187-204). Psychology Press.

- Ang, M., Hwa, C., & Teh, G. M. (2018). Work intensification and turnover intention in academia: The mediating role of work-life balance. *Journal of Asian Scientific Research*, 8(5), 188-196.
- Angelini, G., Buonomo, I., Benevene, P., Consiglio, P., Romano, L., & Fiorilli, C. (2021). The Burnout Assessment Tool (BAT): A contribution to Italian validation with teachers'. *Sustainability*, 13(16), 9065.
- Antoniou, A. S., Polychroni, F., & Vlachakis, A. N. (2006). Gender and age differences in occupational stress and professional burnout between primary and high-school teachers in Greece. *Journal of Managerial Psychology*, 21(7), 682–690.
- Arnetz, B., & Wiholm, C. (1997). Technological stress: Psychophysiological symptoms in modern offices. *Journal of Psychosomatic Research*, 43, 35–42. doi:10.1016/S0022-3999(97)00083-4
- Atanasoff, L., & Venable, M. A. (2017). Technostress: Implications for adults in the workforce. *The career development quarterly*, 65(4), 326-338.
- Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological antecedents and implications. *MIS Quarterly*, 35 (4), 831–858. <https://doi.org/10.2307/41409963>
- Bagozzi, R. P., Bergami, M., Marzocchi, G. L., & Morandin, G. (2012). Customer–organisation relationships: Development and test of a theory of extended identities. *Journal of Applied Psychology*, 97(1), 63.
- Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: taking stock and looking forward. *Journal of occupational health psychology*, 22(3), 273.
- Bakker, A. B., & Demerouti, E. (2018). Multiple levels in job demands-resources theory: Implications for employee well-being and performance. *Handbook of well-being*.
- Ballenger-Browning, K., Schmitz, K. J., Rothacker, J. A., Hammer, P. S., Webb-Murphy, J. & Johnson, D. C., (2011). Predictors of burnout among military mental health providers. *Military Medicine*, 176(3), 253-60.
- Bamberger, S. G., Vinding A. L., Larsen, A., Nielsen, P., Nielsen, N., Ryom, P., et al. (2012) Impact of organisational change on mental health: a systematic review. *Occupational and Environmental Medicine*, 69(8): 592–8.

- Barber, L. K., & Santuzzi, A. M. (2015). Please respond ASAP: workplace telepressure and employee recovery. *Journal of Occupational Health Psychology*, 20(2), 172.
- Bawden, D., & Robinson, L. (2009). The dark side of information: overload, anxiety and other paradoxes and pathologies. *Journal of information science*, 35(2), 180-191.
- Bergdall, A. R., Kraft, J. M., Andes, K., Carter, M., Hatfield-Timajchy, K., & Hock-Long, L. (2012). Love and hooking up in the new millennium: Communication technology and relationships among urban African American and Puerto Rican young adults. *Journal of Sex Research*, 49(6), 570-582. doi:10.1080/00224499.2011.604748
- 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.
- Berkeley Planning Associates (1977), *Evaluation of Child Abuse and Neglect Demonstration Projects. 1974-1977*, Vol. IX, Project Management and Worker Burnout, US Department of Commerce, Washington, DC.
- Berndt, A. E. (2020). Sampling methods. *Journal of Human Lactation*, 36(2), 224-226.
- Bhattacharjee, A. (2012). Social science research: Principles, methods, and practices.
- Biggs, A., Brough, P., & Drummond, S. (2017). Lazarus and Folkman's psychological stress and coping theory. *The handbook of stress and health: A guide to research and practice*, 351-364.
- Blalock Jr, H. M. (2018). *Causal inferences in non-experimental research*. UNC Press Books.
- Blumenthal, D., Fowler, E. J., Abrams, M., & Collins, S. R. (2020). Covid-19-implications for the health care system.
- Blustein, D. L., Duffy, R., Ferreira, J. A., Cohen-Scali, V., Cinamon, R. G., & Allan, B. A. (2020). Unemployment in the time of COVID-19: A research agenda.
- Bola, A. (2010). Gender differences in the experience of work burnout among university staff. *African Journal of business management*, 4(6), 886-889.

- Brake, H. T., Bloemendal, E., & Hoogstraten, J. (2003). Gender differences in burnout among Dutch dentists. *Community dentistry and oral epidemiology*, 31(5), 321-327.
- Brewer, E. W., & Shapard, L. (2004). Employee Burnout: A meta-analysis of the relationship between age or years of experience. *Human Resource Development Review*, 3(2), 102–123.
- Breyer, B., & Bluemke, M. (2016). Work-family conflict scale (ISSP).
- Brivio, E., Gaudio, F., Vergine, I., Mirizzi, C. R., Reina, C., Stellari, A., & Galimberti, C. (2018). Preventing technostress through positive technology. *Frontiers in psychology*, 9, 2569.
- Brod, C. (1984). *Technostress: The human cost of the computer revolution*. Reading, MA: Addison-Wesley.
- Brooks, S., & Califf, C. (2017). Social media-induced technostress: Its impact on the job performance of it professionals and the moderating role of job characteristics. *Computer Networks*, 114, 143–153
- Brown, R., Duck, J., & Jimmieson, N. (2014). E-mail in the workplace: The role of stress appraisals and normative response pressure in the relationship between E-mail stressors and employee strain. *International Journal of Stress Management*, 21(4), 325–347. <https://doi.org/10.1037/a0037464>
- Bunner, J., Prem, R., & Korunka, C. (2018). How work intensification relates to organisation-level safety performance: the mediating roles of safety climate, safety motivation, and safety knowledge. *Frontiers in psychology*, 9, 2575.
- Business tech (2019). Burnout has been officially recognised by the WHO – here’s how South Africans are struggling with it. Retrieved 30 June 2021 from <https://businesstech.co.za/news/business/319608/burnout-has-been-officially-recognised-by-the-who-heres-how-south-africans-are-struggling-with-it/>
- Byrne, B. M. (2013). *Structural equation modelling with Mplus: Basic concepts, applications, and programming*. Routledge.

- Califf, C. B., & Brooks, S. (2020). An empirical study of techno-stressors, literacy facilitation, burnout, and turnover intention as experienced by K-12 teachers. *Computers & Education*, 157, 103971.
- Califf, C. B., Sarker, S., & Sarker, S. (2020). The Bright and Dark Sides of Technostress: A Mixed-Methods Study Involving Healthcare IT. *MIS Quarterly*, 44(2).
- Caligiuri, P. M., & De Cieri, H. (2021). Predictors of employees' preference for working from home post-pandemic. *Business and Economic Research*, 11(2), 1-9.
- Canadas-De la Fuente, G. A., Ortega, E., Ramirez-Baena, L., De la Fuente-Solana, E. I., Vargas, C. & Gomez-Urquiza, J. L. (2018). Gender, marital status, and children as risk factors for burnout in nurses: A meta-analytic study. *International Journal of Environmental Research and Public Health*, 15, 1–13. <https://doi.org/10.3390/ijerph15102102>
- Carlson, D. S., Kacmar, K. M., & Williams, L. J. (2000). Construction and initial validation of a multidimensional measure of work–family conflict. *Journal of Vocational behaviour*, 56(2), 249-276.
- Cascio, W. F., & Montealegre, R. (2016). How technology is changing work and organisations. *Annual Review of Organisational Psychology and Organisational Behaviour*, 3, 349-375.
- Castellano, E., Muñoz Navarro, R., Toledo, M. S., Spontón, C., & Medrano, L. A. (2019). Cognitive processes of emotional regulation, burnout and work engagement. *Psicothema*, 2019, vol. 31, num. 1, p. 73-80.
- Chandra, S., Srivastava, S. C., & Shirish, A. (2015). Do Technostress Creators Influence Employee Innovation? In *PACIS* (p. 93).
- Chen, W., Zhang, G., Tian, X., Wang, L., & Luo, J. (2021). Rasch Analysis of Work-Family Conflict Scale Among Chinese Prison Police. *Frontiers in Psychology*, 12, 1528.
- Cheung, M. W. L. (2015). *Meta-analysis: A structural equation modeling approach*. John Wiley & Sons.

- Chin, W. W. (1998). The partial least squares approach to structural equation modelling. *Modern methods for business research*, 295(2), 295-336.
- Chien, W. C. (2015). Application of Item Parceling in Structural Equation Modeling: A Correlational Study of Undergraduate Students' Academic Behaviour, Employability, and Employment Performance. *International Journal of Intelligent Technologies and Applied Statistics*, 8(1), 29-44.
- Christian, M., Purwanto, E., & Wibowo, S. (2020). Technostress creators on teaching performance of private universities in Jakarta during Covid-19 pandemic. *Technology Reports of Kansai University*, 62(6), 2799-2809.
- Chung, H., & Van der Lippe, T. (2020). Flexible working, work–life balance, and gender equality: Introduction. *Social Indicators Research*, 151(2), 365-381.
- Chung, H., Seo, H., Forbes, S., & Birkett, H. (2020). Working from home during the COVID-19 lockdown: Changing preferences and the future of work.
- Chung, H., & Van der Lippe, T. (2018). Flexible working, work–life balance, and gender equality: Introduction. *Social Indicators Research*, 1-17.
- Çoban, H., & İrmış, A. (2016). Work-family conflict and burnout in Turkish banking industry.
- Cohen, J. (1988). Statistical power analysis for the behavioural sciences Lawrence Earlbaum Associates. 20th–.
- Cohen, J. (1992). Quantitative methods in psychology: A power primer. In *Psychological bulletin*.
- Cohen, L., Manion, L., & Morrison, K. (2017). Approaches to quantitative data analysis. In *Research methods in education* (pp. 725-738). Routledge.
- Corradini, I. Marano, A. & Nardelli, E. (2015). Prisma-ra: A set of tools for work related stress risk assessment. *World Institute for Advanced Research and Science*. p.118
- Cox, T., Kuk, G., & Leiter, M. P. (2017). Burnout, health, work stress, and organisational healthiness. In *Professional burnout* (pp. 177-193). Routledge.
- Cram, W. A., Proudfoot, J. G., & D'arcy, J. (2017). Organisational information security policies: a review and research framework. *European Journal of Information Systems*, 26(6), 605-641.

- Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: a theoretical extension and meta-analytic test. *Journal of applied psychology*, 95(5), 834.
- Crews, D. E., & Russ, M. J. (2020). The impact of individual differences on multitasking ability. *International Journal of Productivity and Performance Management*.
- Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: a theoretical review. *Human resources for health*, 18, 1-17.
- Day, A., Paquet, S., Scott, N., & Hambley, L. (2012). Perceived information and communication technology (ICT) demands on employee outcomes: The moderating effect of organisational ICT support. *Journal of Occupational Health Psychology*, 17, 473-491. <https://doi.org/10.1037/a0029837>
- De Beer, L. T. (2021). Is There Utility in Specifying Professional Efficacy as an Outcome of Burnout in the Employee Health Impairment Process. *International Journal of Environmental Research and Public Health*, 18(12), 6255.
- De Beer, L. T., & Bianchi, R. (2017). Confirmatory factor analysis of the maslach burnout Inventory. *European Journal of Psychological Assessment*.
- De Beer, L. T., Schaufeli, W. B., De Witte, H., Hakanen, J. J., Shimazu, A., Glaser, J., ... & Rudnev, M. (2020). Measurement invariance of the Burnout Assessment Tool (BAT) across seven cross-national representative samples. *International journal of environmental research and public health*, 17(15), 5604.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2000). A model of burnout and life satisfaction amongst nurses. *Journal of advanced nursing*, 32(2), 454-464.
- Dhanabhakya, M., & Malarvizhi, J. (2014). Work-family conflict and work stress among married working women in public and private sector organisations. *International research Journal of business and Management*, 7(10), 46-52.
- Didusov, V., & Kochueva, Z. (2017). Statistical methods usage of descriptive statistics in corpus linguistic. In *Computational linguistics and intelligent systems (COLINS 2017)*. National Technical University «KhPI».

- Diebig, M., Poethke, U., & Rowold, J. (2017). Leader strain and follower burnout: Exploring the role of transformational leadership behaviour. *German Journal of Human Resource Management*, 31(4), 329-348.
- Doane, D. P., & Seward, L. E. (2016). *Applied statistics in business and economics*, 5th. McGraw-Hill.
- Duchscher, J. E. B. (2009). Transition shock: The initial stage of role adaptation for newly graduated registered nurses. *Journal of Advanced Nursing*, 65(5), 1103–1113.
- Dwi, P. H. R. (2018). Organisational commitment of hospital nurses: An empirical study on work-life balance and burnout management. *European Researcher. Series A*, (9-3), 235-248.
- Erasmus, E. (2014). *Technology acceptance, psychological attachment and technostress*. Doctoral dissertation at the North-West 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.
- Farler, L., & Broady-Preston, J. (2012). Workplace stress in libraries: A case study. *Aslib Proceedings*, 64 (3), 225–240. <https://doi.org/10.1108/00012531211244509>
- Fischer, T. & Riedl, R. (2015) Theorizing technostress in organisations: a cybernetic approach. In: *Proceedings of the 12th International Conference on Wirtschaftsinformatik*, Osnabrück, pp 1453–1467
- Fisher, W. & Wesolkowski, S. (1999). Tempering technostress. *IEEE Technology Society Magazine* 18(1) 28-33
- Fleck, R., Cox, A. L., & Robison, R. A. (2015, April). Balancing boundaries: Using multiple devices to manage work-life balance. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (pp. 3985-3988).
- Form, W., Kaufman, R. L., Parcel, T. L., & Wallace, M. (2017). The impact of technology on work organisation and work outcomes: A conceptual framework and research agenda. *Industries, Firms, and Jobs*, 303-328.
- Fowler Jr, F. J. (2013). *Survey research methods*. Sage publications.

- French, K. A., Dumani, S., Allen, T. D., & Shockley, K. M. (2018). A meta-analysis of work–family conflict and social support. *Psychological bulletin*, 144(3), 284.
- Galanakis, M., Alexandri, E., Kika, K., Lelekanou, X., Papantonopoulou, M., Stougiannou, D., & Tzani, M. (2020). What is the source of occupational stress and burnout? *Psychology*, 11(05), 647.
- Garner, B. R., Knight, K., & Simpson, D. D. (2007). Burnout among corrections-based drug treatment staff: Impact of individual and organisational factors. *International Journal of Offender Therapy and Comparative Criminology*, 51(5), 510–522.
- Gashmard, R., Bagherzadeh, R., Pouladi, S., & Akaberian, S. (2015). Burnout and its related demographic factors among the medical staff working in hospitals associated with Bushehr University of Medical Sciences. *Puerto Rico health sciences journal*, 34(4), 208-214.
- Gatrell, C. J., Burnett, S. B., Cooper, C. L., & Sparrow, P. (2014). Work–life balance and parenthood: A comparative review of definitions, equity and enrichment. *International Journal of Management Reviews*, 15(3), 300–316. [https://doi.org/ 10.1111/j.1468-2370.2012.00341.x](https://doi.org/10.1111/j.1468-2370.2012.00341.x)
- Gewin, V. (2021). Pandemic burnout is rampant in academia. *Nature*. 591, 489-491. Retrieved on 1 July 2021 from <https://www.nature.com/articles/d41586-021-00663-2>, doi: <https://doi.org/10.1038/d41586-021-00663-2>
- Ghorpade, J., Lackritz, J., & Singh, G. (2007). Burnout and personality: Evidence from academia. *Journal of Career Assessment*, 15(2), 240–256.
- Gianfrate, G., & Peri, M. (2019). The green advantage: Exploring the convenience of issuing green bonds. *Journal of cleaner production*, 219, 127-135.
- Giorgi, G., Arcangeli, G., Ariza-Montes, A., Rapisarda, V., & Mucci, N. (2019). Work-related stress in the Italian banking population and its association with recovery experience. *International Journal of Occupational Medicine and Environmental Health*, 32(2), 255-265.
- Giorgi, G., Arcangeli, G., Perminiene, M., Lorini, C., Ariza-Montes, A., & Fiz-Perez, J. & Mucci, N. (2017). Work-related stress in the banking sector: a review of incidence, correlated factors, and major consequences. *Frontiers in psychology*, 8(2166), 235-252.

Global Citizen (2020). COVID-19 Is Having a Serious Toll on South Africans' Mental Health: Study. Retrieved on 25 June 2021 from <https://www.globalcitizen.org/en/content/covid-19-south-africa-mental-health-impact/?template=next>

Gong, Z., Chen, Y., & Wang, Y. (2019). The influence of emotional intelligence on job burnout and job performance: Mediating effect of psychological capital. *Frontiers in psychology*, 10, 2707.

Götz, O., Liehr-Gobbers, K. & Krafft, M. (2010). Evaluation of structural equation models using the partial least squares (PLS) approach. In *Handbook of partial least squares* (pp. 691-711). Springer, Berlin, Heidelberg.

Graham, M., Weale, V., Lambert, K. A., Kinsman, N., Stuckey, R., & Oakman, J. (2021). Working at home: The impacts of COVID 19 on health, family-work-life conflict, gender, and parental responsibilities. *Journal of Occupational and Environmental Medicine*, 63(11), 938.

Greenhalgh, L. & Rosenblatt, Z. (2010) Evolution of research on job insecurity. *International Studies of Management and Organisation*, 40(1): 6–19.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of management review*, 10(1), 76-88.

Guest, D. E. (2017). Human resource management and employee well-being: towards a new analytic framework. *Human Resource Management Journal*, 27 (1), pp. 22-38.

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 Behaviour*, 85(3), 361–373. <https://doi.org/10.1016/j.jvb.2014.08.010>

Hadzibajramović, E., Schaufeli, W., & De Witte, H. (2020). A Rasch analysis of the Burnout Assessment Tool (BAT). *Plos One*, 15(11), e0242241.

Hagqvist, E., Gådin, K. G., & Nordenmark, M. (2017). Work–family conflict and well-being across Europe: The role of gender context. *Social Indicators Research*, 132(2), 785-797.

Hair, J. F., Gabriel, M., & Patel, V. (2014). AMOS covariance-based structural equation modeling (CB-SEM): Guidelines on its application as a marketing research tool. *Brazilian Journal of Marketing*, 13(2).

- Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.
- Haley, L. M., Mostert, K., & Els, C. (2013). Burnout and work engagement for different age groups: Examining group-level differences and predictors. *Journal of Psychology in Africa*, 23(2), 283-295.
- Hamdan, M., & Hamra, A. A. A. (2017). Burnout among workers in emergency Departments in Palestinian hospitals: prevalence and associated factors. *BMC health services research*, 17(1), 1-7.
- Harvard Business Review (2017). Employee Burnout Is a Problem with the Company, Not the Person. Retrieved on 30 June 2021 from <https://hbr.org/2017/04/employee-burnout-is-a-problem-with-the-company-not-the-person>
- Hauk, N., Göritz, A. S., & Krumm, S. (2019). The mediating role of coping behaviour on the age-technostress relationship: A longitudinal multilevel mediation model. *PLoS One*, 14(3), e0213349. doi:10.1371/journal.pone.0213349
- He, S. C., Zhang, Y. Y., Zhan, J. Y., Wang, C., Du, X. D., Yin, G. Z., ... & Zhang, X. Y. (2017). Burnout and cognitive impairment: associated with serum BDNF in a Chinese Han population. *Psychoneuroendocrinology*, 77, 236-243.
- Health and Safety Executive (2018). Health and Safety Executive. (<http://www.hse.gov.uk>) Accessed on 17 June 2021
- Henseler, J., Hubona, G. & Ray, P. A. (2016). Using PLS path modelling in new technology research: updated guidelines. *Industrial management & data systems*.
- Henseler, J., Ringle, C. M. & Sinkovics, R. R. (2009). The use of partial least squares path modelling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.
- Henson, R. N. (2015). Analysis of variance (ANOVA). *Brain Mapping: an encyclopedic reference*. Elsevier, 477-481.

- Hjálmsdóttir, A., & Bjarnadóttir, V. S. (2021). “I have turned into a foreman here at home”: Families and work–life balance in times of COVID-19 in a gender equality paradise. *Gender, Work & Organisation*, 28(1), 268-283.
- Hobfoll S. E. 1989. Conservation of resources: a new attempt at conceptualizing stress. *Am. Psychol.* 44(3):513– 24
- Hobfoll, S. E. (2011). Conservation of resources theory: Its implication for stress, health, and resilience. In S. Folkman (Ed.), *The Oxford handbook of stress, health, and coping* (pp. 127–147). Oxford University Press.
- Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organisational context: The reality of resources and their consequences. *Annual Review of Organisational Psychology and Organisational Behaviour*, 5, 103-128.
- Hobfoll, S. E., Tirone, V., Holmgreen, L., & Gerhart, J. (2016). Conservation of resources theory applied to major stress. In *Stress: Concepts, cognition, emotion, and behaviour* (pp. 65-71). Academic Press.
- Hoffmann-Burdzińska, K., & Rutkowska, M. (2015). Work life balance as a factor influencing well-being. *Journal of Positive Management*, 6(4), 87-101.
- Holmgreen, L., Tirone, V., Gerhart, J., & Hobfoll, S. E. (2017). Conservation of resources theory. *The handbook of stress and health: A guide to research and practice*, 443-457.
- Hopkins, V. M. (2011). *The mediating role of work engagement and burnout in the relationship between job characteristics and psychological distress among lawyers: a thesis presented in partial fulfilment of the requirements for the degree of Master of Arts in Psychology at Massey University, Albany, New Zealand* (Doctoral dissertation, Massey University).
- Hu, N. C., Chen, J. D., & Cheng, T. J. (2016). The associations between long working hours, physical inactivity, and burnout. *Journal of occupational and Environmental Medicine*, 58(5), 514-518.
- Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X., ... & Zhu, J. (2020). Frontline nurses’ burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *EClinicalMedicine*, 24, 100424.

- Hu, X., Park, Y., Day, A., & Barber, L. K. (2021). Time to Disentangle the Information and Communication Technology (ICT) Constructs: Developing a Taxonomy around ICT Use for Occupational Health Research. *Occupational Health Science*, 1-29.
- Huri, M., Bağış, N., Eren, H., Başibüyük, O., Şahin, S., Umaroğlu, M., & Orhan, K. (2017). Burnout and occupational participation among dentists with teaching responsibilities in universities. *Psychology, health & medicine*, 22(6), 693-700.
- Hwang, I., & Cha, O. (2018). Examining technostress creators and role stress as potential threats to employees' information security compliance. *Computers in Human Behaviour*, 81, 282–293.
- Hyman, J., Baldry, C., Scholarios, D., & Bunzel, D. (2003). Work-life imbalance in the new service sector economy. *British Journal of Industrial Relations*, 41(2), 215-239.
- Ibrahim, H., & Yusoff, Y. M. (2015). User characteristics as antecedents of techno stress towards EHRM: From experts' views. *Procedia-Social and Behavioural Sciences*, 172, 134-141.
- Ingusci, E., Signore, F., Giancaspro, M. L., Manuti, A., Molino, M., Russo, V., ... & Cortese, C. G. (2021). Workload, Techno Overload, and Behavioural Stress During COVID-19 Emergency: The Role of Job Crafting in Remote Workers. *Frontiers in Psychology*, 12, 1141.
- Jackson, L. T. B., & Rothmann, S. (2005). An adapted model of burnout for educators in South Africa. *South African Journal of Education*, 25(2), 100–108.
- James, J. B., McKechnie, S., & Swanberg, J. (2011). Predicting employee engagement in an age-diverse retail workforce. *Journal of Organisational Behaviour*, 32(2), 173–196.
- Jena, R. K. (2015). Technostress in ICT enabled collaborative learning environment: An empirical study among Indian academicians. *Computers in Human Behaviour*, 51, 1116–1123.
- Johari, J., Tan, F. Y., & Zulkarnain, Z. I. T. (2018). Autonomy, workload, work-life balance and job performance among teachers. *International Journal of Educational Management*.
- Johnson, S. J., Holdsworth, L., Hoel, H., & Zapf, D. (2013). Customer stressors in service organisations: The impact of age on stress management and burnout. *European Journal of Work and Organisational Psychology*, 22(3), 318-330.

- Johnson, S. J., Machowski, S., Holdsworth, L., Kern, M., & Zapf, D. (2017). Age, emotion regulation strategies, burnout, and engagement in the service sector: Advantages of older workers. *Revista de Psicología del Trabajo y de las Organizaciones*, 33(3), 205-216.
- Jonsdottir, I. H., Nordlund, A., Ellbin, S., Ljung, T., Glise, K., Währborg, P., & Wallin, A. (2013). Cognitive impairment in patients with stress-related exhaustion. *Stress*, 16(2), 181-190.
- Jyothi, S. V., & Jyothi, P. (2012). Assessing work-life balance: From emotional intelligence and role efficacy of career women. *Advances in Management*.
- Kalandatzis, T., & Hyz, A. (2021). Empirical Analysis of the Phenomenon of Job Burnout Among Employees in the Banking Sector. *International Journal of Service Science, Management, Engineering, and Technology (IJSSMET)*, 12(5), 116-132.
- Kanste, O., Kynga, H. & Nikkila, J. (2007). The relationship between multidimensional leadership and burnout among nursing staff. *Journal of Nursing Management*, 15(7), pp. 731-739.
- Kaur, P., Stoltzfus, J., & Yellapu, V. (2018). Descriptive statistics. *International Journal of Academic Medicine*, 4(1), 60.
- Kebza, V., Šolcová, I. (2003). Syndrom vyhoření. praha: státní zdravotní ústa. isbn 80- 7071-231-7.
- Keeton, K., Fenner, D. E., Johnson, T. R., & Hayward, R. A. (2007). Predictors of physician career satisfaction, work–life balance, and burnout. *Obstetrics & Gynecology*, 109(4), 949-955.
- Khalid, A., Pan, F., Li, P., Wang, W., & Ghaffari, A. S. (2020). The impact of occupational stress on job burnout among bank employees in Pakistan, with psychological capital as a mediator. *Frontiers in public health*, 7, 410.
- Khattak, J. K., Khan, M. A., Haq, A. U., Arif, M., & Minhas, A. A. (2011). Occupational stress and burnout in Pakistan’s banking sector. *African Journal of Business Management*, 5(3), 810–817.
- [Khatri, P.](#) & [Gupta, P.](#) (2019). Development and validation of employee wellbeing scale – a formative measurement model. *International Journal of Workplace Health Management*, 12 (5), pp. 352-368. <https://doi.org/10.1108/IJWHM-12-2018-0161>

- Khedhaouria, A., & Cucchi, A. (2019). Technostress creators, personality traits, and job burnout: A fuzzy-set configurational analysis. *Journal of Business Research*, 101, 349–361.
- Kim, W. H., Ra, Y. A., Park, J. G., & Kwon, B. (2017). Role of burnout on job level, job satisfaction, and task performance. *Leadership & Organisation Development Journal*.
- Kinnunen, U., Geurts, S., & Mauno, S. (2004). Work-to-family conflict and its relationship with satisfaction and well-being: A one-year longitudinal study on gender differences. *Work & Stress*, 18(1), 1-22.
- Kipperman, B. S., Kass, P. H., & Rishniw, M. (2017). Factors that influence small animal veterinarians' opinions and actions regarding cost of care and effects of economic limitations on patient care and outcome and professional career satisfaction and burnout. *Journal of the American Veterinary Medical Association*, 250(7), 785-794.
- Klausegger, C., Sinkovics, R. R., & “Joy” Zou, H. (2007). Information overload: a cross-national investigation of influence factors and effects. *Marketing Intelligence & Planning*, 25(7), 691-718.
- Kline, R. B. (2015). *Principles and practice of structural equation modelling*. Guilford publications.
- Kluczyk, M. (2013). *The impact of work-life balance on the wellbeing of employees in the private sector in Ireland* (Doctoral dissertation, Dublin, National College of Ireland).
- Knani, M. (2013). Exploratory study of the impacts of new technology implementation on burnout and presenteeism. *International Journal of Business and Management*, 8, 92–97.
- Koonce, N. N. (2014). The moderating role of equity sensitivity on the relationship between motivation, self-efficacy, and burnout among mental health professionals. Unpublished doctoral dissertation, Capella University, Minneapolis, Minnesota.
- 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., & Lee, K. H. (2017). Work-family conflict and work-life conflict. In *Oxford research encyclopedia of business and management*.

- Křivohlavý, J. (2009). *Psychologie zdraví*. 3. vydání. Praha: Portál. 280 s. isbn 80-7178- 551-2.
- Küçüksüleymanoğlu, R. (2013). Occupational burnout levels of Turkish imams. *Review of Religious Research*, 55(1), 27-42.
- Landolfi, A., Barattucci, M., & Lo Presti, A. (2020). A time-lagged examination of the Greenhaus and Allen work-family balance model. *Behavioural Sciences*, 10(9), 140.
- La Torre, G., De Leonardis, V., & Chiappetta, M. (2020). Technostress: How does it affect the productivity and life of an individual? Results of an observational study. *Public Health*, 189, 60-65.
- Lee, C. Y., Wu, J. H., & Du, J. K. (2019). Work stress and occupational burnout among dental staff in a medical center. *Journal of dental sciences*, 14(3), 295-301.
- Leiter, M. P., Clark, D., & Durup, J. (1994). Distinct models of burnout and commitment among men and women in the military. *The Journal of applied behavioural science*, 30(1), 63-82.
- Leiter, M. P., Maslach, C., & Frame, K. (2014). Burnout. *The encyclopedia of clinical psychology*, 1-7.
- Lim, N., Kim, E. K., Kim, H., Yang, E., & Lee, S. M. (2010). Individual and work-related factors influencing burnout of mental health professionals: A meta-analysis. *Journal of Employment Counseling*, 47(2), 86-96.
- Lindblom, K. M., Linton, S. J., Fedeli, C., & Bryngelsson, I. L. (2006). Burnout in the working population: relations to psychosocial work factors. *International journal of behavioural medicine*, 13(1), 51-59.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural equation modeling*, 9(2), 151-173.
- Little, T. D., Rioux, C., Odejimi, O. A., & Stickley, Z. L. (2021). Parceling in structural equation modeling: A comprehensive introduction for developmental scientists. *Elements in Research Methods for Developmental Science*.
- Loscalzo, Y., Raffagnino, R., Gonnelli, C., & Giannini, M. (2019). Work–Family Conflict Scale: Psychometric Properties of the Italian Version. *Sage Open*, 9(3), 2158244019861495.

- Lott, Y., & Chung, H. (2016). Gender discrepancies in the outcomes of schedule control on overtime hours and income in Germany. *European Sociological Review*, 32(6), 752–765.
- Lowry, R. (2014). Concepts and applications of inferential statistics.
- Lu, A.C.C. & Gursoy, D. (2016). Impact of job burnout on satisfaction and turnover intention: Do generational differences matter? *Journal of Hospitality & Tourism Research*, 40(2), 210-235.
- Ma, J., Ollier-Malaterre, A., & Lu, C. Q. (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 Behaviour*, 122, 106811.
- MacFarland, T. W., & Yates, J. M. (2016). Kruskal–Wallis H-test for oneway analysis of variance (ANOVA) by ranks. In *Introduction to nonparametric statistics for the biological sciences using R* (pp. 177-211). Springer, Cham.
- Mahendran, A. V., Panatik, S. A., Rajab, A., & Nordin, N. (2019). The Influence of Work-life Balance on Burnout among Nurses. *Indian Journal of Public Health Research & Development*, 10(11).
- 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.
- Maier, C., Laumer, S., Wirth, J., & Weitzel, T. (2019). Technostress and the hierarchical levels of personality: a two-wave study with multiple data samples. *European Journal of Information Systems*, 28(5), 496–522.
- Mano, R. S. & Mesh, G.S. (2010). E-mail characteristics, work performance and distress. *Computer Human Behav.* 26(1):61–69.
- Marchand, A., Blanc, M. E., & Beauregard, N. (2018). Do age and gender contribute to workers' burnout symptoms? *Occupational Medicine*, 68(6), 405-411.
- Marchand, A., Durand, P., Haines, V., & Harvey, S. (2015). The multilevel determinants of workers' mental health: results from the SALVEO study. *Social psychiatry and psychiatric epidemiology*, 50(3), 445-459.

- Marchiori, D. M., Mainardes, E. W., & Rodrigues, R. G. (2019). Do individual characteristics influence the types of technostress reported by workers? *International Journal of Human–Computer Interaction*, 35(3), 218-230.
- Maslach, C. (2017). *Professional burnout: Recent developments in theory and research*. Routledge.
- Maslach, C., & Leiter, M. P. (2017). Understanding burnout: New models.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology*, 52(1), 397-422.
- Maslach, C., & Schaufeli, W. B. (2018). Historical and conceptual development of burnout. In *Professional burnout: Recent developments in theory and research* (pp. 1-16). CRC Press.
- Matthews, R. A., Bulger, C. A., & Barnes-Farrell, J. L. (2010). Work social supports, role stressors, and work–family conflict: The moderating effect of age. *Journal of Vocational Behaviour*, 76(1), 78-90.
- Matthias, K. (2015). *Introduction to statistical data analysis with R*. bookboon. com.
- Mayerl, H., Stolz, E., Waxenegger, A., Rásky, É., & Freidl, W. (2016). The role of personal and job resources in the relationship between psychosocial job demands, mental strain, and health problems. *Frontiers in Psychology*, 7, 1214.
- McEwan, B. (2020). Sampling and validity. *Annals of the International Communication Association*, 44(3), 235-247.
- Meeker, W. Q., Escobar, L. A., & Pascual, F. G. (2022). *Statistical methods for reliability data*. John Wiley & Sons.
- Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. (2011). Antecedents of work–family conflict: A meta-analytic review. *Journal of Organisational Behaviour*, 32(5), 689–725. <https://doi.org/10.1002/job.695>
- Myron, D. R. (2003). Syndrom vyhoření. Praha: Návrat domů,. 129 s. ISBN 80-7255- 074- 8.

- Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., et al. (2020). Wellbeing costs of technology use during Covid-19 remote working: an investigation using the Italian translation of the technostress creators scale. *Sustainability* 12, 5911. doi: 10.3390/su12155911.
- Ng, T. W., & Feldman, D. C. (2010). The relationships of age with job attitudes: A meta-analysis. *Personnel psychology*, 63(3), 677-718.
- Nimrod, G. (2018). Technostress: Measuring a new threat to well-being in later life. *Aging & Mental Health*, 22(8), 1086–1093. 10.1111/isj.12068
- Nimrod, G. (2020). Technostress in a hostile world: older internet users before and during the COVID-19 pandemic. *Aging & Mental Health*, 1-8.
- Nisafani, A. S., Kiely, G., & Mahony, C. (2020). Workers' technostress: a review of its causes, strains, inhibitors, and impacts. *Journal of Decision Systems*, 1-16.
- Norlund, S., Reuterwall, C., Höög, J., Lindahl, B., Janlert, U., & Birgander, L. S. (2010). Burnout, working conditions and gender-results from the northern Sweden MONICA Study. *BMC public health*, 10(1), 1-9.
- Oosterholt, B. G., Maes, J. H., Van der Linden, D., Verbraak, M. J., Kompier, M. A. (2016). Getting better, but not well: a 15-year follow-up of cognitive performance and cortisol levels in clinical and non-clinical burnout. *Biol. Psychol.* 117, 89–99.
- Odoh, L., Odigbo, B. and Onwumere, J.U.J. (2013). Effect of technostress on the performance of accountants and other managers in Nigerian banking and brewery industries. *European Journal of Business and Management*, 5(14), pp.100–108.
- Oksanen, A., Oksa, R., Savela, N., Mantere, E., Savolainen, I., & Kaakinen, M. (2021). COVID-19 crisis and digital stressors at work: A longitudinal study on the Finnish working population. *Computers in Human Behaviour*, 122, 106853.
- Owusu-Ansah, S., Azasoo, J. Q., & Adu, I. N. (2016). Understanding the effects of technostress on the performance of banking staff. *International Journal of Business Continuity and Risk Management*, 6(3), 222-237.

- Pandis, N. (2015). Comparison of 2 means (independent z test or independent t test). *American journal of orthodontics and dentofacial orthopedics*, 148(2), 350-351.
- Pangemanan, F. L., Pio, R. J., & Tumbel, T. M. (2017). Pengaruh work-life balance dan burnout terhadap kepuasan kerja. *Jurnal administrasi bisnis (JAB)*, 5(003).
- Park, H. I., Jacob, A. C., Wagner, S. H., & Baiden, M. (2014). Job control and burnout: A meta-analytic test of the Conservation of Resources model. *Applied Psychology*, 63(4), 607-642.
- Patrick, K., & Lavery, J. F. (2007). Burnout in Nursing. *Australian Journal of Advanced Nursing*, 24(3), 43–48.
- Pflügner, K., Maier, C., & Weitzel, T. (2021). The direct and indirect influence of mindfulness on techno-stressors and job burnout: a quantitative study of white-collar workers. *Computers in Human Behaviour*, 115, 106566.
- Peterka-Bonetta, J., Sindermann, C., Sha, P., Zhou, M., & Montag, C. (2019). The relationship between Internet Use Disorder, depression and burnout among Chinese and German college students. *Addictive Behaviours*, 89, 188–199.
- Piccoli, B., & De Witte, H. (2015). Job insecurity and emotional exhaustion: Testing psychological contract breach versus distributive injustice as indicators of lack of reciprocity. *Work & Stress*, 29(3), 246-263.
- Pines, A. M., Neal, M. B., Hammer, L. B., & Icekson, T. (2011). Job burnout and couple burnout in dual-earner couples in the sandwiched generation. *Social Psychology Quarterly*, 74(4), 361-386.
- Pollard, R. J. (1998). Essentials of survey research and analysis. *Retrieved online October 5, 2005*.
- Poulose, S., & Sudarsan, N. (2018). Work life balance: A conceptual review. *International Journal of Advances in Agriculture Sciences*.
- Punia, V. and Kamboj, M. (2013). Quality of work-life balance among teachers in higher education institutions. *Learning Community*, 4(3), 197-208.
- Purvanova, R. K. & Muros, J. P. (2010). Gender differences in burnout: a meta-analysis. *Journal of Vocational Behaviour*, 77,168–185.

- Queen, D., & Harding, K. (2020). Societal pandemic burnout: A COVID legacy. *International Wound Journal*, 17(4), 873.
- Quick, J. C., & Henderson, D. F. (2016). Occupational stress: Preventing suffering, enhancing wellbeing. *International journal of environmental research and public health*, 13(5), 459.
- Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organisations: Conceptual development and empirical validation. *Information Systems Research*, 19, 417–433.
- Rama Devi, V., & Nagini, A. (2014). Work-life balance and burnout as predictors of job satisfaction in private banking sector.
- Raišienė, A. G., & Jonušauskas, S. (2013). Silent issues of ICT era: impact of technostress to the work and life balance of employees. *Entrepreneurship and sustainability issues*, 1, 108-115.
- Rama Devi, V., & Nagini, A. (2014). Work-life balance and burnout as predictors of job satisfaction in private banking sector.
- Rehman, W. U., Janjua, S. Y., & Naeem, H. (2015). Impact of burnout on employees' performance: an analysis of banking industry. *World Review of Entrepreneurship, Management and Sustainable Development*, 11(1), 88-105.
- Rezaei, J., Naderi, S., Mahmoudi, E., Rezaei, S., & Hashemian, A. H. (2015). Job burnout rate and related demographic factors in nursing personnel employed in emergency departments of chosen educational hospitals by Kermanshah University of Medical Science in 2012. *Advances in Biological Research*, 9(2), 117-27.
- Riggar, T. F., Harrington, G. S. & Hafer, M. (1984) Burnout and job satisfaction in rehabilitation administrators and direct service providers. *Rehabilitation Counseling Bulletin*. 27 (3), pp. 151-160.
- Ringle, C. M., Wende, S. & Becker, J. M. (2015). SmartPLS 3. Boenningstedt: SmartPLS GmbH, <http://www.smartpls.com>.
- Robinson, G. E. (2003). Stresses on women physicians: Consequences and coping techniques. *Depression and Anxiety* 17(3):180-189.

- Rodríguez-Mantilla, J. M., & Fernández-Díaz, M. J. (2017). The effect of interpersonal relationships on burnout syndrome in Secondary Education teachers. *Psicothema*, 29(3), 370-377.
- Ross, A., & Willson, V. L. (2017). Independent samples T-test. In *Basic and advanced statistical tests* (pp. 13-16). SensePublishers, Rotterdam.
- Roskam, I., & Mikolajczak, M. (2020). Gender differences in the nature, antecedents and consequences of parental burnout. *Sex Roles*, 83(7), 485-498.
- Rumschlag, K. E. (2017). Teacher burnout: A quantitative analysis of emotional exhaustion, personal accomplishment, and depersonalization. *International management review*, 13(1), 22-36.
- Sahu, P. K., Pal, S. R., & Das, A. K. (2015). *Estimation and inferential statistics*. Springer.
- Sakakibara, K., Shimazu, A., Toyama, H., & Schaufeli, W. B. (2020). Validation of the Japanese Version of the Burnout Assessment Tool. *Frontiers in psychology*, 11, 1819.
- Salah-Eddine, M., & Belaissaoui, M. (2016, December). Technostress, coping and job satisfaction model of information systems. In *2016 International Conference on Computational Science and Computational Intelligence (CSCI)* (pp. 139-142). IEEE.
- 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
- Salmela-Aro, K., Upadaya, K., Hakkarainen, K., Lonka, K., & Alho, K. (2017). The dark side of internet use: two longitudinal studies of excessive internet use, depressive symptoms, school burnout and engagement among Finnish early and late adolescents. *Journal of Youth and Adolescence*, 46(2), 343–357.
- Salvagioni, D. A. J., Melanda, F. N., Mesas, A. E., González, A. D., Gabani, F. L., & Andrade, S. M. D. (2017). Physical, psychological and occupational consequences of job burnout: A systematic review of prospective studies. *PloS one*, 12(10), e0185781.
- Sandström, A., Peterson, J., Sandström, E., Lundberg, M., Nystrom, I. L. R., Nyberg, L., & Olsson, T. (2011). Cognitive deficits in relation to personality type and hypothalamic-pituitary-adrenal

(HPA) axis dysfunction in women with stress-related exhaustion. *Scandinavian journal of psychology*, 52(1), 71-82.

Schaufeli, W. B., Desart, S., & De Witte, H. (2020). Burnout Assessment Tool (BAT)—development, validity, and reliability. *International journal of environmental research and public health*, 17(24), 9495.

Schaufeli, W. B., De Witte, H., & Desart, S. (2019). Handleiding Burnout Assessment Tool (BAT). *KU Leuven, België: Intern rapport*.

Schaufeli, W., De Witte, H., & Desart, S. (2019). Burnout Assessment Tool (BAT)—Test Manual.

Schaufeli, W. B. & Salanova, M. (2014). Burnout, boredom and engagement at the workplace. in *An Introduction to Contemporary Work Psychology*, eds M. C. W. Peeters, J. De Jonge, and T. W. Taris (Chichester: John Wiley & Sons Ltd), 293–320.

Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the job demands-resources model: Implications for improving work and health. *Bridging occupational, organisational and public health*, 43-68.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.

Sellberg, C., & Susi, T. (2014). Technostress in the office: A distributed cognition perspective on human-technology interaction. *Cognition, Technology and Work*, 6(2), 187–201. <https://doi.org/10.1007/s10111-013-0256-9>

Šerbetar, I., & Sedlar, I. (2016). Assessing reliability of a multi-dimensional scale by coefficient alpha. *Journal of Elementary Education*, 9(1/2), 189-196.

Shafer, K., Scheibling, C., & Milkie, M. A. (2020). The division of domestic labor before and during the COVID-19 pandemic in Canada: Stagnation versus shifts in fathers' contributions. *Canadian Review of Sociology/Revue canadienne de sociologie*, 57(4), 523-549.

Shahid, M. N., Latif, K., Sohail, N., & Ashraf, M. A. (2011). Work stress and employee performance in banking sector evidence from district Faisalabad, Pakistan. *Asian Journal of Business and Management Sciences*, 1(7), 38-47.

- Sharma, D. D. & Gill, T. K. (2016). Technostress and personality traits—are they associated? – evidence from Indian bankers. *International Journal of Computer Science and Technology*, 7 (1), pp. 106-111
- Shek, D. T., & Yu, L. (2014). Confirmatory factor analysis using AMOS: a demonstration. *International Journal on Disability and Human Development*, 13(2), 191-204.
- Sirgy, M. J. (2021). Positive Outcomes of Wellbeing. In *The Psychology of Quality of Life* (pp. 59-78). Springer, Cham.
- Sirgy, M. J., Efraty, D., Siegel, P., & Lee, D. J. (2001). A new measure of quality of work life (qwl) based on need satisfaction and spill over theories. *Social Indicators Research*, 55(3), 241–302.
- Siw, T. I., Ellen, M. L., Geir A. E., Erik F. & Olaf G. A. (2008). Positive and negative work-family interaction and burnout: A longitudinal study of reciprocal relations. *Work and Stress*, 22(1): 1-15
- Soelton, M., Hardianti, D., Kuncoro, S., & Jumadi, J. (2020, February). Factors affecting burnout in manufacturing industries. In *4th International Conference on Management, Economics and Business (ICMEB 2019)* (Vol. 2, pp. 46-52). Atlantis Press.
- Spagnoli, P., Molino, M., Molinaro, D., Giancaspro, M. L., Manuti, A., & Ghislieri, C. (2020). Workaholism and Technostress during the Covid-19 emergency: the crucial role of the leaders on remote working. *Frontiers in Psychology*, 11, 3714.
- Spataro, B. M., Tilstra, S. A., Rubio, D. M. & McNeil, M. A. (2016). The toxicity of self-blame: Sex differences in burnout and coping in internal medicine trainees. *Journal of Women's Health*, 25, 1147–1152. <https://doi.org/10.1089/jwh.2015.5604>
- Srivastava, S. C., Chandra, S., & Shirish, A. (2015). Technostress creators and job outcomes: theorising the moderating influence of personality traits. *Information Systems Journal*, 25(4), 355–401.
- Stangor, C. (2011). *Research methods for the behavioural sciences (4th ed)*. Belmont CA: Wadsworth.

- Starmer, A. J., Frintner, M. P., & Freed, G. L. (2016). Work–life balance, burnout, and satisfaction of early career pediatricians. *Pediatrics*, 137(4).
- Swanson, R. A., & Holton, E. F. (2005). *Research in organisations: Foundations and methods in inquiry*. Berrett-Koehler Publishers.
- Syed, A. A., Gupta, S., & Rai, D. (2021). Psychological, social and economic impact of COVID 19 on the working population of India: Exploratory factor analysis approach. *International Journal of Disaster Risk Reduction*, 66, 102617.
- Tams, S., Thatcher, J. B., & Grover, V. (2018). Concentration, competence, confidence, and capture: An experimental study of age, interruption-based technostress, and task performance. *Journal of the Association for Information Systems*, 19(9), 2.
- Tandon, R. (2019). Workplace wellness: a priority for organisations, available at: www.businessworld.in/article/Workplace-Wellness-A-Priority-For-organisations/18-06-2021-167001/ (accessed June 18, 2021).
- 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., Maier, C., Laumer, S., & Weitzel, T. (2020). Explaining the link between technostress and technology addiction for social networking sites: A study of distraction as a coping behaviour. *information systems journal*, 30(1), 96-124.
- Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (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. (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, 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

Templeton, K., Bernstein, C. A., Sukhera, J., Nora, L. M., Newman, C., Burstin, H., ... & Busis, N. (2019). Gender-based differences in burnout: Issues faced by women physicians. *NAM Perspectives*.

Ten Brummelhuis, L. L., Ter Hoeven, C. L., Bakker, A. B., & Peper, B. (2011). Breaking through the loss cycle of burnout: The role of motivation. *Journal of Occupational and Organisational Psychology*, 84(2), 268–287.

Ter Hoeven, C. L., van Zoonen, W., & Fonner, K. L. (2016). The practical paradox of technology: The influence of communication technology use on employee burnout and engagement. *Communication monographs*, 83(2), 239-263.

Thangavhuelelo, T. M. (2013). *The relationship between leisure-time physical activity and psychological well-being in executive employees of selected African countries* (Doctoral dissertation).

Theorell, T., Hammarström, A., Aronsson, G., Bendz, L. T., Grape, T., Hogstedt, C., ... & Hall, C. (2015). A systematic review including meta-analysis of work environment and depressive symptoms. *BMC public health*, 15(1), 1-14.

Theorell, T., Hammarström, A., Gustafsson, P. E., Hanson, L. M., Janlert, U., & Westerlund, H. (2014). Job strain and depressive symptoms in men and women: a prospective study of the working population in Sweden. *J Epidemiol Community Health*, 68(1), 78-82.

Theron, M., Barkhuizen, N. & Du Plessis, Y. (2014). Managing the academic talent void: Investigating factors in academic turnover and retention in South Africa. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde* 40(1). Art. # 1117, p. 14 (<http://dx.doi.org/10.4102/sajip/v40i1.1117>)

Tracey, J. B. & Hinkin, T. R. (1996). How transformational leaders lead in the hospitality industry. *International Journal of Hospitality Management*, 15(2), pp. 165-176.

Trapero, F. G. A., Castaño, L. E. V., Parra, J. C. V., & García, J. D. L. G. (2017). Differences on self-perception of organisational pride and loyalty in Millennial & Generation X, considering gender and seniority variables. *Business and Economic Horizons (BEH)*, 13(1232-2017-2421), 270-286.

- Turel, O., & Gaudioso, F. (2018). Techno-stressors, distress and strain: The roles of leadership and competitive climates. *Cognition, Technology & Work*, 20(2), 309–324. <https://doi.org/10.1007/s10111-018-0461-7>
- Umene-Nakano, W., Kato, T. A., Kikuchi, S., Tateno, M., Fujisawa, D., Hoshuyama, T., & Nakamura, J. (2013). Nationwide survey of work environment, work-life balance and burnout among psychiatrists in Japan. *PloS one*, 8(2), e55189.
- Unterbrink, T. (2007). Parameters influencing health variables in a sample of 949 German teachers. *International Archives of Occupational Health*, 82, 117-123. <http://dx.doi.org/10.1007/s00420-008-0336-y>
- Ursachi, G., Horodnic, I. A. & Zait, A. (2015). How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Economics and Finance*, 20, 679-686.
- Valente, M. D. S. D. S., Lopes, C. S., Pastor-Valero, M., & Menezes, P. R. (2016). Psychosocial work conditions and burnout among Brazilian bank employees: A cross-sectional study. *Annals of Occupational Hygiene*, 60(5), 567-580.
- Van Dam, A. (2016). Subgroup analysis in burnout: relations between fatigue, anxiety, and depression. *Front. Psychol.* 7, 90.
- Van Strateen, L. (2014). *An appreciative inquiry of selected elements of staff well-being at a higher education institution* (Published Master's). University of the Free State, South Africa.
- van Zoonen, W., Verhoeven, J. W. M., & Vliegenthart, R. (2016). Social media's darkside: Including boundary conflicts. *Journal of Managerial Psychology*, 31(8), 1297–1311. <https://doi.org/10.1108/JMP-10-2015-0388>
- Verdonk, P., Hoofman, W. E., Van Veldhoven, M. J., Boelens, L. R., & Koppes, L. L. (2010). Work-related fatigue: the specific case of highly educated women in the Netherlands. *International archives of occupational and environmental health*, 83(3), 309-321.

- Virgă, D., Schaufeli, W. B., Taris, T. W., van Beek, I., & Sulea, C. (2019). Attachment styles and employee performance: The mediating role of burnout. *The Journal of psychology*, 153(4), 383-401.
- Voegtlin, C., & Greenwood, M. (2016). Corporate social responsibility and human resource management: A systematic review and conceptual analysis. *Human Resource Management Review*, 26, 181-197.
- Wang, X., & Li, B. (2019). Technostress among university teachers in higher education: A study using multidimensional person-environment misfit theory. *Frontiers in psychology*, 10, 1791.
- Wang, B., Liu, Y., Qian, J., and Parker, S. K. (2020). Achieving effective remote working during the COVID-19 pandemic: a work design perspective. *Appl. Psychol.* 70, 16–59. doi: 10.1111/apps.12290
- Wang, X., Tan, S. C., & Li, L. (2020). Technostress in university students' technology-enhanced learning: An investigation from multidimensional person-environment misfit. *Computers in Human Behaviour*, 105, 106208.
- Wang, J., Zhang, L., Jiang, F. et al. (2022). Gender differences in burnout among endocrinologists in China. *Frontiers in Psychology*, 13, 845188. <https://doi.org/10.3389/fpsyg.2022.845188>
- Weinberg, S., Edwards, G. & Garove, W. E. (1983). Burnout among employees of state residential facilities serving developmentally disabled persons. *Children and Youth Services Review*, 5(3), pp. 239-253.
- Whitehead, J. T. (1985). Job burnout in probation and parole: Its extent and intervention implications. *Criminal Justice and behaviour*, 12(1), 91-110.
- Wold, H., (1985). *Partial least squares*. In: Kotz, S., Johnson, N.L. (Eds.), *Encyclopaedia of Statistical Sciences*, 6, Wiley, New York, pp. 581–591.
- World Health Organisation (2019). *Burnout an 'Occupational Phenomenon': International Classification of Diseases*. Geneva: World Health Organisation.

- Wu, G., Duan, K., Zuo, J., Yang, J., & Wen, S. (2016). System dynamics model and simulation of employee work-family conflict in the construction industry. *International journal of environmental research and public health*, 13(11), 1059.
- Yang, L., Jaffe, S., Holtz, D., Suri, S., Sinha, S., Weston, J., et al. (2020). How work from home affects collaboration: a large-scale study of information workers in a natural experiment during COVID-19. *arXiv arXiv:2007.15584*
- Yavas, U., Babakus, E., & Karatepe, O. M. (2008). Attitudinal and behavioural consequences of work-family conflict and family-work conflict. *International Journal of Service Industry Management*.
- Yener, S., Arslan, A., & Kiliç, S. (2020). The moderating roles of technological self-efficacy and time management in the technostress and employee performance relationship through burnout. *Information Technology & People*.
- Yi, C. S., Hassan, Z., & Othman, A. E. A. (2015). Gender Differences in Work-Family Balance Factors. *Journal of Cognitive Sciences and Human Development*, 1(1), 34-45.
- Young-Hee, Y. (2013). Analysis of Burnout and Job Satisfaction among Nurses Based on the Job Demand-Resource Model [J]. *Journal of Korean Academy of Nursing*, 43(1), 114.
- Zeidner, M., Ben-Zur, H., Reshef-Weil, S. (2011). Vicarious life threat: An experimental test of conservation of resources (COR) theory. *Personal. Individ. Differ.* 50, 641–645.
- Zhang, L., Zhao, J., Xiao, H., Zheng, H., Xiao, Y., Chen, M., & Chen, D. (2014). Mental health and burnout in primary and secondary school teachers in the remote mountain areas of Guangdong Province in the People's Republic of China. *Neuropsychiatric Disease and Treatment*, 10, 123.
- Zhao, G., Wang, Q., Wu, L., & Dong, Y. (2022). Exploring the Structural Relationship Between University Support, Students' Technostress, and Burnout in Technology-enhanced Learning. *The Asia-Pacific Education Researcher*, 1-11.