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UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

THE IMPACT OF WORK ENGAGEMENT AND WORK ADDICTION ON DIGITAL

BURNOUT AMONG HIGHLY EDUCATED EMPLOYEES WITHIN THE RESEARCH

INDUSTRY

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NADINE RUDDY

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SUPERVISOR: DR NICOLEEN COETZEE

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ABSTRACT

Working environments have seen a radical transformation, from office bound working hours to flexible working hours and remote locations. Being connected and contactable only during working hours and at the office has become a thing of the past and a double-edged sword.

While employees in high pressured client service working environments rely on their digital devices in an attempt to gain a competitive edge, it is this constant connectivity causing exasperated exhaustion levels. The overuse of digital devices to access emails and work-related documents results in little "down time", causing stress and anxiety for employees.

This state of exhaustion coupled with burnout has brought about the phenomenon, digital burnout. Digital burnout sufferers are continuously tired and less productive as they struggle to focus on the task at hand while continuously multitasking. Left feeling demotivated, these individuals commonly associate their work with negative emotions.

Thus, the study aimed to assess the impact of work engagement and work addiction on digital burnout. A sequential explanatory mixed methods design was utilised which yielded a final sample of 69 quantitative and six qualitative interviews with highly educated research employees.

The results revealed intensified levels of exhaustion and absorption. Further, the results identified signs of over-engagement, leaning more towards work addiction than positive work engagement. These findings coupled with the augmented use of their digital devices and long working hours poses a risk of digital burnout. Further research on digital burnout is required, with a focus on a longitudinal study is proposed for future research.

Key terms: work engagement, work addiction, burnout, digital burnout, market research industry, highly educated employees, digital devices, exhaustion, always-on, digitally connected

CHAPTER 1:   INTRODUCTION TO RESEARCH STUDY

1.1. Introduction

Working environments have seen a transformation over the past couple of years. There has been a change from office working environments with desktop personal computers to flexible working hours in and out of the office using laptops and smartphones. The advancement and development of digital devices have enabled remote working that allows employees the freedom to work from any destination as long as they are digitally connected and online. Research by Chang (2014) suggests that employers and employees no longer live in a single realm, but rather in two parallel universes. The first is the physical realm consisting of face-to-face interaction in which individuals are becoming less present. The second is the virtual realm, in which people engage online through digital devices. Employees' working environments are becoming more challenging as individuals are expected to be continuously engaged and present in both realms. The use of digital devices is said to consume approximately eight hours and 41 minutes of every day (Chang, 2014). According to Chang (2014), for most individuals, this is more time spent in the online world than they spend sleeping.

Constantly being online and never completely resting has brought about a new phenomenon called digital burnout. Digital burnout is characterised by symptoms of constant tiredness, a lack of concentration, low productivity, and an inability to cope with routine (Breytenbach, 2015). This phenomenon has attracted much attention. However, a gap in the current research of this phenomenon is evident, and therefore a need has arisen to explore this concept further. In an attempt to limit the scope of the study, the researcher has decided to focus on highly educated employees, defined for the purpose of this study as an employee with a postgraduate degree, who works within the research industry.

The South African research industry is characterised by its long, hard working hours. Research companies are further known to be highly competitive and high-pressure environments with more than one hundred research companies in South Africa (Bizcommunity, 2013). Employees within this industry are required to have a postgraduate degree for most positions ranging from researchers to statisticians. Further, this high-pressure environment, which relies on service delivery to clients, often results in the heightened use of digital devices by these employees to increase efficiencies to gain a competitive edge. Due to the small size of the industry and limited amount of research companies, ensuring excellent client service and output becomes imperative. Through the increased use of digital devices, these employees can make themselves available to clients during and after working hours, in and out of the office.

Thus, the researcher has hypothesised that these individuals are over-engaged at work and at risk of being burnt out or addicted to their work. Although digital burnout ultimately forms part of burnout, it is induced by the combination of excessive working behaviour (work addiction) and digital interaction and exposure.

1.2. Defining the Key Construct: Digital Burnout

Digital burnout is a new phenomenon that has been identified, and occurs primarily in employees, internationally (Quill, 2017). Although there is no formal definition of digital burnout yet, for the purpose of this study digital burnout will be defined as a psychological state brought about by excessive working behaviour enabled by continuous connectivity via digital devices (Breytenbach, 2015). It is a topic of conversation that has not only psychologists intrigued but has caught the attention of employers due to the drastic effects it may have on their employee's well-being, such as lowered efficiency, inability to cope with stress and routine, and negative engagement working styles (Quill, 2017).

According to Dimas (2016), checking emails and being contactable outside of working hours has become the norm for employees in the United States of America. The overuse of digital devices in an attempt to gain a competitive edge has, in fact, had the opposite effect. Studies conducted by Lehigh University, Virginia Tech, and Colorado State University (Belkin, Becker, & Conroy, 2016) show that the overuse of devices after hours has resulted in decreased productivity and effectiveness at the office. Furthermore, the study revealed that these employees who are expected to always be contactable suffer from anticipatory stress (Belkin et al., 2016). This anticipatory stress prevents employees from disconnecting from work and as a result, they become emotionally exhausted (Dimas, 2016).

The anticipation of receiving emails and being expected to respond after working hours causes individuals to become obsessed with their email, inadvertently becoming addicted to work. According to Friedman (2016), even when there are no emails the employee needs to action, the mere anticipation of receiving an after-hours email creates an on-going stressor preventing detachment from work. Work engagement can, therefore, become negative due to the association of stress when thinking about work as a result of the expectation of constant availability (Schaufeli, 2013).

Worldwide, companies have recognised the changing working environment and have such adjusted their laws and company policies in an attempt to prevent digital burnout among their employees. Countries such as France, have recently adjusted their labour laws to accommodate for the right to disconnect from their emails and digital devices after hours (Thibodeau, 2017). This law requires companies with more than 50 employees to implement a disconnection policy in which employees are not required to receive or send emails and

phone calls outside of their contractual working hours (Thibodeau, 2017). In addition, companies such as Daimler AG have recognised the damaging effects of an "always on" culture and have implemented a system called "Mail on Holiday". This system deletes any emails received while on holiday (Grant-Marshall, 2014). The inability to disconnect and disengage from work strains professional and personal relationships, resulting in exhausted and demotivated employees (Belkin et al., 2016).

1.3. Problem Statement

This study thus focuses on the impact of work engagement and work addiction on digital burnout among highly educated individuals. Research studies measuring the impact and outcomes of the individual constructs, namely (1) work addiction, (2) work engagement, and (3) burnout in a working environment have been exhausted and thoroughly investigated in the literature review. However, very few research studies have been completed looking at the role of digital devices in the working environment and how this may lead to digital burnout among employees globally. To the researchers' knowledge, no formal studies have been conducted in South Africa on digital burnout among research employees.

Thus, with the fast-growing spread of this phenomenon and adjustments being made to working environments around the globe as highlighted above, more research is required to clarify the concept and how it affects South African working environments. In South Africa and specifically in research companies, there has been little to no change in company policies protecting employees from digital burnout. The lack of research on this phenomenon in South Africa has netted the attention of the researcher and is what formed the foundation of this study.

Chapter 2 extensively discusses the research that has already been done in this regard and expands on how companies worldwide have adjusted their working policies to protect their employees from digital burnout. Thus, although South African companies follow a similar trend to international companies, these companies have no research that outlines the dangers of digital burnout. Since no research has been conducted in South Africa, these companies do not have research readily available to guide the necessary changes in working policies. In the research sector where employees work in highly pressured environments, it therefore becomes critical for research to be conducted to assess the risk and indicators of digital burnout in a South African setting.

The researcher, therefore, aims to assess whether or not the use of digital devices within South African research companies has reached the point where it negatively impacts employee's working behaviour, exposing them to the risk of becoming digitally burnt out. If the results indicate a frequent use of digital devices is correlated with high scores for burnout, then

the risk of becoming digitally burnt out among these employees may be evident. The results may then be used to guide the development of a standardised digital burnout research measure, which could be used by South African employees to guide the restructuring of company policies. The aims and objectives of the study that aim to address the concerns relating to South African working environments and increased use of digital devices are outlined in the subsequent section.

1.4. Research Aim and Objectives

The primary aim of this study is to determine the impact of work engagement and work addiction on the risk of digital burnout among highly educated employees within the research industry. To attain this primary aim, the following objectives were set to encompass the qualitative and quantitative findings:

- To determine if participants experience digital burnout due to the excessive use of digital devices;
- Assess whether the belief that they are expected to be available induces anticipatory stress indicated by increased exhaustion levels;
- To assess the impact of work engagement on the risk of digital burnout;
- To determine the impact of work addiction on the risk of digital burnout; and
- To investigate whether highly educated employees within the research industry have an increased risk of digital burnout.

1.5. Outline of the Dissertation

The following section provides an outline of each of the chapters to follow in this dissertation:

- Chapter 2
  - This chapter will focus on the literature and theoretical background of digital burnout and the South African working environment. The literature review will also review and contextualise each of the constructs under investigation.
- Chapter 3
  - The research design and methodology chapter elaborates on the research methodology applied. The chapter will specifically focus on the mixed-methods design used. Attention will also be paid to the

procedures followed during data collection. Additionally, insights into the sampling method and sample characteristics will be provided.

- Chapter 4
  - o This chapter focuses on delivering a detailed discussion and analysis of the results. This chapter elaborates further on the descriptive statistics of the sample characteristics of the participants as well as the advanced analysis used to correlate the results of the various research measures.

- Chapter 5
  - o Finally, the researcher concludes this study in the last chapter, by summarising the findings and providing the limitations of the study as well as recommendations for future research. This chapter rounds off the study by linking the theoretical and literature research to the findings of the study.

1.6. Conclusion

Chapter one has outlined the definition and emergence of digital burnout. The researcher defined digital burnout as the progressive form of burnout caused by excessive working behaviour enabled by exposure to digital devices. Digital burnout has been identified as a new phenomenon on which very little research has been conducted. Therefore, a gap exists to identify whether highly educated employees and employers within the research industry are at an increased risk of becoming digitally burnt out. The researcher now refers to the subsequent chapter for an elaboration on the literature and theoretical point of departure.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The present chapter will detail the literature review for each construct under investigation. It will, therefore, provide the reader with a holistic view of the development and understanding of the research problem. For the purpose of this study, it is essential to have a clear and definite understanding of all variables and terms involved. This chapter aims to provide the reader with the context of the current area of research being assessed. Thus, the literature includes what has been done in previous research, how it was executed, and identifies areas of best practice as well as gaps in the existing literature.

The core sample of this study consists of highly educated individuals working within the research environment. It is therefore vital to understand the different working behaviours and how these are adopted by highly educated individuals. The researcher aims to provide the reader with a contextual understanding of the existing research that has highlighted the relationships between working methods and how they increase the risk of burnout. Finally, the combination of these two constructs within the changing working environment and increased exposure to digital platforms are explored.

The subsequent text provides the reader with a brief overview of different working styles. More specifically, this section focuses on work engagement and how it is defined within the physical working world. Thereafter, the literature delves into the more negative form of engagement commonly referred to as work addiction. This is done using literature and theoretical frameworks that underpin the understanding and usage of each construct.

Once the various working behaviours and their impact on burnout has been clearly described, burnout is further explored. A definition of burnout is provided and followed by the exploration of burnout studies conducted on employees and companies across various professions. Finally, the focus is on the changes in global working environments and then specifically South African employee trends. This section is used to elaborate on and contextualise the rise of digital burnout. Here, the outline of current digital addiction trends and the gaps that exist in digital burnout research within the working environment in South Africa are depicted. The remainder of this chapter will focus on each of these constructs in isolation, providing a detailed description of each and lastly, providing a conclusion on how they impact one another.

2.2. Physical Work Engagement

In the subsequent text, the terms work engagement and work addiction will be explained. These two concepts lie on the spectrum related to working behaviour and as a result, predict the positive outcome such as work satisfaction or the negative outcome such as burnout.

2.2.1. Defining Work Engagement

For the purpose of this study, the terms employee engagement and work engagement will not be used interchangeably. Employee engagement focuses on the relationship between the individual and the organisation. Work engagement, on the other hand, focuses on the relationship between the employee and his or her work (Schaufeli, 2013). Thus, this study specifically aims to focus on work engagement behaviours, which are task and goal orientated, rather than relationship-driven working behaviours.

Amabile (1996) describes work engagement as an intrinsic motivator that results in the voluntary execution of work to experience pleasure while working. Engaged individuals are commonly associated with being passionate, enthusiastic, and committed, completing their tasks with dedication and effort (Schaufeli, 2013). The terms motivation and commitment are frequently used in association with work engagement. Therefore, work engagement will be defined as encompassing vigour, dedication, and absorption. These three constructs are interlinked and are often used to describe the working behaviour of an engaged employee (Schaufeli, 2013).

Vigour can be described as someone who experiences high levels of energy while engaging with his or her work. In addition, these individuals are often persistent, regardless of the difficulty of the tasks they are assigned and have a high level of mental resilience (Schaufeli & Bakker, 2006). Dedication refers to employees who execute their job tasks with enthusiasm and pride. These individuals are extremely involved in their job and often enjoy a challenge. Lastly, Schaufeli and Bakker (2006, p. 702) describe an employee who is absorbed in his or her work as someone who is "happily engrossed in their work, whereby time passes quickly and has difficulties with detaching themselves from their work" (Kahn, 1990).

The term work engagement used in a business sense was first coined by the Gallup Organisation in 1990 (Schaufeli, 2013). In a book called *Human Resource Champion*, David Ulrich (1997) described the importance of engagement in the working environment in the following statement:

Employee contribution becomes a critical business issue because in trying to produce more output with less employee input, companies have no choice but to try to engage not only the body, but also the mind and the soul of every employee. (p. 125)

A study conducted by Bakker, Schaufeli, Leiter, and Taris (2008) highlighted the importance of positive engagement of employees with their work. The results of this study showed a clear competitive advantage for companies that fostered high levels of positive engagement. According to Schaufeli (2013), engaged employees execute their work tasks with a psychological investment in their company's success and therefore perform to a higher standard to exceed their key performance indicators. Upon contributing to the company's success, employees feel a sense of job satisfaction, which in turn motivates them to continue working in that environment, growing their commitment to the organisation (Harter, Schmidt, & Hayes, 2002).

According to Bakker et al. (2008), two components facilitate engagement in a working environment, namely job resources and personal resources. Job resources can be defined as the social support, professional feedback, autonomy, and opportunity for professional development within an organisation (Bakker et al., 2008). Job resources can act as an intrinsic motivator that fosters personal development among employees. Furthermore, it can act as an extrinsic motivator that provides the employee with everything needed to achieve their work goals (Bakker et al., 2008). Extrinsic motivators such as supportive staff and performance appraisals foster learning and therefore an increase in competency, resulting in successful task completion. Overall, job resources could have three impacts on an employee and his or her organisation. These include the reduction of job demands, the stimulation of learning and development, and creating a functional environment in which employees can achieve their work goals (Bakker et al., 2008). By fostering an environment that allows for the achievement of work goals, an employee's sense of autonomy and competence is increased, therefore encouraging high engagement work ethics (Bakker et al., 2008). In a study conducted by Schaufeli and Bakker (2004), structural equation modelling was used. The data for the study came from four independent occupational samples with a total sample size of 1698 participants. The study found a positive relationship between job resources and job engagement. Furthermore, Hanaken, Bakker, and Schaufeli (2006) replicated this study with over 2000 Finnish teachers and found that supervisor support, as well as an innovative and social climate, has strong positive correlations with high work engagement.

The second construct, personal resources, that facilitates engagement can be defined as the "positive self-evaluations that are linked to resiliency and refer to the individual's sense of their ability to control and impact upon their environment successfully" (Hobfoll, Johnson,

Ennis, & Jackson, 2003 in Bakker et al., 2008, p. 192). These positive self-evaluations have been shown to encourage life satisfaction and goal-setting behaviours.

Stress coping mechanisms play an important role in the level of employee engagement. Coping can be defined as "an individual's attempt to prevent, reduce or eliminate negative experiences" (Mostert & Joubert, 2005, p. 42). In a cross-sectional study conducted by Mostert and Joubert (2005) among Western Cape police officers, two types of coping styles were identified, namely avoidance coping and approach coping. Avoidance coping consists of avoiding the stressor in the hope that it will go away, while approach coping includes active coping, where one identifies the stressor and use positive solutions to deal with the stressor. Mostert and Joubert (2005) focused on the adverse effects of job stress on employees and their work in an attempt to identify the effect each coping style had on burnout. The results of this study indicated that those who engaged in an approached coping style in an attempt to minimise the negative effects of job stress had decreased levels of burnout. In contrast, the police officers who engaged in an avoidance coping mechanism suffered from increased levels of burnout (Mostert & Joubert, 2005).

In another cross-sectional study conducted by Rothmann and Storm in 2003, 1910 South African police officers were interviewed. It was found that the police officers who were most engaged with their work practised an active coping style. These police officers were described as problem solvers who were continuously removing stressors, enabling them to be more engaged at work. Engaged employees with well-developed personal resources are described as highly self-efficacious and have a general positive belief that they can overcome any task and successfully fulfil their job roles (Xanthoupoulou, Bakker, Demerouti, & Schaufeli, 2007).

It is evident from existing literature that job and personal resources are both positively correlated with engagement. Job resources allow employees to complete job tasks without any obstacles and with the motivation of personal development. Personal resources instil a high level of resilience and optimism, which result in high levels of work engagement (Bakker et al., 2008).

Thus, employees who are engaged with their work can be defined as engaging with work while in a positive frame of mind (Schaufeli & Bakker, 2006). Therefore, even when these individuals work long hours, they experience positive emotions towards their work. These individuals often engage physically, emotionally, and cognitively with their work in a positive manner (Innanen, Tolvanen, & Salmela-Aro, 2014). Lastly, Kahn (1992, p. 322) described engagement as when "people feel and are attentive, connected, integrated, and focused in their role performance".

2.2.2. Why Having Engaged Employees is Critical for Organisations

"When engagement starts to decline, companies become vulnerable not only to a measurable drop in productivity, but also to poorer customer service and greater rates of absenteeism and turnover." (Towers Watson, 2012, p. 5). During a global study conducted across various industries by Towers Watson (2012), the attitudes and concerns of 32,000 workers were taken into consideration. The study highlighted these employees' working behaviours in terms of their engagement and commitment to their employers. It was found that only 35% of the global sample felt that they were highly engaged with their work, while 26% felt disengaged. A further 22% of the total sample of employees felt that they were unsupported and 17% felt detached from their work. Interestingly, this study found that engaged employees only lost 3.2 days in absenteeism and 7.6 days of presenteeism (lack of productivity at work) compared to the 4.2 days lost in absenteeism and 14.1 days of presenteeism of disengaged employees (Towers Watson, 2012). Therefore, fostering engaged workforces becomes critical as the outcome of this study showed that engaged employees were 22% more likely to remain with their current employer than those who were disengaged. Thus, the impact of maintaining positive work engagement is critical in employee productivity and loyalty to their organisations (Towers Watson, 2012).

Through their study, Towers Watson (2012) suggested that companies strategically enforce sustainable engagement practices that empower employees to remain engaged, enabled, and energised. Furthermore, Towers Watson (2012) described engaged employees as employees who believe in the company goals, feel an emotional connection to their organisation, and are willing to go the extra mile. Enabled employees were described as those who were free from obstacles in their working environment, had access to adequate resources, and were able to meet all work challenges effectively (Towers Watson, 2012).

In an exhaustive explorative study conducted on workplace engagement by Gallup (a consultancy company) (Harter, Schmidt, Killham, & Asplund, 2006), variables of the study were controlled at company level to determine how work engagement affected individuals and their organisations. This study involved accessing the financial records, available over the research period, of 90 publicly traded organisations that had conducted a Q12 employee engagement survey. A Q12 survey aims to assess employee engagement by asking employees a mere 12 questions (Harter et al., 2006).

The Gallup Consultancy Company spent decades writing and testing hundreds of questions, because their wording and order are imperative to accurately measure engagement (Ott, 2007). Their research yielded Gallup's Q12 survey: the 12 questions that measure the most important elements of employee engagement. This has been used to assess more than 25 million employees. Harter et al. (2006) found that competitive companies that had four

engaged employees to every one disengaged employee experienced an additional 2.6% growth in earnings per share than that of their competitors. Furthermore, employee engagement had a positive impact on productivity, profitability, and lowered absenteeism (Ott, 2007).

Research studies conducted on engagement are exhaustive. Thus, the studies covered above are deemed sufficient for providing a definitive explanation of engagement and its importance in the organisational setting.

In light of the discussions presented thus far, work engagement can be defined as the opposite state of the mind to burnout (Schaufeli & Bakker, 2006), which is characterised by three constructs: exhaustion, cynicism, and lack of accomplishment (Maslach, Schaufeli, & Leiter, 2001). For the purpose of this study, it is important for the reader to not view engagement in isolation but rather to have a holistic understanding of the term. This includes understanding the full spectrum of engagement, including those who are positively engaged with their work and therefore strive in the working environment and those who are negatively engaged and typically display symptoms of work addiction. These two forms of engagement and working behaviour determine the individual's propensity to become burnt out (Maslach et al., 2001). Burnout will be discussed and elaborated on extensively in section 2.4.

The succeeding text will elaborate on and provide a broader understanding of work addiction and its impact on employee productivity and working behaviour. Later in section 2.5, the continuous engagement in the online sphere that may lead to digital burnout will be further explored.

2.3. Work Addiction

2.3.1. Defining Work Addiction/Workaholism

For the purpose of this study, the terms workaholism and work addiction will be used interchangeably. These two terms serve to describe the behaviour of a workaholic that can be defined as an individual with the "tendency to work excessively hard, obsessed with work and the unwillingness to disengage with work" (Innanen et al., 2014, p. 39). Workaholism is a term coined by Wayne Oates and was classified as a serious compulsive disorder in the late 1980s (Robinson, 1999). It is an addictive pattern caused by an obsessive working behaviour. Typically, this addiction is fuelled by individuals' unfulfilled or unmet needs (Berger, 2005). Individuals may experience the desire to achieve a certain standard of success in order to feel that what they have done is acceptable and lives up to the standards of others. Commonly, these individuals may believe that normal working behaviour is not enough and cannot be deemed acceptable (Berger, 2005). In some cases, workaholics have a low self-esteem, which

drives them to work excessively hard to prove their self-worth. It is not uncommon for workaholics to continue in this behaviour, due to their inability to relax as they are always pushing to achieve more (Berger, 2005).

It is important to note that in the study conducted by Bakker et al. (2008), a clear differentiation is made between work engagement and workaholism. Bakker et al. (2008) describe engaged employees as hard working and involved but unlike workaholics, experience positive emotions when fulfilling their work tasks. Engaged employees lack the compulsive working drive commonly held by workaholics. Engaged employees work hard because they enjoy what they do, not due to an irresistible inner urge or compulsion (Schaufeli, Taris, & van Rhenen, 2008). In contrast to this, workaholics are described as hard-working individuals who find it very difficult to detach themselves from their work, even when they are at home or during leisure time (Taris, Schaufeli, & Shimazu, 2010).

According to Taris et al. (2010), workaholics experience an increasing desire to achieve and therefore adopt a compulsive working behaviour. This behaviour leads to negative work engagement in which the individual works long hours without taking the necessary time to recover, therefore increasing his or her risk of burnout (van Gordon, Shonin, Dunn, Garcia-Campayo, Demarzo & Griffths, 2017).

Schaufeli, Taris, and Bakker (2008) also noted that these employees tend to work excessively hard at the expense of their health and interaction in social and other spheres of their lives. Typically, these employees will use work as an excuse to avoid engaging in social functions in the working environment. Van Gordon et al. (2017) furthermore identified the unwillingness of these individuals to share intimacy with others. The World Service Organisation (2005) explains that workaholism can appear in various forms. These include completing unnecessary work, making everything in one's life work related, and deriving and basing one's self-esteem, and image solely on one's work. Thus, work-addicted individuals keep themselves overly busy and consequently avoid maintaining their health and intimate relationships with others.

2.3.2. Effects of Work Addiction/ Workaholism on the Individual and Organisation

Andreassen (2014) describes work addiction as a serious problem often fostered and encouraged in an individual's working environment. Many organisations may reward and praise a workaholic for the hard work and extra hours they put in. Furthermore, in many organisations, working long periods after hours is expected from their employees. This appraisal and reward further encourages the addictive behaviour of the workaholic. Sussman (2013) describes two origins of work addiction, namely the compulsive need for success or

achievement and the need to escape from problems. According to Sussman (2013), workaholics use the work affirmations such as salary increases and praise from management and colleagues to discount the negative consequences suffered in their personal life. These consequences may include increased feelings of being burnt out, social exclusion, and tension with significant others around their obsessive working behaviour. Further, this denial of the negative impact that work addiction has on one's life may lead to life-threatening activities such as driving while one's mind is preoccupied with work or using one's cell phone when driving to complete one's work (Sussman, Lisha, & Griffiths, 2011).

Several studies have highlighted the adverse effects of excessive working behaviour and how it impacts an employee's physical and psychological well-being. In a systematic review of literature, Sussman (2013) states that excessive working behaviour not only becomes an addiction but may also lead to the point of non-enjoyment of one's work and environment. This incessant working behaviour causes harm to oneself and others through the life imbalance it creates (Andreassen, 2014).

However, even though the individual may become negative about his or her working environment, he or she continues to work due to his or her need to comply with organisational demands (Sussman, 2013). This highlights the compulsivity of the working pattern of a work-addicted employee who would continue working even at the expense of his or her own happiness and fulfilment.

Líbano, Grumbau, Salanove, and Schaufeli (2010) conducted a study on 2714 Spanish and Dutch employees to understand workaholism as a negative construct. This study revealed a significant inverse correlation between workaholism and employees' psychological well-being. The results indicated that higher scores for workaholism were associated with lower scores for perceived health and happiness. These results confirmed the hypothesis that workaholism is a negative psychological construct (Líbano et al., 2010). These results correlate with the results found in a Canadian study in which 530 interviewed MBA students' emotional and physical well-being ratings were lower, the higher their workaholism scores were (Burke, 2000).

Furthermore, a study conducted by Sussman (2013) highlighted the negative behaviours and effects associated with workaholics. Some of these behaviours included the excessive time spent on work that may often fall beyond the roles and responsibilities of an employee. In addition, it was found that when prevented from taking on excessive workloads, work-addicted employees express frustration (Sussman, 2013). Another common characteristic among workaholics is their inflexibility, which ultimately results in poor relationships with those at work and an imbalanced work-family life. Sussman (2013) summarised the lack of personal well-being and emotional satisfaction to include increased levels of stress, lowered self-esteem, and overall low levels of life and work satisfaction.

Sussman (2013) and Robinson and Kelley (1998) further explored the personal relationships of workaholics and found that these individuals had a significantly higher propensity to encounter marital problems, poor communication with their spouses and difficulty maintaining relationships with their children.

In a study conducted by Shimazu and Schaufeli (2009) among 776 Japanese employees, the researchers focused on the full spectrum of employee behaviours, from engagement to workaholism, and their correlation with mental and physical health. The study found that by not giving themselves enough time to recover from their excessive working, workaholics are left emotionally and cognitively drained. This study also revealed that workaholics displayed increased levels of psychological distress and physical illness (Shimazu & Schaufeli, 2009). The strongest correlation was between workaholism and ill health; this highlighted the risk of workaholism negatively affecting an individual's health. Again, this study confirms the negative impact of excessive working behaviour on personal and family life and relationships. Schaufeli et al. (2008) argued that workaholics create more tasks for themselves through their continuous strive for perfection, inflexibility, and inability to delegate.

2.3.3. Workaholism and Personality Types

In a study conducted by Andreassen, Ursin, Eriksin, and Pallesen (2012) on a sample of 235 Norwegian bank employees that participated in a cross-sectional survey, it was shown that there was a positive relationship between narcissism and work enjoyment and engagement, particularly among employees who held a managerial position. Andreassen et al. (2012) theorised that this positive correlation was derived from the affirmation and confirmation of the sense of self these individuals derived from being overly involved at work. For the purpose of their study, Andreassen et al. (2012) included the managerial drive to climb the organisational ladder in their definition of narcissism. Although there are several studies conducted on work addiction, very few explain the process of how one becomes addicted to work. Andreassen et al. (2012) believed that the above results could contribute to the possible explanation of how work addiction arises as they describe narcissism as a basic personality trait. Narcissistic individuals become overly involved at work in an attempt to boost their self-image in a public setting.

According to Clark (2016), there are positive and negative correlations between workaholism and certain personality types. For example, extraversion and neuroticism are positively correlated with workaholism, while agreeableness is negatively correlated with it. Achievement-orientated personality types such as Type A personality types are highly correlated with workaholism due to the desire to achieve and the drive for perfectionism (Clark, Michel, Zhadnova, Pui & Baltes, 2016).

In a meta-analysis conducted by Clarke et al. (2016) it was found that perfectionism ($r = .46$) and Type A personality ($r = .32$) had the strongest correlations with workaholism of all the individual personality traits assessed (Clarke et al., 2016). Furthermore, studies by Andreassen et al. (2012) and Clark, Lelchook, and Taylor (2010) revealed that narcissism was also positively correlated to work addiction.

A study conducted by Součková, Vaculík, and Procházka (2014) aimed to assess the extent to which different personality traits determine the prevalence of workaholism. The study focused specifically on conscientiousness, perfectionism, and neuroticism. The study included the views of university students and employees and consisted of a total sample of 470 participants ranging from 19 to 66 years of age. Findings of the study indicated a high correlation between workaholism and neuroticism and perfectionism. The opposite was found for conscientiousness which was weakly correlated with workaholism (Součková et al., 2014). Possible explanations provided for the over involvement in work by perfectionists and neurotics is the need to boost their self-esteem and exercise control over their immediate environment. The results also indicated that individuals who were less emotionally stable were driven to improve their self-esteem and were therefore more likely to negatively immerse themselves in their work (Součková et al., 2014).

Součková et al.'s (2014) findings confirm previous findings from studies conducted by Aziz and Tronzo (2011) and Liang and Chu (2009) that personality traits are the determining factor for the risk of becoming a workaholic. Aziz and Tronzo (2011) showed that personality explained 15% of the variance in work enjoyment and 23% in work involvement. The study was conducted with American workers aged between 25 and 45 years of age.

Findings from the above studies corroborate the findings from a study conducted by Robinson (2000), in which it was recognised that workaholics are less productive than engaged employees are. This lowered productivity can be attributed to their perfectionistic personality types, which result in their attention being focused on irrelevant details. Furthermore, the repeated checking of work results in lost time, in which these individuals could have been more productive (Součková et al., 2014). Robinson (2000) also found that workaholics were more prone to make mistakes due to their increased stress levels and poor health. The inability to dedicate their time to various tasks efficiently resulted in time spent on unnecessary activities as well as poor time estimation when completing tasks (Robinson, 2000). Hogan and Hogan (2001) conducted a study during which they observed behavioural patterns of executive managers. Their results attributed the unproductive behaviour of workaholics to rigidity caused by the drive for perfectionism. The subsequent text will focus on the most extreme consequence of work addiction, namely burnout.

2.4. Burnout

2.4.1. Defining Burnout

Professional burnout was a term first used by Bradley (1969) in his article that focused on burnout among probation officers managing juvenile delinquents. Thereafter, Freudenberger (1974) studied and identified the physical and behavioural signs of burnout. During his career, Freudenberger (1974) worked as a volunteer at a clinic for drug addiction where he noticed changes in the behaviour of volunteers. These volunteers, over time, became more exhausted and less committed. Freudenberger's (1974) work was primarily influenced by his observations of his surroundings as well as his personal experiences, having burnt out twice before. He summarised these changes in behaviour to include irritability, short temperedness, exhaustion, frequent headaches, and shortness of breath (Freudenberger, 1974). Since then, many studies have explored the definition and impact of burnout. The definition of burnout and the related studies conducted will be elaborated on in the text to follow.

According to Bakker and Costa (2014, p. 113), burnout can be defined as the "state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform". Montero-Marín and García-Campayo (2010) defined each of these symptoms individually. Exhaustion was described as the depletion of one's emotional resources, resulting in one being unable to give any more of oneself emotionally (Maslach & Jackson, 1981). Burnt out employees also display typical symptoms of cynicism resulting in a detached attitude towards their work. Lastly, inefficiency and doubt in one's capacity to perform was defined as the feeling of being incompetent due to the lack of completion of tasks (Montero-Marín & García-Campayo, 2010). Thus, it was concluded that burnout was a symptom of the body's inability to cope with and manage stress at work (Montero-Marín & García-Campayo, 2010).

It is therefore important to note that burnout has a variety of symptoms that can be psychological or physiological in nature. Some of the psychological symptoms include depression and anxiety (van Gordon et al., 2008). On the other hand, some of the physiological symptoms include sleeplessness, increased illness, and impaired concentration (Sussman, 2013). According to Ackerley, Burnell, Holder, and Kurdek (1998), burnout is the most drastic physical illness of workaholism.

2.4.2. The Causes and Consequences of Burnout

In a study done by Bakker and Costa (2014), situational and individual factors were identified as the two typical root causes of burnout. Situational factors are directly related to

the working environment, in which the job demands and a lack of available resources cause the individual to undergo severe hardship (Bakker & Costa, 2014). Factors contributing to burnout are role ambiguity, stress, excessive workloads, and high-pressure working environments (Van Gordon et al., 2017).

Role ambiguity was further explored in a cross-sectional study on 2115 medical residents, conducted by Schaufeli, Bakker, van der Heijden, and Prins (2009). This study, which focused on the roles of doctors versus trainees, found that role ambiguity was one of the primary situational causes of burnout. With no clear boundaries regarding work roles and tasks in place, excessive working behaviours beyond scope of the original role develops. It is suggested by Powell (2011) that role ambiguity can be managed by companies that clearly demarcate employees' roles and responsibilities for them. This could be done in the form of employee surveys, which enables the management team to identify individuals or departments that show signs of role ambiguity stressors (Powell, 2011). Managers are then able to assist these employees with graphs, descriptors, and visual cues to provide them with a clear understanding of their role within the company (Powell, 2011).

Additionally, a lack of resources results in increased pressure on current employees to complete the same amount of work within the expected timeframe. According to Sussman (2013) increasing pressure on employees to engage in excessive working behaviours has become evident. Sussman (2013) further explained that working environments that are more demanding with fewer resources leads to work burnout. Completing the same amount of work with fewer resources has become an increasing trend among employers with the changing economy in which companies are forced to cut costs (Powell, 2011). It is crucial for managers to ensure equal distribution of workloads to safeguard individuals from being overworked. This includes managing team structures and fostering a collaborative culture (Powell, 2011). Job resources are the most predominant predictor of work engagement (Demerouti et al., 2003; Bakker, Demerouti, & Verbeke, 2004).

The second category, personal resources, can be defined as "aspects of the self that are generally linked to resiliency and refer to individual's sense of their ability to control and impact upon their environment successfully" (Hobfoll, Johnson, Ennis, & Jackson, 2003 in Xanthopoulou et al., 2007, p. 124). Xanthopoulou et al. (2007) identified three core traits, namely self-efficacy, organisational-based self-esteem, and optimism. These three characteristics are key in the individual's ability to adapt to his or her working environment (Xanthopoulou et al., 2007). The subsequent text will provide a brief definition of each.

The first, self-efficacy, is the ability of the individual to assess the context and then form perceptions of his or her ability to meet the demands set forth. Self-efficacy is based on prior experiences and forms the foundation for the belief or disbelief that one can complete the task (Chen, Gully, & Eden, 2001). Self-efficacy was measured in a study conducted by

Van Yperen and Snijders (2000), in which it was found that self-efficacy helps maintain one's psychological health through the efficient management of job demands. Believing that one is able to do the job instils a sense of confidence, which in turn motivates one to take on excessive job demands (Van Yperen & Snijders, 2000).

The second, organisation-based self-esteem (OBSE), is defined by Pierce, Gardner, Cummings, and Dunham (1989) as the individual's belief in him or herself to fulfil his or her role within the organisation, thus positively contributing to the organisation. Increased OBSE was proven in a study conducted by Pierce and Gardner (2004) to defend against symptoms of a demanding organisational setting such as depression and physical and mental strain. The increased confidence of employees in their abilities acted as motivation, enabling better stress coping mechanisms (Pierce & Gardner, 2004).

Lastly, optimism was defined as a positive outlook on one's work in which one believes that there will always be a positive outcome. Optimism results in a willingness to cope with and deal with challenges within the working environment (Scheier & Carver, 1985). Optimistic employees facing demanding work environments had lower mental and physical distress (Mäkikangas & Kinnunen, 2003).

Therefore, job resources and personal resources are critical in the assessment of burnout. In their study conducted on licensed psychologists, Ackerley et al. (1998) described burnout as being caused by workaholics over commitment to their work tasks and lack of personal control. These burnout symptoms were attributed to two main working behaviours, namely the lack of boundaries between work and other areas of life and the physical exhaustion from addictive working (Sussman, 2013).

Maslach and Jackson (1981) concluded that burnout is a severe consequence of exhaustion, which is detrimental to the individual and the organisation as a whole.

Burnout has been thoroughly researched and employers are now more conscious of burnout due to the adverse effects it has on their business, such as lowered productivity and increased absenteeism (van Gordon et al., 2017). However, although individuals are still at risk for burnout, this phenomenon has evolved to include the risk of digital burnout due to the rapid change in working environments that demand the increased use and exposure to digital devices. Burnout is no longer linked merely to a physical working environment but has extended to the impact that technology has on the way in which society functions and engages with their working environments.

2.5. Digital Burnout

With the changing economy, employers are forced to cut costs and become more task efficient to save money. This often means that fewer employees are expected to do the same amount of work in highly pressured environments. These increased work pressures now include the increased use of digital devices, causing little "downtime" in which individuals are entirely disconnected from work.

2.5.1. Defining Digital Burnout

According to Breytenbach (2015), digital burnout is defined by the amount of exhaustion experienced. Digital burnout sufferers are continuously tired, unable to hold their concentration, or cope with routine. This exhaustion results in lowered productivity as they struggle to focus on their tasks due to continuous multitasking (Breytenbach, 2015). The overuse of digital devices to access emails and work-related documents results in little to no "down time", which causes stress and anxiety for employees (Friedman, 2016). An article by Bonobo (2017) suggest that there are three types of digital burnout: (1) the feeling of constantly being overloaded, (2) negative feelings towards one's work, and (3) feeling as though one is stuck in one's work and not able to successfully complete tasks or move forward (Chang, 2014). The defining factor between daily stress and digital burnout is the impact it has on one's motivation. The constant feeling that one does not want to go to work or engage in work may be indicative of digital burnout (Bonobo, 2017).

2.5.2. The Impact of Increased use of Digital Devices in a Working Environment

With the increased use of digital devices, working employees are now not only at risk of burnout but are specifically at risk of digital burnout. Although digital burnout is a new term that still needs refining and clarification, for the purpose of this study it will be defined as an addiction that involves an excessive commitment to one's physical and digital existence (Chang, 2014). One's physical existence is the reality and the environment in which one physically works and lives (Chang, 2014). The digital existence is in the online environment where one has increased engagement and exposure to digital working enablers such as a variety of digital devices, mobile email, and applications (apps) (Chang, 2014).

Not only do employers expect employees to be available in their physical existence, but employees are also expected to be online in their online existence, causing them to be in a permanent state of multitasking. Chang (2014) noted that employees tend to delve so deeply into their online existence that, upon their return to the physical reality, they realise there are

still other things to do. A common assumption among employers and employees is that being online and available at any point for clients and other colleagues provides them with a competitive edge (Quill, 2017). It is the use and exposure to various devices that enables multitasking as employees are now able to access and complete their work from any remote location. However, Breytenbach (2015) notes that continuous multitasking leads to being less, rather than more, productive. Living in this parallel universe thus causes exhaustion and contributes to their risk of digital burnout, as employees need to work harder for them to be able to live in both the physical and the online sphere (Chang, 2014).

Turel, Serenko, and Bontis (2011) conducted a study with 241 organisational mobile email users on the extended and growing use of mobile and digital devices. This study revealed increased organisational pervasive technologies usage could result in technology addiction and dependency. It was found that the use of mobile emails was associated with a perceived increase in work overload (Turel et al., 2011). This perception around work overload in turn negatively impacted on the employees' commitment to their work and company. Furthermore, those who had experienced high levels of mobile email engagement were more likely to have family conflict (Turel et al., 2011). Thus, the combination of lowered work commitment and family conflict resulted in high levels of work-family conflict for these individuals, which in turn resulted in poorer productivity (Turel et al., 2011). In this study, Turel et al. (2011) theorised that the dependency on technology is the cause for excessive use, which then impacts on the daily lives of these participants (Turel et al., 2011). This overuse of technology may become an escape or a safe haven employees use to avoid daily tasks or routines. Interference with their use of technology may cause withdrawals or cause the individual to become irritable (Turel et al., 2011).

In the same vein, Camargo (2008) conducted a study in which the role of emails in the experience of work-related burnout was assessed. This qualitative research focused particularly on full-time employees working in a highly technological environment, thus living in the parallel universe identified by Chang (2014). The results found that these environments were extremely fast paced and ever changing. A common practice of misusing and overusing emails seemed to occur. The overexposure to the digital realm was identified as part of the chain of events that contribute to work-related burnout (Camargo, 2008).

Shimazu and Schaufeli (2009) stated that clear boundaries between one's personal and work life have diminished over the past few years. The degeneration in these boundaries was largely attributed to the increased use of organisational pervasive information system technology (IST) among their sample (Shimazu & Schaufeli, 2009). Organisational pervasive IST can be defined as "technologies that may be used almost anytime and anywhere, thus they do not constrain employees to the physical location of their organization" (Turel et al., 2011, p. 88). The increased penetration of a technology-based working environment means

that employees are no longer bound by traditional office environments. Although the development of these technologies has allowed employees more flexibility in their working environments, it has also lead to less structured working hours and increased expectations to be available at any given point (Shimazu & Schaufeli, 2009).

In an article by Breytenbach (2015) about addressing digital burnout in the working environment, the shift in working environments from office-bound jobs encompassing traditional working hours (09:00 to 17:00) to online availability which enables remote working was again confirmed. Digital burnout is typically identified through symptoms such as the inability to cope with routine and control of one's emotions. Exhaustion and lowered productivity are also common side effects associated with digital burnout (Breytenbach, 2015). Breytenbach (2015) highlighted that the recovery process of digital burnout is to be differentiated from traditional burnout recovery. Traditional burnout requires one to take a substantial period off work where one can rest completely. Digital burnout, however, requires that one not only take some time off work but also requires a change in digital behaviour and usage (Breytenbach, 2015).

A recent study conducted by Belkin et al. (2016) on 279 working American adults found a direct relationship between increased stress and exhaustion levels and excessive digital device usage. The study interviewed employees specifically with regards to their access to emails after working hours and the impact this had on their stress levels. The sending and receiving of emails were found to negatively impact on employees' productivity as they became exhausted from anticipatory stress (Friedman, 2016). Anticipatory stress is caused by the constant anxiety that one may receive an after-hours email or phone call, requiring additional work (Friedman, 2016).

The expectation of after-hours availability caused these employees emotional stress. Belkin et al. (2016) found in their study that even when there were no emails that require the employee to complete a task, the mere anticipation that an email would come through prevents these employees from disconnecting from their work. Thus, it is not the amount of time spent on emails after working hours, but rather the anticipation of incoming emails that results in exhaustion caused by continuous stress. Exhaustion combined with the expectation to continuously check emails results in employees who are in a permanent state of anxiety and uncertainty (Belkin et al., 2016). This inability to disconnect further blurs the lines between work and family balance, causing more conflict within employees' households (Belkin et al., 2016). In addition, the accessibility of their emails allows employees to work as though they never left their working environment (Friedman, 2016). This continuous working pattern leads to the perception of work overload and prohibits the ability to disconnect (Belkin et al., 2016). Thus, the study by Belkin et al. (2016) was the first study to identify anticipatory stress caused by after-hours emails combined with already-known factors of burnout such as increased

workloads, interpersonal conflicts, and amplified time pressures, which result in exhaustion. These intensified exhaustion levels lead to the augmented risk of digital burnout (Belkin et al., 2016).

Digital burnout is a new phenomenon with severe implications for employers and employees. Very little research has currently been conducted on digital burnout, particularly in South Africa. The subsequent text will address global and South African employee trends and what is currently being done to curb digital burnout.

2.5.3. Global Working Environment Trends and Well-Being in a Digital Era

Heerwagen, Kelly, and Kampschroer (2016) highlight the shift in employee working environments and trends that have been brought about by the increased use of technology in the working space. Some of these shifts include the working environments of today being more dependent on technical skills, mobile working, and limited timelines for deliverables (Heerwagen et al., 2016). These changes have been attributed to two main drivers, namely (1) the need for companies to be more competitive in terms of costs and timing and (2) the development of technology has allowed work to become separated from fixed times and locations (Heerwagen et al., 2016). Recent research conducted by Chang (2014) has shown that most individuals spend more time on their digital devices (8 hours and 40 minutes) than they do sleeping. Employees believe that they have a competitive edge being available at all times for colleagues and clients. However, in an article by Quill (2017) it was highlighted that 44% of Australians state that they complete working activities outside of their prescribed working hours. The uncertainty of when they are allowed to switch off causes employees to use their digital devices excessively, in case any work arises (Quill, 2017). Studies conducted by Colorado State University and the University of British Columbia have shown that employees who check their emails only three times daily are less stressed that those who do so incessantly.

Globally, there has been recognition of digital burnout and the effect it has on businesses as employees become less productive and more exhausted (Breytenbach, 2015). Increased personal and family life conflict due to increased digital usage negatively impacts employees' stress and sleep cycles, ultimately translating to ineffectiveness in the working environment (Quill, 2017). While South African companies are becoming more persistent that their employees are electronically available after hours, international companies have realised the threat of digital burnout and have implemented preventative measures (Grant-Marshall, 2014). In order to prevent digital burnout, companies such as BMW and Volkswagen in Germany have implemented regulations that prevent the use of emails or employees being

contacted after working hours or while on holiday (Grant-Marshall, 2014). Furthermore, Chrysler International allows employees to delete all emails received while on leave. The Unlimited Group, voted the best company to work for by Deloitte in 2013 and 2014, has an email free Wednesday to ensure face-to-face engagement, collaboration, and conversation among staff members (Breytenbach, 2015).

Recently, France has adjusted their labour laws to allow employees to disconnect. This law ensures that companies with more than 50 employees have a company policy in place in which employees are not expected to respond to or send emails outside of their working hours, as stipulated in their contracts (Thibodeau, 2017). This change in labour laws came after France's realisation that global companies have started making the appropriate shifts to protect their employees from digital burnout (Quill, 2017). The transformation aims to bring about greater boundaries between work and personal life, resulting in more balanced and stress-free employees (Thibodeau, 2017).

The studies discussed in section 2.5.2 and the steps taken by global companies indicated above, reveal the extensive research that has already been conducted and the processes that have been implemented to circumvent digital burnout in a working environment. However, to the researcher's knowledge, no studies have been conducted on the effects of digital burnout in a working environment in South Africa. Thus, no data exist to guide changes in company policies regarding the right to disconnect.

2.5.4. Why the Need for a Shift in South African Companies' Working Policies is Important

South Africans are known as hard-working people who do not often disconnect from work. The Accenture "Defining Success Study" by Storhaug and Hyland (2013) and the results of the Ipsos Global and Reuters study revealed that South African employees are engaging in non-stop workaholic behaviour (Snyman, 2013). In the study conducted by Snyman (2013), 58% of South Africans defined themselves as workaholics. This behavioural pattern poses a potentially devastating consequence for not only the companies' year-end performance but also the well-being of their employees (Snyman, 2013). With less than half of South African employees utilising all the leave days granted to them by their employers, South Africans are at an increased risk of burnout (Snyman, 2013).

Snyman (2013) further refers to another study conducted in 2006 by Ernst and Young in which they found that employees who had an additional 10 days of vacation, experienced an 8% increase in their performance ratings at the end of the financial year. Moreover, the results indicated that these employees were less likely to leave the firm (Snyman, 2013). According to Snyman (2013), the monitoring by companies of leave taken plays an important

role in preventing a workaholic culture being fostered. If these precautions are not taken, Snyman (2013) highlights the risk of companies facing increased incidences of absenteeism, burnout related symptoms among staff, higher turnovers, and less productivity overall. The expectation of always being available electronically poses an even further risk for South African companies.

In a Finweek staff study, 1000 working men and women in South Africa were interviewed. The results indicated that only 46% of employees that partook in the survey had put in five working days leave per year (Finweek staff, 2015). Half of these participants who had put in leave mentioned that they were going on leave but would still be online, regarding checking and responding to emails and phone calls (Finweek staff, 2015). These studies highlight the hard-working characteristics of the South African employees who are unable to disconnect from work.

Excessive digital use in South Africa follows the trends seen and outlined above occurring worldwide. A digital report released by *We Are Social* depicts key findings from data collected on digital behaviour within 30 countries, including South Africa. This report indicates that South Africans spend an average of 4 – 5 hours a day online (Kemp, 2016). In 2016, 26.8 million internet users were recorded in South Africa (Kemp, 2016). The statistics in this report show that almost 50% of South Africans are active mobile users, out of the total 85.53 million mobile connections in South Africa. Furthermore, digital ownership in South Africa was split into the following categories: (1) 92% of the population own a mobile phone, (2) 60% own a smartphone, (3) 18% own a laptop or a desktop, and (4) 7% own a tablet (Kemp, 2016). 4,993 mobile internet users in South Africa were studied from November 2016 to January 2017. It was found that 42% of participants use their cell phone for 30 minutes to 2 hours per day, on average, while 18% use their cell phones for over five hours per day (Effective Measure, 2017). Although the increased use of digital devices in the working environment has positive benefits, such as flexible working hours and increased networking, it has become an addiction for most, causing their brains to be over-stimulated. Continuous interruptions via emails, phone calls, and instant messaging while working has resulted in lowered productivity (Lin, Kain, & Fritz, 2013).

2.6. The Research Industry and Highly Educated Employees

Research companies are typically characterised by their pressured working environments with tight deadlines (U.S. News and World Report, 2017). In an industry that relies on excellent client service as a competitive edge (Bizcommunity, 2013), being able to deliver the fastest and highest quality deliverables is of utmost importance in securing more clients. Combined with the increased expectation for after hours availability, most research

companies only appoint highly educated individuals who have a postgraduate degree and are able to work efficiently and produce high quality deliverables. The subsequent text will take a closer look at the research industry, followed by characteristics of highly educated employees that may make them more prone to digital burnout.

2.6.1. A Closer Look at the Research Industry

The research industry, in particular the market research industry, is known for it's fast-paced and high-pressure environment, where employees are constantly adhering to strict timelines. The research industry is growing rapidly and contributes to a substantial portion of the economic growth of South Africa. In 2013, the market research industry generated approximately 45 billion U.S. dollars in revenue worldwide (Schmidt, 2016), up from 39.08 billion from the previous year (Statista, 2015). In the Middle East and Africa alone, market research contributed 0.66 billion U.S. dollars to the annual revenue (Statista, 2015). ESOMAR (2017) indicated the following growth in the research industry for 2016:

Figure 2.1: Adapted from Global Market Research 2017: An ESOMAR Industry Report.

Africa was identified as the fastest growing continent, with a growth spurt of 22.7% (ESOMAR, 2017). South Africa specifically, recorded a 17% growth in the industry (ESOMAR, 2017). With the expedited growth, ESOMAR (2017) notes that this increase is largely due to the increase in smaller consultancy firms. Further, it was highlighted that more traditional firms are besieged to compete as they struggle to match the customised service offered by the

smaller consultancies (ESOMAR, 2017). This high-pressure industry provides various job opportunities and has proved expedited growth over the past few years. The importance of looking after the employee and employer's health within this industry is thus essential. Due to the nature of the work, market researchers work closely with their clients to provide them with accurate reports within the client's timeframe.

According to Freudenberger (1974) and Pines and Maslach (1978), burnout is more predominant in employees dealing directly with clients, trying to meet their needs. As the research industry is a sector that relies purely on providing clients with a service, client relationships and engagement form the foundation of this industry. The continuous pressure to deliver quality service and deliverables that are superior to those of the competitor research companies is what drives the company's success. Pines and Maslach (1978, p. 233) defined burnout as "a syndrome of physical and emotional exhaustion, involving the development of negative self-concept, negative job attitudes, and loss of concern and feelings for clients". Burnout arises as a result of dealing with clients directly over an extended period of time, which results in personal stress to meet deadlines and the client's expectations (Pines & Maslach, 1978).

2.6.2. Highly Educated Employees

Highly educated individuals, for the purpose of this study and within the South African context, are individuals who have a tertiary education, including an undergraduate or postgraduate degree. According to the General Household Survey 2015 (StatsSA, General Household Survey 2015 report), approximately 710 139 students were enrolled at higher education institutions. Thus, 4.2% of persons aged 18 to 29 were enrolled at a higher education institution in the country, which is an increase from the 4% enrolled in 2002. In comparison, as seen in the graph below from the General Household Survey report 2015, far fewer children attend tertiary education institutions than there are children enrolled at schools.

	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Not in education	14,4	1,9	1,3	0,5	0,3	0,8	0,7	0,8	1,6	1,5	3,4	6,3	12,0	27,0	42,2	56,8	67,6	78,6	84,7	89,5
Other	0,6	0,2	0,8	0,2	0,6	0,4	0,6	0,6	0,8	0,7	0,6	0,7	0,6	0,7	0,4	1,3	0,9	0,6	0,7	0,7
TVET and other colleges	0,3	0,2	0,3	0,0	0,2	0,1	0,1	0,0	0,1	0,1	0,1	0,4	0,9	2,4	5,4	6,7	7,9	5,0	4,5	3,5
University	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,4	3,3	5,2	6,6	7,0	6,7	5,2	3,4
Secondary school	0,4	0,2	0,3	0,2	0,4	0,8	1,2	9,7	42,5	68,3	80,5	86,1	83,2	64,9	45,3	28,1	16,4	8,9	4,7	2,9
Primary school	57,5	91,7	95,3	97,8	98,5	97,9	97,3	88,9	55,1	29,4	15,6	6,5	2,9	1,7	1,5	0,5	0,2	0,2	0,2	0,0
Pre-school	27,0	6,0	2,1	1,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Figure 2.2: Type of Educational Institution Attended by Population 5 - 24 Years, 2015.
(Adapted from the General Household Survey 2015, StatsSA)

When looking at the education attained by individuals aged 20 years and older (depicted in the graph below), it can be seen that the number of learners completing Grade 12 has increased from 21.9% in 2002 to 28% in 2015. Similarly, an increase is seen in individuals with some post-school education (defined as any education higher than Grade 12) from 9.3% in 2002 to 14.1% in 2015. Although there was an increase, this still indicates that just over one in every ten individuals have some post-school education.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
■ Other	0,2	0,3	0,1	0,1	0,1	0,2	0,2	0,2	0,1	0,3	0,3	0,5	0,4	0,4
■ Post-School	9,3	9,5	9,8	9,9	9,3	10,0	11,1	11,2	11,4	11,8	12,5	12,8	13,5	14,1
■ NSC/Grade 12	21,9	22,3	23,8	23,0	24,4	23,9	24,5	26,2	26,5	27,6	27,2	27,7	28,7	28,0
■ Some Secondary	34,1	35,8	34,5	36,1	36,0	36,6	35,6	37,2	37,3	37,1	38,0	37,5	36,7	37,1
■ Completed Primary	7,0	6,5	6,6	6,4	6,3	6,4	6,0	5,7	5,7	5,5	5,3	5,2	4,8	4,8
■ Some Primary	17,0	15,8	15,5	15,0	14,3	14,3	13,9	12,3	12,1	11,5	10,9	10,7	10,6	10,4
■ None	10,6	9,9	9,6	9,4	9,5	8,6	8,7	7,2	6,8	6,4	5,8	5,6	5,3	5,1

Figure 2.3: Percentage distribution of educational attainment for persons aged 20 years and older 2002–2015. (Adapted from the General Household Survey 2015, StatsSA)

2.6.3. Highly Educated Employees and Burnout

In a study conducted on a representative sample of Norwegian employees, Andreassen et al. (2014) found that workaholism is comprised mainly of negative attributes such as compulsiveness and rigidity. This study was carried out on a sample of 2160 participants who were randomly selected from the AA-registry in Norway, of which 1124 completed the questionnaire. Interestingly, workaholism was prevalent in an estimated 8.3% of the sample population. It was also found that those who were highly educated with a Masters or PhD scored higher on the workaholism measure than those who had basic schooling (Andreassen et al., 2014). One of the explanations provided for this correlation was that highly intellectual individuals are more curious and therefore more involved at work. Furthermore, Andreassen et al. (2014) explained that working environments in which intellectual individuals find themselves often require imagination and create innovative working climates.

Sussman (2013) did a study on workaholism and found that burnout was more prevalent by 8% to 17.5% among educated individuals and between 23% and 25% among psychologists. Most market research companies in South Africa employ only individuals with a postgraduate qualification; particularly those who have studied psychology or marketing.

Another study, conducted by Micklevitz (2001), found that burnout is more likely to present itself among young professionals who are extremely driven. This was confirmed in a study done by Maslach et al. (2001), whose results indicated that burnout was most commonly found among young professionals who are highly educated and ambitious. This study revealed

that the main driver of burnout in these individuals is the misalignment between their expectations and the reality of a working environment (Maslach et al., 2001). Although the latter study focused on nurses in particular, the concept of entering the working environment with the expectation that employees will be able to meet all clients' needs can be applied to any industry, including the research industry. Highly qualified individuals exhibit the need to prove themselves within the working environment and share various personality traits (Espeland, 2006). Some of these personality traits identified by Maslach et al. (2001) include (1) locus of control, (2) hardiness, (3) personality type, and (4) attitude.

Individuals with a heightened external locus of control were identified as being more prone to burnout. This can be attributed to their lack of an internal locus of control, which is the ability to attribute success to their own effort and ability (Maslach et al., 2001).

The second personality trait identified was hardiness. Individuals that typically display lowered hardiness are at an increased risk of burnout due to their lack of involvement and feeling of being in control. These individuals are prone to extreme exhaustion, leading to burnout (Maslach et al., 2001).

During their study, Maslach et al. (2001) found that those with A-type personalities are more prone to burnout due to their excessive need for control. This attribute exposes these individuals to an increased risk of exhaustion due to their time-pressured lifestyles that stem from their competitive nature. Those with A-type personalities are more set in their routines and practice stricter boundaries between work and family life and are consequently more affected by anticipatory stress caused by after-hours emails (Belkin et al., 2016).

Attitude was identified as the last driver of burnout as these individuals enter the working environment with extremely high expectations (Maslach et al., 2001). These individuals not only display high expectations of the working environment but of themselves too regarding their likelihood of achieving success (Maslach et al., 2001). These heightened personal expectations lead to these individuals taking on more work, sometimes too much work, to prove themselves and showcase their abilities. The increased workload is sometimes met with disappointment, which results in cynicism when unrealistic expectations (e.g. promotions) are not met (Maslach et al., 2001). Highly educated employees share traits such as perfectionism and, in the research industry, overcommitment to their clients, which results in burnout (Sherman, 2004).

2.7. Conclusion

Based on the extensive review of the literature, the current study is founded on key findings from previous studies. These include findings such as the discovery that highly educated individuals are more likely to be negatively impacted by workaholism, therefore

becoming burnt out. Further, it has been shown that in an attempt to gain a competitive edge, higher educated individuals tend to show high levels of engagement with their digital devices. Lastly, previous studies have revealed that highly educated individuals are more likely to make themselves available outside of their required working hours. These findings, combined with the nature of the South African research industry, formed the basis of this study, investigating whether highly educated individuals are at risk of digital burnout.

This study will therefore further explore this construct in a South African employee environment, as no research of this nature had been conducted in this country, specifically within the research industry. The following chapter will outline the research design and sampling framework used in the present study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Introduction

This study investigates work engagement and work style, as well as the possible addiction to work and propensity to burn out. Focusing specifically on employees within the research industry, this study has combined standardised measures, which measure the constructs above, with a digital usage measure. The combination of the four measures aims to provide an indication of the extent to which researchers are at risk of being not only burnt out but more specifically digitally burnout.

Due to the limited research available on digital burnout and the personal nature of the study, a mixed-methods design was adopted. This chapter elaborates on the research strategy and design. Thereafter, a brief overview is given of the work Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007). This model informed the theoretical point of departure for the study. The researcher then delves into the sampling technique and the characteristics of the sample that participated in the study. The sample profile aims to provide the reader with a clear understanding of the participants, should the study be replicated in future research. Further, an explanation of each of the measurement instruments and how they were administered during the data collection phase is provided. A brief overview is delivered of the analysis that was conducted, before concluding the chapter with some of the ethical considerations of this study.

3.2. Research Strategy and Design

A mixed-methods design has no one single definition but has rather been described by Brown et al. (2008, p. 158) as "a position whereby strength of belief accumulates in line with salient evidence". This methodology is commonly used by social scientists to explain quantifiable data by providing an account for that which drives certain behaviours (Gilbert, 2010). By gaining a more holistic view of the topic being researched (Gilbert, 2010), the researcher can prove or disprove his or her hypothesis with quantitative data and use the qualitative data to further their reasoning for doing so (Johnson & Onwuegbuzi, 2004). Further, Teddlie and Tashakkari (2009, p. 13) state that a mixed methodology "provides better inferences and minimizes unimethod bias".

There are three primary ways in which one can conduct mixed-method research. These three methods are briefly outlined in the subsequent text (Creswell & Plano Clark, 2010). The first method, merging the data, involves the merging of the two methods (qualitative and quantitative) simultaneously (Creswell & Plano Clark, 2010). The second method,

connecting the data, incorporates the use of one data set to build on the other. This method is closely related to the third, embedding the data, in which one would embed the data set of the qualitative research into the data of the quantitative research or vice versa (Creswell & Plano Clark, 2010). Thus, the two data sets support one another to fulfil the objectives of a study (Creswell & Plano Clark, 2010).

For the purpose of this study, the third methodology was applied. Therefore, the quantitative data did not inform the design of the qualitative survey and vice versa. This study adopted a sequential explanatory design. According to Greene, Caracelli, and Graham (1989), this approach has also been referred to as the complementarity design. This approach is described as the use of both qualitative and quantitative methodologies, used to ensure a holistic approach where each methodology counteracts the shortfalls of the other methodology (Greene, 2008). For example, as one would peel an onion, this design measures different levels and phases of one phenomenon using different measurements and approaches. The complementary design allows for the enhancement of the results of the dominant method, in this instance the quantitative data, with the findings of the second methodology, the qualitative data (Cameron, 2009).

The researcher made use of a quantitative approach to measure the four constructs, namely (1) work engagement, (2) work addiction, (3) burnout, and (4) digital device usage. The quantitative data were gathered first. These data were gathered using standardised measures, combined with a digital usage measure, which was designed based on current digital device usage literature. An extensive discussion and description of each of these measures are provided in section 3.6 of this chapter. The data provided a quantified indication of the extent to which employees engage with their working environment, as well as their propensity to be addicted to their work and digital devices, or are burnt out. Further, the measures are cross-referenced and analysed. For example, the researcher was able to calculate if the participants were more addicted to their work than positively engaged with their work.

Although all four measures are quantifiable, understanding how one feels as a consequence of one's engagement and working behaviour was required. Thus, to further explore and understand what drives this behaviour, a qualitative approach was adopted as a second tier in the research process. The qualitative approach was completed using a qualitative questionnaire.

The use of a mixed-methods design allows one to gauge the experiences and feelings of highly educated employees, unpacking their behaviour in more detail. The data that were collected were analysed in the context of the findings from each methodology to provide a holistic overview of the risk of digital burnout among employees (Arcidiacono & De Gregorio, 2008).

The quantitative research followed a correlational design, in which the relationship between work engagement, digital burnout, and work addiction was assessed. Correlational studies assess the relationship between variables measured in one individual (Gravetter & Forzano, 2012). For example, the current research study aimed to assess the impact of work engagement and work addiction on the risk of digital burnout but has not produced results that explain the cause and effect of the relationship.

The qualitative research was conducted and collected according to an explorative design. Explorative designs are used to gather information regarding insights and perceptions of individuals. This research design was not utilised to produce results that bared conclusive answers, but instead provided a better understanding of the particular phenomena or themes that emerged throughout the data collection (Brown et al., 2008).

3.3. Theoretical Point of Departure

The theory described below supports the aim of this research study and has been used in various other studies related to burnout and working employees. This theory provides a model that predicts how working behaviour impacts on burnout. The researcher has used this model to form the theoretical basis for this study of digital burnout.

3.3.1. The Job Demands-Resources (JD-R) Model

The JD-R model (Bakker & Demerouti, 2007) can be used to predict employee burnout and engagement, and consequently organisational performance. For this model, Bakker (2017) describes burnout as a state of exhaustion and a pessimistic attitude towards the individual's working environment. Conversely, work engagement was described as the positive engagement with one's working environment, resulting in dedication, vigour, and a positive motivational state.

Two factors form the basis of the JD-R model, namely job demands and job resources. Thus, this model can be applied to any organisational setting, regardless of the nature of the industry (Bakker, 2017). The versatility of this model was therefore ideal to be applied to this research study, which focuses on employees within the research industry. Job demands are defined by Bakker and Demourouti (2007) as the social, physical, and psychological aspects of an organisation and a job. These aspects of an individual's job require continuous effort and skills. Job resources are ones colleagues within ones working environment. These individuals may play an important role in career guidance and opportunities, supervision, and may even play a part in the role clarification that is important for job satisfaction (Bakker & Demourouti, 2007). This model, which focuses on the importance of employee resources, can be applied

to the research industry, in which there is a strong need to rely on other employees to complete research studies.

These two factors are considered to run parallel with one another in the progression of burnout (Bakker & Demourouti, 2007). Extensive job demands may lead to the complete emotional exhaustion of an individual, known as burnout. Job resources can help maintain positive engagement behaviour and therefore act as a motivational factor. According to Bakker (2017), several studies have indicated that job resources may lessen the impact of high job demands on an employer or employee.

3.4. Sampling

3.4.1. Sampling Technique

Non-probability sampling can be described as a cost-effective sampling method, characterised by the convenience of sampling among readily available participants (Saunders, Lewis, & Thornhill, 2009). Although the results are not generalisable to the broader population, descriptive statistics can be drawn from the results to provide an overview of the sample (Saunders et al., 2009). Due to the profile of the participants required, the researcher had to rely on the availability and willingness of the participants. Relying on availability, combined with the face-to-face data collection method thus meant that the use of non-probability sampling method was most appropriate (Gravetter & Forzano, 2012).

Further, the purposive sampling method was applied, due to the cost-effectiveness and ease of using this method (Collins, Onwuegbuzie, & Jiao, 2006). Purposive sampling does not make use of random sampling, but instead sets a list of criteria each participant needs to meet (Saunders et al., 2009). Using a list to recruit participants is typically known as criterion sampling (Palys, 2008).

3.4.2. Sampling Frame

For this study, the inclusion criteria were the same for the quantitative surveys and qualitative interviews. The study aimed to survey and interview participants who met the following inclusion criteria:

- Currently work full time for a market research company;
- Have a university qualification (a degree or postgraduate degree); and
- Are fluent in English.

No restrictions were placed on demographic variables such as age, gender, or race. By implementing inclusion criteria, the researcher aimed to limit the effects of confounding variables on the results by creating a uniform sample that can be easily replicated by other researchers (Gravetter & Forzano, 2012).

This study aimed to prove or disprove the hypothesis that the more educated an individual is, the stronger his or her drive is to be successful. Further, it was hypothesised that these individuals are therefore more likely to work longer hours in an attempt to increase productivity and advance in their career. Thus, highly educated individuals as defined and outlined in Chapter 2 were chosen due to their propensity to be more driven to succeed. Further, the research industry was chosen due to the high-paced and high-pressure nature of the industry. Research houses were contacted, relying on former working relationships or referrals to put the researcher in contact with the most suitable employees. Typically, these included team managers, managing directors, or CEOs. After visiting the ten research companies that had responded and agreed to partake in the study, a total sample size of 75 was achieved. This consisted of 69 quantitative interviews and six qualitative interviews.

3.4.3. Description of Sample

The demographic questionnaire asked participants to provide their gender, population group, age, position held, and company for which they currently work. The sample characteristics are described below.
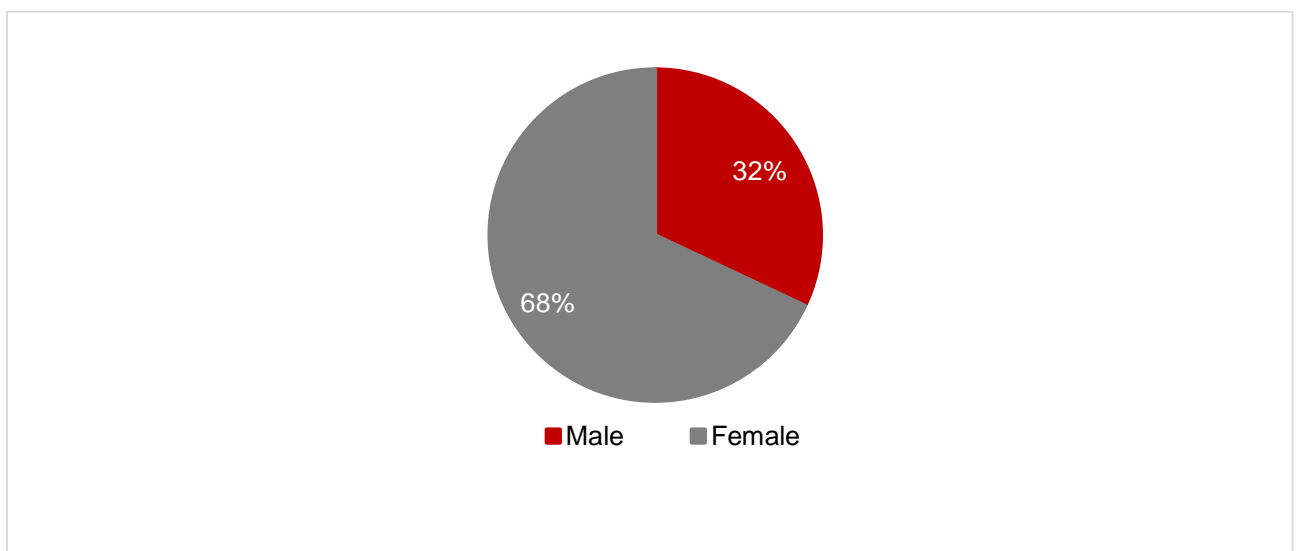
Figure 3.1: Gender of participants

Referring to the figure above, it is evident that over two thirds of the sample was female. Further, when looking at the position held indicated in Figure 3.2 below, it can be seen that 29% of the participants were researchers, while another 29% were key account managers. One in five participants filled a management role.

These sample characteristics are consistent with the findings outlined in Chapter 2, where it was found that the research industry's junior to middle management positions are mostly filled by females (Melsheimer, 2012). However, when looking at managerial or executive positions, it was found that males most commonly filled these positions.
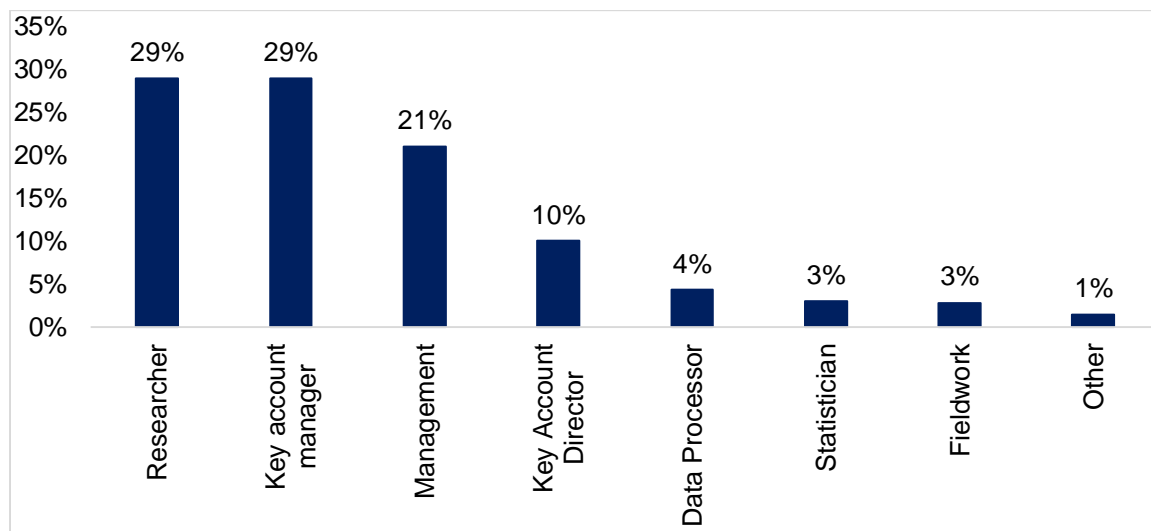
Figure 3.2: Position held

As outlined in section 3.4.2, the sample consisted only of participants who have obtained a university undergraduate or postgraduate degree. As can be seen in Figure 3.3, 61% of the sample has obtained a postgraduate degree. This substantiates that the sample was adequately literate to complete the survey in English.
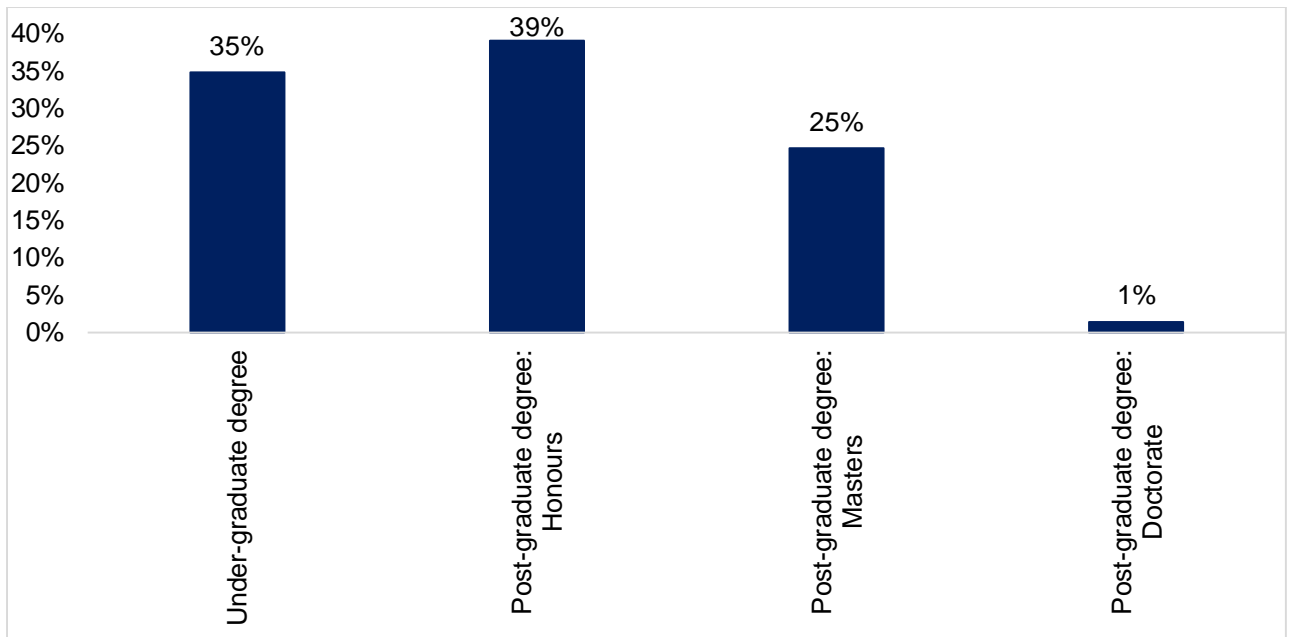
Figure 3.3: Highest qualification obtained by participants

Overall, it is evident that one in six of the employees who participated in the study were white, while a third were black.
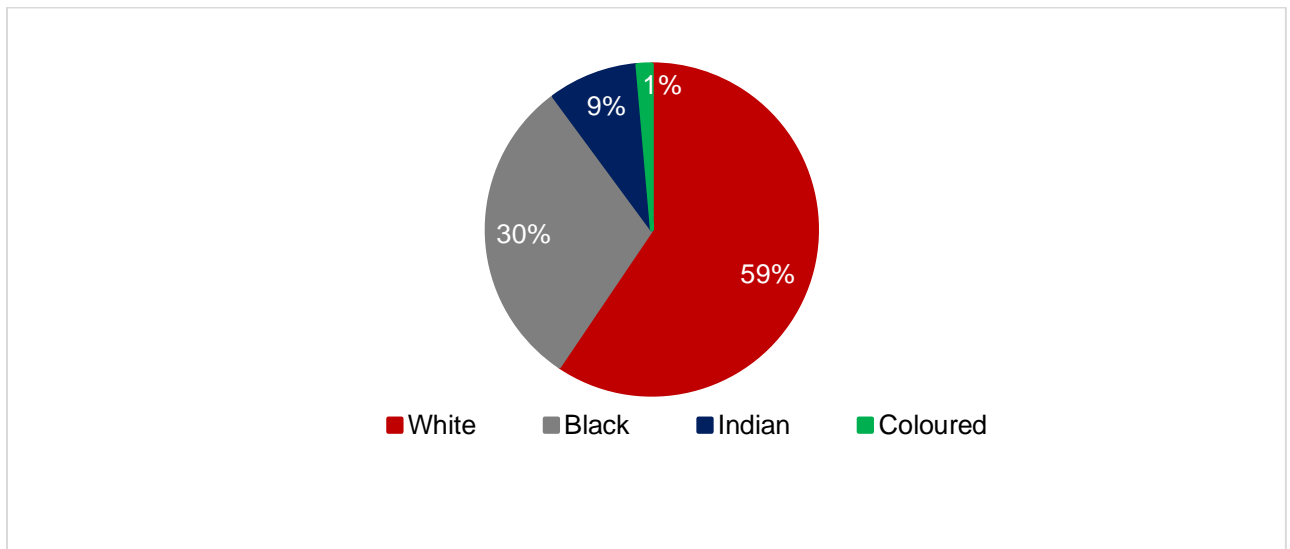
Figure 3.4: Population group of participants

As can be seen in Table 3.1 below, the youngest participant who participated in the study was 23 years of age, while the oldest was 47 years old. The mean age of the participants was 33 years.

Table 3.1: Exact Age. Means (M), Median (Mdn), Standard Deviation (SD), Minimum (Min), and Maximum (Max)

Measure	Years
Mean	33
Median	31
Std. Deviation	5.487
Minimum	23
Maximum	47

Almost two thirds of the participants were aged 26 – 35 years, as seen in Figure 3.5 below. Thus, the sample consisted mainly of South African youth, as defined by United Nations Population Fund South Africa (UNFPA, 2017).
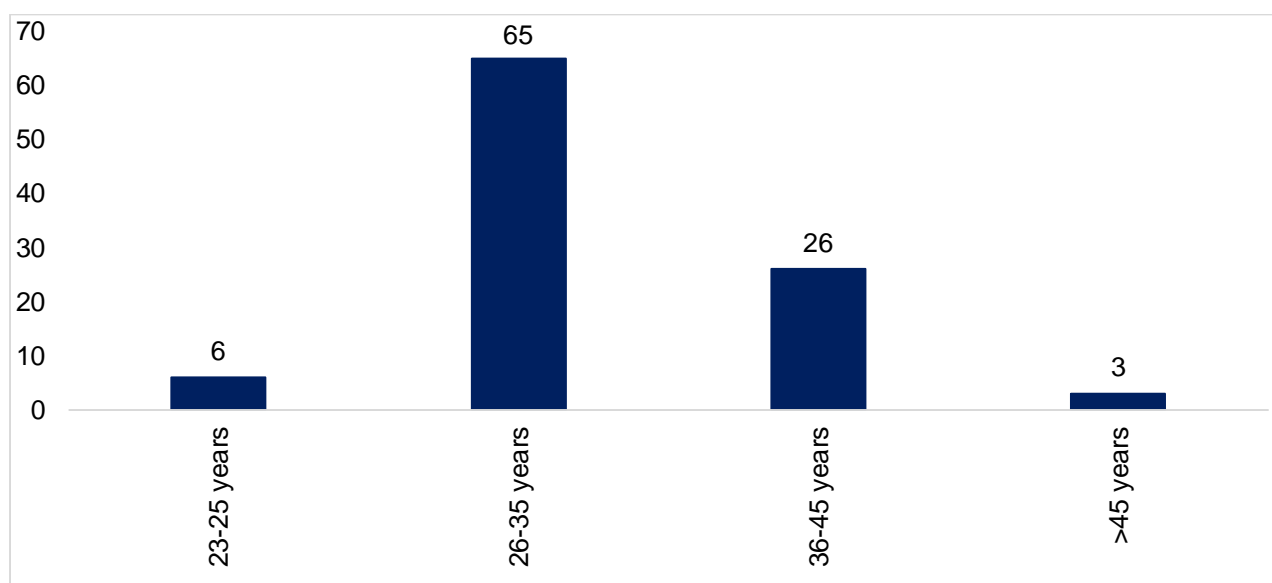
Figure 3.5: Age of participants

As indicated in Table 3.2, the participants have worked in the research industry for seven years, suggesting that the sample has had sufficient years of experience to understand the nature of the industry and working environment.

Table 3.2: Years of Work Experience in the Research Industry. Means (M), Median (Mdn), Standard Deviation (SD), Minimum (Min), and Maximum (Max)

Measure	Years
Mean	7
Median	6
Std. Deviation	4.463
Minimum	0.8 Years
Maximum	7 Years

When looking at Figure 3.6 below, it is important to note when interpreting the findings that these employees are not new to the working environment. A third of the sample has up to three year's working experience. Just under half of the sample has 4 – 10 years' experience, while 22% of the sample indicated that they have been in the industry for more than 10 years.
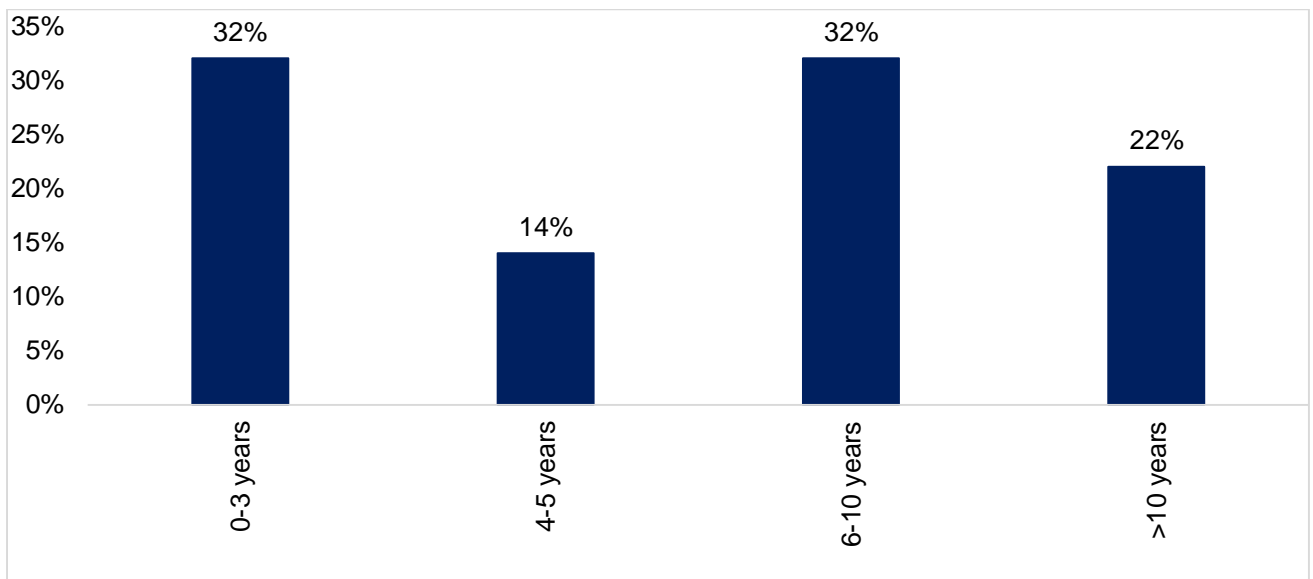
Figure 3.6: Years worked in the research industry

3.5. Measurement Instruments

3.5.1. Quantitative Measurement Instruments

For the quantitative research, a demographical, working behaviour, and digital usage measure was designed. This measure was used in conjunction with three existing questionnaires to form one measuring instrument. The first standardised measure was the

Oldenburg Burnout Inventory (OLBI); the second, the Utrecht Work Engagement Scale (UWES); and the third, the Work Addiction Risk Test (WART). Permission to use these measures was obtained from the authors of the questionnaires prior to commencing with the study. The questionnaires were programmed into one self-complete questionnaire that was completed face-to-face. The data collection procedure is outlined in more detail in section 3.7 of this chapter.

3.5.1.1.   Demographics and digital behaviour inventory

In order to draw descriptive statistics about the sample that participated in the study, a basic demographic questionnaire was formulated (see Appendix 1). Further, this questionnaire posed the relevant questions to ensure that all participants met the inclusion criteria of the study, including their highest qualification and whether they work full time in a market research company. In addition to the above, the demographic questionnaire was developed with the aim of identifying any trends that exist among variables such as gender, race, age, working status, or education level. Following the first section detailing the demographics, the researcher drew on questions from literature to formulate the digital behaviour inventory (see Appendix 1). Due to the lack of research pertaining to digital burnout, the digital device usage results obtained from this section of the questionnaire were correlated with the questionnaires pertaining to burnout and work engagement and addiction. The aim was to assess how the participants' digital exposure and behaviour combined with their work engagement style might result in the risk of being digitally burnt out. This digital behaviour inventory was approved by a statistician for analytical purposes before the commencement of the study.

3.5.1.2.   Burnout: Oldenburg Burnout Inventory

In order to measure the level of engagement, positively or negatively, and the physical consequence of work in terms of exhaustion levels, the OLBI was utilised. The OLBI consists of 16 statements that aim to measure two constructs: (1) disengagement and (2) exhaustion. Each construct is measured by eight statements that include four positively and four negatively framed items (Bakker & Demerouti, 2007). By incorporating negative and positively framed items, the measure limits the chance of artificial factor solutions in which similarly worded items are grouped together (Bakker, 2010). Disengagement in the context of this measure is defined as the purposeful distancing of oneself from one's work and work content (Bakker & Demerouti, 2007). Disengagement results in a negative attitude towards one's work, which results in negative behaviours being exhibited by the employee (Bakker & Demerouti, 2007). Exhaustion includes cognitive, physical, and affective exhaustion. Exhaustion is typically

characterised by statements that relate to a feeling of emptiness and indicate a strong desire to rest (Bakker & Demerouti, 2007).

With statements focused specifically on the relationship between the individual and his or her work (Bakker & Demerouti, 2007), the participant was required to rate each subscale and its attribute on a scale of 1 - 4, where 1 means *strongly agree* and 4 means *strongly disagree* (Bakker, 2010). Further, the reliability of the OLBI was confirmed for this study with a Cronbach alpha of .79 for the construct disengagement and a Cronbach alpha of .84 for the construct exhaustion. The overall Cronbach alpha for the OLBI measure was .885.

The convergent validity of the measure was also confirmed in a study conducted by Halbesleben and Demerouti (2005). The OLBI's high Cronbach alpha score (α = .84) and factorial validity was confirmed in studies conducted in Germany (Demerouti, Bakker, Nachreiner, & Ebbinghaus, 2002; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), the United States of America (Halbesleben & Demerouti, 2005), and Greece (Demerouti, Bakker, Vardakou, & Kantas, 2003). Furthermore, the OLBI's test-retest reliability was confirmed in a study by Halbesleben and Demerouti (2005), in which the instrument was tested during a study with four-month time lags (Bakker & Demerouti, 2007).

3.5.1.3.   *Work engagement: Utrecht Work Engagement Scale*

To further assess work engagement style of the research employees the UWES was included in the overall combined measure. Engagement can be defined as a positive attitude towards work, which results in work satisfaction when one is absorbed, vigorous, and dedicated to one's work (Schaufeli, 2013).

The UWES operationalises work engagement by using three scales: vigor, dedication, and absorption (Schaufeli & Bakker, 2003). According to Geldenhuys, Taba and Venter (2014), vigour refers to the high levels of energy experienced by those persistent in their jobs. Absorption explains the elevated engagement levels in one's job and dedication refers to the pride and enthusiasm shown while performing one's job (Geldenhuys et al., 2014).

In totality, the measure consists of 17 statements, all of which are positively framed. Of these statements, six items assess vigour, five items assess dedication, and six items assess absorption. The participants rate each subscale on a scale of 0 – 6, where 0 means *daily* and 6 means *never*. According to Schaufeli and Bakker (2003), all scales of the UWES are highly internally consistent. The UWES has been psychometrically evaluated in over 10 countries and has proven cross-national validity due to its three-factor model. The Cronbach alpha for this measure ranges between .80 and .90 (Ugwu, 2013). For this study, the reliability of the constructs were high with a Cronbach alpha score of .75 for the construct vigor, .86 for dedication, and .79 for the construct absorption. The overall Cronbach alpha was .914.

3.5.1.4. Workaholism: Work Addiction Risk Test

Lastly, this study aimed to assess the research employees' propensity to be addicted to their work. Workaholism is the inability to separate oneself from one's work (Furnham, 2014). Furnham (2014) defines a workaholic as someone who works compulsively and does much more than is what required of him or her. This compulsion drives the urge to work and the difficulty switching off. According to Killinger (2011), a workaholic becomes addicted to power in an attempt to be successful and gain recognition. Thus, considering the hypothesis of the study, the WART was deemed an appropriate measure to include.

The measure consisted of 25 statements, of which none were negatively phrased. The statements focused on two themes, including excessive working behaviour and work-related compulsive tendencies. Participants were required to the rate each statement on a scale of 1 – 4, where 1 means *never true*, and 4 means *always true* (Counselling Team International, 2014). The measure for compulsive tendencies was assessed as it is theorised that individuals who suffer from workaholism have compulsive work behaviour. Sample items included, "I feel guilty when I am not working on something" and "I spend more time working than socializing with friends, on hobbies, or on leisure activities." The WART is reliable with a Cronbach alpha score of .925. The Cronbach's alpha for this measure was also confirmed in a study by Aziz, Uhrich, Wuensch, and Swords (2013) at $\alpha = .90$.

3.5.2. Qualitative Measurement Instruments

For the qualitative portion of the research, a qualitative questionnaire was used. Qualitative questionnaires attempt to elicit more in-depth insights and yields content-rich information. The questionnaire consisted of only open-ended questions (see Appendix 2). This questionnaire aimed to further explore the themes identified during the quantitative data collection to enhance the quantitative results. The advantage of using a qualitative questionnaire is that participants are able to answer the questions in their own words (Ackroyd & Hughes, 1981).

3.6. Data Collection Procedures

According to Babbie and Mouton (2010), self-administered questionnaires are only deemed appropriate if the sample of the study is adequately literate. Due to the inclusion criteria including that the individual has to have a university degree, the sample was deemed literate, and the quantitative and qualitative interviews were self-administered.

3.6.1. Quantitative Data Collection Procedure

Prior to the data collection, the combined questionnaire including all four measures was programmed. A program called Survey2Go was utilised to programme the measures, allowing for the proper triggering and filtering of questions based on the participant's answers. The researcher opted to programme the study using Survey2Go and complete the interviews using digital devices due to the following benefits (Dooblo, 2017):

- The inclusion criteria questions are programmed to terminate the survey should the participant not meet the requirements to participate in the study. This ensures accurate screening of participants, guaranteeing that only the specified sample proposed in the sample framework are included in the study.
- The programming allows for the control of the flow and logic, which means that questions are skipped, filtered, and looped based on the participant's answers.
- The programmed questionnaire allows the researcher to add notes to questions mitigating scenarios where questions, scales, or answer options are misinterpreted.
- Statements can be randomised. Some questions have several statements and so data affected by participant fatigue is limited by ensuring that each participant does not receive the same order of statements.
- Offline functionality ensures that the results captured are stored safely even when disconnected. Once connected, all results are synced and stored in the survey server.
- The survey can be accessed at any point during data collection, allowing the researcher to conduct interim data checks. This results in a clean data set being produced once the study has been completed.
- Progress on data collection can be tracked and monitored.
- With state of the art security, the study's results are private, secure, and available for extraction at any point.

The questionnaire used for the programming can be seen in Appendix 1. An example of the output of the programmed questionnaire is provided in figure 3.7:
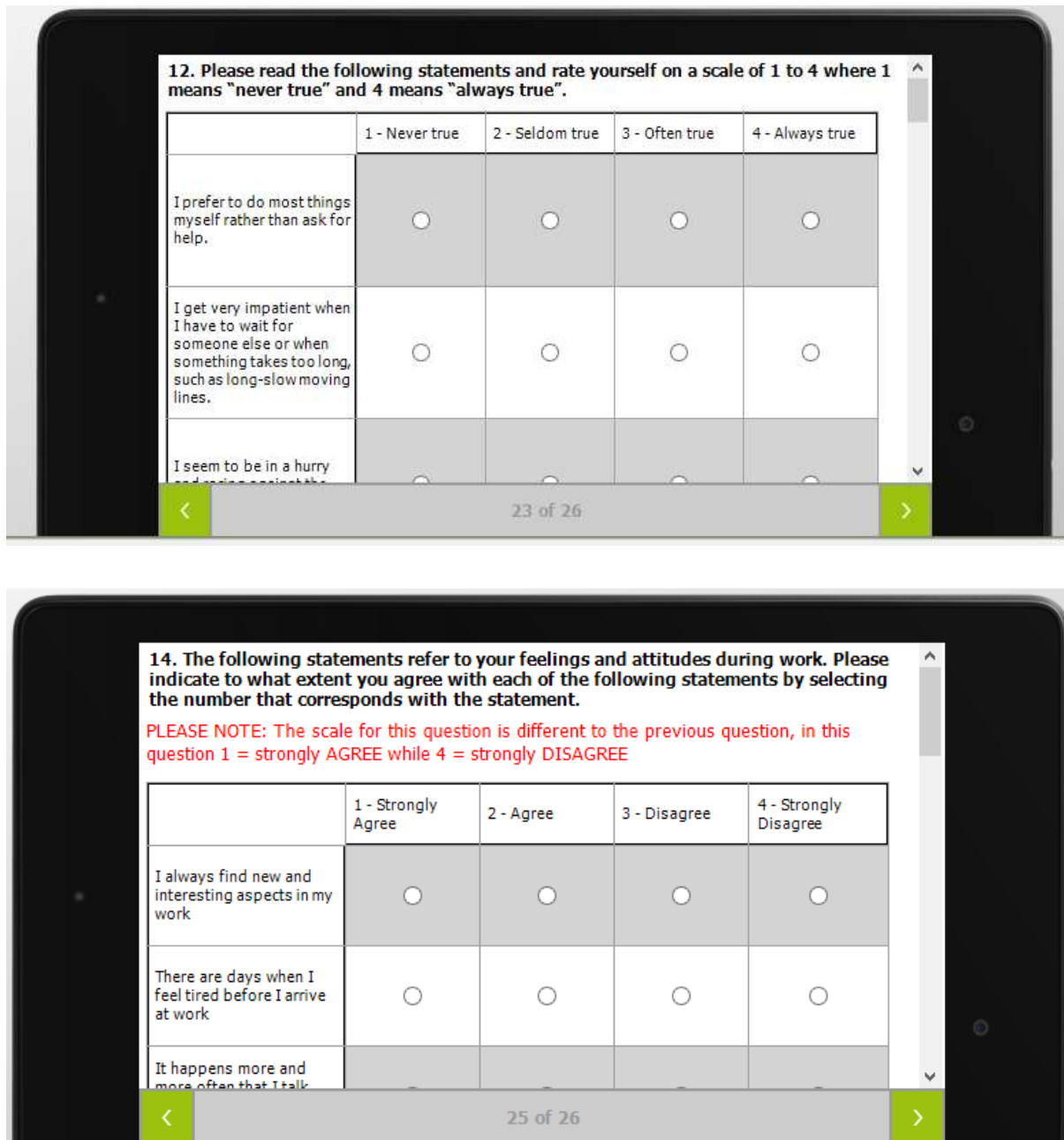
Figure 3.7: Example of the programmed questionnaire on the android tablets

Access to the required sample proved to be challenging due to the interviews being scheduled during working hours at the various companies. The first step was making contact with various research houses in Gauteng, asking permission to survey their employees. Contact with the relevant team manager, managing director, or CEO was initially made by email. Once permission was obtained, an appointment was scheduled for the researcher to visit the research company.

Once at the company, the researcher set up the eight Android devices in a room centrally located within the company. The employees with whom the time was scheduled were seated in the room where the researcher explained the aims and objectives of the study. After informed consent was obtained from the participants by indicating "Yes, I would like to continue with the survey on the tablet", the participants commenced with the survey.

The programmed questionnaire was self-administered on an Android tablet and allowed multiple participants to complete the questionnaire on the various tablets (Babbie & Mouton, 2010). Interviews conducted in this manner are referred to as Computer Aided Personal Interviews (CAPI) (Babbie & Mouton, 2010).

3.6.2. Qualitative Data Collection Procedure

Following the quantitative data collection process, seven individuals (10% of the quantitative sample) were randomly selected to participate in the qualitative phase. These individuals had indicated during the quantitative phase that they would be willing to participate in the second phase. Contact was made with these seven individuals via email, and informed consent was obtained by six of the seven participants to participate in the second phase of the data collection process. The researcher therefore emailed a copy of the questionnaire to these six participants and requested them to return the completed questionnaire within two working days. The completed questionnaires were returned via email.

3.7. Data Analysis

Due to the complimentary mixed-method design applied, the quantitative and qualitative data were collected separately. During analysis, the results were interpreted with the qualitative data enriching the quantitative data. A brief description of the analysis of both data sets is provided below.

3.7.1. Quantitative Data Analysis

During the quantitative data collection, the participants captured their answers on an Android tablet. Once the data collection was completed, the data were readily available for extraction and for the analysis to commence. The data were extracted from the Survey2Go platform using their data software, Dooblo. The quantitative data collected were interpreted using Statistical Package for the Social Sciences (SPSS) Version 24©. Descriptive statistics were computed first, followed by correlational analysis and multiple linear regression analysis. The data were not normally distributed, thus, a Pearsons correlation analysis, was computed. The multiple regression analysis was conducted but a process of transformation was used

whereby the variables that violate the assumption of normality were transformed. This allows one to conduct a non-parametric version of the multiple regression analysis. The OLBI, WART, and UWES have their own scoring methods in which the mean of the individual scores are added together. The final scores were then interpreted based on the measure's standardised instructions. Once the basic descriptive statistics were computed and the measures calculated according to their standardised scoring systems a digital index was created. The digital index allowed for a standardised scoring system which provided an indication of the level of digital device usage. Lastly, the digital device index was correlated with the standardised measures, the UWES, WART and OLBI to determine which variables were most highly correlated. Based on this correlational analysis and the review of the literature on digital burnout, a digital burnout measure was created.

3.7.2. Qualitative Data Analysis

The qualitative data collected were analysed using thematic analysis. Thematic analysis is a qualitative technique in which one identifies, analysis, and reports on patterns evident in the data (Gale, Heath, Cameron, Rashid, & Redwood, 2013). This qualitative research technique clusters similar themes to identify similar findings in the data (Braun & Clarke, 2006). According to Braun and Clarke (2006), a researcher engages in six stages during thematic analysis. These stages involve becoming familiar with the data, the transcription of the verbal data into a written transcript, the generation of initial codes, searching for themes, reviewing the themes, defining and naming the themes, and finally writing the report. As a self-complete qualitative questionnaire was used, there was no need for transcribing of audio files. According to the sequential mixed-methods design, the qualitative data aim to inform the quantitative data and therefore enriches the results (Braun & Clarke, 2006).

3.8. Ethical Considerations

3.8.1. Permission to Conduct the Study

Ethical clearance was provided by the University of Pretoria's Faculty of Humanities Ethical Committee. Thus, the researcher was granted permission to commence with the study.

3.8.2. Ethical Considerations during the Study

To participate in the study, participants had to provide informed consent. To ensure the participant was fully informed, each participant was provided with a consent form (see

Appendices three and four) detailing the specifics of the research study. The consent form outlined the following details of the study:

- The background and objectives of the study;
- The procedure to be followed during the completion of the survey;
- The risks and benefits of the study;
- The participant's rights throughout the study;
- The confidentiality of the results; and
- The contact details of the researcher should they have any queries following the completion of the survey.

Further, the participants were assured full confidentiality of the results. Confidentiality was of utmost importance for this study, as the employees provided information about their working behaviour directly related to their current position and working environment. Thus, it was clarified that the results would not be shared with the respective research company they were working for or any of their co-workers.

Confidentiality was ensured as each record was not personally identifiable. By assigning a number to each participant, the anonymity of the entries was assured. No personal details such as their name, surname, or contact details were acquired.

3.8.3. The Researchers Ethical Compliance

Overall, the researcher complied with two basic categories of ethical responsibilities. Firstly, all participants were treated with dignity and protected from harm. Secondly, the results published are accurate and truthful (Gravetter & Forzano, 2012). Participants could withdraw from the study at any time without experiencing any negative consequences. The ethical considerations and processes followed were the same for the quantitative and qualitative interviews completed. All participants of the study were informed that the results might be used for future research. As such, the data collected from this study are stored the University of Pretoria's Department of Psychology for 15 years.

3.9. Conclusion

This chapter outlined the research design and methodology used in this study. Further, the reliability of all measures used was discussed and confirmed. The following chapter will discuss the results of the survey in more detail, outlining the most significant findings.

CHAPTER 4: RESULTS

4.1. Introduction

The following chapter provides the reader with an overview of the analysis conducted for the study. In an attempt to understand the impact of work engagement and work addiction on digital burnout, this study was completed using a mixed-methodology research design. In line with the sequential explanatory design adopted, the quantitative results did not inform the qualitative measure design and vice versa. The complementary design allows for the enhancement of the results of the dominant method. In this instance, the qualitative data will be used to enhance the dominant method, the quantitative data findings (Cameron, 2009).

This chapter will thus commence with the basic descriptive quantitative findings, followed by inferential statistics. The chapter will conclude with an in-depth discussion of the thematic analysis conducted on the qualitative data. Chapter five will focus on the interpretation and integration of the quantitative and qualitative findings.

4.2. Quantitative Instrument Scoring

4.2.1. Utrecht Work Engagement Measure (UWES)

The UWES is a 17-item measure that measures three constructs, namely (1) vigour, (2) dedication, and (3) absorption. An average score for each construct is calculated with a higher score indicating increased levels of work engagement. Each statement is rated on a scale of 0 – 6. The scale is defined as follows: 0 = *Never*, 1 = *Almost never (A few times a year or less)*, 2 = *Rarely (Once a month or less)*, 3 = *Sometimes (A few times a month)*, 4 = *Often (Once a week)*, 5 = *Very Often (A few times a week)*, and 6 = *Always (Every day)*.

The following scoring categories were created in accordance to the UWES Manual (Schaufeli & Bakker, 2004) and are defined as follows:

Table 4.1: Scoring Categories for the UWES

Qualification	Lower Limit		Upper Limit
Very High	95 percentile ≤	score	
High	75 percentile ≤	score	< 95 percentile
Average	25 percentile ≤	score	< 75 percentile
Low	5 percentile ≤	score	< 25 percentile
Very Low		score	< 5 percentile

4.2.2. Work Addiction Risk Test (WART)

The WART consists of 25 statements, none of which are reversed. Each statement is rated on a scale of 1 to 4, where 1 means *never true*, 2 means *seldom true*, 3 means *often true,* and 4 means *always true.* The WART measures the propensity to be addicted to one's work and includes statements such as: "I seem to be in a hurry and racing against the clock", "I find myself doing 2 or 3 things at one time, such as eating lunch & writing a memo, while talking on the telephone", and "I feel guilty when I am not working on something".

The guide to the interpretation of the scores is indicated in the table below. These guidelines are provided with the WART questionnaire to assist with the interpretation of the results.

Table 4.2: WART Results Interpretation

Total Score	Statement
25-54	Not Work addicted
55-69	Mildly Work addicted
70-100	Highly Work addicted

As can be seen from the scoring index in table 4.2, the higher the score, the greater the risk that the individual is addicted to his or her work.

4.2.3. Oldenburg Burnout Inventory (OLBI)

The OLBI consists of 16 measures, eight of which are reversed. The OLBI aims to assess the propensity to be burnt out by looking at two constructs, namely (1) exhaustion and (2) disengagement. Each statement is rated on a scale of 1 to 4, where 1 means *strongly agree* and 4 means *strongly disagree*. Higher scores indicate higher exhaustion and disengagement. A mean score above the 2.5 threshold is indicative of burnout.

4.3. Descriptive Statistics

4.3.1. Measure of Work Engagement

To calculate work engagement, basic frequencies, the mean, and standard deviation were computed. The mean score of the three UWES sub-measures was computed by adding the scores on the particular scale and dividing the sum by the number of items of the sub-measures involved. A similar procedure was followed for the total score, overall UWES measure. Hence, the UWES yields three sub-measure scores and a total score that ranges between 0 and 6.

4.3.1.1. Vigour

Vigour is assessed by six items that refer to high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties. High scores are indicative of individuals who have high energy levels when working. The scores for each statement included are provided in table 4.3.

Table 4.3: Vigor Responses

Item	Data type	Response options							
		0	1	2	3	4	5	6	Total
At my work, I feel bursting with energy	Count	0	2	6	21	15	19	6	69
	%	0.0%	2.9%	8.7%	30.4%	21.7%	27.5%	8.7%	100.0%
At my job, I feel strong and vigorous	Count	2	2	2	16	21	19	7	69
	%	2.9%	2.9%	2.9%	23.2%	30.4%	27.5%	10.1%	100.0%
When I get up in the morning, I feel like going to work	Count	7	2	9	18	14	12	7	69
	%	10.1%	2.9%	13.0%	26.1%	20.3%	17.4%	10.1%	100.0%
I can continue working for very long periods at a time	Count	2	0	6	6	15	20	20	69
	%	2.9%	0.0%	8.7%	8.7%	21.7%	29.0%	29.0%	100.0%
At my job, I am very resilient, mentally	Count	2	0	1	15	14	22	15	69
	%	2.9%	0.0%	1.4%	21.7%	20.3%	31.9%	21.7%	100.0%
At my work I always persevere, even when things do not go well	Count	0	1	1	4	19	28	16	69
	%	0.0%	1.4%	1.4%	5.8%	27.5%	40.6%	23.2%	100.0%

As is evidenced in the table above, the majority of the participants indicated a three or above for most of the measures for vigour. Of particular interest was the persevering nature of the current sample of employees, of whom 63.8% feel that they always persevere at their work, even when things do not go well. This corroborates the finding that 73.9% feel that they are more often than not mentally resilient at work. Over half of the participants (58%) felt that they can work for long periods at a time. However, when asked about if they felt like going to work when they wake up, just over a quarter (26%) stated that they never or very rarely felt this way.

Table 4.4 represents the percentile scores calculated per scoring category for vigour.

Table 4.4: Percentile Scores for the Scoring Categories for Vigor

	Percentile 05	Percentile 25	Percentile 75	Percentile 95
Vigor	3.83	4.67	5.83	6.50

Referring to the figure below, indicating the mean score for each of the items, it is evident that all scores are below the mean of 5.83 for the 75th percentile. This indicates that the overall vigour experienced is average among the participants.
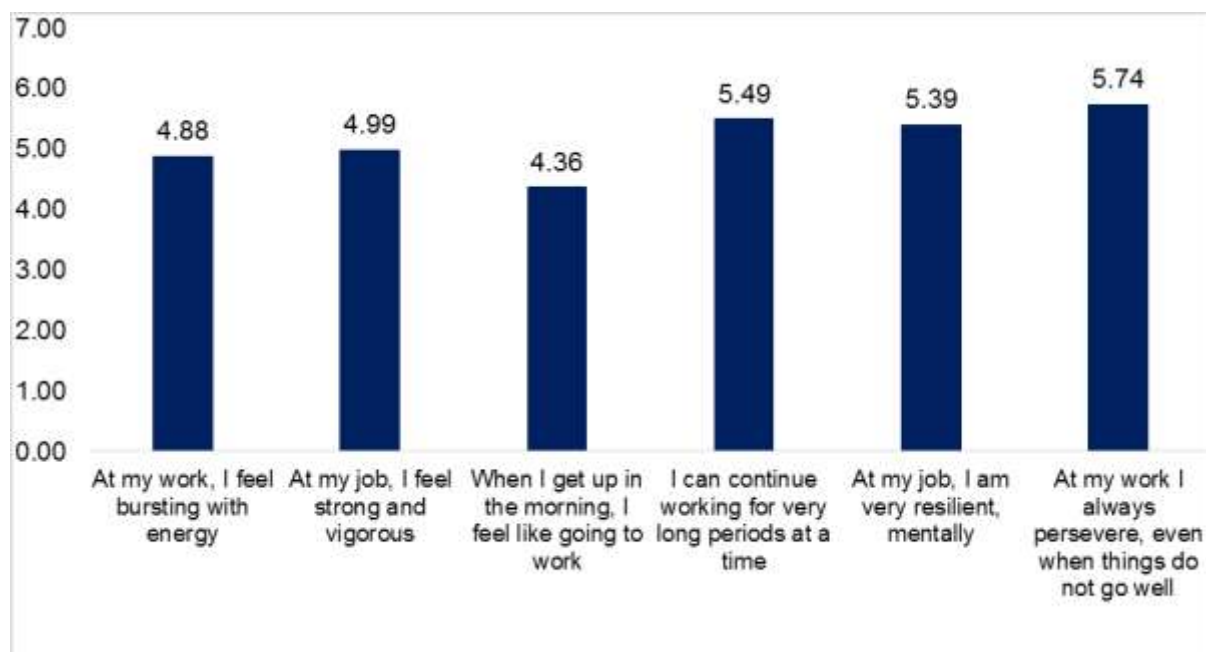
Figure 4.1: UWES vigour mean scores (n=69)

4.3.1.2.   *Dedication*

Dedication is assessed by five items that refer to deriving a sense of significance from one's work, feeling enthusiastic and proud about one's job, and feeling inspired and challenged by it. Individuals who score high on this measure find work meaningful and challenging. The responses for this construct are provided below.

Table 4.5: Dedication Responses

Item	Data type	Response options							
		0	1	2	3	4	5	6	Total
I find the work that I do full of meaning and purpose	Count	2	1	2	19	12	23	10	69
	%	2.9%	1.4%	2.9%	27.5%	17.4%	33.3%	14.5%	100.0%
I am enthusiastic about my job	Count	3	1	0	11	23	17	14	69
	%	4.3%	1.4%	0.0%	15.9%	33.3%	24.6%	20.3%	100.0%
My job inspires me	Count	5	2	7	13	15	20	7	69
	%	7.2%	2.9%	10.1%	18.8%	21.7%	29.0%	10.1%	100.0%
I am proud of the work that I do	Count	0	0	3	5	13	25	23	69
	%	0.0%	0.0%	4.3%	7.2%	18.8%	36.2%	33.3%	100.0%
To me, my job is challenging	Count	3	2	5	11	13	18	17	69
	%	4.3%	2.9%	7.2%	15.9%	18.8%	26.1%	24.6%	100.0%

While 78.2% frequently feel enthusiastic about their job, one in five that feel that their job could be more inspiring. Almost all participants (88%) said that they feel proud of the work they do every day or at least every week. Overall, one can see that these are highly dedicated employees. This may speak to the drive attributed to highly educated individuals outlined in Chapter 2.

Table 4.6 represents the percentile scores calculated per scoring category for dedication.

Table 4.6: Percentile Scores for the Scoring Categories for Dedication

	Percentile 05	Percentile 25	Percentile 75	Percentile 95
Dedication	3.00	4.60	6.00	6.80

With reference to the scoring categories (above) and the means for the individual items (below), average dedication is experienced overall, with "I am proud of the work that I do" leaning towards high levels of dedication.
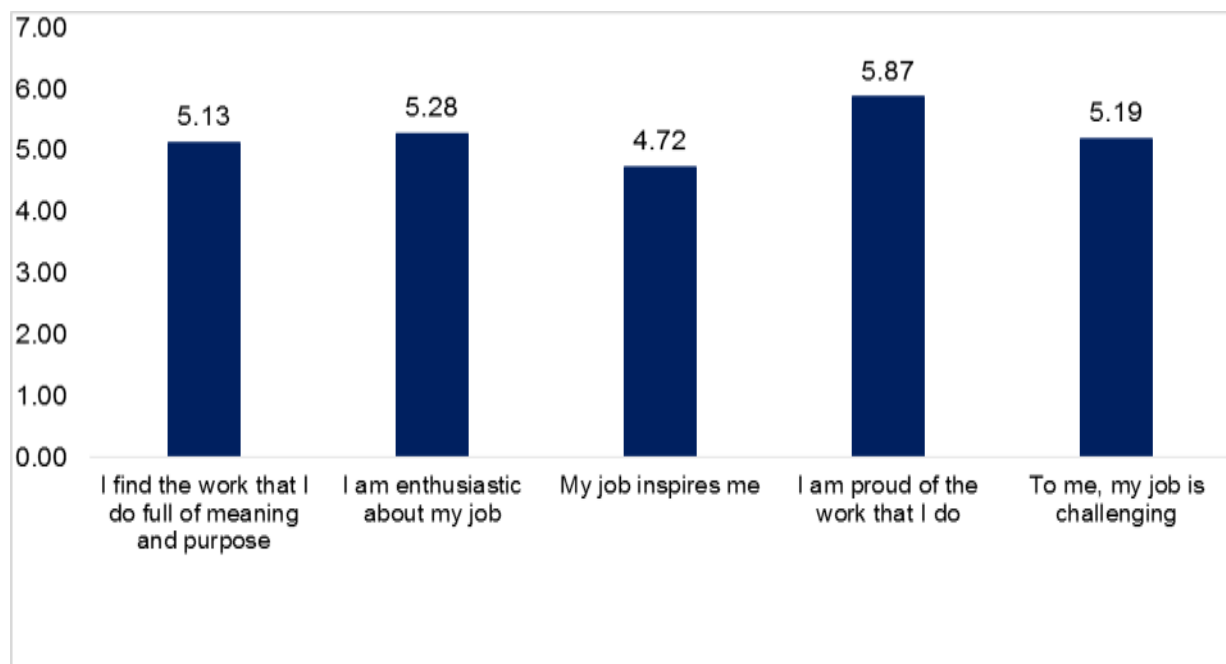
Figure 4.2: UWES dedication mean scores (n=69)

4.3.1.3. Absorption

Absorption is measured by six items that refer to being totally and happily immersed in one's work and having difficulties detaching oneself from it so that time passes quickly and one forgets everything else that is around. Individuals that score high on this measure are engrossed in their work. They experience difficulty detaching from their work and tend to forget everything around them. The responses for this construct are provided below.

Table 4.7: Absorption Responses

Item	Data type	Response options							
		0	1	2	3	4	5	6	Total
Time flies when I'm working	Count	0	1	2	3	15	29	19	69
	%	0.0%	1.4%	2.9%	4.3%	21.7%	42.0%	27.5%	100.0%
When I am working, I forget everything else around me	Count	3	1	4	14	15	23	9	69
	%	4.3%	1.4%	5.8%	20.3%	21.7%	33.3%	13.0%	100.0%
I feel happy when I am working intensely	Count	6	1	1	11	20	19	11	69
	%	8.7%	1.4%	1.4%	15.9%	29.0%	27.5%	15.9%	100.0%
I am immersed in my work	Count	1	0	2	8	20	20	18	69
	%	1.4%	0.0%	2.9%	11.6%	29.0%	29.0%	26.1%	100.0%
I get carried away when I'm working	Count	2	1	4	12	15	21	14	69
	%	2.9%	1.4%	5.8%	17.4%	21.7%	30.4%	20.3%	100.0%
It is difficult to detach myself from my job	Count	6	4	11	10	13	12	13	69
	%	8.7%	5.8%	15.9%	14.5%	18.8%	17.4%	18.8%	100.0%

Referring to the descriptive statistics for absorption above, just over two thirds (69%) of the sample feel that time flies when they are at work. This substantiates the findings that 68% stated that they more often than not forget everything around them and become completely immersed in their work (84%). A tendency for compulsive working behaviour becomes evident with over a third (36%) stating they frequently experience difficulty detaching themselves from their work.

Table 4.8 represents the percentile scores calculated per scoring category for absorption.

Table 4.8: Percentile Scores for the Scoring Categories for Absorption.

	Percentile 05	Percentile 25	Percentile 75	Percentile 95
Absorption	3.67	4.50	6.00	6.83

All statements fall slightly below the 75th percentile score of 6. Statements such as "time flies when I'm working" and "I am immersed in my work" lean towards high absorption ratings.
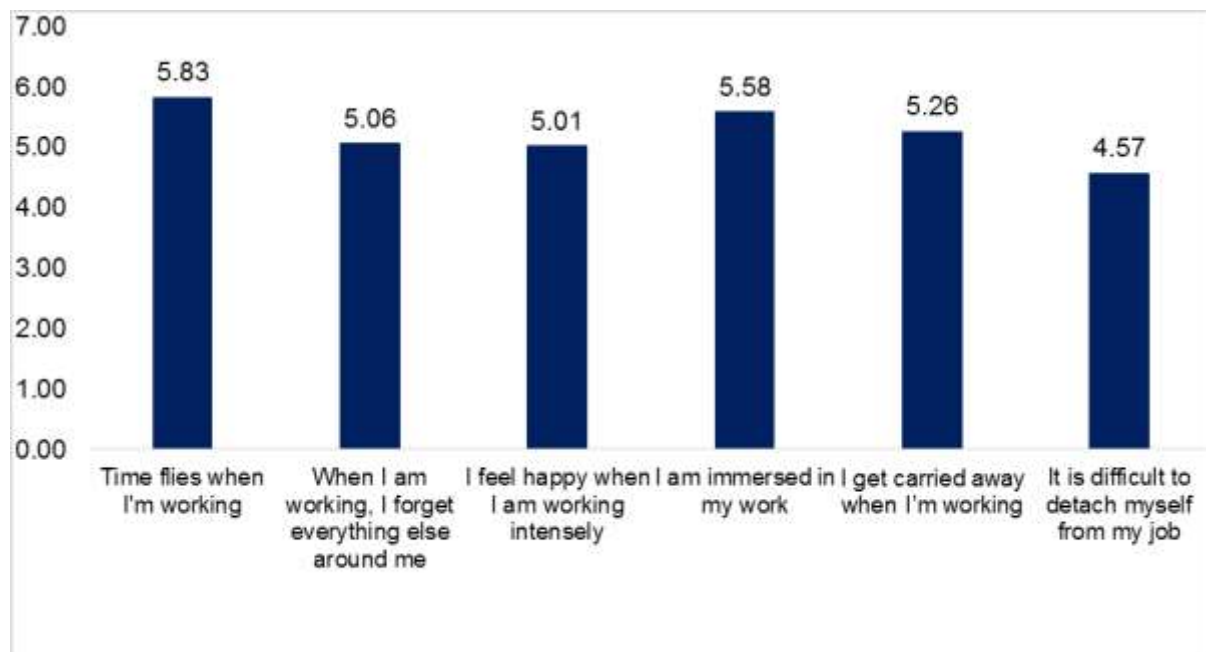
Figure 4.3: UWES absorption mean scores (n=69)

Comparing the descriptive statistics below to the scoring categories created, it is evident that for all constructs and overall, the UWES scores indicated "average" work engagement levels. This is deduced from the mean score of 5.14 for vigour, 5.24 for dedication, 5.22 for absorption, and 5.20 for the UWES overall, all falling between the 25th and 75th percentile.

Table 4.9: UWES Descriptive Statistics

Description	Vigour	Dedication	Absorption	Work & Well-being
Sample size	69	69	69	69
Mean	5.14	5.24	5.22	5.20
Median	5.17	5.40	5.33	5.26
Std. Deviation	0.91	1.17	1.03	0.93
Minimum	2.50	1.60	2.33	2.34
Maximum	6.83	7.00	7.00	6.94

Table 4.10: UWES Scoring Categories Sample Distribution

Item	Data type	Scoring categories					
		Very low	Low	Average	High	Very high	Total
Vigour	Count	3	18	29	18	1	69
	%	4.3%	26.1%	42.0%	26.1%	1.4%	100.0%
Dedication	Count	4	17	31	14	3	69
	%	5.8%	24.6%	44.9%	20.3%	4.3%	100.0%
Absorption	Count	5	14	34	11	5	69
	%	7.2%	20.3%	49.3%	15.9%	7.2%	100.0%
Work & Well-being	Count	3	14	35	14	3	69
	%	4.3%	20.3%	50.7%	20.3%	4.3%	100.0%

4.3.2. Measure of Work Addiction

To calculate work addiction, basic frequencies, the mean, and standard deviation were computed. Work addiction is measured by 25 statements. The higher the score, the higher the risk of addiction to work.

The responses for each statement in this measure are provided in table 4.11 below.

Table 4.11: WART Responses

Item	Data type	Response options				
		1	2	3	4	Total
I prefer to do most things myself rather than ask for help.	Count	7	14	34	14	69
	%	10.1%	20.3%	49.3%	20.3%	100.0%
I get very impatient when I have to wait for someone else or when something takes too long, such as long-slow moving lines.	Count	2	8	34	25	69
	%	2.9%	11.6%	49.3%	36.2%	100.0%
I seem to be in a hurry and racing against the clock.	Count	8	10	29	22	69
	%	11.6%	14.5%	42.0%	31.9%	100.0%
I get irritated when I am interrupted while I am in the middle of something.	Count	5	27	20	17	69
	%	7.2%	39.1%	29.0%	24.6%	100.0%
I stay busy and keep many "irons in the fire".	Count	3	7	39	20	69
	%	4.3%	10.1%	56.5%	29.0%	100.0%
I find myself doing 2 or 3 things at one time, such as eating lunch & writing a memo, while talking on the telephone.	Count	3	12	31	23	69
	%	4.3%	17.4%	44.9%	33.3%	100.0%
I overly commit myself by biting off more than I can chew.	Count	7	25	20	17	69
	%	10.1%	36.2%	29.0%	24.6%	100.0%

I feel guilty when I am not working on something.	Count	6	17	25	21	69
	%	8.7%	24.6%	36.2%	30.4%	100.0%
It is important that I see the concrete results of what I do.	Count	0	2	22	45	69
	%	0.0%	2.9%	31.9%	65.2%	100.0%
I am more interested in the final result of my work than in the process.	Count	10	20	24	15	69
	%	14.5%	29.0%	34.8%	21.7%	100.0%
Things just never seem to move fast enough or get done fast enough for me.	Count	7	28	17	17	69
	%	10.1%	40.6%	24.6%	24.6%	100.0%
I lose my temper when things don't go my way or work out to suit me.	Count	20	32	10	7	69
	%	29.0%	46.4%	14.5%	10.1%	100.0%
I ask the same question over again, without realizing it, after I've already been given the answer once.	Count	26	28	11	4	69
	%	37.7%	40.6%	15.9%	5.8%	100.0%
I spend a lot of time mentally planning & thinking about future events while tuning out the here & now.	Count	6	22	30	11	69
	%	8.7%	31.9%	43.5%	15.9%	100.0%
I find myself still working after my co-workers have called it quits.	Count	9	16	25	19	69
	%	13.0%	23.2%	36.2%	27.5%	100.0%
I get angry when people don't meet my standards of perfection.	Count	5	27	23	14	69
	%	7.2%	39.1%	33.3%	20.3%	100.0%

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I get upset when I am in situations where I can not be in control.	Count	7	23	27	12	69
	%	10.1%	33.3%	39.1%	17.4%	100.0%
I tend to put myself under pressure with self-imposed deadlines when I work.	Count	6	12	34	17	69
	%	8.7%	17.4%	49.3%	24.6%	100.0%
It is hard for me to relax when I'm not working.	Count	21	24	9	15	69
	%	30.4%	34.8%	13.0%	21.7%	100.0%
I spend more time working than on socializing with friends, on hobbies or on leisure activities.	Count	7	20	24	18	69
	%	10.1%	29.0%	34.8%	26.1%	100.0%
I dive into projects to get a head start before all the phases have been finalized.	Count	8	22	31	8	69
	%	11.6%	31.9%	44.9%	11.6%	100.0%
I get upset with myself for making even the smallest mistake.	Count	4	22	22	21	69
	%	5.8%	31.9%	31.9%	30.4%	100.0%
I put more thought, time, & energy into my work than I do into my relationships, with my spouse, (or lover) and family.	Count	16	21	20	12	69
	%	23.2%	30.4%	29.0%	17.4%	100.0%
I forget, ignore or minimize important family celebrations such as birthdays, reunions, anniversaries or holidays.	Count	32	16	12	9	69
	%	46.4%	23.2%	17.4%	13.0%	100.0%
I make important decisions before I have all the facts & have a chance to think them through thoroughly.	Count	25	29	11	4	69
	%	36.2%	42.0%	15.9%	5.8%	100.0%

As can be seen from the table above, the participants provided mostly three (*often true*) and four (*always true*) ratings for the majority of the statements. The results indicate a clear pattern of independent, efficient working behaviour that is driven by a sense of urgency and perfectionism. The seven out of ten (69.6%) participants who agreed that they prefer to do most things themselves, rather than ask for help demonstrated independent working behaviour. Further, the sense of urgency is profound, as intolerance for working at a slower pace manifests in 85.5% of the participants, mentioning that they get very impatient when they have to wait for someone else or when something takes too long, such as long, slow-moving lines. Due to the urge to complete their tasks at a fast pace, participants highlighted the need to multitask in an attempt to work efficiently. This is done by eating lunch, working, and talking on the phone at the same time for 78% of the participants.

Almost two thirds (73.9%) feel that they are constantly working against the clock but also agreed that they (73.9%) tend to place unnecessary pressure on themselves with self-imposed deadlines. The urgency and seemingly inflated workload may, to some extent, be self-imposed, as a quarter of the participants indicated that they over commit and 85.5% indicated that they keep busy with many irons in the fire at the same time. Further, the drive for perfectionism in their working behaviour is apparent as over half (53.6%) of the participants mentioned that they get angry when people do not meet their standards of perfection and 62% mentioned that they get upset when they make even the smallest mistake.

Work seems to become all-encompassing for these individuals as two thirds (66%) confessed to feeling guilty when they are not working. A full 63.7% of participants find themselves working after hours after everyone else has concluded their working day. Work affects their personal life as a third (34%) feel that they find it difficult to relax when not working and a further 60.9% state that they spend more time working than socialising with friends and family.

Seen in the figure below, 39.1% of the sample is classified as highly addicted to their work, while another 44.9% is categorised as mildly addicted.
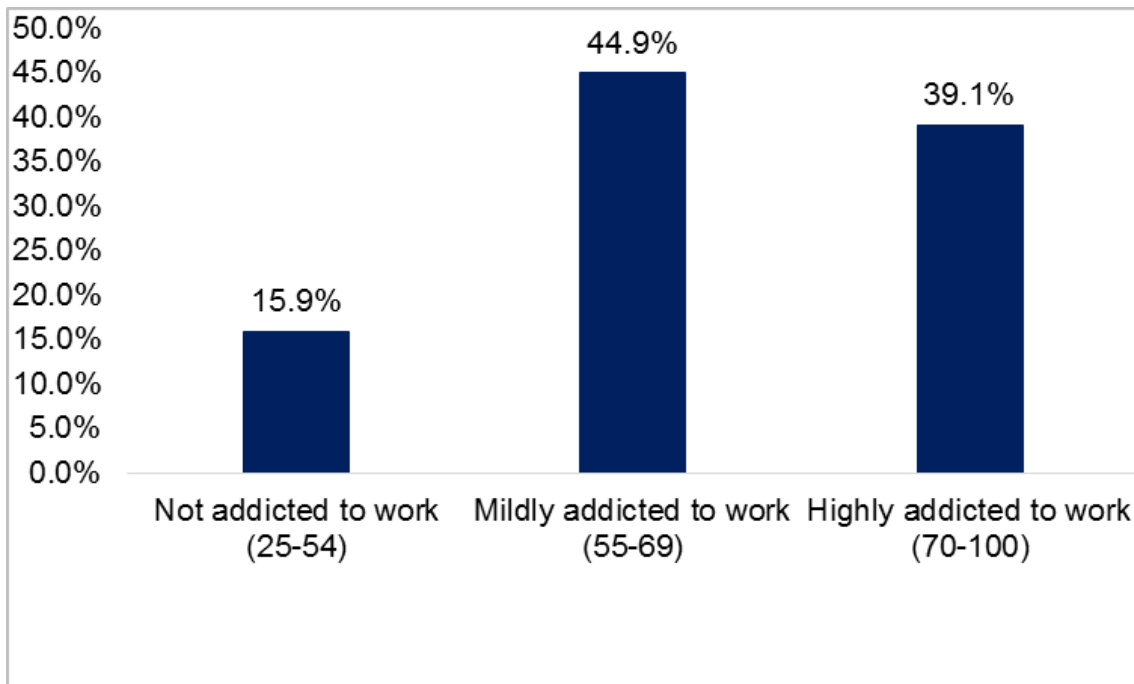
Figure 4.4: Work addiction score distribution among the current sample

With a mean of 66.64, the majority of the sample is on the verge of being classified as highly addicted to their work.

Table 4.12: WART Descriptive Statistics

Description	Exhaustion
Sample size	69
Mean	66.64
Median	63.00
Std. Deviation	13.65
Minimum	38.00
Maximum	100.00

4.3.3. Measure of Burnout

In order to measure the propensity to be burnt out, basic frequencies, the mean, and standard deviation were computed. The scores for the two constructs measured by the OLBI - (1) exhaustion and (2) disengagement - are provided below. This is followed by the overall OLBI scores for the participants.

4.3.3.1. Exhaustion

The exhaustion sub-measure consists of eight items, four of which are reversed. Reversed statements have been indicated in the table 4.13 below.

Table 4.13: OLBI Exhaustion Responses

Item	Data type	Response options				
		1	2	3	4	Total
There are days when I feel tired before I arrive at work - Reversed	Count	1	12	37	19	69
	%	1.4%	17.4%	53.6%	27.5%	100.0%
After work, I tend to need more time than in the past in order to relax and feel better - Reversed	Count	7	20	25	17	69
	%	10.1%	29.0%	36.2%	24.6%	100.0%
I can tolerate the pressure of my work very well	Count	18	42	8	1	69
	%	26.1%	60.9%	11.6%	1.4%	100.0%
During my work, I often feel emotionally drained - Reversed	Count	4	30	23	12	69
	%	5.8%	43.5%	33.3%	17.4%	100.0%
After working, I have enough energy for my leisure activities	Count	7	23	23	16	69
	%	10.1%	33.3%	33.3%	23.2%	100.0%
After my work, I usually feel worn out and weary - Reversed	Count	4	24	25	16	69
	%	5.8%	34.8%	36.2%	23.2%	100.0%
Usually, I can manage the amount of my work well	Count	19	42	5	3	69
	%	27.5%	60.9%	7.2%	4.3%	100.0%
When I work, I usually feel energized	Count	7	38	18	6	69
	%	10.1%	55.1%	26.1%	8.7%	100.0%

Due to the inclusion of reversed items in the measure for exhaustion, higher scores can be interpreted as increased levels of exhaustion. Thus, if a majority of the participants indicated a rating score of three or above, they experience greater exhaustion levels. As can be seen in the table above, the majority of the participants indicated a three or above for five out of the eight measures. Interestingly, over 80% state that there are days that they feel tired before arriving at work. While the majority feel that they can cope efficiently with the work pressure (87%) and the workload (88.4%), one in six feels that they need more time to relax and feel better than they did in the past. Over half (59.4%) expressed that they feel worn out and weary after work. Although the risk of increased exhaustion levels is indicative in five out of the eight measures, 65.2% of the participants feel energised once they are working.

Figure 4.5 demonstrates the mean score of each of the items. Items with a score of 2.5 or above are indicative of increased exhaustion levels thus indicating the propensity to be burnt out.
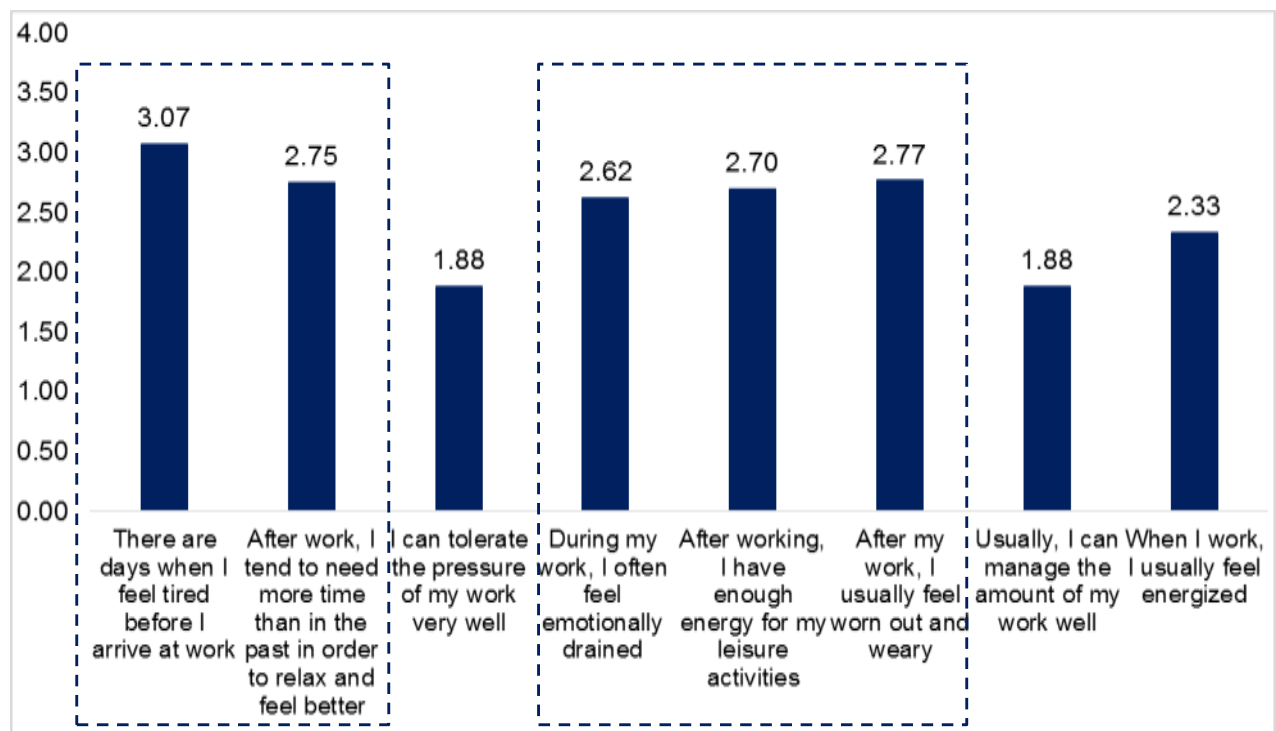
Figure 4.5: OLBI exhaustion mean scores (n=69)

As can be seen in Figure 4.5, participants in this study lean towards high exhaustion levels that increase their risk of burnout. Table 4.14 provides the descriptive statistics for exhaustion as a sub-measure of burnout.

Table 4.14: OLBI Exhaustion Descriptive Statistics

Description	Exhaustion
Sample size	69
Mean	2.50
Median	2.50
Std. Deviation	0.57
Minimum	1.38
Maximum	3.88

As seen in table 4.14 above, the group exhibits a mean score of 2.5 for exhaustion, indicating that the group is on the verge of exhaustion and thus at the risk of becoming burnt out if their behaviour and attitude towards work do not improve.

4.3.3.2. Disengagement

The disengagement sub-measure consists of eight items, four of which are reversed. Reversed statements have been indicated in table 4.15 below.

Table 4.15: OLBI Disengaged Responses

Item	Data type	Response options				
		1	2	3	4	Total
I always find new and interesting aspects in my work	Count	18	40	11	0	69
	%	26.1%	58.0%	15.9%	0.0%	100.0%
It happens more and more often that I talk about my work in a negative way - Reversed	Count	17	22	19	11	69
	%	24.6%	31.9%	27.5%	15.9%	100.0%
Lately, I tend to think less at work and do my job almost mechanically - Reversed	Count	6	35	24	4	69
	%	8.7%	50.7%	34.8%	5.8%	100.0%
I find my work to be a positive challenge	Count	16	36	13	4	69
	%	23.2%	52.2%	18.8%	5.8%	100.0%
Over time, one can become disconnected from this type of work - Reversed	Count	5	24	26	14	69
	%	7.2%	34.8%	37.7%	20.3%	100.0%
Sometimes I feel sickened by my work tasks - Reversed	Count	12	32	18	7	69
	%	17.4%	46.4%	26.1%	10.1%	100.0%
This is the only type of work that I can imagine myself doing	Count	6	6	29	28	69
	%	8.7%	8.7%	42.0%	40.6%	100.0%
I feel more and more engaged in my work	Count	14	29	21	5	69
	%	20.3%	42.0%	30.4%	7.2%	100.0%

Contrary to the findings of exhaustion, the participants overall are not disengaged with their work. Participants mostly indicated a rating score of 2 or below for the majority of the statements. Thus, if one looks at the table above, 84.1% of the participants feel that they always find new and interesting aspects in their work. Further, three quarters of the sample find their work to be a positive challenge (75.4%). However, heightened disengagement scores do not seem prevalent among this sample; 58% agreed that over time, one could become disconnected from this type of work. Over a third of the sample (36.2%) indicated that sometimes they feel sickened by their work tasks. This may be indicative of increased disengagement levels for these employees in the years to come.

The figure 4.6 below demonstrates the mean score of each of the items for disengagement. Items with a score of 2.5 or above are indicative of increased disengagement levels thus indicating the propensity to be burnt out.
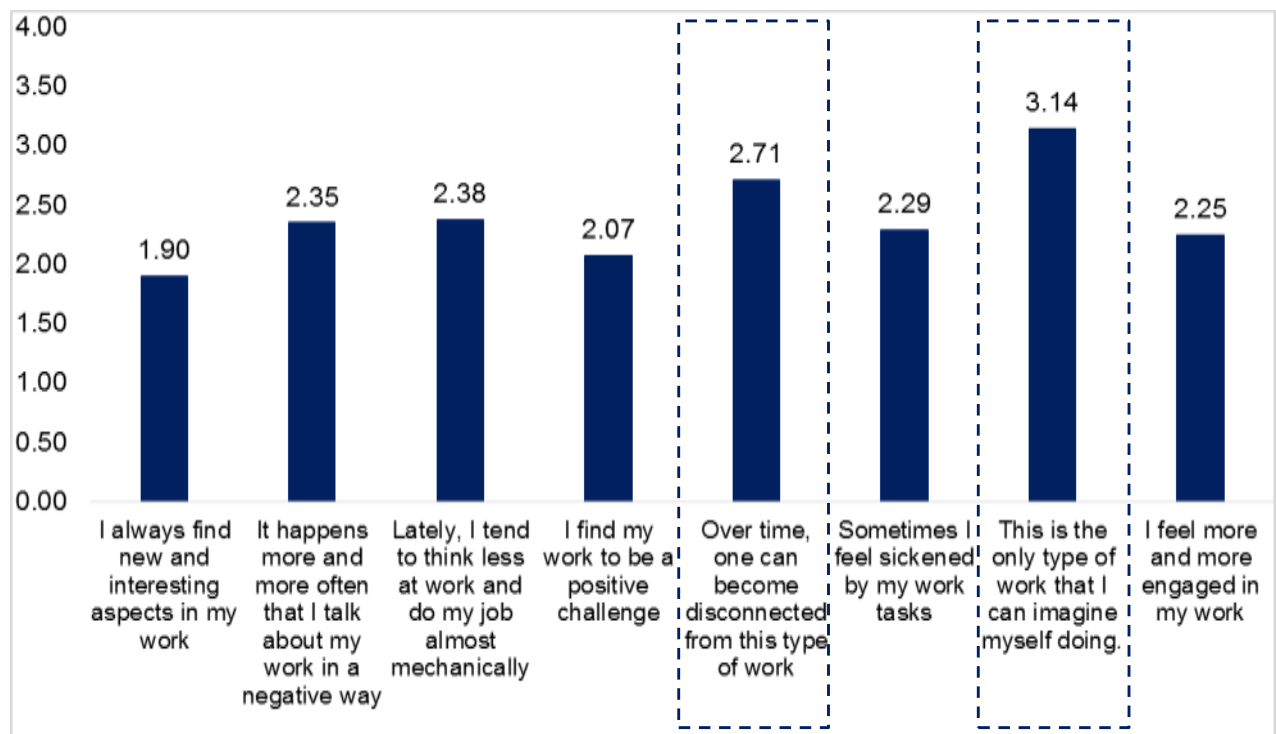
Figure 4.6: OLBI disengagement mean scores (n=69)

As the above items lean towards disengagement, it cannot be said that the participants are disengaged although they exhibit high exhaustion levels. However, looking at the nature of these two items, it should be cautioned that over a more extended period of time these participants might display increased disengagement levels.

Table 4.16: OLBI Disengagement Descriptive Statistics

Description	Disengagement
Sample size	69
Mean	2.39
Median	2.25
Std. Deviation	0.54
Minimum	1.25
Maximum	3.63

As seen in table 4.16, the group exhibits a mean score of 2.39 for disengagement, which is slightly below the 2.5 threshold for the measure of disengagement. This is indicative that while some individuals demonstrated a risk of disengagement, the same cannot be said for the group as a whole. The subsequent section focuses on burnout overall, indicating the risk of burnout among these participants.

4.3.3.3. Overall burnout

The burnout score was calculated by adding each of the individual scores for the statements included in the two constructs. Once this was done, the mean score was calculated, which was then interpreted in relation to the 2.5 threshold. Table 4.17 provides a holistic view of the mean scores obtained for the two constructs as well as burnout overall.

Table 4.17: OLBI Descriptive Statistics

Description	
Sample size for the OLBI measure	69
Mean (Exhaustion)	2.50
Mean (Disengagement)	2.39
Mean (Burnout)	2.44
Std. Deviation (Burnout)	0.50
Minimum (Burnout)	1.44
Maximum (Burnout)	3.75

As can be seen from the table above, the group overall scored just below the threshold of 2.5, indicating that this group is leaning towards the risk of burnout.
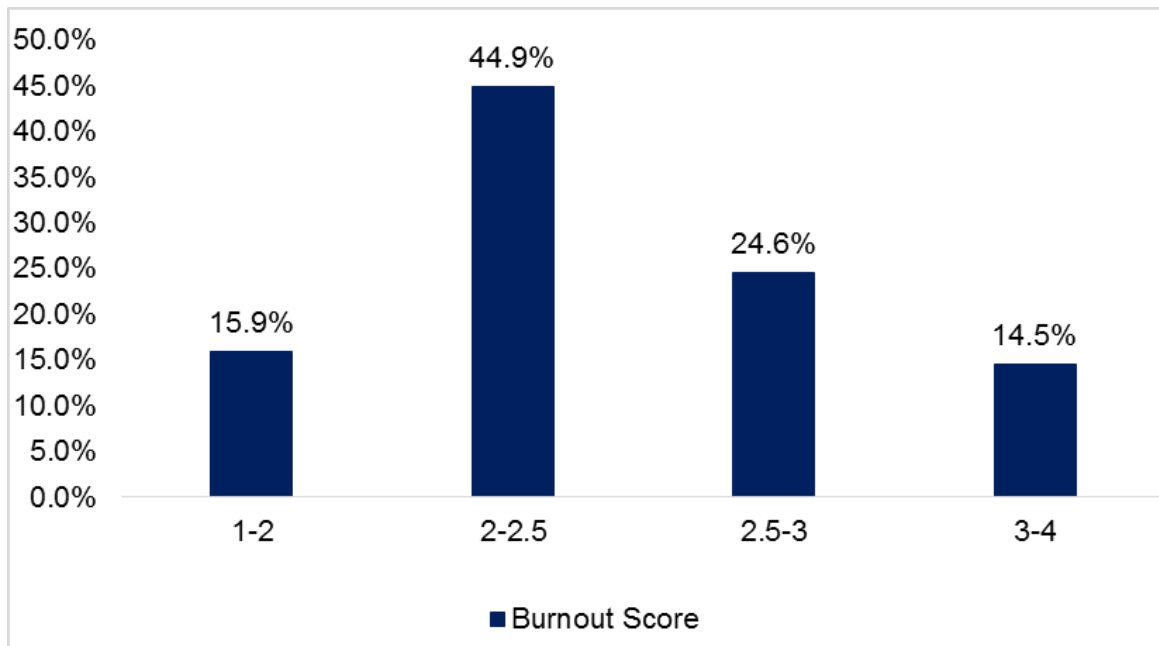
Figure 4.7: Burnout distribution among the current sample

Figure 4.7 above groups the burnout scores into categories to illustrate the distribution of the sample. As can be seen above, 39.1% of the sample scored 2.5 and above.

A possible explanation as to why these individuals are not yet burnt out is the lowered disengagement mean, combined with the number of years working in the industry. As can be seen in the figure below, just under a third has been working for 0 – 3 years, while another third have been working for 6 – 10 years.
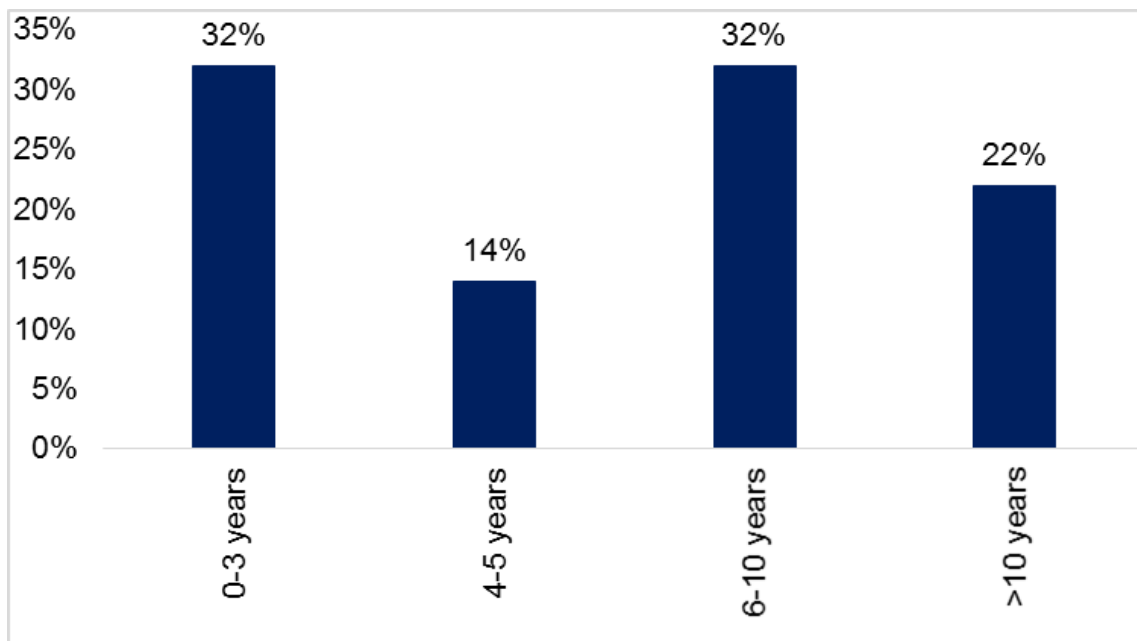
Figure 4.8: Years worked in the research industry

4.4. Digital Index

Digital behaviour and usage were assessed by the questionnaire with questions specifically pertaining to the type of digital devices used, the frequency of usage, the purpose of usage, and the nature of the usage as seen in Appendix 1.

Preliminary analysis was run including all digital devices used by the participants. However, due to the small sample sizes for each of the device categories, the preliminary analysis did not yield significant results. Thus, a decision was made to focus on digital behaviour regarding the usage of cell phones for the remainder of the analysis.

The first step in the creation of the digital index was to create a standardised scoring system that allocated a score to each answer option of the questions in the digital behaviour section of the overall questionnaire. A digital index was then created for each participant based on his or her answers provided to each question in this section of the questionnaire. The scores allocated to each answer option have been indicated below in table 4.18.

Table 4.18: Scores Assigned to Each Answer Option to Create a Digital Device Index

Question	Answer options	Score
Please indicate whether you use each of these devices for work or personal purposes or both. (Cell phone)	Personal	2
	Work	2
	Both work and personal	4
On average, how many hours a day do you spend on each of these devices? (Cell phone)	Less than 1 Hour	1
	1-2 hours	1
	3-4 hours	0
	5-6 hours	0
	7-8 hours	0
	8-9 hours	0
	10 or more hours	0
On average, how many times a day do you check each of these devices? (Cell phone)	Every 5 minutes	1
	Every 10 minutes	1
	Every 15 minutes	1
	Once every half an hour	0
	Every hour	0
	Every 2 – 4 hours	0
Please select the statement that best describes when you use each of these devices (Cell phone)	First thing in the morning before work	1
	On my way to work	1
	At work	1
	After working hours	1
	Just before I go to bed	1
	Other (please specify)	1

	All the time (all of the above options and more)	6
Please select which devices you use for each of the following statements (Cell phone)	To receive and check work emails	1
	To complete my daily work (i.e. check reports, communicate with clients etc.)	1
	To access social media	1
	For online banking	1
	To surf the internet for general information	1
	To watch / stream videos or music	1
	Instant messaging	1
Thinking about your device usage and your working environment specifically, which one of the following statements best describe your digital behaviour? (Cell phone)	Once I leave the office I do not check my emails, take any phone calls or reply to any messages that are work related	0
	Once I leave the office I still check my emails but do not respond to any calls/messages/emails that are work related	1
	Once I leave the office I continuously check my emails, take phone calls and respond to messages that are work related	2

Based on the scoring assigned to each answer option and the participant's answers provided, the participant could score a maximum of 21 points contributing to his or her digital index. The higher the score, the higher his or her digital usage. The following descriptive statistics were computed for the digital index.

Table 4.19: Digital Device Index Descriptive Statistics

Description	Digital index
Sample size	69
Mean	14.98
Median	15.00
Std. Deviation	3.66
Minimum	2.00
Maximum	20.00

As can be seen from table 4.19 above, the mean score for the digital index was 14.98, indicating high engagement with cellular devices. The maximum score of 20 out of 21 indicated extremely high digital usage. One standard deviation of 2.66 indicates that 68.2% of the scores fall between 11.32 and 18.64.

Further analysis was conducted on Q10 and Q11, which consisted of agreement statements about the participant's digital device usage and behaviour. These statements were rated on a scale of 1 to 4, where 1 means *strongly disagree* and 4 means *strongly agree*. From this analysis, two constructs were created, namely (1) digital connect and (2) digital devices. The basic frequencies of each of these are provided in table 4.20 below.

Table 4.20: Digital Connect Responses

Item	Data type	1	2	3	4	Total
			Response options			
[R] I am expected to be available for work after hours	Count	14	30	21	4	69
	%	20.3%	43.5%	30.4%	5.8%	100.0%
[R] I make myself available for work after hours	Count	27	34	7	1	69
	%	39.1%	49.3%	10.1%	1.4%	100.0%
I am able to separate my work and personal life	Count	5	19	34	11	69
	%	7.2%	27.5%	49.3%	15.9%	100.0%
I am able to switch off after work (i.e. you do not use any of your digital devices for work purposes after hours)	Count	16	26	22	5	69
	%	23.2%	37.7%	31.9%	7.2%	100.0%
[R] I need access to my emails at all times	Count	16	23	22	8	69
	%	23.2%	33.3%	31.9%	11.6%	100.0%
[R] I feel lost when I am digitally disconnected	Count	18	31	13	7	69
	%	26.1%	44.9%	18.8%	10.1%	100.0%

As can be seen in Table 4.20 above, 63.8% of the participants feel that they are expected to be available after working hours. As such, 88.4% mentioned that they make themselves available after hours. Just over a quarter (27.5%) disagreed that they can separate their work and personal life. A similar pattern of difficulty to disconnect from their digital devices for work purposes after hours is illustrated as seven out of ten participants disagreed with the statement "I am able to switch off after work (i.e. you do not use any of your digital devices for work purposes after hours)". There is a strong desire to be connected at all times, with over half of the participants indicating that they need access to their emails at all times.

Table 4.21 below indicates the frequencies obtained for the construct digital devices. Interestingly, just under half strongly agree that digital devices enhance their work performance. Further, 89.9% of the participants agree (total responses for *agree* and *strongly agree*) that they can complete their work faster due to the use of digital devices.

Table 4.21: Digital Devices Responses

Item	Data type	Response options				
		1	2	3	4	Total
It enhances my work performance	Count	3	1	32	33	69
	%	4.3%	1.4%	46.4%	47.8%	100.0%
[R] I struggle to get all my work done while I am digitally "connected"	Count	5	11	37	16	69
	%	7.2%	15.9%	53.6%	23.2%	100.0%
I complete my work faster through the use of digital devices	Count	1	6	28	34	69
	%	1.4%	8.7%	40.6%	49.3%	100.0%
[R] I strongly dislike the use of all digital devices in the working environment	Count	1	2	21	45	69
	%	1.4%	2.9%	30.4%	65.2%	100.0%
[R] Digital devices should be banned in the working environment	Count	1	0	13	55	69
	%	1.4%	0.0%	18.8%	79.7%	100.0%

Table 4.22: Digital Connect and Digital Devices Descriptive Statistics

Description	Digital connect	Digital devices
Sample size	69	69
Mean	2.18	3.41
Median	2.14	3.40
Std. Deviation	0.55	0.47
Minimum	1.00	1.60
Maximum	3.14	4.00

4.5. Results of the Correlational Analysis between the UWES, OLBI, WART, and Digital Index

To assess the linear relationships that exist between the various measures, a Pearson correlation coefficient was computed as shown in table 4.23 below.

Table 4.23: Pearson Correlation Analysis Across all Measures

		1	2	3	4	5	6	7	8
Disengagement	1	1							
Exhaustion	2	.657**	1						
Oldenburg Burnout Inventory	3	.906**	.915**	1					
Q10 Digital Connect	4	-0.065	-.428**	-.275*	1				
Q11 Digital Devices	5	-.309**	-0.220	-.289*	-0.169	1			
Digital Index	6	-0.056	0.005	-0.027	-.281*	.243*	1		
Work Addiction Risk Test	7	.323**	.556**	.486**	-.534**	0.169	0.116	1	
Work & Well-being	8	-.617**	-.297*	-.498**	-0.183	0.225	0.121	0.163	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

To summarise the findings in the table above, one can see a large positive significant correlation between disengagement and exhaustion. Further, a large positive correlation exists between the OLBI and exhaustion ($r = .915$) and disengagement ($r = .906$). This is to be expected, as these are the two sub-measures of the OLBI. Interestingly, a medium negative

correlation exists between digital connect and exhaustion and between digital connect and the OLBI.

When looking at the WART, there exists a small to medium positive correlation with disengagement ($r = .323$), exhaustion ($r = .556$), and burnout ($r = .486$). Interestingly, there is a negative medium correlation between the WART and digital connect ($r = - .534$).

Lastly, the UWES has a large negative correlation with disengagement ($r = - .617$), which aligns with the theory covered in Chapter 2 that engaged and disengaged lie on opposite ends of the working engagement spectrum.

4.6. Digital Burnout Index

After establishing a digital index that looked specifically at the attitudes and behaviours towards digital devices, a digital burnout dimension was created. Since digital burnout is a new phenomenon with no standardised measure or scoring system in place yet, it is important to note the process that was followed to create the digital burnout dimension. This dimension was created to establish whether digital behaviour was correlated with work addiction, work engagement, and burnout to indicate whether digital burnout poses a threat to the current sample. The digital burnout dimension was created based on the literature review of the drivers of digital burnout as well as the correlational analysis run as indicated in section 4.5. The following three measures were included in the creation of the digital burnout metric:

1. Disengagement (Sub-measure of OLBI)
2. Exhaustion (Sub-measure of OLBI)
3. Digital connect (Q10 – Sub-measure of the digital index)

Correlational analysis was run to determine whether a relationship exists between the digital burnout metric and all the other measures. The findings are presented in table 4.24 below.

Table 4.24: Pearson Correlation Analysis of Digital Burnout Index across all Measures

	Pearson Correlation	p-value	N
Vigour	-0.431	0.000*	69
Dedication	-0.427	0.000*	69
Absorption	0.010	0.935**	69
Disengagement	0.744	0.000*	69
Exhaustion	0.908	0.000*	69
Work Addiction Risk Test	0.615	0.000*	69
Work & Well-being	-0.315	0.008*	69
Oldenburg Burnout Inventory	0.910	0.000*	69

* p <= 0.001

** p <= 0.005

Following the Pearson correlation coefficient analysis on the relationship between digital burnout and each of the individual measures above, the following was found.

Digital burnout is inversely correlated with vigour (r = -.431) and dedication (r = -.427). Thus, increased vigour and dedication experienced while working lowers one's risk of being digitally burnt out. This is a significant inverse correlation as $p < 0.05$. As vigour and dedication are two of three constructs that comprise work engagement, it is to be expected that one also sees an inverse correlation between digital burnout and the UWES overall (r = -.315).

There is a large positive correlation between digital burnout and burnout (r = .910), with exhaustion being the construct with the largest correlation (r = .908). Lastly, a large positive correlation exists between digital burnout and work addiction (r = .615). The findings have been visually presented in figures 4.9 and 4.10 below.
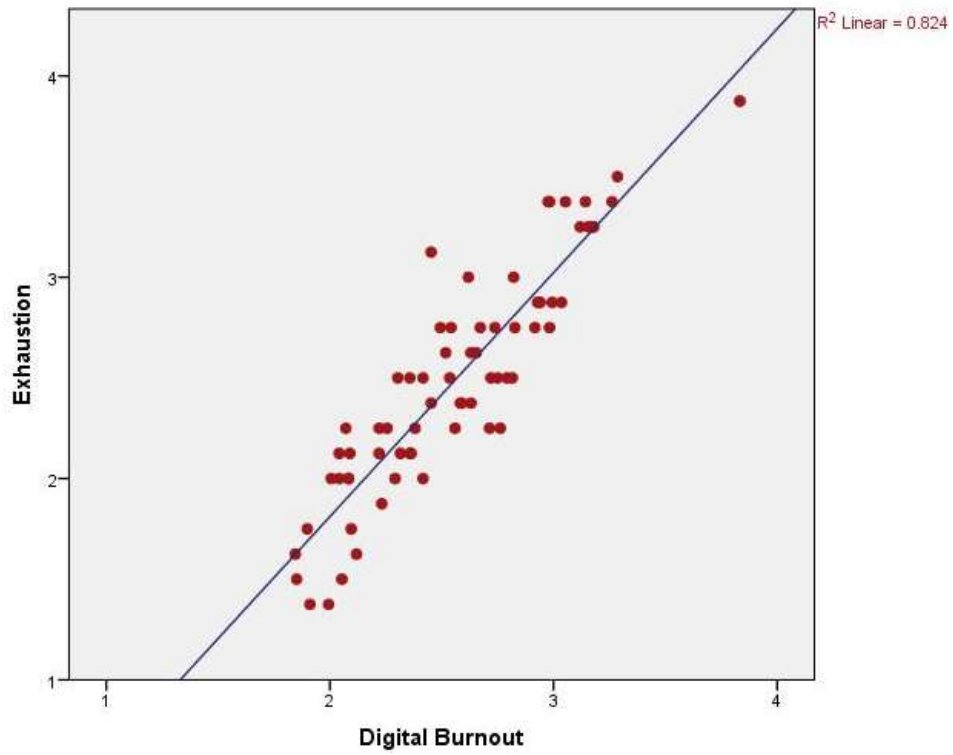
Figure 4.9: Correlation between digital burnout and exhaustion
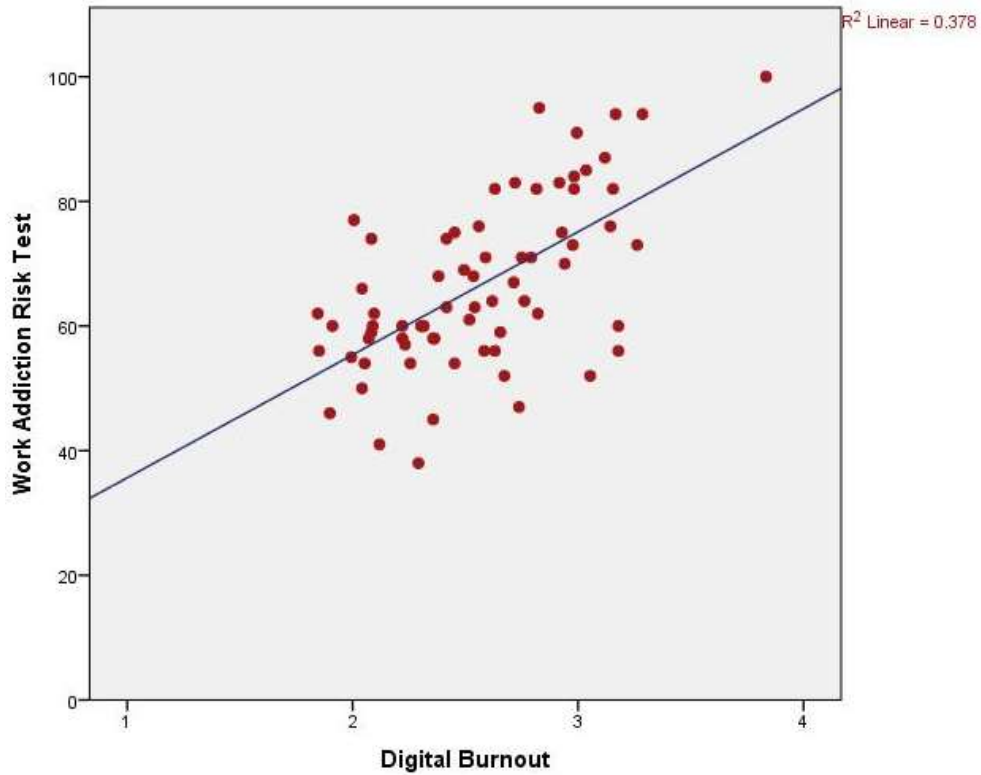
Figure 4.10: Correlation between digital burnout and work addiction risk test

The descriptive statistics for digital burnout are specified in table 4.25.

Table 4.25: Digital Burnout Descriptive Statistics

Description	Digital burnout
Sample size	69
Mean	2.5699
Median	2.5595
Std. Deviation	0.42519
Minimum	1.85
Maximum	3.83

Due to the lack of a standardised digital burnout measure, a decision was made to use the same cut-off point as the OLBI measure. As can be seen from the table above, the group overall scored above the threshold of 2.5. This is indicative that this group is at the risk of digital burnout, as defined by the digital burnout metric descriptive statistics above.

4.7. A Step-Wise Multiple Linear Regression to Identify Predictors of Digital Burnout

A step-wise multiple linear regression was run on the following measures and sub-measures to identify the measures that act as the greatest predictors of digital burnout.

1. WART overall
2. Vigor (sub-measure of UWES)
3. Dedication (sub-measure of UWES)
4. Absorption (sub-measure of UWES)
5. UWES Overall
6. Digital index
7. Digital devices (Q11 sub-measure of Digital index)

Preliminary analyses was conducted to test for the violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity.

The result of the step-wise multiple linear regression can be found below.

Table 4.26: Results of the Step-Wise Multiple Linear Regression

Variables Entered/Removed[a]

Model	Variables Entered
1	Work Addiction Risk Test
2	Vigor
3	[R] Q11 Digital Devices

a. Dependent Variable: Digital Burnout

The model with the best fit was the third model (indicated in table 4.27 below) and was thus used for the remainder of the analyses.

Table 4.27: Model Summary

Model	R	R Square	Adjusted R Square
3	.792c	0.628	0.610

c. Predictors: (Constant), Work Addiction Risk Test, Vigor, [R] Q11 Digital Devices

Model three explained 62.8% of the variance in digital burnout.

Table 4.28: Coefficients[a]

Model		Unstandardized Coefficients			Standardized Coefficients	Sig.	Collinearity Statistics	
		Beta	Std. Error	Sig.	B		Tolerance	VIF
3	(Constant)	1.971	0.295	0.000		0.000		
	Work Addiction Risk Test	0.021	0.002	0.000	0.672	0.000	0.971	1.030
	Vigor	-0.203	0.036	0.000	-0.435	0.000	0.952	1.050
	[R] Q11 Digital Devices	0.157	0.071	0.030	0.174	0.030	0.929	1.077

In summary, it was found that the greatest predictors of digital burnout were (1) WART (*beta* = 0.021, *p* < .001), (2) Vigour (*beta* = -0.203, *p* < .001), and (3) digital devices (*beta* = 0.157, *p* < .001) (Pallant, 2010).

4.8. Thematic Analysis Results

4.8.1. Analysis Process Followed

As indicated in Chapter 3, section 3.7.2, the qualitative data collected were analysed using thematic analysis as outlined by Braun and Clarke (2006) and Gale et al. (2013). This qualitative research technique clusters similar themes to identify similar findings within the data (Braun & Clarke, 2006). According to Braun and Clarke (2006), the researcher engages in six steps when working through the data. Each of the six steps will be further discussed in light of the current study and results.

In the first step, the researcher took the time to become familiar with the data, working through the completed questionnaires (Braun & Clarke, 2006). An example of the questionnaire can be found in Appendix 2. This provided the researcher with a holistic view of the data and allowed initial thoughts around possible themes and codes to be developed. Thereafter, each question was approached individually across all the completed questionnaires. For example, the researcher read question one across all six interviews then read question two, and so on. Reading and preliminarily analysing each question across all the completed questionnaires allowed the initial identification and recording of possible themes, sub-themes, and existing codes (Braun & Clarke, 2006).

While reading each question individually, the researcher embarked on the second step in the analysis process in which codes and relevant quotations from the data were created and extracted. Table 4.29 below outlines some of the codes with supporting data extracts as an example of the initial codes that were created.

Table 4.29: Illustration of Response Codes and Supporting Data Extracts

Codes	Supporting data extract	Participant number
Company culture (The people)	"The culture now seems to be everyone for themselves, work and go home, there doesn't seems to be togetherness."	2
Job resources	"For the first half of year, it was really tough – this was a result of the company being under-staffed, poor management and lack of support."	5
Job demands	"Yes it is definitely high pressured and heavy workload."	2
Stress alleviating mechanisms	"I talk about work with family all the time it's a way of releasing tension and feel there is someone on my side."	6
Responsibility	"I do think we might take on more responsibility and therefore have a higher work ethic and willingness and commitment to complete tasks"	3
Experience	"It comes with experience and also seniority and the two are mutually enforcing "	1
Work Ethic	"I think being highly educated plays a part in one's work ethic but I don't believe it is the sole factor determining work ethic but definitely plays a part."	5
Ambition	"People who want to be successful will work hard and achieve their goals with or without a degree"	4
Immersed	"Immersed, I live and breathe my work but manage to find a balance"	1
Absorption	"I am completely immersed in my job. I try so hard to get it right that I end up working on weekends and after hours."	6
Dedication	"I give 100% at work and always try my best with every project/ task given to me, but I would not say I am totally immersed in my job."	3
Disengaged	"I feel that work is a means to an end"	2
Separating work from personal life	"I often find it hard to separate work from personal life. Sometimes when it gets tough I cry even at home to my family."	6
Limited longevity	"I need a salary and that's why I do what I do"	2
Disengaged	"Sometimes feel that the job just isn't for me and I am not really that interested or excited by it."	3

Vigour	"Mostly positive and energised."	1
Exhaustion	"It is easy to get exhausted in market research that is why it is important to take regular breaks."	5
Separation from work	"No, I have pretty good boundaries."	2
Continuously working	"I always check my emails and respond to calls on weekends. It's the sort of environment I am in. Whenever there is work it must be done!	6
Working hours	"I do work over weekends on average once a month."	2
Anxiety about emails	"I am always worried about emails and what I would be having to face on Monday mornings at the office."	4
Expectation to be available	"I feel it is expected because some employees can't separate work and personal life and therefore expect it to be a standard for all employees."	2
Digital detox	"I don't like being so dependent on a device... I do feel like I need a break from my cell phone."	4
Permanent attachment	"Especially if something unplanned pops up over the weekend that I urgently need to do. Or that I constantly have to drag my laptop with over weekends for in case I'm needed."	3

After the creation of the initial codes, the questionnaires were reread, and some codes were merged where too little supporting data were available to substantiate the code existing in isolation. Other codes, however, were split into sub-themes, allowing for a more granular analysis of the data. For example, "anxiety about emails" and "checking of emails" were merged to form "work emails". Similarly, "immersed" was merged with "absorption".

The third phase involved the creation of themes by grouping various codes (Braun & Clarke, 2006). The grouping of codes was done judiciously, grouping similar codes together to form a theme, while ensuring that each theme was distinct from the others. The table below provides an example of the different themes and where relevant, sub-themes, that were created. Although during the second phase the researcher read each question individually, for the purpose of creating the themes, the questionnaires were read as a whole, taking into consideration all relevant data extracts.

The next phase involved a thorough review of the themes, resulting in some themes being merged and others split into sub-themes (Braun & Clarke, 2006). Table 4.30 below indicates the final themes and sub-themes that were created.

Table 4.30: The Final Themes and Sub-Themes Created

Themes	Sub-themes
Working environment	Job resources
	Job demands
Approach to work	Qualification
Work & Well-being	Work engagement
	Burnout
Work Addiction	Work versus personal life
	Hours worked
Digital connect	How and why are they connected?
	The impact of being connected

Once the themes and sub-themes were finalised, each theme was analysed individually (Braun & Clarke, 2006) as part of the fifth step in the analysis process. During the final phase, the results of the analysis are discussed in detail and are presented in the subsequent chapter (Braun & Clarke, 2006). Interpretation of the themes was made with the aim of answering the objectives of the study and enhancing the dominant quantitative findings. Relevant data extracts were used to further explain the themes, providing real accounts of what was said by the participants.

The subsequent text will focus on each of the themes, their sub-themes, and the codes and will provide a brief overview of some of the key findings that emerged.

4.8.2. Defining and Describing the Final Themes, Sub-Themes, and Codes

4.8.2.1. Working environment

The first theme identified looked at the working environment of the employees. This comprises of two themes, namely job resources and job demands. With 60% of the participants mentioning an individualistic working environment, the remaining 40% indicated that although their working environment was more team orientated, when it came to deadlines, the process became more important than the people. All of the participants mentioned that their companies were highly pressured work environments and that they continually have a heavy workload. The two primary methods of alleviating the demands of work and the stressful environment identified were (1) support and engagement with teams and (2) excessive working hours to ensure timelines are met.

Table 4.31: Theme 1: Working Environment

Theme	Sub-themes	Codes	Raw data extract	#
Working environment	Job resources	Company culture (The people)	"Fast paced, individualistic and competitive"	1
			"There is a strong focus on performance and showcasing performance"	1
			"We have a culture that embraces excellence. More of a task oriented organisation."	6
			"The result is that people tend to have more regard for the process than people"	1
			"The culture now seems to be everyone for themselves, work and go home, there doesn't seems to be togetherness."	2
			"Our company culture is informal although it is very high-paced."	3
			"Employees are mostly friendly and caring towards each other but when pressure rises, it can get a bit tough with people pushing towards meeting deadlines."	3
			"I would describe the environment as professional and family oriented."	4
			"The satisfaction comes from getting the job done and getting the job done well."	6
			"Research firms expect you to be as passionate about their own business as they are and they cannot understand why this would not be the case. I feel this is unrealistic because they expect you to care about their business but in the same breath they will replace you in a heartbeat."	4
		Manager and team role	"For the first half of year, it was really tough – this was a result of the company being under-staffed, poor management and lack of support."	5
			"The emotions/ mood of my Direct Report also affects me directly – as we communicate every day and I receive tasks/ feedback from her on a regular basis throughout the day. This can easily make or break my confidence and mood for the rest of the day – be it positive or negative. "	3
	Job demands	Work load and pressure	"Yes it is definitely a high pressurised environment with constant deadlines to meet."	2
			"My working environment is highly pressurised but not always it usually depends on the project deadlines."	6
			"Yes it is definitely high pressured and heavy workload."	2
			"Previous research companies I have worked for are the exact opposite, where the workload is definitely not manageable and most of the time you need to work overtime to just feel like you can breathe."	4

	"There is still lots of pressure with high workload volume but all this is more manageable with more support with a spread of workload amongst researchers."	5
Stress Reliever	"here I actually walk around in the office and engage with different people and basically de-stressing"	1
	"Working overtime seems to be the only way to manage completion of tasks"	2
	"It is difficult to cope effectively with the pressure if one works from home, as there's really no cut-off point between 'work and home'"	3
	"In order to meet deadlines I would neglect my personal life, finding myself 'unbalanced' in life."	3
	"Most of the time you need to work overtime to just feel like you can breathe."	4
	"The company I work at has a great company culture, I feel like we all get along quite well which always helps – especially in stressful times."	5
	"I talk about work with family all the time it's a way of releasing tension and feel there is someone on my side."	6

4.8.2.2. Approach to work

The second theme addresses the question posed to the participants *Do you think that highly educated people such as yourself have a different or the same work ethic as employees who might not have obtained their undergraduate / postgraduate degree? If so, why?* Although one participant thought that higher educated individuals were more likely to take on more work, the prevailing opinion was that one's qualification was not the determining factor when assessing one's work ethic.

Table 4.32: Theme 2: Approach to Work

Theme	Sub-themes	Codes	Raw data extract	#
Approach to work	Does being highly educated impact your approach to work	Responsibility	"I do think we might take on more responsibility and therefore have a higher work ethic and willingness and commitment to complete tasks"	3
			"Where others (undergraduates) might not feel the pressure as much as they know in the end their not solely responsible for a project/ task to be completed successfully."	3
			"The highly educated people I have come across in the research industry, including myself, generally take their work more seriously than employees who have not obtained an undergraduate / postgraduate degree"	4
		Experience	"It comes with experience and also seniority and the two are mutually enforcing "	1
		Work Ethic	"Hard workers are usually hard works irrespective of their qualifications."	2
			"I think being highly educated plays a part in one's work ethic but I don't believe it is the sole factor determining work ethic but definitely plays a part."	5
			"Yes. I think a person's work ethic increases as a person grows in relation to his/her profession. There are principles I learnt in varsity which I wouldn't have necessarily learnt if I didn't make it to that level."	6
			"people who want to be successful will work hard and achieve their goals with or without a degree"	4

4.8.2.3. Work and well-being

The third theme addresses work and well-being. This theme explores the various approaches to work across the spectrum of engagement and disengagement. Looking at work engagement specifically, 60% of the sample finds themselves absorbed or wholly immersed in their work. The remainder of the sample indicated that they remain dedicated to their work, regardless of the high workload and pressured environment. This was best explained by participant number three who said, "I give 100% at work and always try my best with every project/ task given to me, but I would not say I am totally immersed in my job."

However, when the researcher delved into how work made them feel, all the participants stated that they felt exhausted, tired, and relieved when arriving home after work. Participant five explained that "it is easy to get exhausted in market research that is why it is important to take regular breaks*."* The research industry is seen as a means to an end for most, as 60% indicated that they do not feel excited about their job and that it is not something

they can see themselves doing for their rest of their life. Participant three summarises by stating, "I sometimes feel that the job just isn't for me and I am not really that interested or excited by it". Thus, an important finding is the possible limited longevity of being in the market research industry.

Table 4.33: Theme 3: Work and Well-being

Theme	Sub-themes	Codes	Raw data extract	#
Work and Well-being	Work engagement	Absorption	"Immersed, I live and breathe my work but manage to find a balance"	1
			"I find myself not taking lunch, not finishing the job at 5pm, but still working late nights and having to plan my weekends around projects that needs to be done over weekends as well."	3
			"I am completely immersed in my job. I try so hard to get it right that I end up working on weekends and after hours."	6
			"I am constantly overwhelmed and therefore not really have the time or energy to really be present"	3
			"I am aware of the fact that I do not exercise (and that it will increase my energy levels if I do) but I simply don't have the time (or energy – ironic) to exercise – linking to the 'unbalanced life' I currently have."	3
		Vigour	"Mostly positive and energised."	1
		Dedication	"I am always available but put my phone on silent when not at work, I do however use email as my primary communication"	1
			"I give 100% at work and always try my best with every project/ task given to me, but I would not say I am totally immersed in my job."	3
	Burnout	Exhaustion	"Exhausted, mainly due to the fact that I sit in traffic for almost 2 hours each day. Most days I feel quite negative, this is due to not being in the job that I want to be in. "	2
			"I would say most of the time I feel exhausted"	3
			"I usually feel completely exhausted."	4
			"Generally, during my career in research, I would feel absolutely exhausted and demotivated to be going to work."	4
			"It is easy to get exhausted in market research that is why it is important to take regular breaks."	5

	"Tired, relief"	1
	"I feel exhausted when I have to go to work but find it much better to work from home."	6
	"Exhausted."	2
	"TIRED"	3
	"Relieved to be home"	4
Disengaged	"I feel that work is a means to an end"	2
	"sometimes feel that the job just isn't for me and I am not really that interested or excited by it "	3
	"I am going to be working for myself now. I would rather be putting in the hours for my own business and know that I will be reaping the rewards, than be working for a market research firm for the rest of my career."	4
	"I feel that work is a means to an end, I need a salary and that's why I do what I do"	2

4.8.2.4. *Work addiction*

Theme four specifically examines working hours and looks at the causes for working longer hours than necessary. Further, the separation of work and personal life is discussed, highlighting the difficulty of separating the two. Work addiction seems to be a symptom of working in the research industry as only one of the participants felt that they can manage their workload and work a 08:00 to 17:00 day. The remainder of the participants indicated that they continually feel as though they are working against the clock, with most working an average of 10 hours per day. Difficulty separating work and one's personal life was a dominant theme that emerged as participants indicated that they work in the evenings and most weekends. Work becomes all-consuming as explained by participant 4: "Work is definitely top of my mind and I talk about it all the time to my family and friends." Longer working hours seem to be caused by client meetings that occur during the working day and deliverables on tight deadlines being promised to clients. Employees are therefore expected to meet client expectations and promises made to clients regardless of the impact it may have on their personal life. Another cause for after-hours working is the constant availability and checking of emails, further explored in the following theme.

Table 4.34: Theme 4: Work Addiction

Theme	Sub-themes	Codes	Raw data extract	#
Work Addiction	Work versus personal life	Separating work from personal life	"I usually find it very difficult to separate my personal life and work."	4
			"It does intrude obviously."	1
			"Yes. I constantly work late nights and over weekends. "	3
			"Since I work from home, I can expect a call from my Direct Report any time of the day or night – if changes in deadlines occur someone has to make it happen and get the work done – since we're a very small team everyone is on standby and are expected (even though it's not officially been said) to jump right in."	3
			"I often find it hard to separate work from personal life. Sometimes when it gets tough I cry even at home to my family."	6
			"My friends/ family are not happy with the way I work and are constantly encouraging me to find another less stressful job."	3
			"Work is definitely top of mind and I talk about it all the time to my family and friends."	4
			"No, I have pretty good boundaries."	2
			"Yes I am able to separate my work from my personal life. For me, being able to do this proves how important good management and support (from both management and colleagues) is in a company. Team work is vital."	5
	Hours worked	Working schedules	"Definitely against the clock around 70% of the time."	1
			"I always work against the clock "	3
			"Over the last 2 years I can't even count on my one hand the amount of days I had a normal 8am – 5pm day (including a lunch break)."	3
			"I usually feel like I am working against the clock."	4
			"At work around 7:45 and leave around 18:00 so it's around 10 hours"	1
			"Most days I manage to complete my work, there are however busy days where I do work against the clock."	2

		"When there is a deadline I always feel like I am working against the clock."	6
		"I do work over weekends on average once a month."	2
		"Most nights I finish working around 8-9PM. "	3
		"I always check my emails and respond to calls on weekends. It's the sort of environment I am in. Whenever there is work it must be done!"	6
		"I would work late most of the time and take work home as well."	4
	Cause for long working hours	"Another aspect that influences my work days are the fact that the amount of work I set out to do each day changes every day, I could still be busy with my to-do list working through my day and I'd get a call with something totally different that I quickly need to help out with or do. That usually causes my working day to be extended with another couple of hours."	3
		"I also travel a lot so some of the time when you are out of the office most of the day you still have hours of communication and emails to catch up on."	1
		"We would have 2-3 client meetings/ presentations/ workshops per week in Johannesburg that takes a lot of my productive time out of the week."	3
		Main driver of working after hours Emails are the worst culprit actually I receive and send a lot	1
		"Yes I do work over weekends as I have a lot of international clients and their demands are excessive."	1
		"The issue is that sometimes there are time critical (or for me anyways) "	1
		"Commitments have been made to the client and we are expected to keep to it "	3

4.8.2.5. *Digital connect*

The final theme delves into the digital usage and behaviour of the participants, particularly for work purposes. This theme looks at how these employees remain connected and the impact of being digitally connected. Email is identified as one of the biggest culprits that force employees to remain digitally connected even after hours. Further, participants' accounts attest to anticipatory stress being evident as a result of possible incoming emails. This was clearly explained by participants three and four: "I would constantly check my mails and my heart would skip a beat when I hear my email notification going off on my phone" and "I am always worried about emails and what I would be having to face on Monday mornings at the office." While 50% indicated that their excessive cell phone usage for work purposes after hours had caused problems in their personal relationships, most participants indicated that a digital detox would be something in which they would be interested.

Table 4.35: Theme 5: Digital Connect

Theme	Sub-themes	Codes	Raw data extract	#
Digital connect	How and why are they connected?	Checking emails	"I would constantly check my mails and my heart would skip a beat when I hear my email notification going off on my phone"	3
			"I am always worried about emails and what I would be having to face on Monday mornings at the office."	4
			"Excessive on email on phone only"	1
			"I dreaded going back to work on Mondays."	4
		Expectation to be available	"I feel that I always have to answer the phone when my boss calls (no matter the time of day) and will always call her back immediately if I missed her call."	3
			"I sit in front of my laptop and work with my cell phone next to me in case my boss needs to get hold of me or clients are looking for me."	3
			"Not really (the CEO mostly) but they are happy if you do."	1
			"I feel it is expected because some employees can't separate work and personal life and therefore expect it to be a standard for all employees."	2
			"Yes...and if I don't do it, or help her to do it, then it will not get done."	3
			"Research firms expect you to be as passionate about their own business as they are and they cannot understand why this would not be the case."	4
			"Especially if something unplanned pops up over the weekend that I urgently need to do. Or that I constantly have to drag my laptop with over weekends for in case I'm needed. "	3
			"I have a laptop and a cell phone and both of them are connected to my work email so that I'm always reachable"	3
	The impact of being connected	Digital detox	"I do feel I need a digital detox and it is annoying that I always have to be available to everyone all the time."	2
			". I don't like being so dependent on a device... I do feel like I need a break from my cell phone. "	4
			"I would say my digital device usage in an entire day is excessive"	5
			"Seriously – if you want to get hold of me don't phone – email."	1
			"I am permanently attached to my cell phone. I don't go anywhere without it"	4
			"I can't live without my cellphone and laptop because I work with them and contact family with my phone."	6
			"I feel I need to be connected all times for work purposes."	6
			"I use my cell phone excessively"	5
		Impact on relationship	"I get frustrated with my family if they do not answer their phones or respond within a short period of time. This is because I am so attached	4

to my phone that I can't understand or fathom why other people aren't. "	
"My wife says I am on my pone the whole day but I think objectively it's not so much. My kids have mentioned it once or twice but not a lot. "	1
"Yes. It annoys my friends and family when I don't answer my phone. "	2
"they are only upset if I'm taking calls or looking at emails over the weekends "	3
"I get frustrated with my family if they do not answer their phones or respond within a short period of time. This is because I am so attached to my phone that I can't understand or fathom why other people aren't. "	4

4.9. Conclusion

This chapter outlined the analysis of the quantitative data. Each measure – the UWES, WART, and OLBI – was analysed individually. Thereafter, digital behaviour and usage were investigated, and a digital index was created. Finally, the digital index was correlated with each of the measures and sub-measures and significant relationships between the variables were found. After the quantitative analysis, the qualitative data were analysed using thematic analysis. The themes, sub-themes, and codes were finalised and each briefly analysed. The final chapter will focus on the interpretation of the current findings and the integration of them with existing literate. Although analysed separately above, during the interpretation of the findings the qualitative findings will be used as an enhancement mechanism to enrich the quantitative data (Greene et al., 1989).

CHAPTER 5: DISCUSSION OF FINDINGS, LIMITATION OF THE STUDY, RECOMMENDATIONS FOR FUTURE RESEARCH, AND CONCLUSIONS

5.1. Introduction

This chapter focuses on the interpretation and integration of the results that were analysed and presented in Chapter 5. The results are interpreted in the context of the objectives of the study and are compared to existing studies and literature. The chapter is structured according to the outline provided in Chapters 2 and 4, where the descriptive statistics of each measure will be discussed, followed by the relationship between the measures. Cell phones were the only digital device used for all of the analyses. Due to the use of a sequential explanatory mixed-methods research design, the quantitative results will be discussed, with the qualitative findings enhancing the results where applicable. Following the discussion of the results, recommendations are presented and the limitations of the study are elaborated on. Thereafter, the researcher reflects on the current study and provides recommendations for future research. Finally, the chapter is concluded by highlighting key findings.

5.2. Brief Overview of the Aim and Objectives of the Study

The study aimed to investigate whether a relationship exists between work engagement and work addiction, and digital burnout. The following objectives were set:

- To determine if participants experience digital burnout due to the excessive use of digital devices;
- Assess whether the belief that they are expected to be available induces anticipatory stress indicated by increased exhaustion levels;
- To assess the impact of work engagement on the risk of digital burnout;
- To determine the impact of work addiction on the risk of digital burnout; and
- To investigate whether highly educated employees within the research industry have an increased risk of digital burnout.

The first objective is met by the correlation found between the digital index and digital burnout measure outlined in Chapter 4. The second objective was covered in the frequencies provided on statements in sections 4.3.3.1 and 4.4 in Chapter four and by the qualitative results outlined in Table 4.33 and Table 4.35. Objectives three and four were addressed in the descriptive statistics and then through the correlation analysis, which proved a positive

correlation between work addiction and digital burnout and a negative correlation between work engagement and digital burnout. Lastly, the fifth objective was covered in the qualitative analysis presented in Chapter 4.

5.3. Discussion of the Descriptive Statistics

5.3.1. Work Engagement

For the purpose of this study, the researcher investigated the relationship between the employee and his or her work when exploring the concept of work engagement (Schaufeli, 2013). Delving into the sub-measures of work engagement, it is evident that dedication was the highest scoring sub-measure. Dedication has a mean score of 5.24, which is higher than the UWES overall mean score of 5.20 (see Table 4.9). The high dedication scores of the sample are mainly driven by employees feeling enthusiastic (78%) (see Table 4.5) about their work and taking pride in the work they do (88%) (see Table 4.5). These findings are mirrored when looking at the statements that were most prominent for vigour. These included, "at my work, I always persevere, even when things do not go well" and "I can continue working for long periods at a time" (see Figure 4.1). Perseverance, dedication, enthusiasm, and completing one's work with effort were the common characteristics used by Schaufeli (2013) to describe engaged employees.

Furthermore, when exploring the sub-measure absorption, it became evident that the majority (85%) of the participants indicated that they become completely immersed in their work. Further, just over two thirds feel that time flies when they are at work (69%) and they tend to forget about everyone and everything around them (68%) (see Table 4.7). Early signs of compulsive working behaviours are evident with 36% of the sample, stating that at times they find it difficult to detach themselves from their work. Similarly, the qualitative results indicated an immersion in their work, with 83% of the participants reporting that they feel they are continuously working (see Table 4.34). Most find it difficult to separate themselves from their work, indicating that they work most evenings and over the weekends to get all their work completed (see Table 4.34). One participant mentions: "I find myself not taking lunch, not finishing the job at 5pm, but still working late nights and having to plan my weekends around projects that needs to be done over weekends as well."

These findings corroborate the characteristics used to describe an absorbed employee (Schaufeli & Bakker, 2006; Kahn, 1990). Schaufeli and Bakker (2006) and Kahn (1990) describe an absorbed employee as someone who becomes immersed in his or her work, often forgetting about everyone around them and finds it difficult to detach from his or her work.

Compulsive work behaviour will be further discussed in section 5.4, which looks at work addiction.

5.4. Prevalence of Work Addiction among the Current Sample

Work addiction was defined as an obsessive compulsion to work with the inability or unwillingness to detach oneself from work (Innanen, Tolvanen, & Salmela-Aro, 2014, p. 39). The current study found that two thirds (see Table 4.11) of participants feel guilty when they are not working on something. Another 66% (see Table 4.11) mentioned that they find themselves working even after their co-workers have "called it quits". The results are thus aligned with the definition of a workaholic provided by Innanen et al. (2014, p. 39), which states a workaholic is someone with the "tendency to work excessively hard, obsessed with work and the unwillingness to disengage with work".

5.4.1. Workaholic Personality Traits

Berger (2005) and Taris et al. (2010) define workaholics as individuals working obsessively in an attempt to achieve a high standard of work. A perfectionist personality trait is alluded to among the majority of the sample, with 62% (see Table 4.11) indicating that they get upset with themselves for even the smallest mistake. Further, a strong desire to be in control (56.5%) (see Table 4.11) is exhibited in the current study, indicative of A-type personalities (Součková et al. 2014). When working with others, these participants most commonly experience anger when others do not meet their standard of perfection (53.6%) (see Table 4.11). Clark (2016) confirmed that there is a positive correlation between workaholism and achievement-orientated personality types, which typically includes Type A personality types. In a meta-analysis conducted by Clarke et al. (2016) it was found that perfectionism ($r = .46$) and Type A personality ($r = .32$) had the strongest correlations with workaholism of all the individual personality traits assessed.

The current study discovered that these individuals tend to place a significant amount of pressure on themselves; 73.9% (see Table 4.11) through self-imposed deadlines. These self-imposed pressures coupled with the tendency to keep many irons in the fire (85.5%) (see Table 4.11) illustrates the need to stand out and achieve, regardless of the impact this may have on their personal time (Taris et al., 2010). This drive for recognition and achievement may be caused by the perceived research working environment which was described as individualistic, competitive, and a culture that embraces excellence (see Table 4.31). Berger (2005) found that individuals might experience a desire to achieve a certain standard of working to make them feel that what they have done meets the expectations of others. Further, Andreassen (2014) explains that work addiction is fostered and encouraged by the working

environment. This results in an inability to relax as these individuals constantly feel that they have not yet done enough (Berger, 2005). This inability to relax, thus not taking the necessary time to recover from the stressful workload and work environment, increases the risk of burnout (van Gordon et al., 2017).

5.4.2. Difficulty Separating from Work and the Effect on Personal Time and Relationships

This drive to achieve a high standard of work and to an extent, perfectionism, thus results in difficulty detaching from work and consequently working longer hours (Taris et al., 2010). Over a third (34%) of the participants find it hard to relax when they are not working. Of the employees in the current study, 84% (Q14) indicated that they work longer than the hours stipulated in their contract. This is further validated by the qualitative findings of the need to achieve and be successful. As a participant explained, "I am completely immersed in my job. I try so hard to get it right that I end up working on weekends and after hours."

Typically, these employees tend to work excessively at the expense of their social life and health (Schaufeli et al., 2008). Participant three summarises this sacrifice and imbalance by stating: "I am aware of the fact that I do not exercise (and that it will increase my energy levels if I do) but I simply don't have the time (or energy – ironic) to exercise – linking to the 'unbalanced life' I currently have." Further, the results showed that just under half (46%) (see Table 4.11) of the participants put more time, effort, and energy into their work than they do into their relationships with their spouse and family. More than half (see Table 4.11) agreed and strongly agreed that they spend more time working than they do socialising or engaging in leisure activities. The World Service Organisation (2005) corroborated these findings that work addicts work excessively hard and use their work as an excuse to avoid relationships and social interaction with others. Sussman (2013) and Robinson and Kelley (1998) further substantiated these findings when they discovered that workaholics had a significantly higher propensity to encounter marital problems, poor communication with their spouses, and difficulty maintaining relationships with their children.

When considering the role technology plays in employees' work-life balance, there is a general agreement that technology enables more flexible working and allows them to complete their work faster (89.9%) (see Table 4.21). Almost all participants felt that technology enhances their work performance (94.2%) (see Table 4.21). However, the downside is the constant connectivity that never allows these employees to disconnect fully.

These are similar to the findings of the Accenture "Defining Success Study" by Storhaug and Hyland (2013), in which it was found that technology played an important role in achieving work-life balance. Participants in the Accenture study (2013) mentioned that they

experienced mixed emotions about the impact technology had on their personal life. While 77% agreed technology enables them to be more flexible with their schedules, 70% stated that access to work using technology brings work into their personal life.

5.4.3. The Impact of Work Addiction in a Working Environment

Work addiction not only has a negative impact on the employee but also the organisation as it results in lowered productivity (Robinson, 2000) and the development of a negative attitude towards one's work (Sussman, 2013). The drive for perfectionism as indicated above was confirmed by Robinson (2000) as the leading cause for lowered productivity due to the excessive focus on irrelevant details. Sussman's (2013) findings were echoed in the current study where 56.4% (see Table 4.15) of the sample mentioned that they find themselves talking about their work negatively more and more as time passes. Participants described their feelings towards work as sickening (36.2%) (see Table 4.15) and expressed negative emotions that lead to them feeling demotivated when having to go to work (see Table 4.15). However, in an attempt to still meet organisational demands, the participants continue working regardless of the negativity experienced (Sussman, 2013). Furthermore, Sussman (2013) highlighted that excessive time is spent on work that may often fall beyond the roles and responsibilities of an employee. The current study revealed that 53.6% (see Table 4.11) of the sample take on more than they can handle and thus feel the need to work excessively just to feel as though they are coping (see Table 4.31). Participants summarised these feelings of drowning in their workload by saying: "Most of the time you need to work overtime to just feel like you can breathe" and: "In order to meet deadlines I would neglect my personal life, finding myself 'unbalanced' in life."

Addictive working behaviour results in long working hours each day, which leads to emotional and cognitive exhaustion. This finding is affirmed in the study by Shimazu and Schaufeli (2009) among 776 Japanese employees. Smimazu and Schaufeli (2009) found that by not giving themselves enough time to recover from their excessive working schedules, workaholics are left emotionally and cognitively drained.

5.4.3.1. Burnout

5.4.3.1.1. Exhausted, disengaged, or completely burnt out?

Exhaustion was the highest scoring sub-measure, with a mean score of 2.50 (see Table 4.14). Most (63%) of the statements were rated as *agree* or *strongly agree*, which resulted in a mean above 2.5 for all of these statements. The statement that was most striking was that participants feel there are days that they are tired before they even arrive at work (81.1%) (see Table 4.13). This finding was further substantiated by the qualitative findings demonstrated by the following raw data extract: "I feel exhausted when I have to go to work" (see Table 4.33). Further participants indicated that they feel worn out and weary after work (59.4%) (see Table 4.13) and that they feel that after work they need more time than in the past to relax and feel better (60.8%) (see Table 4.13). When asked to describe how they felt before, during, and after work, participants mentioned, "I would say most of the time I feel exhausted" and "during my career in research, I would feel absolutely exhausted and demotivated to go to work".

Disengagement had a slightly lower mean of 2.39, which indicates that disengagement, at this stage, is not as concerning as exhaustion. However, there is cause for concern that disengagement may increase the longer the participants remain in the research industry. When looking at the years worked in the research industry, a third indicated that they have been working for between 0 and 3 years and another third indicated between six and ten years. Further, most participants fell between the ages of 26 and 35 years old. Thus, these sample characteristics combined with the high score on the statement "over time one can become disconnected from this type of work" indicate that disengagement may become a concern in the long term. Participants in the qualitative survey voiced strong opinions in this regard, with most indicating that their job is just a means to an end for them and not something they can see themselves doing for the rest of their lives. The lack of excitement and possible disengagement in the long term was highlighted by participant 3, who stated: "Sometimes I feel that the job just isn't for me and I am not really that interested or excited by it". Freudenberger (1974) found similar observations when he worked as a volunteer at a clinic for drug addiction. During his time there, he noticed changes in the behaviour of volunteers as, over time, they became more exhausted and less committed.

Lower scores on the statement "I always find new and interesting aspects of my work" coupled with high scores on "lately, I tend to think less at work and do my job almost mechanically" further authenticate the lack of excitement and challenges experienced by these employees.

5.4.3.1.2.   Burnout: The causes and consequences

When combining the scores of disengagement and exhaustion, an overall score of 2.44 is obtained for burnout. The burnout scores were then further broken down into low (1 - 2), medium (2 - 2.5), high (2.5 - 3), and very high (3 - 4) risk of burnout. Subsequently, it was found that 39.1% were at high and very high risk of burnout. Analysing the segmented scores, just under half of the participants (44.9%) scored between 2 and 2.5, indicating a medium risk of becoming burnt out. An increase in disengagement over time may result in this becoming a high risk of burnout. Based on these findings, it is clear that the majority of the current sample is at a medium to high risk of burnout. Van Gordon et al. (2017) identified the contributing factors to burnout as excessive workloads, increased stress levels, and high-pressure working environments.

Burnout is effectuated by two systemic causes, namely job demands and a lack of sufficient job resources (Bakker & Costa, 2014). While the current study did not focus on the cause of burnout, the themes of resources and job demands were explored in the qualitative survey. The key findings illustrated in section 4.8.2.1 of Chapter four portray a consistent theme of the current working environments being described as fast paced and high pressured. Participants attest to the struggle of effectively coping with the workload ("the workload is definitely not manageable and most of the time you need to work overtime to just feel like you can breathe"). Further, resources play a key role in capacity management. Immediate relief from stress levels is experienced as soon as there is an adequate number of resources and sound management systems in place.

> For the first half of year, it was really tough – this was a result of the company being under-staffed, poor management and lack of support. There is still lots of pressure with high workload volume but all this is more manageable with more support with a spread of workload amongst researchers.

However, the existence of supportive resources that not only assist with the workload but also act as a team providing a support structure seems rare. Most participants describe the company culture as being more process driven than being driven by employee wellness. Company culture is described as individualistic, where "the culture now seems to be everyone for themselves, work and go home, there doesn't seems to be togetherness." A lack of resources causes increased pressure on employees, which prevents them from getting through their workload (Sussman, 2013). Maslach and Jackson (1981) concluded that burnout is a severe consequence of exhaustion, which is detrimental to the individual and the organisation as a whole.

5.5. Correlation analysis

5.5.1. Exploring Existing Relationship Strengths and Direction between the UWES, WART, OLBI, and the Digital Index

Correlation analysis was conducted to assess the strength and direction of the relationships that exist between all the measures. Following this, a digital burnout index was created based on an analysis of the existing relationships and a thorough review of the literature. This dimension was created to establish whether digital behaviour was correlated with work addiction, work engagement, and burnout to determine whether digital burnout poses a threat to the current sample. Finally, step-wise multiple linear regression analysis was conducted to assess which measures act as the greatest predictors of digital burnout.

The initial correlational analysis found a large positive significant correlation between disengagement and exhaustion. Thus, as one becomes more exhausted, one also becomes more disengaged and vice versa. Further, a larger positive correlation was identified between the OLBI and exhaustion ($r =.915$, $p < .001$) than between burnout and disengagement ($r = .906$; $p < .001$). This was interesting, considering the high exhaustion levels of the current sample.

Looking at work addiction, a small to medium significant positive correlation with disengagement ($r = .323$; $p < .01$), exhaustion ($r = .556$; $p < .001$), and burnout ($r = .486$; $p < .001$) was found. However, interestingly, it seems from the initial analysis there is a negative medium correlation between the WART and digital connect ($r = - .534$; $p < .001$). This implies that as digital usage goes down, work addiction increases.

Lastly, the UWES has a large negative significant correlation with disengagement ($r = - .617$; $p < .001$), which aligns with the theory covered in Chapter 2 that engaged and disengaged lie on opposite ends of the working engagement spectrum. As indicated by Schaufeli and Bakker (2006), engaged employees experience positive emotions towards their work. Work engagement is therefore defined as the opposite state of mind to burnout (Schaufeli & Bakker, 2006), which is characterised by three constructs: exhaustion, cynicism, and lack of accomplishment (Maslach et al., 2001).

5.5.2. Exploring Existing Relationship Strengths and Direction between the UWES, WART, OLBI, and Digital Burnout

5.6.2.1. *Work engagement and digital burnout*

Further correlational analysis between the main measures and digital burnout revealed that digital burnout is significantly inversely correlated with vigour ($r = -.431$; $p < .001$) and

dedication (r = -.427; p < .001). This is aligned with the theory that digital burnout has a negative impact on one's work engagement resulting in one becoming demotivated to go to work. As vigour and dedication are two of three constructs that comprise work engagement, it is to be expected that one also sees a significant inverse correlation between digital burnout and the UWES overall (r = -.315; p < .001). The overuse of digital devices to access emails and work-related documents results in little time in which the employee truly disconnects from his or her work. This continuous connection results in employees experiencing stress and anxiety (Friedman, 2016). The defining factor between daily stress and digital burnout is the impact it has on one's motivation. Digital burnout results in one experiencing constant feelings that one does not want to go to work or engage in work, which is indicative of digital burnout (Bonobo, 2017).

5.6.2.2. Work addiction and digital burnout

Looking at the research industry, gaining a competitive edge is understood as the need to be available at all times. Quill (2017) therefore highlighted the common assumption among employers and employees that being online and available at any time for clients and other colleagues provides them with a competitive edge. This "competitive edge" is thus obtained by the overuse of various devices from remote locations to complete one's work, which brings about a new "always on" culture. It is therefore not surprising that a large significant positive correlation exists between digital burnout and work addiction (r = .615; p < .001).

However, when looking at the literature, it is evident that this constant multitasking and obsessive working behaviour does not increase productivity but instead increases one's risk of digital burnout due to increased exhaustion levels. Belkin et al. (2016) attribute this exhaustion to the anticipatory stress caused particularly by the constant connection to one's emails after hours. The anticipation of receiving emails and being expected to respond after working hour's causes individuals to become obsessed with their email, inadvertently becoming addicted to work (Friedman, 2016). The anticipatory stress prevents employees from disconnecting from work, and as a result, they become emotionally exhausted (Dimas, 2016). The following text will explore burnout, more specifically exhaustion, and how it is correlated to digital burnout.

5.6.2.3. Burnout and digital burnout

Digital burnout is a new phenomenon that has been effectuated by the excessive usage of digital devices. Although burnout and digital burnout exhibit similar conditions in a diagnosed individual, the causes differ slightly.

It is thus to be expected that a large significant positive correlation would exist between digital burnout and burnout (r = .910; p < .001). Interestingly and aligned with the findings of the current study, exhaustion holds the largest correlation (r = .908; p < .001) with digital burnout. Breytenbach (2015) states that digital burnout is defined by the amount of exhaustion experienced. Digital burnout sufferers are continuously tired, unable to hold their concentration, or cope with routine. This exhaustion results in lowered productivity as they struggle to focus on their tasks due to continuous multitasking (Breytenbach, 2015).

5.6.2.4. Exploring the routes and greatest predictors of digital burnout

When asked about the working environment, all participants mentioned that the research industry is "fast paced, individualistic, and competitive". Camargo (2008), in his study, assessed the role of emails in the experience of work-related burnout. He found that typically in extremely fast-paced and ever-changing working environments, misusing and overusing emails seemed to occur. Further, as mentioned above in section 4.5.2.2., being constantly available is linked to a perceived competitive edge.

The excessive use of digital devices for work purposes as identified in the current sample can thus be attributed to the culture of the research industry that fosters the expectation that employees should always remain contactable after working hours, particularly via email. This expectation was depicted in the findings of the current study with 63.8% (see Table 4.20) of the participants indicating that they believe they are expected to be available after hours. Accounts provided by the participants in the qualitative survey further validate this finding as they mention: "I feel that I always have to answer the phone when my boss calls (no matter the time of day) and will always call her back immediately if I missed her call" and "I feel it is expected because some employees can't separate work and personal life and therefore expect it to be a standard for all employees." (see Table 4.35).

Further, 88.4% of participants (see Table 4.20) mentioned that they make themselves contactable after hours: "I have a laptop and a cell phone and both of them are connected to my work email so that I'm always reachable". Over half (see Table 4.20 and 4.35) of the participants indicated that they need to be connected at all times, specifically on email. The qualitative findings also highlighted the dependency on being contactable by email: "I have a laptop and a cell phone and both of them are connected to my work email so that I'm always reachable", while another participant said: "Seriously – if you want to get hold of me don't phone – email." Almost two thirds (59%) mentioned that once they leave the office, they regularly check their emails, take phone calls, and respond to work-related messages.

A strong digital dependency was further illustrated by seven in ten participants mentioning that they are unable to separate themselves from their digital devices (see table

4.20). Again, a similar theme was identified in the qualitative findings, where participants said: "I do feel I need a digital detox and it is annoying that I always have to be available to everyone all the time" (see Table 4.35). Further, self-proclaimed excessive digital device usage emerged, as one participant states: "I would say my digital device usage in an entire day is excessive".

When assessing the routes of digital burnout and the impact of employees being contactable at all times, the researcher first turned to existing literature to understand the findings of the current sample. A recent study conducted by Belkin et al. (2016) on 279 working American adults found a direct relationship between increased stress and exhaustion levels and excessive digital device usage. The study focused specifically on the role of emails after hours and the impact of this continuous connectivity. The sending and receiving of emails negatively impacted employees' productivity as they became exhausted from anticipatory stress. The expectation of after-hours availability thus caused these employees emotional stress. This study highlighted the important finding that it is not the amount of time spent on emails after working hours, but rather the anticipation of incoming emails that results in exhaustion caused by continuous stress.

Continious connectivity causes increased anxiety and decreased personal time where the employee is completely disconnected from work, which ultimately brings about workaholism. As discussed above, this results in reduced productivity, which in turn leaves the employee feeling that he or she is overloaded and unable to cope with his or her work (Belkin et al., 2016). Turel et al. (2011) confirmed these findings of perceived work overload when they conducted a study with 241 organisational mobile email users on the extended and growing use of mobile and digital devices. This perception around work overload in turn negatively influenced the employees' commitment to their work and company. Belkin et al.'s (2016) study was the first to identify anticipatory stress caused by after-hours emails combined with already-known factors of burnout such as increased workloads, interpersonal conflicts, and amplified time pressures, which result in exhaustion. These intensified exhaustion levels lead to the increased risk of digital burnout (Belkin et al., 2016).

Thus, based on the findings of the current study and existing studies it is not surprising that the high digital index mean (14.95) coupled with the high exhaustion mean (2.50) results in a high mean of 2.75 for digital burnout. Thus, one can deduce that the current sample is at high risk of digital burnout.

In closing, in an attempt to identify the measures that act as the greatest predictors of digital burnout, a step-wise multiple linear regression was run on the all the measures and sub-measures. The outcome of this analysis revealed that the greatest predictors of digital burnout were (1) WART ($beta = 0.021$, $p < .001$), (2) Vigor ($beta = -0.203$, $p < .001$), and (3)

digital devices (*beta* = 0.157, *p* < .001) (Pallant, 2010). The model explained 62.8% of the variance in digital burnout.

5.7. Recommendations Based on the Results of the Present Study

Several conclusions can be drawn from the findings of the current study. Looking at these conclusions coupled with the review of current trends in global companies, the following recommendations are made:

- South African companies should consider adjusting their current working policies to include compulsory down time for employees. This may include amending policies to allow employees the right to disconnect after hours. Alternatively, companies can specify "contactable hours" in their working policies.
- Further, a yearly assessment of engagement, work addiction, and burnout could be conducted to assess the well-being of employees. Results of these assessments may indicate early warning signs of work addiction that may result in burnout or digital burnout.
- Companies could monitor the number of emails being sent and received within the organisation in an attempt to minimise the "digital traffic".

5.8. Limitations of the Study

Due to the diversity of variables that affect the research process, all research studies have limitations that are not always predictable during the planning phases of the study. Thus, it is crucial for researchers to reflect on the limitations once completing a study to provide room for improvement, should the study be replicated in future research. Similarly, this study presented some limitations, which are elaborated on below.

The first limitation was the lack of a standardised digital burnout measure. Thus, the researcher had to compile a measure based on limited literature available on digital burnout. Further, a digital burnout dimension was created based on the analysis and results of the current sample and may therefore not be generalisable to all employees employed in different sectors.

The second limitation was the use of non-probability convenience sampling. The use of convenience sampling reduces the generalisability of the results and resulted in a small sample size for the study (Babbie, 2010). In addition to the small sample size, this study only focused on the views of employees within market research companies and did not interview employees within social or environmental research companies. The sample specifications, as

well as the use of convenience sampling, resulted in a small final sample size of 75 participants.

The digital usage and behaviour questionnaire focused on the use of multiple digital devices. However, upon analysis, the researcher focused only on the use of cellular devices when constructing the digital index, as the other devices' sample sizes were too small.

5.9. Recommendations for Future Studies

Reflecting on the limitations of the study as outlined above, the following recommendations for future studies are made.

- Increase the sample size to include other research companies such as environmental and social research companies. This will allow one to draw more generalisable conclusions about the research industry working environment as a whole.
- For the purpose of this study, a cross-sectional design was used. However, based on the findings, it is recommended that future studies adopt a longitudinal design. By conducting a longitudinal study, one would be able to assess whether the heightened exhaustion levels combined with the high digital device usage evident in the current study result in increased disengagement and ultimately burnout the longer one works within the research industry.
- Another recommendation is to conduct a study that focuses particularly on the development of a standardised digital burnout measure and scoring index. This digital burnout inventory could place focus only on the use of cellular devices, thus focusing on developing a more intricate measure.
- Future studies could focus on the impact of digital devices on burnout without assessing work engagement and work addiction. A streamlined study may yield more granular results of the effect of digital device usage on burnout.
- A final recommendation is to further the exploration and analysis of the current correlations that exist. The current study has shown that relationships exist between the current variables; however, a causal relationship between the variables has not yet been established.

5.10. Conclusion

This chapter has covered the interpretation and discussion of the results from the quantitative study while using the qualitative findings to enhance these results. The findings have been linked to existing literature and similarities and differences have been highlighted. Increased workaholism and exhaustion levels combined with lowered vigour and dedication

levels indicate that the current sample is at high risk of digital burnout. The current study has set the groundwork for future studies to be conducted on digital burnout and for the development of a standardised digital burnout measure. The limitations of the current study were thus outlined, and recommendations for future studies were made.

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APPENDIX 1: QUANTITATIVE QUESTIONNAIRE

Digital burnout and engagement questionnaire

Introduction

Good day sir/madam. We are asking people to participate in a survey to discuss their working environments and the way in which they engage with their work. The interview will take no longer than 15 minutes of your time.

Would you like to continue?

Programmer note: Single mention, spontaneous

Yes	**Continue to Screener Section**
No	Thank participant and terminate interview

Basic Demographics and Screener

S1. What is your current work status?

1	Student	Thank participant and terminate interview
2	Unemployed (do not currently have a job but I am looking for one)	Thank participant and terminate interview
3	Home-maker	Thank participant and terminate interview
4	Work part time	Thank participant and terminate interview
5	Work full time	Continue to S2
6	Not working (do not currently have a job and I am not looking for one)	Thank participant and terminate interview

S2. Do you work within the market research industry?

1	Yes	Continue to next question
2	No	Thank participant and terminate interview

S3. What is your highest qualification?

Interviewer note: Please select your highest qualification. If you are busy completing your qualification, please select the statement that best describes the qualification you are currently completing.

Programmer note: single mention

1	Matric	Thank participant and terminate interview
2	Undergraduate / first degree (i.e. BCom, BA, BSocSci etc.)	Please specify which qualification and then Continue to next question
3	Honours	Please specify which qualification and then Continue to next question
4	Masters	Please specify which qualification and then Continue to next question
5	Doctorate	Please specify which qualification and then Continue to next question
6	Other	Please specify which qualification and then Continue to next question

S4. How long have you been working in the research industry?

Interviewer note: None

Programmer note: single mention. Numeric entry

Years:

S.5 What is your current position held?

Programmer note: single mention

1	Researcher and equivalent	
2	Key account manager and equivalent	
3	Key Account Director and equivalent	
4	Statistician and equivalent	
5	Data Processor and equivalent	
6	Finance and equivalent	
7	Management and equivalent	
8	Fieldwork and equivalent	
9	Other	Please specify

S6. Gender:

Interviewer note: Do not ask, mark correct option only.

Programmer note: Single mention. Check quotas

1	Male	Continue to next question
2	Female	Continue to next question

S7. Population group

Interviewer note: do not ask just tick.

Programmer note: Single mention

	Population group	Programmer note
1	Black	Continue
2	Coloured	Continue
3	White	Continue
4	Indian	Continue
5	Asian	Continue

S8. AGE: Please can you tell me your exact age? (Single mention)

Interviewer note: please enter numeric value.

Working behaviour

---

1. On average, how many hours do you work each day?

Programmer note: Single mention

	Hours per week	
1	Less than 8 hours a day	
2	8 hours a day	
3	9 hours a day	
4	10 hours a day	
5	11 hours a day	
6	12 hours a day or more	

2. Please select the statement that best describes your working environment

Programmer note: Single mention

	Statement	
1	I work in an office	
2	I work from home	
3	I work at the office and from home	

3. Please select the statement that best describes your working behaviour?

	Statement	
1	I work less hours than stipulated in my contract	
2	I only work the hours stipulated in my Contract (i.e. only work from 8 – 5 every day)	
3	I work longer than the hours stipulared in my contract	

Digital behaviour

4. Please indicate whether you use each of these devices for work or personal purposes or both.

Interviewer note:

	Device	Work	Personal	Both work and personal	I do not own / use such a device
1	Cell phone				
2	Tablet				
3	Desktop computer				
4	Laptop				
5	Pager				
6	Smart watches				
7	Other please specify				

5. On average, how many hours a day do you spend on each of these devices?

Interviewer note: None

	Device	Less than 1 Hour	1-2 hours	3-4 hours	5-6 hours	7-8 hours	8-9 hours	10 or more hours
1	Cell phone							
2	Tablet							
3	Desktop computer							
4	Laptop							
5	Pager							
6	Smart watches							
7	Other please specify							

6. On average, how many times a day do you check each of these devices?

#	Device	Every 5 minutes	Every 10 minutes	Every 15 minutes	Once every half an hour	Every hour	Every 2 – 4 hours	Every 5 – 8 hours	Once a day
1	Cell phone								
2	Tablet								
3	Desktop computer								
4	Laptop								
5	Pager								

6	Smart watches							
7	Other please specify							

7. Please select the statement that best describes when you use each of these devices

Interviewer note: None

		Cell phone	Tablet	Desktop computer	Laptop	Pager	Smart watches	Other please specify	Not applicable
1	First thing in the morning before work								
2	On my way to work								
3	At work								
4	After working hours								
5	Just before I go to bed								
6	All the time(all of the above and more)								
7	Other (please specify)								

8. Please select which devices you use for each of the following statements

Interviewer note: None

		Cell phone	Tablet	Desktop computer	Laptop	Pager	Smart watches	Other please specify	Not applicable
1	To receive and check work emails								
2	To complete my daily work								
3	To access social media								
4	For online banking								
5	To surf the internet for general information								
6	To watch / stream videos or music								
7	Instant messaging								

9. Thinking about your device usage and your working environment specifically, which one of the following statements best describe your digital behaviour?

Programmer note: Single mention

	Statements	Programmer note
9.1	Once I leave the office I do not check my emails, take any phone calls or reply to any messages that are work related	Continue to next question
9.2	Once I leave the office I still check my emails but do not respond to any	Continue to next question

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	calls/messages/emails that are work related	
9.3	Once I leave the office I continuously check my emails, take phone calls and respond to messages that are work related	Continue to next question

10. On a scale of 1 to 4 where 1 is strongly disagree and 4 is strongly agree please indicate how much you agree with the following statements:

Programmer note: Single mention

Interviewer note: none

	Statement	Strongly disagree [1]	Disagree [2]	Agree [3]	Strongly agree [4]
10.1	I am expected to be available for work after hours (A)				
10.2	I make myself available for work after hours (a)				
10.3	I am able to separate my work and personal life (b)				
10.4	I am able to switch off after work (i.e. you do not use any of your digital devices for work purposes after hours) (b)				
10.5	I need access to my emails at all times (a)				
10.6	I feel lost when I am digitally disconnected (a)				
10.7	I am able to multitask on various digital devices simultaneously (b)				

11. On the same scale of 1 to 4 where 1 is strongly disagree and 4 is strongly agree and thinking about digital devices and the way in which you use them, please evaluate to which extent which you agree or disagree with the following statements

	Statements	Strongly disagree [1]	Disagree [2]	Agree [3]	Strongly agree [4]
11.	It enhances my work performance (b)				
11.	I struggle to get all my work done while I am digitally "connected"(a)				
11.3	I complete my work faster through the use of digital devices (b)				
11.	I strongly dislike the use of all digital devices in the working environment (a)				
11.	Digital devices should be banned in the working environment (a)				

	Work addiction risk test

This section deals looks at work addiction and how you go about your work.

12. Please read the following statements and rate yourself on a scale of 1 to 4 where 1 means "never true" and 4 means "always true".

Nr	Statement	1 (Never true)	2 (Seldom true)	3 (Often true)	4 (Always true)
12.1	I prefer to do most things myself rather than ask for help.				
12.2	I get very impatient when I have to wait for someone else or when something takes too long, such as long-slow moving lines.				
12.3	I seem to be in a hurry and racing against the clock				
12.4	I get irritated when I am interrupted while I am in the middle of something.				
12.5	I stay busy and keep many "irons in the fire".				
12.6	I find myself doing 2 or 3 things at one time, such as eating lunch & writing a memo, while talking on the telephone.				
12.7	I overly commit myself by biting off more than I can chew.				
12.8	I feel guilty when I am not working on something.				
12.9	It is important that I see the concrete results of what I do.				
12.10	I am more interested in the final result of my work than in the process.				

12.11	Things just never seem to move fast enough or get done fast enough for me.				
12.12	I lose my temper when things don't go my way or work out to suit me.				
12.13	I ask the same question over again, without realizing it, after I've already been given the answer once.				
12.14	I spend a lot of time mentally planning & thinking about future events while tuning out the here & now.				
12.15	I find myself still working after my co-workers have called it quits.				
12.16	I get angry when people don't meet my standards of perfection.				
12.17	I get upset when I am in situations where I can not be in control.				
12.18	I tend to put myself under pressure with self-imposed deadlines when I work.				
12.19	It is hard for me to relax when I'm not working.				
12.20	I spend more time working than on socializing with friends, on hobbies or on leisure activities.				

12.21	I dive into projects to get a head start before all the phases have been finalized.				
12.22	I get upset with myself for making even the smallest mistake.				
12.23	I put more thought, time, & energy into my work than I do into my relationships, with my spouse, (or lover) and family.				
12.24	I forget, ignore or minimize important family celebrations such as birthdays, reunions, anniversaries or holidays.				
12.25	I make important decisions before I have all the facts & have a chance to think them through thoroughly.				

Work and wellbeing test

13. The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

Nr	Statement	0 Never	1 Almost never (A few times a year or less)	2 Rarely (Once a month or less)	3 Sometimes (A few times a month)	4 Often (Once a week)	5 Very often (A few times a week)	6 Always (Every day)
13.1	At my work, I feel bursting with energy							
13.2	I find the work that I do full of meaning and purpose							
13.3	Time flies when I'm working							
13.4	At my job, I feel strong and vigorous							
13.5	I am enthusiastic about my job							
13.6	When I am working, I forget everything							

	else around me						
13.7	My job inspires me						
13.8	When I get up in the morning, I feel like going to work						
13.9	I feel happy when I am working intensely						
13.10	I am proud of the work that I do						
13.11	I am immersed in my work						
13.12	I can continue working for very long periods at a time						
13.13	To me, my job is challenging						

13.14	I get carried away when I'm working			145				
13.15	At my job, I am very resilient, mentally							
13.16	It is difficult to detach myself from my job							
13.17	At my work I always persevere, even when things do not go well							

Oldenburg Burnout Inventory

14. The following statements refer to your feelings and attitudes during work. Please indicate to what extent you agree with each of the following statements by selecting the number that corresponds with the statement.

PLEASE NOTE: The scale is inversed therefore for this question 1 = strongly AGREE while 4 = strongly DISAGREE

	Statement	Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
14.1	I always find new and interesting aspects in my work				
14.2	There are days when I feel tired before I arrive at work				
14.3	It happens more and more often that I talk about my work in a negative way				
14.4	After work, I tend to need more time than in the past in order to relax and feel better				
14.5	I can tolerate the pressure of my work very well				
14.6	Lately, I tend to think less at work and do my job almost mechanically				

14.7	I find my work to be a positive challenge	147			
14.8	During my work, I often feel emotionally drained				
14.9	Over time, one can become disconnected from this type of work				
14.10	After working, I have enough energy for my leisure activities				
14.11	Sometimes I feel sickened by my work tasks				
14.12	After my work, I usually feel worn out and weary				
14.13	This is the only type of work that I can imagine myself doing.				
14.14	Usually, I can manage the amount of my work well				
14.15	I feel more and more engaged in my work				
14.16	When I work, I usually feel energized				

15. Would you be willing to participate in the qualitative survey for this study?

Yes	**Email address provided**
No	Thank participant and terminate interview

Thank you for your time, we have reached the end of the survey

APPENDIX 2: QUALITATIVE SURVEY

Qualitative survey

Hello.I want to **thank you** for agreeing to complete this qualitative survey. This survey is aimed at assessing your thoughts and feelings on your working environment and working behaviour. Please note that there are no right or wrong answers. I am mainly interested in your opinions, feelings, and behaviour. All information disclosed will remain **confidential.** You will not, under any circumstances, be personally identified.

All opinions and ideas are very welcome and if at any point you do not feel comfortable answering something, please move onto the next question. Please feel free to ask me any questions 072 347 1905.

Section 2: Understanding the working environment

1. Thinking about the way in which employees engage with one another, how would you describe your company culture?

2. Would you describe your working environment as highly pressured with a high workload volume? If so, do you think you cope effectively with the pressure and how do you manage to complete all the work? (For example, do you work only at the office? Or do you work at home after hours?)

Section 3: Work Engagement and Addiction

The next topic I would like to explore is your own personal work ethic and engagement.

3. Do you think that highly educated people such as yourself have a different or the same work ethic as employees who might not have obtained their undergraduate / postgraduate degree? If so, why? Why not?

4. How would you describe your work engagement? (For example, would you describe yourself as completely immersed in your job or is it only a job for you? Do you find you are able to separate your work and personal life or are the boundaries blurred?)

5. How does it make you feel when you go to work each morning? (For example, do you feel energised/ exhausted when going to work? Do you feel positive or negative about your work?)

6. Do you find it difficult to separate your work from your personal life? If so, why?

7. Do you find yourself always working against the clock or do you feel you have enough time in the day to get through all your daily tasks?

Section 4: Burnout

8. Thinking about your working hours, how would you describe your normal day at the office? Do you working overtime all the time or leaving work on time each day?

9. Earlier we spoke about separating your work life and your personal life. When you get home after work or when you are at home on the weekends do you feel the need to check your emails / respond to work calls or do you find yourself talking about work all the time to your family and friends? Why?

10. Do you feel that there is an expectation from your fellow employees and employer that you be available for work at all times? If so, why? Why not? How does this make you feel?

11. What is the one feeling you feel after a working day once you are at home?

Section 5: Digital Behaviour

I would like to know a bit more about your digital behaviour at work and at home.

12. How would you describe your digital device (i.e. cellphones, laptops, PC's, iPads, and tablets) usage behaviour? Why do you say so?

13. Do you and your spouse/ family/friends ever have disagreements regarding your digital behaviour? Why?

14. Do you feel the need to be connected at all times? Why, and for what reason do you or don't you feel the need to be digitally connected at all times?

We have reached the end of the interview. I would like to thank you for your time.

APPENDIX 3: CONSENT FORM (QUANTITATIVE)

Department of Psychology

Floor 11 and 12

Faculty of Humanities

University of Pretoria

Dear participant,

Letter of consent to participate in this quantitative research study

Title

The impact of work engagement and work addiction on digital burnout among highly educated employees within the research industry.

Purpose

Digital burnout is a new phenomenon that has been identified, particularly among employees around the globe. Digital burnout poses a risk to employers, employees, clients and organisations. With the fast growing spread of this phenomenon, more research is required to clarify the concept. Digital burnout has been characterised by symptoms of continuous tiredness, lack of concentration, low productivity and inability to cope with routine. Although there is no formal definition on digital burnout as yet, for the purpose of this study the researcher defines digital burnout as a psychological state brought about by the excessive working behaviour enabled by the continuous connectivity via digital devices.

It is a topic of conversation that not only has psychologists intrigued but has caught the attention of employers due to the drastic effect this may have on the business as well as their employees. The research industry is known for its fast-paced and high pressure environment in which employees are constantly pushing to meet the next deadline. Very little research has been conducted on this particular topic and therefore a gap exists to identify whether highly educated employees within this sector are at an increased risk of becoming digitally burnt out. The South African employee landscape is characterised by its long, hard working hours and there is a need for research that may increase awareness of the dangers and guide the development of a preventative measure for digital burnout.

Procedures

Each participant will be given the four questionnaires to complete namely the (1) demographic questionnaire, (2) Oldenburg Burnout Inventory, (3) Utrecht Work Engagement Scale and the (4) Work Addiction Risk test. These questionnaires aim to assess the participants working behavior, digital behavior and their risk of burnout. The participants will complete the programmed questionnaire with the researcher present. These questionnaires will take approximately 15 minutes to complete.

Risks

The participants will not encounter any risks or discomfort throughout this research study.

Benefits

The participants will not be offered an incentive and participation in this study will be completely voluntary.

Participants' rights

Participation is voluntary and participants will be informed that they may withdraw from participation in the study at any time and without negative consequences.

Confidentiality

The researcher will ensure that all information is treated as confidential and will assign each participant a sample number instead of linking personal details to the data captured. Should the participant withdraw at any point the data would be destroyed.

Should you at any point have any queries or concerns regarding this study, please feel free to contact the researcher using the contact details provided below. The data gathered during this study will be used for this Mini dissertation and may be used for future research studies.

Yours faithfully

Nadine Ruddy

Masters in Research Psychology student (29314659)

Email: ruddynadine@gmail.com

Cell: 072 347 1905

APPENDIX 4: CONSENT FORM (QUALITATIVE)

Department of Psychology

Floor 11 and 12

Faculty of Humanities

University of Pretoria

Dear participant,

Letter of consent to participate in this qualitative research study

Title

The impact of work engagement and work addiction on digital burnout among highly educated employees within the research industry.

Purpose

Digital burnout is a new phenomenon that has been identified, particularly among employees around the globe. Digital burnout poses a risk to employers, employees, clients and organisations. With the fast growing spread of this phenomenon, more research is required to clarify the concept. Digital burnout has been characterised by symptoms of continuous tiredness, lack of concentration, low productivity and inability to cope with routine. Although there is no formal definition on digital burnout as yet, for the purpose of this study the researcher defines digital burnout as a psychological state brought about by the excessive working behaviour enabled by the continuous connectivity via digital devices.

It is a topic of conversation that not only has psychologists intrigued but has caught the attention of employers due to the drastic effect this may have on the business as well as their employees. The research industry is known for its fast-paced and high pressure environment in which employees are constantly pushing to meet the next deadline. Very little research has been conducted on this particular topic and therefore a gap exists to identify whether highly educated employees within this sector are at an increased risk of becoming digitally burnt out. The South African employee landscape is characterised by its long, hard

working hours and there is a need for research that may increase awareness of the dangers and guide the development of a preventative measure for digital burnout.

Procedures

For the qualitative research the researcher intends to complete six qualitative surveys. These surveys will be emailed to the participants that provided permission and were randomly selected from the quantitative survey.

Risks

The participants will not encounter any risks or discomfort throughout this research study.

Benefits

The participants will not be offered an incentive and participation in this study will be completely voluntary.

Participants' rights

Participation is voluntary and participants will be informed that they may withdraw from participation in the study at any time and without negative consequences.

Confidentiality

The researcher will ensure that all information is treated as confidential and will assign each participant a sample number instead of linking personal details to the data captured. Should the participant withdraw at any point the data would be destroyed.

Should you at any point have any queries or concerns regarding this study, please feel free to contact the researcher using the contact details provided below. The data gathered during this study will be used for this Mini dissertation and may be used for future research studies.

Yours faithfully

Nadine Ruddy

Masters in Research Psychology student (29314659)

Email: ruddynadine@gmail.com

Cell: 072 347 1905