

FEAR OF COVID-19 AND CALL CENTRE OPERATOR ENGAGEMENT AND BURNOUT

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DECLARATION

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ABSTRACT

Call centres are viewed as being unpleasant work environments and are referred to as “electronic sweatshops”, “dark satanic mills” and “assembly lines in the head” (Visser & Rothmann, 2008, p. 80), and many research findings have concluded that multiple variables of the work environment lead to burnout. Furthermore, in 2022 it was found that 87% of call centre employees reported high-stress levels in their job (Donevski, 2022). The recent COVID-19 pandemic has raised various implications for organisations, teams, and individuals. Many issues have come to the fore in the call centre industry from the start of the COVID-19 pandemic and there are still many more challenges that need to be investigated and addressed. The aim of this research study was to develop a conceptual model that is representative of the interaction between the most salient variables that may clarify the variance in job burnout and work engagement among call centre employees in South Africa. The type of research design that was utilised is *ex post facto* design. Non-probability sampling was used as the preferred sampling technique. More specifically, a purposive sampling method was employed, and 148 participants were included.

The data collected was analysed through Partial Least Squared Structural Equation Modelling (PLS-SEM) and support was found for the seven main hypotheses that were formulated at the start of the research study. These findings are in support of the Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2014), which stipulates that the presence of job demands will predict job burnout, and the presence of job and personal resources will predict work engagement. The job resource social support, and career competencies as a personal resource, were found to directly predict engagement. Work overload and the fear of COVID-19 as job demands, were found to lead to burnout for call centre employees. The hypothesised moderating relationships were both found to be non-significant which is not in accordance with JD-R theory.

The research findings provided insight in various aspects that influence the work engagement and job burnout among call centre employees in South Africa. Through these findings, potential interventions were suggested for HR managers, Industrial Psychologists, and managers in the call centre industry to reduce the levels of job burnout and increase the level of work engagement of employees within the call centre industry in South Africa.

OPSOMMING

Inbelsentrums word as onaangename werksomgewings beskou en daar word na verwys as 'elektroniese sweetwinkels', 'donker sataniese meulens' en 'monteerlyne in die kop' (Visser & Rothmann, 2008, p. 80), en baie navorsingsbevindinge het tot die gevolgtrekking gekom dat veelvuldige veranderlikes van die werksomgewing tot uitbranding lei. Verder is daar in 2022 gevind dat 87% van inbelsentrumwerknemers hoë stresvlakke in hul werk gerapporteer het (Donevski, 2022). Die onlangse COVID-19-pandemie het verskeie implikasies vir organisasies, spanne en individue geopper. Baie kwessies het na vore gekom in die oproepsentrumbedryf vanaf die begin van die COVID-19-pandemie en daar is nog baie meer uitdagings wat ondersoek en aangespreek moet word. Die doel van hierdie navorsingstudie was om 'n konseptuele model te ontwikkel wat verteenwoordigend is van die interaksie tussen die mees opvallende veranderlikes wat die variansie in werkuitbranding en werksbetrokkenheid onder oproepsentrumwerknemers in Suid-Afrika kan verduidelik. Die tipe navorsingsontwerp wat gebruik is, is ex post facto ontwerp. Nie-waarskynlikheidsteekproefneming is as die voorkeurstekproeftegniek gebruik. Meer spesifiek is 'n doelgerigte steekproefmetode gebruik, en 148 deelnemers is ingesluit.

Die data wat ingesamel is, is ontleed deur middel van 'Partial Least Squared Structural Equation Modeling' (PLS-SEM) en ondersteuning is gevind vir die sewe hoofhipoteses wat tydens die aanvang van die navorsingstudie geformuleer is. Hierdie bevindinge is ter ondersteuning van die 'Job Demands-Resources' (JD-R) teorie (Bakker & Demerouti, 2014), wat bepaal dat die teenwoordigheid van werkseise werkuitbranding sal voorspel, en die teenwoordigheid van werk en persoonlike hulpbronne werkbetrokkenheid sal voorspel. Daar is gevind dat die werks hulbron sosiale ondersteuning en loopbaanbevoegdheids as 'n persoonlike hulpbron, betrokkenheid direk voorspel. Daar is gevind dat werkoormoed en die vrees vir COVID-19 as werkseise lei tot uitbranding vir inbelsentrumwerknemers. Die hipoteses insake modererende verwantskappe is albei nie-beduidend gevind, wat in kontras is met die JD-R teorie.

Die navorsingsbevindinge het insig verskaf in verskeie aspekte wat die werksbetrokkenheid en werkuitbranding onder oproepsentrumwerknemers in Suid-Afrika beïnvloed. Deur hierdie bevindinge is potensiële intervensies vir MH-bestuurders, Bedryfsielkundiges en bestuurders in die oproepsentrumbedryf voorgestel om die vlakke van werkuitbranding te verminder en die vlak van werksbetrokkenheid van werknemers binne die oproepsentrumbedryf in Suid-Afrika te verhoog.

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CHAPTER 1: BACKGROUND AND OBJECTIVES OF THE STUDY

1.1. Introduction

Call centres across the world are expanding rapidly, with a predicted growth of 5.6% over the period 2020-2027 due to the changing needs of businesses caused by the COVID-19 pandemic (Strategyr, 2020). Additionally, it is predicted that the number of employees in South African call centres will increase significantly, from 240 000 employees in 2020 to 300 000 in 2023 (Customerserv, 2020). A call centre is a work environment where employees engage with clients through telephones or other forms of computer-based technologies. This industry has boomed all over the world in the past two decades, mostly due to improvements in information and communication technologies which decrease the costs of providing these services from remote settings (Zito et al., 2018).

Call centres are characterised by fast-changing technology, changes in products and services, and high work pressure (Dhanpat et al., 2018). The increased use of technology has also influenced the inbound call centres, with tasks becoming more repetitive and structured (Rod & Ashill, 2013). It is argued that employees working in these technological jobs are constantly facing challenges in keeping their skills and knowledge updated, which can result in feelings of inadequacy, poor performance and, eventually, job loss.

The activities in call centres are defined as being inbound or outbound. Inbound activities are known to be more passive as the representatives wait for clients to call them about complaints or to seek assistance. Outbound activities are more active as the operator is responsible for calling the clients, engaging in telemarketing and selling (Zito et al., 2018). Furthermore, the primary focus of inbound call centres is on helping clients with problems or queries, whereas the focus of outbound call centres is primarily on selling products and services to clients, as well as conducting telephonic surveys for market research (Rod & Ashill, 2013).

Call centres employees are defined as customer services representatives and may be more prone to experience increased levels of stress than employees in other work environments (Visser & Rothmann, 2008). Call centres are viewed as being unpleasant work environments and are referred to as “electronic sweatshops”, “dark satanic mills” and “assembly lines in the head” (Visser & Rothmann, 2008, p. 80), and many research findings have concluded that multiple variables of the work environment, together with the work itself, leads to burnout in employees.

When comparing both types of call centres, it is hypothesised that inbound and outbound call centre agents experience stress differently and it is argued that working as an inbound call centre agent is regarded as one of the ten most stressful jobs globally (Doellgast & Sezer, 2012). Researchers argue that inbound call centre agents experience higher levels of stress and burnout than outbound call centre agents. The higher levels of perceived stress experienced by inbound call centre agents are due to the nature of their work being less predictable, with more readjustments and coordination needed when interacting with clients. In contrast to inbound call centres, outbound call centre agents' communications are mostly guided by a provided script, and they have more control over their job tasks. Based on this argument, the focus of this study will be on inbound call centres only, which are characterised by extensive monitoring, lack of job autonomy and greater time pressures (Rod & Ashill, 2013).

According to recent research, a complex problem that call centre employers continuously face is the high turnover rate. The reason why call centre employees feel the need to leave their jobs is due to these jobs being characterised as challenging, tense, and repetitive. The nature of the jobs themselves lack career opportunities and rewards for good performance. Furthermore, employees in high turnover work environments, such as call centres, may experience lower levels of organisational identification than those employees in a more stable work environment (Mutendi et al., 2019; Pattnaik & Panda, 2020).

Inbound call centre employees have reported anxiety and stress resulting from customer complaints due to the unfair demands, personal abuse from customers, sexual harassment remarks, and a high-pressure environment (Jeon et al., 2022). Furthermore, in 2022 it was found that 87% of call centre employees reported high-stress levels in their job (Donevski, 2022). All these demands result in psychological exhaustion and burnout due to customers calling them daily. These negative effects are further aggravated by a lack of supervisor support, reduced opportunities to positively influence their work, and a high workload. These employees are, nonetheless, always expected to remain calm, polite, and empathetic to customers, which directly increases the risk of burnout and exhaustion in call centre employees (Jeon et al., 2022).

Additional stressors among these employees include the extensive monitoring and surveillance within inbound call centres. Extensive monitoring and surveillance inhibit power dynamics of agents as they are being pushed to meet increased demands and targets.

Moreover, the Global Call Centre Report investigated 2 500 call centres in 17 countries and revealed that South African call centres are ranked among those with the highest levels of call centre monitoring, which causes great concern for employees' well-being (Ngabaza, 2017).

In contrast to the abovementioned findings, it is argued that some call centres have managed to balance the negative aspects of the work environment through fun-filled interventions which enhance employees' engagement within the highly monitored work environment. Additionally, call centres can be classified as either utopian or dystopian. Dystopian call centres are characterised as being target driven and highly monitored, and their employees are disengaged and suffer from burnout. Utopian call centres, conversely, aim to encourage and provide support to their employees and are more flexible (Janse Van Rensburg et al., 2013). It is evident from this argument that some employees might enjoy their jobs in call centres. For most employees, however, it is a demanding job associated with increased stress and mental ill-health.

The recent COVID-19 pandemic, which has been a global topic of discussion since 2020, has raised various implications for organisations, teams, and individual employees. Not only did the pandemic cause physical health problems and deaths but it also had detrimental consequences for businesses and the economy at large (Agarwal et al., 2022). Furthermore, COVID-19 is contributing to an increased risk of employees developing burnout (Kniffin et al., 2021). The pandemic has caused chaos and forced the world into a "new normal", whilst it is, at the same time, still holding on to the old one that previously existed (Agarwal et al., 2022). Because of COVID-19's drastic impact on employees' work environments and their mental health, it is crucial to investigate how call centre employees' well-being is affected during this COVID-19 era.

Both employees and workplaces globally have been dramatically affected by the COVID-19 pandemic. Our new post-COVID reality is characterised by new work routines which include hybrid working and working from home, as well as the sudden digital surge caused by the COVID-19 pandemic (Strielkowski et al., 2022). Kniffin et al. (2021) argue that the new work trend created by COVID-19 shifted the work environment towards online spaces to such an extent that some organisations are fully operational without having a physical office, forcing employees to work remotely.

COVID-19 has differing effects on the call centre employees as well. It has been found that call centres had to adapt from physical workplaces characterised by constant surveillance and large open-plan workspaces to virtual offices and working from home (Tovar, 2022). It is argued by some researchers that call centres are in danger of closing around the world as automation and technology are taking over these types of jobs. Contrary to this argument, Tovar (2022) found that COVID-19 and the lockdowns and curfews are in fact, increasing the need for call centres as more communications are carried out via emails and telephone calls instead of in-person interactions.

Many issues have come to the fore in the call centre industry from the start of the COVID-19 pandemic and there are still many more challenges that need to be addressed such as the psychological effects of working from home. Several psychological and economic consequences of the COVID-19 pandemic have been identified in employees who now work remotely, those known as “essential workers” and employees who have lost their jobs (Strielkowski et al., 2022). Traditionally, working from home was dependent on the preferences of employees, but is now a mandatory requirement for most employees. It is, therefore, still very unclear how these new changes are presently impacting employee well-being, and how they will affect employees in the future.

A recent study conducted on the effects of the fear of COVID-19 on the well-being of people found that the fear of COVID-19 has a significant positive relationship with depression and anxiety (Ahorsu et al., 2020). Whilst various arguments suggest that the new Omicron variant signifies the end of the world pandemic, we must act on the challenges we are currently experiencing and plan effectively (Strielkowski et al., 2022). The questions raised are: what are the effects of the changes resulting from COVID-19 on employees’ well-being, and to what extent do these effects impact employees’ engagement in the call centre industry in the current century?

When specifically examining the fear of COVID-19, it has been found that individuals naturally started to worry more about COVID-19 as the infection rates increased. This fear is associated with contracting the virus through colleagues or other people who are possibly already infected. This increased level of fear of COVID-19 can increase the already devastating damage caused by the virus worldwide (Ahorsu et al., 2020). It is important to determine the extent to which employees fear COVID-19 to establish appropriate interventions to address these fears and lessen the psychological effects of the virus on call centre employees.

Constant changes in the environment and the presence of job demands decrease employees' ability to stay healthy and maintain an even work-life balance (Akkermans et al., 2013c). This can be a challenge with the constant changes to which employees must adapt, such as the global COVID-19 pandemic and other characteristics associated with call centres. It is argued that employees are more willing to quit their dream job if it is not fulfilling enough for them or if certain promises are not met (Twenge & Campbell, 2008). These promises are not found in the actual written contract of the job but in the psychological contract with each employee (Mutendi et al., 2019). This psychological contract is developed when employees perceive that their employer satisfactorily provides the incentives that were promised to them. Therefore, employees may become increasingly unhappy with their work environment when the promise in their psychological contract is not met, which leads to burnout (Liang et al., 2022).

In summary, every employee has different needs – for example, different levels of motivation or self-perception. Furthermore, research acknowledges that employees can experience fear of COVID-19 differently depending on their personality characteristics and demographic differences (Kniffin et al., 2021). Therefore, many inconsistencies regarding employees' psychological contracts are present today, as well as how COVID-19 impacts the call centre employees' well-being (Martins de Paiva & Santos, 2020; Kniffin et al., 2021). It is, consequently, up to managers to ensure that the work environment is conducive to enhancing personal- and job-resources to combat the negative aspects of working in a call centre.

1.2. Research Initiating Questions

Every employee has different characteristics and needs when entering the labour market. Some employees may value social support, whereas others desire autonomy and self-regulation. It is therefore clear that employees differ from one another, and everyone manages similar situations in their own individual way. Consequently, the COVID-19 pandemic has various implications for each employee.

The researcher can, therefore, argue that some employees are engaged at work, and others may not be engaged, some employees suffer from burnout whilst others may not. Similarly, an employee may experience different levels of engagement and burnout as the workday progresses.

Additionally, it has been suggested that while some call centres negatively impact employees' well-being, others exhibit a favourable work atmosphere that is beneficial to employee engagement and well-being. Thus, the following research-initiating questions are the driving force behind the study:

What are the levels of burnout and work engagement experienced by employees in the call centre industry, amidst the COVID-19 pandemic?

Secondly, what are the main antecedents of job burnout and work engagement among the call centre employees, amidst the COVID-19 pandemic?

1.3. The Rationale of the Study

It is evident that the call centre industry is one of the industries that suffers the most from burnout, high levels of anxiety and high turnover rates. It is, therefore, necessary to identify those job demands that result in burnout for these employees, as well as identifying those job- and personal resources which aid in improving work engagement. Call centre management should provide its employees with the strategies and tools required to combat the adverse aspects associated with the job before it leads to negative consequences such as burnout, high turnover, and absenteeism. It is necessary for call centre employees to have access to enough personal- and job-resources to aid in decreasing the negative impact of job demands to survive during the COVID-19 pandemic and the consequent changes in the work environment. This will make it possible for Industrial Psychologists and managers in the call centre industry to improve those aspects of employees' jobs to combat the adverse effects of job demands.

When Industrial Psychologists and managers within the call centre industry understand the reasons behind the variance of burnout and engagement of these employees, they will be able to apply focused interventions that lessen the negative consequences of job demands and increase employees' job- and personal-resources, which will lead to an increase in call centre employees' engagement levels. The utilisation of the JD-R model will aid in identifying to what extent the COVID-19 pandemic and work overload can influence the engagement levels of employees, whilst utilising their career competencies.

When all the aforementioned points are considered, it is crucial to find out how the new COVID-19 pandemic and organisational challenges are affecting employee well-being.

It is also of great importance to establish how call centre employees' personal- and job-resources can moderate the negative impact of job demands on their well-being within South African inbound call centres (Akkermans et al., 2015).

The aim of this study is to explore whether call centre employees' personal resources and job resources could increase their engagement and reduce their burnout levels. The study will further investigate the impact that the fear of the COVID-19 pandemic and other job demands have on employee engagement levels. The findings may be helpful in offering suggestions and direction to managers and Industrial Psychologists in the call centre industry in addressing the challenges of the COVID-19 pandemic and burnout in call centre employees if the study can demonstrate that the hypothesised paths of the structural model are significant.

1.4. Research Aims and Objectives

The purpose of this quantitative study could be established once the research-initiating questions were specified. The aim is to establish a network of the most significant variables that cause a variance in the engagement and burnout levels of employees in the South African call centre industry during the COVID-19 pandemic. In order to assess the impact of the key factors inside the Job Demands-Resources model (JD-R model), a structural model will be provided

The study will be centred on the following goals:

- To establish the degree of work engagement and job burnout in the call centre industry, as well as the presence of the fear of COVID-19.
- To create a conceptual model that captures the intricate relationships between the most salient variables/psychological processes that have been put forth to account for the variation in engagement and burnout in call centres.
- To test the fit of the proposed model and determine whether the various hypothesised paths are significant; as well as to quantify the magnitude of the impact of these key variables on the engagement and burnout levels of employees in the call centre industry.
- To identify any errors in the model to be able to develop recommendations for improvement, if required.
- To create a set of recommendations for management purposes in the call centre industry in South Africa to increase work engagement and decrease job burnout.

1.5. Delimitations of the Study

The researcher aimed to identify those aspects of inbound call centres that are critical antecedents of work engagement and job burnout among call centre agents. The data collection was conducted from various inbound call centres across South Africa and within a range of industries, from the financial services and healthcare industries to the retail industry. The JD-R model formed the basis for the study which served as a theoretical framework to describe how various job- and personal-resources, as well as demands, influence the prevalence of engagement and burnout among the employees within the call centre industry (Stemmet, 2022).

The study further established a variety of hypotheses based on the JD-R model to examine the significance of the relationships between the variables being studied. The JD-R model's constructs of job crafting and self-undermining behaviour (Bakker & Demerouti, 2018), will not be included in this research study. The reason for this is that it constitutes a loss cycle of daily job demands in the case of self-undermining behaviour, and a gain cycle of daily job resources in the case of job crafting. It is, therefore, not relevant for this study.

1.6. Outline of the Study

The research study started with Chapter 1, which includes the rationale of the study, the various constructs that impact the well-being of call centre employees, the research questions, aims and objectives of the study. A Thorough overview of the literature is included in Chapter 2 along with extensive descriptions of each relevant latent variable. The interrelationships between the numerous latent variables are addressed in detail, which led to the creation of a structural model to show these interrelationships.

Chapter 3 of this research study consists of the research methodology used in this study. The research methodology was used to measure the structural model discussed in Chapter 2. The results of the statistical analysis conducted are depicted in Chapter 4. The last chapter, Chapter 5, presents the conclusion of the study. The shortcomings in this study are discussed in further detail in Chapter 5, along with recommendations for future research. It also includes possible practical managerial implications within the call centre industry.

CHAPTER 2: LITERATURE REVIEW

This literature review includes a summary of the Job Demands-Resources Model, discussing both the motivational process and the health impairment process. The latent variables that are relevant to this study will then be discussed, followed by the interrelationships between the various variables, and the moderating effects between the variables. The section concludes with a proposed conceptual model.

2.1. Introduction

The Job Demands-Resources Model (JD-R model) serves as the foundation for this study's hypothesis development and research model construction. The JD-R model will be briefly discussed at the outset of the literature review, and the researcher will describe and discuss the various constructs of the model that will be employed in the study. This study uses the JD-R model as a framework to explore and comprehend the problems with engagement levels in South African call centres. Following a detailed examination of the interactions between the different constructs in this model, several hypotheses will be put forth. The moderating factors in this model and their effects will then be covered. An elaborated, conceptual JD-R model will conclude this chapter.

2.2. Eliciting Factors of Work Engagement and Job Burnout Using the JD-R Model

The Job Demands-Resources Model (JD-R Model) is a heuristic model that includes work-related factors which predict well-being and productivity (Akkermans et al., 2013c). Industrial Psychologists have argued that the importance of employee well-being as a work outcome is influenced by individual and organisational factors such as job resources and job demands (Falco et al., 2021). It may be true that every occupation has its risk factors that lead to burnout, but it constitutes a general model that can be applied to various occupations (Bakker & Demerouti, 2007). Furthermore, this model proposes that every job has two broad factors that influence the employees' well-being, namely, job demands and job resources (Pattnaik & Panda, 2020). An imbalance between job demands and job resources, when job demands are more common than job resources within the employee's work environment, can lead to strain or burnout (Zhou et al., 2022).

The JD-R model proposes that an increased number of job resources result in work engagement, whereas a higher occurrence of job demands can lead to poor performance and emotional exhaustion, which are known as the main components of job burnout (Pattnaik & Panda, 2020).

The recent conceptualisation of the JD-R model also includes personal resources and employee actions, based on their perceived levels of job demands and resources (Falco et al., 2021). Some employees have positive self-evaluations that are known as personal resources. Some researchers argue that personal resources are related to employee resiliency and the individual's ability to control and have a successful impact on their environment. Having more personal resources make employees less vulnerable to burnout or resource depletion, and aid in developing additional resources which support them in pursuing their career goals and completing their work responsibilities which, in turn, lead to increased performance and employee well-being (Hulshof et al., 2020).

The call centre industry has been identified as the best industry in which to investigate engagement and burnout levels of employees and their effects on organisational performance. The reason for this is that stress and burnout are found to have the most common effects on employee performance and satisfaction in this industry since it has become a more global industry (Montalbo & Agong, 2017).

The motivational process and the health impairment process are two psychological processes that make up the JD-R model (Akkermans et al., 2013c). These processes are initiated by job demands and job resources (Falco et al., 2021). The motivational process is identified as the result of the presence of job resources, which can lead to job engagement. In the motivational process, the job resources play a motivational role, as either intrinsic motivation or extrinsic motivation. Higher levels of engagement and improved performance are the result of this enhanced motivation of employees. Poorly planned jobs and ongoing levels of job demands that generate stress and deplete an employee's mental and physical resources are the cause of the health impairment process. This process eventually results in job burnout because of increased exhaustion over time. (Falco et al., 2021).

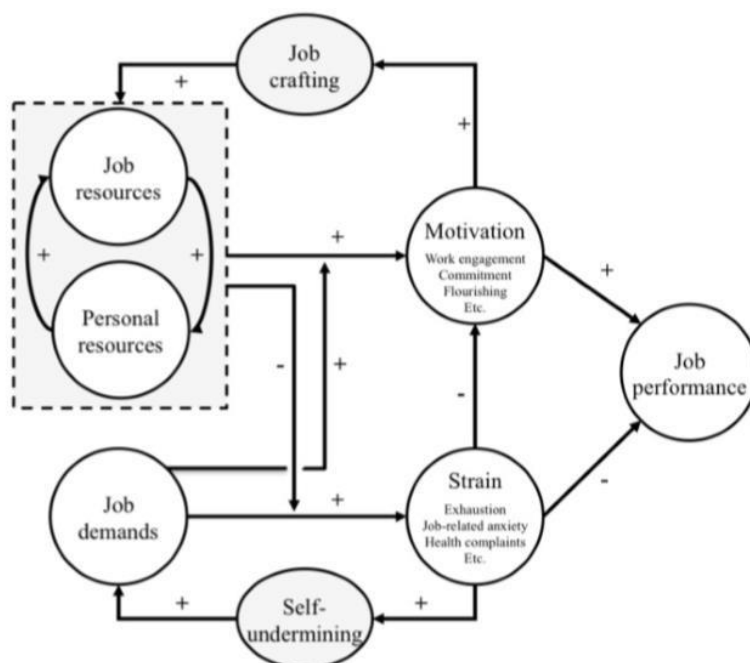
As part of the motivational process, job resources are known as the social, physical, or organisational attributes of a job that may promote the individual's learning, growth, and development by meeting basic needs and helping them to achieve work-related goals (Bakker & de Vries, 2021). Furthermore, they can reduce the negative effect of job demands and the costs thereof (Hidayah Ibrahim et al., 2019).

This process of job resources that reduce the negative consequences of job demands are known as the buffering effect. This buffering effect will be elaborated on later in the thesis (Huang et al., 2020). Job resources can be evident on the task level but can also be present on the individual and organisational levels (Bakker & Demerouti, 2007). As part of the health impairment process, job demands are described as those physical, organisational, or social attributes of an employee's job that require continuous mental or physical effort which are related to certain physical and psychological costs and lead to exhaustion and burnout (Huang et al., 2020).

Bakker and Demerouti (2007) subsequently developed the revised JD-R model, which will be the focus of this study. The JD-R model is known as a flexible model which has been applied in various work-related contexts and in different professional fields. Researchers have applied the JD-R model to study work-life balance, career development, workplace safety and much more (Falco et al., 2021). Figure 2.1 was utilised as a conceptual framework for the revised JD-R model.

Figure 2.1

The Job Demands-Resources Model (JD-R)



Note. Reprinted with permission from "Multiple levels in job demands-resources theory: Implications for employee well-being and performance". A. B. Bakker, and E. Demerouti. 2018. In E. Diener, S. Oishi, & L. Tay (Eds.), Handbook of well-being Salt Lake City, UT: DEF Publishers

2.2.1. Motivational Process

The motivational process of the JD-R model affirms that higher levels of motivation (work engagement) result in greater, positive organisational outcomes, which include higher job performance (Schaufeli, 2017). Motivated employees will work actively to improve their work environment, which results in increased job resources, and further increases the employees' motivation (Kaiser et al., 2020). Job satisfaction refers to the extent to which employees like or dislike their jobs (Zito et al., 2018). Job satisfaction can be defined as any combination of psychological, physiological, and environmental characteristics of an employee's job that lead to the employee feeling happy and content with their job (Wang & Xiao, 2022).

Job satisfaction consists of two components, known as the affective and cognitive components. The cognitive component refers to the objective evaluations of the employee's job characteristics. The affective component refers to the subjective evaluations of the job, which refers to how happy and content the employee feels in their job. The JD-R model explains employees' affective job satisfaction as it can be seen as a form of well-being (Visser & Rothmann, 2008).

Furthermore, research stipulates that the higher the employees' satisfaction with their jobs, the better the effect of job satisfaction will be on the organisational level as well as the individual level. The individual will become more engaged and motivated when more satisfaction is experienced and this, in turn, will lead to better organisational performance (Zito et al., 2018). It is, therefore, evident that organisations should focus on providing employees with enough resources to do their job effectively whilst being motivated and engaged to perform optimally (Kaiser et al., 2020).

The motivational process explains how the presence of job resources positively predicts motivation and work engagement. Job resources are defined as those organisational components of an employee's job that are conducive to job performance, reduce the effects of job demands, and increase personal growth and development (Cao et al., 2020). Research confirms that the presence of job resources has a negative effect on turnover intentions and a positive effect on motivation and organisational commitment (Bakker et al., 2004). Job resources not only reduce psychological stress but also include the motivational potential for employees' work success (Cao et al., 2020).

Various research studies have concluded that work engagement is greatly associated with role performance (Bakker & Bal, 2010). An engaged employee is fully aware of the organisational context and these engaged employees collaborate with their colleagues to increase performance within the job, to ensure the organisation is benefitted in the end (Kumar & Sia, 2012). Work engagement has diverse benefits which include higher levels of job satisfaction, lower turnover, decreased absenteeism, increased job performance and organisational citizenship behaviour. Furthermore, studies confirm that engaged employees perform 20% better than employees who are disengaged. They are also found to be 87% less likely to leave the organisation, indicating the link between engagement and performance at work (Alam et al., 2022).

Employees who are devoted to and engaged in their job, should achieve increased job performance. These engaged employees complete their tasks with increased effort for a longer duration. They further focus increasingly on their daily responsibilities and are emotionally attached to the tasks and duties of their work roles (Daswati et al., 2021; Rich et al., 2010). Schaufeli (2017), argues that work engagement exists when the employees' resources exceed their demands. It results in the employees performing in a unique way and with high levels of excellence, particularly when their job demands are high. Engaged employees achieve high performance levels because they can invest their resources more easily in various aspects of their work. As a result, we can expect that job engagement will have a positive impact on performance within the workplace (Halbesleben & Wheeler, 2008).

The revised JD-R model argues that the positive impact of job resources on engagement will be emphasised when demands are present. This argument is based on evidence that job resources aid in reducing the effects of job demands, achieving work-related goals and, therefore, reduce exhaustion or aid in recovering from exhaustion. The presence of resources will consequently decrease the risk of developing strain and exhaustion (Dicke et al., 2018). Moreover, the revised model also includes mediation and moderation effects, where motivation and exhaustion can mediate the relationship between job resources and job demands on organisational outcomes. Engaged workers are more likely to be in control of their job demands, which lessens the likelihood that strain may result from job demands. In contrast, when employees are already exhausted, increasing their resources will not necessarily lead to engagement as their energy is already depleted. Secondly, the moderating effect is described by the way job resources and job demands have interacting effects on motivation and exhaustion (Cao et al., 2020).

After a deeper understanding of the motivational process is achieved, the health impairment process within the JD-R model will be further explained.

2.2.2. The Health Impairment Process

The health impairment process is activated when there are high levels of job demands present which consequently result in employee strain/burnout (Katou et al., 2021; Prieto et al., 2008). Job demands are described as certain social, physical, or organisational attributes of a job which require constant physical and mental energy and, therefore, relate to certain physiological and psychological consequences (exhaustion/burnout) (Katou et al., 2021; Molino et al., 2016). Employees can experience high levels of stress if they are unable to adapt to, or deal with, certain aspects of their job demands, such as high workload. Those employees who are exposed to high levels of stressors have a greater chance of quitting their job if they are unable to receive adequate support to cope with the demands (Afshari et al., 2022).

Employees with high emotional exhaustion/strain due to job demands, will not perform well because their energetic resources are diminished (Bakker et al., 2004). Job demands will not necessarily lead to job burnout, but they become stressors when it requires extensive effort from the individual to ensure the demands are met (Cao et al., 2020; Molino et al., 2016).

In the exhaustion process of the JD-R model, it is argued that increased levels of burnout/exhaustion can have a significant negative effect on organisational outcomes, such as a decreased level of work engagement and lower organisational performance (Akkermans et al., 2009). It is further argued that employees who experience burnout and exhaustion are likely to experience decreased feelings of competence to perform adequately at work, decreased feelings of accomplishment and, lastly, lower achievement levels (Ahmad et al., 2021). Job burnout has been found to influence various aspects of the job, including absenteeism and turnover (Lehmann et al., 2021; Maslach et al., 2001). Additionally, further studies confirm that burnout leads to greater levels of absenteeism due to the employee experiencing mental and physical fatigue (Bakker & de Vries, 2021). People who persist in working while experiencing burnout will experience less productivity and effectiveness at work. These outcomes will consequently result in reduced commitment to both the job and the organisation (Maslach et al., 2001).

Previous studies have argued that exhaustion diminishes the individual's energy levels which consequently leads to an impairment of effort exerted in their work. Burnout also results in a low sense of self-confidence in reaching job-related goals which, therefore, leads to decreased performance (Bakker et al., 2004). When employees are experiencing job burnout, they negatively influence their colleagues at work. Thus, employees who experience increased exhaustion will be more likely to become involved in interpersonal conflict with colleagues and these exhausted employees can, therefore, disrupt the job tasks of others. Consequently, job burnout can be "contagious", and it has also been found to spill over into employees' personal life as well. Employees who suffer from burnout at work will start to portray negative emotions and behaviour at home, which negatively influence their personal lives (Maslach et al., 2001).

This JD-R model serves as a framework to aid researchers in understanding the relationship between work engagement and burnout (García-Sierra et al., 2016). The model suggests that the well-being of employees is the outcome of the interaction between job demands and job resources. Bakker and Demerouti (2007) suggest that there is a clear relationship between job resources and job demands, although they also have clearly defined individual processes. This interaction is known as the buffering effect.

Bakker and Demerouti (2007) hypothesised that the impact of job demands on burnout can be buffered with the presence of job resources. Moreover, job resources can reduce job demands as well as the psychological and physiological costs resulting from these demands. This process proposes that the interaction between job demands, and burnout will be increasingly strong when the presence of job resources is low (Falco et al., 2021). For instance, the increased opportunity for autonomy in the workplace (job resource) will buffer the effect of workload and stress (job demands) on the employee's burnout level.

Previous JD-R models only included work-related issues that influence an employee's work engagement. It is necessary to integrate personal resources as a factor in the JD-R model as well. The revised JD-R theory suggests that personal resources (such as career competencies) can have a mediating, positive impact on the interaction between job resources and work engagement. When these personal resources are included in the motivational pathway, it directly influences the person's work engagement, acting as a mediator between job resources and work engagement (Hidayah Ibrahim et al., 2019). It is also argued that job resources and personal resources are distinct components of the JD-R model (Cao et al., 2020).

For this study, the focus will be on work engagement and job burnout as dependent variables, as these two variables predict job performance, as depicted by the JD-R model in Figure 2.1. Work engagement and job burnout will further be discussed in Sections 2 and 3 and will thus, in essence, serve as a proxy for employee performance for the purpose of this study. Therefore, this thesis will not investigate employee performance in depth. Moreover, the study aims to investigate those job demands, job resources, and personal resources that impact the engagement of employees in the call centre industry.

2.3. Latent Variables of Interest

In the next section, a discussion will follow about the latent variables of interest. Work engagement and job burnout will be discussed first. The job demands – work overload and the fear of COVID-19 – will then be elaborated on. Lastly, social support as a job resource, and career competencies, as a personal resource, will be elaborated on.

2.3.1. *Work Engagement*

Work engagement is termed by Gomez-Sagado et al. (2021), as a positive and satisfactory state of mind linked to the employee's work. It is displayed as a positive attitude of employees towards the company as well as its values (Kumar & Sia, 2012). It is argued that engaged employees are more invested in the company's way of work and will thus work hard to increase performance for the benefit of the company. Various factors can influence work engagement, and these factors are related to the organisational climate, job resources, personal resources, job demands, and lastly, demographic factors (Gomez-Sagado et al., 2021). Furthermore, work engagement can be categorised into different aspects which include cognitive, behavioural, and emotional engagement. Emotional engagement refers to the feelings that employees have towards the organisation, colleagues, and supervisors. Behavioural engagement refers to the level of energy employees are willing to exert in their work responsibilities. Lastly, cognitive engagement refers to the perceptions that employees have of the organisation's culture and its leadership (Alam et al., 2022). Work engagement can also be defined as a positive, job-related mindset which can be explained by characteristics such as vigour, dedication, and absorption at work (Akkermans et al., 2013a; Katou et al., 2021). These three abovementioned subcomponents of work engagement can be explained as follows:

Vigour: Vigour is a characteristic of a person who has high energy levels and dedication despite setbacks at work (Hakanen et al., 2006). It is also characterised by the willingness to dedicate effort to one's work and persistence when facing daily challenges (García-Sierra et al., 2016). In addition, employees who display vigour are more resilient and able to adapt to various challenges at work, whilst maintaining high levels of energy (Mazzetti et al., 2021).

Dedication: Dedication can be defined as a characteristic of someone who takes great pride and enthusiasm in their jobs and is ready to take on any challenge that comes their way (Hakanen et al., 2006; Katou et al., 2021). It also includes feelings of inspiration, challenge and meaning in employees' daily tasks at work (García-Sierra et al., 2016; Mazzetti et al., 2021). Moreover, vigour and dedication have been proven, theoretically and empirically, as the core dimensions of work engagement (Mazzetti et al., 2021). Moreover, there were reported alpha reliabilities of .81 and .84 for a unidimensional scale consisting of vigour and dedication items (Albrecht & Marty, 2017).

Absorption: Absorption as a factor of engagement is present when a person is happily invested in the job and finds it difficult to separate themselves from their work (Hakanen et al., 2006; Katou et al., 2021). These employees enjoy their job to such an extent that time goes by quickly while on the job (García-Sierra et al., 2016). Being fully invested in one's job is known as a state of optimal experience which refers to characteristics such as focused attention, a clear mind, effortless concentration, and intrinsic enjoyment (Schaufeli & Bakker, 2004). Absorption is proven to be better categorised as an outcome of engagement (Albrecht & Marty, 2017). Absorption can be seen as a similar concept to "flow", which is described as a momentary experience of being present in the moment. Therefore, absorption resembles more of a long-lasting mood because of being engaged, and not much as a dimension of engagement (Mazzetti et al., 2021).

Previous studies have argued that burnout and engagement are found to be opposites on the well-being spectrum (García-Sierra et al., 2016). Engagement was found to be measured by the opposite pattern of scores used with burnout. It was argued that work engagement is present when low scores on emotional exhaustion and cynicism and a high score on professional efficacies are found. Contrary to the above statement, it is now being argued that it is not opposites on a continuum, but rather two independent states that need to be measured with independent tools (Schaufeli & Bakker, 2004).

Engagement is distinct from constructs such as organisational commitment and job satisfaction. For example, the positive attitude that employees have towards their organisation is known as organisational commitment, whereas the attitude employees have towards their job itself, is known as work engagement. Engagement thus describes a more complex perspective of the employees and their relationship with their work (Leiter & Maslach, 2003).

It is found that some employees struggle with various aspects of the work environment and experience burnout more often now than in the past. Contrary to this, other employees can cope with the different job tasks and adapt well to the work environment. Thus, they will be more likely to experience engagement at work (Innanen et al., 2014). It is found that engaged employees in call centres will be able to persist in their tasks even though these are boring and monotonous, which will reduce the risk of turnover intentions (Pattnaik & Panda, 2020).

Work engagement has become an important focal point for organisations as it correlates with positive outcomes such as growth and lower absenteeism rates. Moreover, it is explained that companies that focus on work engagement will outperform those companies that do not focus on engagement. This is because high engagement levels result in higher organisational performance. Issues in call centre such as high stress levels and increased burnout emphasise the importance of focusing on ways of motivating employee wellness, to ensure the organisations can retain their employees (Montalbo & Agong, 2017).

Work engagement is used in organisations to measure their investment in human capital. Many human resource practitioners use work engagement to maximise the effectiveness and efficiency of their employees, which will potentially lead to an overall increase in organisational performance (Kumar & Sia, 2012). Research has proven that employers can create certain conditions in the job environment that will lead to an increase in work engagement levels. These conditions are known, in the JD-R model, as job resources (Bakker & Demerouti, 2007). Employers must focus on factors in the job that will increase the employees' engagement, rather than focusing on factors that will decrease stress at work. This is also linked to Positive Psychology (Leiter & Maslach, 2003).

Previous research has attempted to find ways to resolve problems within call centres, but this research focused on the negative aspects of working in a call centre and there are very few studies available which focus on the positive side.

Several factors in call centres have been identified as demands that hinder employees' engagement levels, such as close supervision with very little freedom and employees remaining seated throughout their shifts. It is, however, important to note that not everybody in call centres are experiencing burnout or stress due to these demands. Instead, some employees are engaged, competent and confident call centre employees (Montalbo & Agong, 2017).

Employees with high levels of engagement will expend much more energy into their work because they are physically involved, cognitively aware and emotionally invested at work. These employees will exert all their physical, emotional, and mental energy into their work, and this will then result in increased employee performance (Innanen et al., 2014). Engaged employees have also reported more job satisfaction than those employees who are not engaged at work. This means that when employees are engaged and satisfied with their work environment, their well-being will also improve. Furthermore, engaged employees will feel happier and experience more joy and enthusiasm than others, which will inhibit the development of negative emotions at work (Kim & Jang, 2022).

It is found that work engagement is transferable between members of the same work team which results in better team performance. The engaged employees within the team motivate their team members to become engaged and together they can increase their performance (Janse van Rensburg et al., 2013). With an understanding of work engagement and its positive effects on employee performance, it is also necessary to investigate job burnout and its effects on employee well-being and performance.

2.3.2. Burnout

Burnout is defined as a job-related condition that is characterised by chronic levels of exhaustion, cynicism and reduced professional efficacy. Moreover, burnout can be described as an enduring condition wherein the employees are unable to and are no longer interested in exerting effort in their work (Bakker & De Vries, 2021). In the past, the occurrence of burnout was due to employees being too naïve when entering a job. Today, in the 21st century, the working world rarely paints rosy pictures and overpromises to future and existing employees, but employees are still vulnerable to burnout. The biggest cause of this phenomenon in the 21st century is the nature of the job and the broader cultural context within which employees work today (Schaufeli et al., 2009b).

It is argued that when call centre employees are continuously exposed to job demands, they will develop feelings of exhaustion, anxiety, and stress. This results in increased levels of burnout among these employees. Burnout also occurs more frequently amongst employees who perform repetitive and computer-based work, such as call centre employees (Bakker et al., 2004).

The work environments of call centres have been studied widely and researchers have found various aspects of these call centres which are related to the development of job burnout. These aspects include high workload, lack of supervisor support and lack of training to deal with these job demands (Rothmann et al., 2008). Additionally, a study conducted on Australian call centres found that call centre employees' burnout levels were among the highest compared to healthcare workers, teachers, lawyers, nurses, etc. They concluded that the reason for the high levels of burnout among call centre employees are due to characteristics such as high work pressure and client demands, as well as the increased workload of a repetitive nature (Griffin, 2021).

The call centre environment consists of work that is demanding, stressful and monotonous with very few career opportunities and satisfactory pay. These aspects of the job result in a greater prevalence of burnout (Hidayah Ibrahim et al., 2019). Job burnout can be explained as a psychological syndrome or psychological state consisting of three components: Cynicism, exhaustion, and low levels of personal accomplishment at work. (Schaufeli et al., 2009a). The three components of burnout can be explained as follows:

Cynicism: Cynicism can be seen as alienation or disengagement (Demerouti et al., 2001). It is a psychological state wherein an employee reflects indifference or acts distant toward their overall work, and not only towards their colleagues (Bakker & de Vries, 2021; Schaufeli & Bakker, 2004).

Exhaustion: It was previously argued that employees who experience job burnout only suffer emotional exhaustion. Emotional exhaustion is categorised as feelings of being overextended by certain job demands and stressors present in one's work and it can be identified by the following symptoms: fatigue, anxiety, and job-related depression (Demerouti et al., 2001). In addition, it is defined as the draining of energetic resources, chronic fatigue, and an enduring feeling of tiredness (Bakker & de Vries, 2021). Recent studies have, however, argued that exhaustion consists of both emotional- and cognitive-impairment.

Emotional impairment refers to the reduced capability to control one's emotions, such as sadness and anger, whereas cognitive impairment refers to the incapacity to regulate one's cognitive processes, such as memory and attention (de Beer et al., 2020).

Low levels of personal accomplishment: The last component, known as low levels of personal accomplishment at work, is characterised as self-evaluations by the employee that they are no longer effective in delivering daily tasks and responsibilities (Luyckx et al., 2010). It also refers to feelings of being incompetent and a lack of productivity (Maslach et al., 2001). The first two components explained – cynicism and emotional exhaustion – have been identified as the core components of job burnout (Luyckx et al., 2010).

Burnout can occur when there is a perception of a threat to the employee's resources within the organisation (Twenge & Campbell, 2008). Burnout is mainly the result of job demands but is also due to a lack of job resources. It has also been argued that burnout also relates to certain health problems and employee turnover (Schaufeli & Bakker, 2004).

Chronic stress at work can result in burnout. Over time, burnout can develop into poorer job performance, lower effectiveness and, ultimately, illnesses such as depression and anxiety (Twenge & Campbell, 2008). The factors that can potentially lead to these illnesses, especially in the current 21st-century employees, are role ambiguity and work overload. These employees do not like taking risks and feel uncertain, so they seek direction from their employers (Twenge & Campbell, 2008). As a result, burnout can be characterised by low levels of energy for completing daily tasks at work, as well as low levels of identification with one's job. With the constantly changing job environment, it is increasingly important to be aware of work engagement and job burnout in employees, as this can play a crucial part in the ultimate productivity of any employee. The next section will give a deeper insight into those job demands, personal- and job-resources, as well as their effects on the engagement/burnout in employees in South African call centres.

2.3.3. Job Demands

As mentioned above, job demands are those physical, psychological, social, or organisational properties of an employee's job that expect physical and/or cognitive energy and refer to certain psychological and physical costs (Falco et al., 2021; Lesener et al., 2019). Job demands are identified as the level to which the environment encompasses factors that constantly need concentration from the individual.

Job demands may not always be viewed as negative, but when meeting these demands requires increased effort, they can develop into stressors which are, therefore, associated with high costs and ultimately result in anxiety, depression, and burnout (Schaufeli & Bakker, 2004). This process of job demands leading to burnout is known, in the JD-R model, as the health impairment process. Examples of job demands include work overload, emotional demands, and physical workload (Lesener et al., 2019).

The concept of mental fatigue is used to explain the health impairment process. Mental fatigue occurs when there is immense cognitive pressure to maintain effective resources due to the demanding nature of the job. Normally people become tired after a long day at work, but their energy is still sufficient to meet those task demands. When a person is already exhausted after a long day of work and must cope with the high workload, extra energy is needed and it then leads to exhaustion or burnout for the employee (Bakker et al., 2004).

Research has identified demands in employees' job environments that result in burnout. These demands include work pressure, increased workload, role and work ambiguity, and emotional demands. For this study, the focus will be on work overload as a job demand as it has been characterised by various researchers as a critical job demand that causes burnout in employees in the call centre industry (Doellgast & Sezer, 2012). Furthermore, empirical studies have concluded that perceived risk and the fear associated with such risk can be classified as a job demand, as well as it leading to burnout and low levels of job satisfaction for employees. It is, therefore, necessary to include fear of COVID-19 in this study as a pivotal job demand affecting burnout among call centre employees (Falco et al., 2021).

2.3.3.1. Work Overload.

Work overload exists when there is insufficient time or resources to meet the demands placed on the employee at work, and it is also found that work overload is viewed as a great predictor of burnout (Brewer & Shapard, 2004). Workload can be defined as the confrontation with tasks and duties in different areas of an individual's life. Work overload exists when these tasks and duties become so demanding that the individual can only cope when great effort is exercised. If an employee is confronted with work overload on a regular basis, it will result in chronic stress or burnout (Schulz et al., 1998).

Work overload is known to directly affect emotional exhaustion (burnout). Aspects in call centres that indicate high workload include the high levels of client contact, not being able to take breaks between calls, extremely high targets, and time pressures (Visser & Rothmann, 2008). The pace of receiving job demands is extremely fast and the demand for a higher productivity level has increased significantly. It results in employees feeling as if they are not performing sufficiently in their job.

These employees look at their amount of undone work and experience feelings of inadequacy (Twenge & Campbell, 2008). Furthermore, managers monitor employees remotely and continuously bombard them with information on their performance, their call handling times and sales compared to their colleagues. Employees are placed under pressure to meet these high targets and are threatened with dismissal or a pay reduction if they fail to meet those strenuous targets (Doellgast & Sezer, 2012). These aspects of the employees' call centre jobs result in increased stress and anxiety.

It is found that work overload increases the risk of the individual exceeding their energetic and cognitive resources which ultimately ends in fatigue, exhaustion, and burnout. It is argued that when an employee suffers from fatigue, their capacity to handle excessive workload decreases. This leads to a decrease in the employee's functioning at work and results in the employee having depressive thoughts and being in a negative state of mind (Pluta & Rudawska, 2021; Weigl et al., 2016).

Ample research has been conducted on work overload and its negative psychological and physical health consequences for employees. These studies concluded that work overload not only leads to emotional exhaustion, but it also results in work-life conflict and reduced job satisfaction (Sofyan et al., 2021).

In a study conducted on employees' emotional well-being in the current 21st-century work environment, it was found that work overload is positively associated with emotional exhaustion (burnout) where $B = .25$, $p < .01$. When tested against job satisfaction, work overload had a negative association with job satisfaction, where $B = -.20$, $p < .01$ (Akkermans et al., 2009). Furthermore, work overload has been found to be the strongest predictor of burnout in the call centre industry (Van der Westhuizen & Bezuidenhout, 2017). Therefore, work overload has a vast influence on the employee's well-being, especially in the call centre industry.

2.3.3.2. The Fear of COVID-19.

The COVID-19 pandemic was first identified in 2019 in China, and subsequently spread uncontrollably across the world and resulted in a global pandemic (De Klerk et al., 2021). The COVID-19 pandemic has great implications for all people worldwide, and many studies have been conducted regarding the physical health effects of the virus, but little research has been documented regarding the psychological consequences. The physical symptoms of COVID-19 include a dry cough, fever, shortness of breath and a sore throat (Peral et al., 2021).

This disease is transferred by inhalation or close contact with infected droplets and the incubation period ranges from 2 days to 14 days (Singhal, 2020). Recent studies have found that, over the past few months, the amount of new COVID-19 infections and deaths has begun to steadily decrease. However, with new variants continuously evolving, we are seeing a resulting rise in new infections (Agarwal et al., 2022).

When COVID-19 first appeared in 2019, cases increased rapidly, with more than 95 million people infected at the start of January 2021. This resulted in most countries, including South Africa, implementing lockdowns. Lockdowns are characterised as the restriction on leaving home for non-essential work and people were encouraged to leave home only when it was essential (De Klerk et al., 2021). Increased pressure was consequently placed on employees who had to cope with lockdowns and social distancing whilst sustaining their employment and physical health.

Most businesses adapted to a “work-from-home” type of work setting, with the number of employees working from home increasing by 44% in the past five years, mainly because of the COVID-19 pandemic (Kaushik & Guleria, 2020). Since the start of the COVID-19 pandemic, most office work has shifted towards work-from-home type settings, and one such industry adopting this method of work includes call centres. The ongoing COVID-19 pandemic impacts employees’ work, work schedules, the relationships between employees, and their work-life balance. With the COVID-19 infection numbers decreasing in recent months, and everything returning to a somewhat new normal, organisations have adapted their work schedules from remote working during lockdowns, to a more hybrid working arrangement for their employees, depending on the type of work performed (Vyas, 2022).

At the end of this global pandemic, we will likely see a new world, including new social norms with far-reaching social and economic destruction. Thus, we can expect various negative psychological consequences for employees worldwide (Kaushik & Guleria, 2020). An extensive investigation of the aspects of inbound call centres, as well as the effects of the COVID-19 pandemic on employees' well-being, has been the core of this section. It is significant to further explore the characteristics of employees who are regarded as sufficient to cope with the 21st-Century work environment in call centres.

Research argues that employee well-being decreases during lockdown levels. The COVID-19 has also impacted employees' emotions, as it is found that employees experienced more negative emotions, such as fear and worry, from the start of the COVID-19 pandemic (Peral et al., 2021). Moreover, a study conducted in South Africa found that there is a positive relationship between the risk of being infected with COVID-19 and depression. The researchers found that participants reported high levels of stress, anxiety/fear of the disease and of related lockdowns, which are used to prevent the spread of the disease (Peral et al., 2021).

Technology also plays a big role in the well-being of call centre employees as they were required to work from home most of the time. (Ernst Kossek et al., 2012; Kaushik & Guleria, 2020). Employees working from home struggle to find the balance between family life and being committed to their job. Furthermore, working from home on a regular basis has various negative effects, such as social isolation and reduced work engagement (De Klerk et al., 2021). With the world becoming more interconnected due to the increased use of technology, every country is being affected by the COVID-19 pandemic. Employees are increasingly experiencing loneliness because of social distancing, which has led to a negative relationship with organisational commitment, engagement, and performance (Kniffin et al., 2021). Working from home has impacted face-to-face supervision and resulted in a lack of access to information and technical support, increased social isolation and reduced boundaries between work and family life (Schall & Chen, 2021).

Employees who are increasingly working from home have also reported an increase in workload and therefore increased levels of stress and exhaustion. Furthermore, it is evident that employees' working conditions have worsened from the start of the COVID-19 pandemic, and there is evidence that more employees are suffering from burnout than before the start of COVID-19. Employees are constantly faced with news about COVID-19. This has a negative impact on their well-being as they are constantly experiencing stress and anxiety.

It is therefore crucial that these employees have a supportive work environment that will provide them with enough resources to combat the negative consequences of the COVID-19 pandemic (Kniffin et al., 2021). With limited research on the long-term effects of the fear of COVID-19 on employees, more information is required regarding the impact of the virus on employees' well-being and why different people are impacted in different ways.

Contrary to the psychological effects caused by the previous lockdowns and working remotely, the recent changes in lockdown regulations have resulted in some organisations starting to return to normal work routines and forcing employees to return to the office, which has new psychological consequences for employees. Those employees are now faced with a high risk of becoming infected with COVID-19 as close contact with co-workers is now allowed. Going back to the office involves various factors that can cause employees' fear of COVID-19 to increase. These include being in close contact with many people who might spread the virus, working closely in public spaces, and regular social interaction with team members and clients (Falco et al., 2021). Therefore, it is the organisations' responsibility to ensure they provide enough job resources at work to ensure that the COVID-19 pandemic has minimal negative psychological effects on employees.

The COVID-19 pandemic has developed a culture of uncertainty among employees, and it has placed pressure on their inner resources to cope with the various challenges (Ojo et al., 2021). COVID-19 has resulted in an increased risk of employees developing burnout due to demands experienced in their work arrangements. In addition, the constant COVID-19 media exposure that employees are bombarded with daily, has placed an immense psychological strain on employees' well-being and increased their fear of COVID-19. Media continuously provides news about the symptoms of COVID-19, the constant new variants, and new changes in lockdown levels. Previous research on the psychological effects of exposure to Hurricane Katrina has found that stress and depression rates increased among people for as long as a year after being exposed to the event. This proves the argument that negative psychological consequences can linger long after a traumatic event or crisis (Kniffin et al., 2021).

Another crucial change in work regulations associated with the COVID-19 pandemic which increases the fear in employees, is the Code of Practice for managing the spread of COVID-19 in South Africa. South African law has included a regulation which stipulates that employers may force their employees to get vaccinated against COVID-19 before returning to work (Kahn, 2022).

The code provides employers with the discretion to refuse employees' entry into the office without a vaccination certificate and dictates that employees may only refuse vaccination in case of a medical condition. These strenuous rules and regulations enforced on employees, especially on those who do not want to be vaccinated for various personal and/or religious reasons, are resulting in increased anxiety, fear and, eventually, burnout.

It is now, more than ever, crucial for employees to take control of their own careers with their personal resources to design their own work towards performance (Schall & Chen, 2021). It is also critical for employees to be equipped with ample job resources to combat these negative psychological consequences. Companies should, therefore, put strategies in place by implementing top-down interventions (providing increased resources such as support and employee assistance programmes), as well as facilitating bottom-up interventions, encouraging employees to take control of their own careers and schedules (Kniffin et al., 2021).

2.3.4. Social Support as a Job Resource

As mentioned earlier in this study, job resources either aid in reaching work goals, thus reducing the negative effect of job demands, or can stimulate the personal development and growth of the individual (Akkermans et al., 2013c). This describes why job resources can be seen as intrinsic motivation towards job performance (Bakker & Demerouti, 2007; Truong et al., 2021).

If call centre employees can rely more on their social support from their colleagues and their supervisor, they will feel more engaged and motivated to work hard to increase company performance. Consequently, they will be less prone to leave the organisation and be absent (Bakker et al., 2002). Job resources thus serve as great motivation for employees to work hard and be dedicated to the job. This is known as the motivational process, which ultimately results in work engagement, better performance, and overall health (Akkermans et al., 2013c).

Job resources can also be seen as extrinsic motivation because they serve as a tool to execute daily work tasks. This can be observed in work environments where there are various job resources present. With the presence of job resources, employees will be more motivated to work hard and eventually complete tasks quickly and efficiently (Bakker & Demerouti, 2007; Truong et al., 2021).

Furthermore, empirical research confirmed that the presence of social support, autonomy, learning opportunities and feedback are predictors of work engagement among employees in various professions. With the psychological consequences caused by COVID-19, it is vital that employees are provided with job resources to cope with the extraordinary demands associated with the pandemic (Oberländer & Bipp, 2022).

There are numerous job resources in the employees' work environment that can influence their engagement at work. It is argued that call centre employees will be able to reduce the negative effects of job demands if they receive sufficient support from their managers and colleagues (Zakaria et al., 2020). Various researchers emphasise how important social support is for employees and their engagement levels. There is an increased focus on the importance of social support during the COVID-19 pandemic as employees are required to work remotely with social distancing measures in place (Oberländer & Bipp, 2022). Social support is defined as "the overall level of helpful social interaction available on the job from both co-workers and supervisors. Support from the supervisor is a social exchange construct, in which employees perceive the degree to which their supervisors value their contributions and care about their well-being" (Othman, 2013, p. 1085). Moreover, it is described as the employee's perception regarding their beliefs that they are valued and being cared for in the workplace (Zakaria et al., 2020).

Social support is known as the best predictor of work engagement, and it is described as an excellent buffer against job strain. It is a straightforward resource as social support is functional in reaching organisational goals. It is also found that high levels of social support protect individuals from exhaustion and burnout in stressful situations at work (Bakker & Demerouti, 2007). The evidence of these positive effects on engagement during a crisis is increasingly coming to the fore during the COVID-19 pandemic. A recent research study concluded that the presence of social support was proved to play a fundamental role in helping employees to cope with the demands associated with COVID-19. Additionally, a study conducted in China found that social support was the most "powerful virtual work characteristic" (Oberländer & Bipp, 2022, p3), during times of working from home.

Employees who have trusting and supportive relationships with their colleagues will experience increased psychological safety. An employee's positive relationship with their supervisor results in feelings of safety in the employee's work environment and it has further been argued that when managers support and serve their employees, the job environment will be one that is highly engaged (Kumar & Sia, 2012).

It has further been argued that social support plays an essential role in providing employees with strengths and the ability to cope with adverse challenges such as COVID-19. Employees who feel supported by their supervisors and colleagues are more likely to manage the stressors associated with their work (Huang et al., 2020). Employees who experience social support in the workplace will exert positive attitudes toward their job and organisation and this will result in higher performance in their work tasks (Zakaria et al., 2020).

Good, constructive feedback received from supervisors and managers will result in employees working more effectively and efficiently, but it will also improve the relationship between the employee and their supervisor due to effective and regular communication (Bakker & Demerouti, 2007). Employees in call centres who perceive the support from their supervisors to be adequate will be able to cope better with job stressors and the fear of COVID-19 and will be able to accomplish their work tasks effectively (Zakaria et al., 2020).

Positive feedback for good work performance will motivate employees to work even harder to become successful. In addition, employers who can communicate in a positive manner with those employees who need to improve their performance will possibly prevent work-related problems that may occur in the future (Bakker & Demerouti, 2007). Call centre employees work in small teams under close supervision. This ensures that employees receive feedback and direction as the problems arise during service delivery and therefore, improves the quality of service. It is also found that social support enhances job satisfaction for these call centre employees (Pattnaik & Panda, 2020). Lastly, Kumar and Sia (2012) argued that when employees have a good relationship with their managers and supervisors, it will lead to happier, and more engaged employees.

2.3.5. Career Competencies as a Personal Resource

A new addition to the JD-R model is known as the personal resources of employees, which have an impact on their well-being at work. Personal resources are characterised as the perceived control that an individual has over their environment. Moreover, personal resources, such as optimism, self-efficacy, and resilience are like job resources, as they aid individuals to reach their job-related goals (Bakker & de Vries, 2021). It is defined as a person's mental characteristics that aid in decreasing the negative impact of demands on their psychological well-being (Prieto et al., 2008). In addition, researchers argue that personal resources are those characteristics that employees bring to the organisation that serve as a coping mechanism against crisis situations such as COVID-19, as well as improving the well-being of employees (Oberländer & Bipp, 2022).

It has further been established that personal resources play a vital role in the JD-R model as it explains the variance in burnout and work engagement, together with job demands and job resources (Prieto et al., 2008).

The contemporary career is characterised as being dynamic, within a complex environment. Employees are now faced with challenges such as changes in global economies, changing government policies and regulations, technological innovations, as well as the consequences and fear associated with COVID-19 (Baruch & Sullivan, 2022). These consequences of COVID-19 include employees losing their jobs and work schedules shifting towards remote working. Organisations are now struggling to determine how work can be completed effectively, and employees are struggling to adapt to their new work schedules (McDonald et al., 2022).

All these challenges employees are experiencing, and will experience long after the pandemic ends, result in them taking more responsibility for their own career success (McDonald et al., 2022). In addition, employees face challenges such as defining their career goals, searching for better jobs, and discovering what is expected from them in their professional roles (Presti et al., 2021). Employees who now work remotely accept greater responsibility for their career development and work performance than those employees working in the office. This is due to remote workers experiencing less support from their managers towards their career development and, therefore, feel responsible for proactively influencing their career success (McDonald et al., 2022).

Employees in the current 21st century are extremely focused on continuously appraising their environment and being aware of alternative career opportunities while constructing their careers (Blokker et al., 2019). It is found that the greater an individual's personal resources are, the higher the person's self-regard is and the more likely it will be that the individual will reach their goals in the future. The reason for this is due to them being intrinsically focused and achieving goals because of their great internal motivation, and it thus leads to greater performance and satisfaction (Bakker, 2011).

Akkermans et al. (2013c), have suggested that personal resources not only aid individuals in achieving their goals, but also increase their personal growth and development. Research suggests that the concept of career competencies can work in a similar way to personal resources and may, therefore, be viewed as a personal resource in the JD-R model (Akkermans & Tims, 2017).

Furthermore, it is found that career competencies result in greater employability for the employees, and they will exert more adaptive behaviour, add value to the organisation, and be successful in their job (Blokker et al., 2019).

It is found that career competencies as a personal resource have both a direct and indirect influence on job engagement and increased performance in the workplace. Furthermore, they can be defined as the knowledge, abilities, and skills that are critical for career development, work engagement and employee well-being. These competencies can be influenced by the employee (Albrecht & Marty, 2017; Plomp et al., 2016; Presti et al., 2021). Career competencies are explained through a framework that illustrates three dimensions of competencies, which include reflective, communicative, and behavioural dimensions (Akkermans et al., 2013c). The development of career competencies for employees are identified as an important foundation for achieving career success (Presti et al., 2021). The three dimensions of career competencies can be explained as follows:

Reflective career competencies: An individual with reflective career competencies is aware of, and can reflect on their career (Akkermans et al., 2013a). This category consists of two competencies. The first competency is known as a reflection on motivation, which includes the individual who reflects on their values, passions and motivations concerning their personal career (Akkermans & Tims, 2017). The second competency is the reflection on qualities, which is characterised as an individual reflecting on their skills and limitations regarding their career (Akkermans et al., 2013a). It is especially important for employees in the call centre industry to be able to reflect on their career interests and strengths as they plan their future careers (Presti et al., 2021).

Communicative career competencies: Secondly, individuals with communicative career competencies can communicate effectively with others in building a strong professional network, to demonstrate their strengths and skills (Plomp et al., 2016). The first competency of this dimension is known as the ability to network, which includes the awareness of the value of networking and the ability to increase the employee's network for career-related purposes (Akkermans & Tims, 2017). The second competency in this dimension is self-profiling. This consists of the ability to present and communicate one's personal knowledge, abilities, and skills in the labour market (Akkermans et al., 2015).

Behavioural career competencies: The last dimension, known as behavioural career competencies, includes the setting of career goals and actively exploring possible careers and learning opportunities (Kong & Yan, 2014). One competency associated with this dimension is work exploration. It is categorised as actively searching for job opportunities in the labour market (Akkermans & Tims, 2017). Secondly, career control refers to actively investing in one's career by setting action plans for achieving these career goals (Akkermans et al., 2015).

Career competencies are also characterised by self-guidance and can be seen as employees' self-management of their working and learning experiences to achieve career success, well-being, and engagement (Kuijpers et al., 2006). Furthermore, employees with better-developed career competencies will have a better understanding of their motivations and qualities at work, which allow them to improve and instil these motivations into various occupational roles in the future.

Research further states that career competencies aid individuals in exploring alternative opportunities in the labour market and therefore have the power to control their careers. These career competencies aid individuals to employ greater adaptive behaviours and result in increased career success (Blokker et al., 2019). It is therefore hypothesised that employees in call centre positions with greater career competencies will be able to adapt to the circumstances of their role and have the required motivation to build the career they aspire to. This is especially required during the current COVID-19 pandemic with changes in work schedules. People are responsible for their own career development as less interaction is possible to explore new opportunities at work (Mc Donald, et al., 2022).

Akkermans et al. (2020), argue that when employees experience a "career shock", such as COVID-19, the relationship between their career competencies and perceived career success is negatively impacted. They further state that when a crisis event occurs (characterised by novelty, disruption, and criticality) it will initiate a change in the behaviour of employees towards their career success. This "career shock" influences employees' ability to adapt their behaviours. Employees who can effectively predict and plan for career shocks such as COVID-19 will be able to adapt their behaviours and still be able to achieve career development and career success. Blokker et al. (2019), state that when individuals can develop their behavioural, communicative, and reflective career competencies, they are more effectively able to cope with these "career shocks" and become more resilient during setbacks (such as the consequences of COVID-19). Employees with career competencies will be able to remain engaged and employable.

Career competencies can initiate the motivational process that leads to employee satisfaction and performance in their career (Akkermans & Tims, 2017). This issue of career competencies as a personal resource in the JD-R model may be important for employees in the 21st century, especially due to the COVID-19 pandemic affecting the way work is being done (Akkermans et al., 2015). Employees with developed career competencies experience negative career changes, such as job loss and changes in work schedules, but they can effectively adapt and view these as an opportunity for exploring different career opportunities. Furthermore, they can make positive career changes which improve their job satisfaction and work-life balance, which improves their engagement at work (Akkermans et al., 2020).

For some employees, the negative consequences of COVID-19 can instead bring opportunities for taking responsibility to change their work schedules, improve their career development and advance their skills. The recent changes in technology have also resulted in a much easier transition to flexible working arrangements during COVID-19 and therefore, also improved the possibilities for call centre employees to improve their skills and career competencies through online learning (The Economist, 2020).

2.4. Interrelations Between the Latent Variables of Interest

The study's subsequent section will determine how the latent variables related to one another. The interrelationships between job- and personal-resources, as well as work engagement, will be covered once the relationship between engagement and burnout has been addressed. The final section will explain the connections between various job demands and job burnout.

2.4.1. *The relationship Between Work Engagement and Job Burnout*

Various researchers argue that burnout is the opposite of engagement on the well-being spectrum (García-Sierra et al., 2016). It is rare that an employee who suffers from burnout will be engaged in their job, and that an employee who is engaged will rarely experience burnout (Bakker & Demerouti, 2014). Furthermore, when an employee is experiencing any dimension of burnout, it is doubtful that the employee will be committed and engaged in their job.

Apart from the argument that burnout and engagement are independent states as previously discussed, feeling exhausted once a week does not mean that an individual will not feel energetic and engaged on other days of the week (Schaufeli & Bakker, 2004). Since different viewpoints regarding the independent nature of work engagement and job burnout exist, this study will start by assuming that a negative relationship exists between engagement and burnout experienced by employees (Stemmet, 2022). For this reason, this research study proposes the following hypothesis.

Hypothesis 1. Job burnout has a significant negative linear relationship with work engagement

2.4.2. The Relationship Between Social Support as a Job Resource, and Work Engagement

Previous studies conducted on different job resources like social support have found that they have a significant positive interaction with work engagement. For example, this phenomenon could be due to social support satisfying the need for autonomy and the need for belonging which increases engagement (Bakker, 2011). Furthermore, it is found that increased levels of social support in the call centre industry result in greater satisfaction amongst these employees and higher levels of engagement are achieved. This is due to employees experiencing a trusting relationship with their supervisor. They feel the organisation cares for their well-being, and, in turn, they become more engaged (Pattnaik & Panda, 2020).

Schaufeli and Bakker (2004) performed a study on employees from various Dutch services companies and found that social support from supervisors and colleagues as examples of job resources, have a positive interaction with work engagement. Furthermore, a recent study found that high levels of supervisor support led to a high-quality relationship between the supervisor and employee, which positively impacted their levels of engagement (Pattnaik & Panda, 2020). Furthermore, research has provided ample support that increased levels of perceived social support lead to greater levels of organisational identification which, in turn, lead to increased work engagement (Bonaiuto et al., 2022).

Social support from colleagues and supervisors creates a sense of belonging and safety which increase employees' self-confidence and results in them engaging in the organisation and increasing their effort in daily tasks (Rich et al., 2010).

Various researchers argue that social support can restrict the negative effects of job demands and exhaustion from occurring in the organisation and help employees to cope with different daily challenges (Othman, 2013). This is also found to be true during the current COVID-19 pandemic, where employees who receive social support have higher self-efficacy and reduced anxiety and stress. Thus, social support mitigates the negative consequences of social isolation, and increases employee well-being and engagement (Grey et al., 2020).

A study conducted on the well-being of employees found a positive linear relationship between social support and work engagement, with ($\beta = .34, p < .01$) (Akkermans et al., 2009).

Hypothesis 2. Social support has a significant positive linear relationship with work engagement

2.4.3. The Relationship Between Career Competencies as a Personal Resource, and Work Engagement

Various research studies have confirmed that career competencies as a personal resource have a positive relationship with work engagement. The reason for this is the fact that when employees master these competencies, they may experience greater levels of motivation and this will result in increasing level of engagement (Akkermans et al., 2015; Presti et al., 2021).

Akkermans et al. (2013c) argue that career competencies increase employees' ability to impact and control their environment with less effort, and they will also be more successful in achieving their personal and organisational goals. Moreover, employees with career competencies are able to relate to others and know how to act proactively in setting goals and plans to achieve them. Therefore, employees in call centres will be able to set their career goals and work towards them, which will lead to greater control over their work environment and may result in them being more satisfied and engaged in their current work situation.

Research emphasises that employees with high self-regard will be more inherently motivated to reach their goals. This will lead to higher job performance and increased engagement in the organisation (Bakker & Demerouti, 2008).

It is also hypothesised that employees who are engaged and have high levels of self-efficacy can meet their demands in the organisation (Bakker, 2011).

Professionals who have already developed their career competencies will better understand their professional self-concept and it is possible for them to implement their self-concept into multiple occupational roles in their careers. Furthermore, these employees will be likely to explore other career possibilities and have control over their careers (Blokker et al., 2019). It is thus possible that when employees feel stuck in their role as call centre operators, their career competencies can increase their motivation to achieve greater career goals, which will make them work harder in moving up the career ladder to achieve greater success.

Hypothesis 3. Career competencies have a significant positive linear relationship with work engagement.

2.4.4. The Relationship Between Career Competencies as a Personal Resource and Social Support

Akkermans et al. (2013c), have included an example of the effect of career competencies on work engagement. They say that when employees know their values and strengths, and they are good at setting goals and action plans, they may be better at developing themselves which will consequently result in a higher prevalence of work engagement. They have further included in their example that employees who actively communicate with others at work through utilising their career competencies, will create a positive energetic work environment and this may result in employees feeling supported by their co-workers and employers which increases their perceived social support.

Akkermans and Tims (2016), have argued that career competencies are displayed through job crafting behaviour as employees with developed career competencies are able to recognise job resources such as social support more easily. Furthermore, it is found that personal resources are positively related to job resources and, as mentioned in the explanation in the literature review above, career competencies can be viewed as a personal resource (Xanthopoulou et al., 2007). Therefore, it has been argued that career competencies have a positive relationship with job resources. Moreover, perceived social support may be influenced by career competencies due to the employees' ability to build a network with others and being able to communicate their strengths and career goals (Akkermans et al., 2013c). The argument above leads to the next hypothesis:

Hypothesis 4: Career competencies as a personal resource have a significant positive relationship with social support.

2.4.5. The Relationship Between Work Overload as a Job Demand, and Job Burnout

Researchers have found that work overload is the greatest predictor of burnout at work (Brewer & Shapard, 2004). As discussed above, work overload exists when tasks and duties become so demanding that the individual can only cope when great effort is exercised. If an employee is confronted with work overload regularly, it will result in chronic stress or burnout (Schulz et al., 1998). Research found that when employees experience extensive work overload over a period, it will result in mental fatigue and exhaustion, which results in burnout (Sufiyati & Cokki, 2021).

Job demands, such as work overload, have been studied by various researchers in the past and all of them concluded that burnout is a response to work overload (Maslach et al., 2001). It is found that too high a workload will lead to an individual's energy being exhausted and will result in recovery becoming impossible. Work overload is very draining for the employee and it requires the individual to portray emotions that are not consistent with their personal feelings and thus directly results in emotional exhaustion and burnout of the individual (Brewer & Shapard, 2004).

A recent study done on the effects of the COVID-19 pandemic concluded that remote working conditions, especially during the COVID-19 pandemic, result in an increase in workload from the view of the employee. These increased levels of workload experienced during the current working schedules have resulted in employees experiencing increased burnout and anxiety (Ingusci et al., 2022).

It has also been found that an increase in workload will lead to a greater chance of burnout and result in negative consequences such as illness, turnover, and absenteeism. This can be due to the individual investing so much energy in trying to cope with the excessive workload that their energy is depleted.

When this occurs, they ultimately become exhausted and suffer burnout (Schaufeli & Bakker, 2004). Work overload in call centres, especially the high levels of contact with clients, not being able to take breaks between calls, and high-performance targets directly leads to burnout (Visser & Rothmann, 2008).

A study conducted on employees in the call centre industry found that work overload is consistently associated with burnout. The study proved that 35% of the variance in burnout was due to high levels of work overload (Visser & Rothmann, 2008).

Hypothesis 5. Work overload has a significant positive linear relationship with job burnout

2.4.6. The Relationship Between Fear of COVID-19 as a Job Demand, and Job Burnout

COVID-19 impacts employees' mental health, even when they are physically healthy. This is due to the increased fear of being infected. This fear is associated with negative feelings relating to the danger of contracting the virus. It is, therefore, argued that the fear of COVID-19 can be perceived as a hindrance job demand. These fears that employees experience result in increased levels of continuous stress that lead to burnout (Opatha, 2020). Uncertainty related to COVID-19 and the period of remaining at home have also caused various changes in the lives of every employee. These changes and uncertainty result in increased levels of stress, anxiety, depression, and burnout (Yildirim & Solmaz, 2020). It is argued in previous studies that the pandemic has increased exposure to traumatic stimuli, such as the fear of contracting the disease, fear of infecting family members, or the increasing rates of deaths globally.

Furthermore, a study conducted in China has found that stress and anxiety levels of employees have increased by 25% from the start of the COVID-19 pandemic (Yildirim & Solmaz, 2020). Some employees had already been suffering from high levels of stress and anxiety prior to COVID-19. Together with the added fear of COVID-19, stress can have detrimental consequences for employees (Opatha, 2020). The fear of COVID-19, combined with other job demands such as work overload, leads to burnout in these employees (De Klerk et al., 2021). Additionally, it has been found that the added fear of COVID-19 on employees' current stress levels has a negative effect on employees' well-being. Employees are increasingly experiencing more anxiety, lower emotional well-being, and reduced job satisfaction (Opatha, 2020).

Employees experience challenges related to working from home, such as reduced teamwork, boundaries between work and family life blurring, work overload, increased loneliness and increased stress and anxiety. When these feelings persist for long periods of time, it results in an increased risk of burnout for these employees (De Klerk et al., 2021).

It is, therefore, also hypothesised that the fear of COVID-19 will negatively impact work engagement as these negative feelings of anxiety and loneliness will have a dampening effect on the engagement level of the employee. The researcher will also evaluate the additional impact that the fear of COVID-19 may have on the burnout levels of employees, over and above the influence of workload on the burnout levels of call centre employees.

Hypothesis 6. Fear of COVID-19 has a significant positive linear relationship with job burnout.

Hypothesis 7. Fear of COVID-19 has a significant negative relationship with engagement.

2.5. Moderating Effects Between Variables

The development of work engagement and job burnout is mainly as a result of the interaction between job demands and job resources. Aside from the main effects explained above, it has been argued that job resources and job demands have interacting effects. Furthermore, it is found that job resources can buffer the negative effect of job demands on burnout. The opposite moderating process is also proven to be present, where job resources become more prominent and increase the motivational potential when employees are faced with high job demands (Rai & Chawla, 2021). These interactions are described by Demerouti and Bakker (2011), as the first interaction and the second interaction. The two types of interaction will be discussed below.

2.5.1. The Interaction Effects

Considering the discussion of the buffering effect, call centre employees who have high levels of job resources, such as social support, will feel more committed to their work and less prone to experience burnout when increased job demands are perceived (Janse van Rensburg et al., 2013). It is found that when employees suffer from increased work overload during the COVID-19 pandemic, a high level of social support will buffer the negative effect of work overload. This means that employees will be less likely to experience burnout when they have sufficient support to manage their demands (De Klerk et al., 2021).

Akkermans et al. (2017), argue that employees with career competencies as a personal resource will be able to control their work environment in such a way that they will be able to recognise/generate job resources to buffer the negative effect of job demands on burnout.

During a crisis, such as the COVID-19 pandemic, employees with career competencies are found to be able to protect themselves against emotional exhaustion, which boosts the perception of a difficult situation. In this way, the individual feels that the situation is an opportunity to grow and learn instead of a threat to their well-being (Moreno-Jiménez et al., 2021).

Job demands have a relationship with engagement in the way that job demands interact with job resources. Therefore, it is found that job resources will aid in the development of engagement when high job demands are present (Rai & Chawla, 2021). Previous studies have distinguished between job hindrances and challenges. A job hindrance is experienced when it overwhelms the individual's ability to cope and results more frequently in exhaustion. Contrary to a job hindrance, when an employee experiences a challenge, they will more likely be able to overcome it and it may improve the employee's development, goal attainment, and job satisfaction (Demerouti & Bakker, 2011).

Moreover, when employees experience the job demands as a challenge, the more the motivating potential of job resources is found in work engagement because job resources aid in achieving goals (Borst et al., 2017). Under conditions where demands are high, employees with a great number of job and personal resources are more capable of dealing with the demands. This results in decreased levels of exhaustion. Employees with high levels of personal resources, such as career competencies, are more competent in dealing with demanding conditions, and therefore reduce the risk of burnout (Xanthopoulou et al., 2007).

In contrast to the argument above, it has been argued that the absence of personal resources and job resources (such as career competencies and social support) during the pandemic, can increase the negative effect of this demand. Moreover, an overwhelmingly high level of hindrance demands can contribute to burnout. It is, therefore, argued that the fear of COVID-19 can turn into a hindrance demand instead of a challenging demand, which has an increased probability to lead to burnout among employees (Moreno-Jiménez et al., 2021).

To conclude, due to the focus of this research study being the impact of the COVID-19 pandemic on call centre employees' engagement and burnout levels, the only moderating effect that will be investigated in this research study is the fear of COVID-19 as a job demand.

It is, therefore, hypothesised that the fear of COVID-19 as a job demand, may act as a challenge to motivate employees to utilise their social support and career competencies to remain engaged in their jobs. However, if employees' career competencies and social support are found to be insufficient, the researcher hypothesises that fear of COVID-19 might have a dampening effect on their engagement levels.

Hypothesis 8. Fear of COVID-19 has a significant dampening effect on the relationship between social support and work engagement.

Hypothesis 9. Fear of COVID-19 has a significant dampening effect on the relationship between career competencies and work engagement.

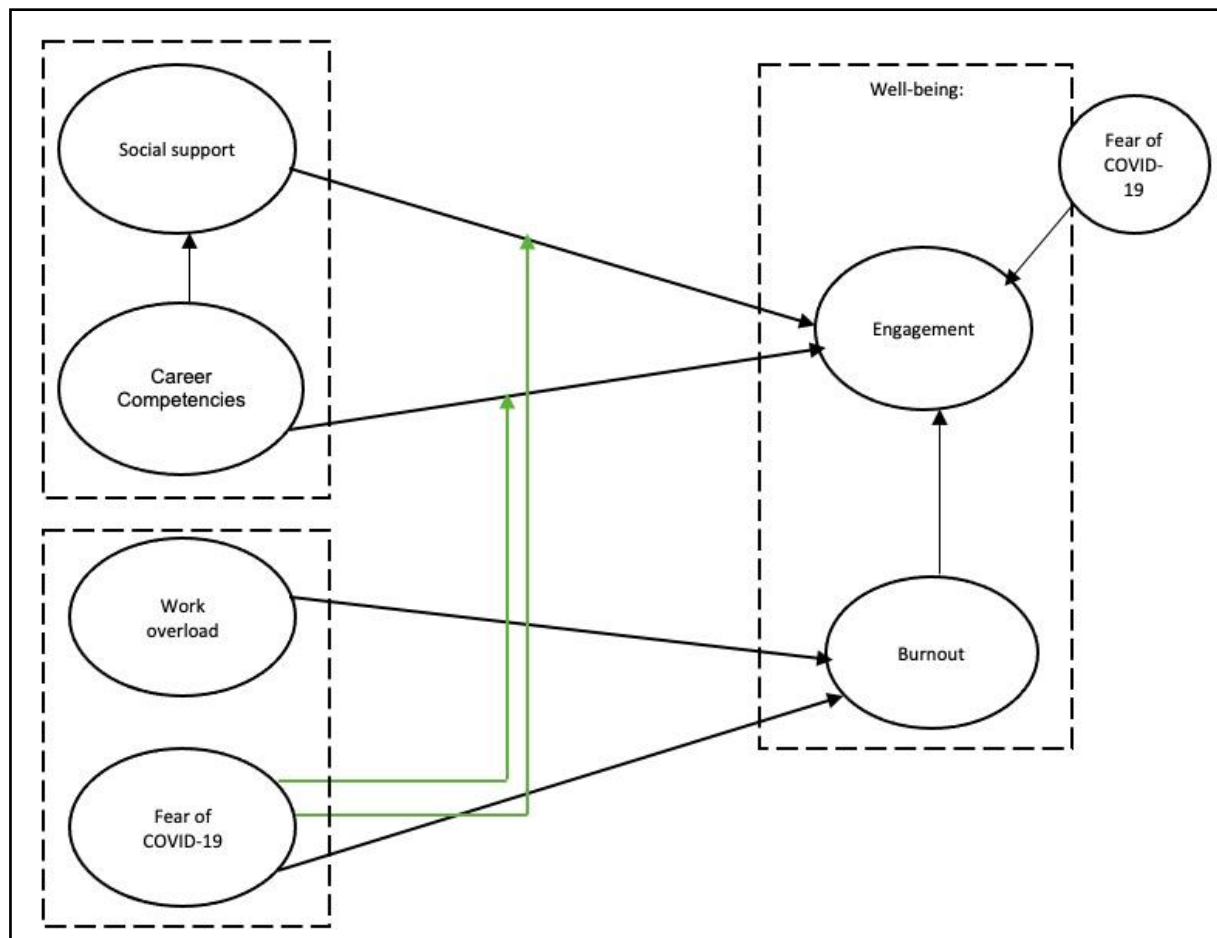
2.6. Section Summary

An overview of the constructs used in this study is given to the reader in this portion of the research study. The theoretical justifications presented above allowed for the inclusion of burnout, engagement, work overload, social support as a job resource, career competencies as a personal resource, and fear of COVID-19 in a nomological network of factors thought to be responsible for the variation in work engagement and job burnout among call centre employees in the 21st century.

The conceptual model (Figure 2.2), which includes a reduced structural model and moderating effects, was created to represent these ideas. The validity of the simplified model and moderating effects in explaining the variation of job burnout and work engagement among inbound call centre employees during the COVID-19 pandemic will be examined.

2.7. The Conceptual Model

The Hypotheses are demonstrated in the conceptual model (Figure 2.2). This is a simplified illustration of the hypothesised paths between the variables.

Figure 2.2*Conceptual Model*

CHAPTER 3: RESEARCH DESIGN METHODOLOGY

This section will begin with a description of the substantive research hypotheses, the structural model, and the statistical hypotheses for this study. Thereafter, the research design applicable for this study will be elaborated on, followed by the sampling method chosen for this research study. The research procedure that was followed and the ethical considerations will then be discussed. Lastly, the measurement instruments that were utilised will be elaborated on, as well as the explanation of the statistical analysis.

3.1. Introduction

This section will consist of the methodology that was used throughout the quantitative research project. The purpose of this section is to attempt to answer the research-initiating questions:

What are the levels of burnout and work engagement experienced by employees in the call centre industry, amidst the COVID-19 pandemic?

Secondly, what are the main antecedents of job burnout and work engagement among the call centre employees, amidst the COVID-19 pandemic?

The method of inquiry used to develop the explanations from the suggested model determines their validity and credibility (Theron, 2017). Therefore, the method being used has affected the probability of uncovering credible and valid explanations. Additionally, a model is only determined to be valid if it closely matches the given empirical data (Babbie and Mouton 2001). Moreover, science is devoted to an “epistemic imperative” (Babbie & Mouton, 2001, p. 8), to investigate valid explanations. These explanations can be perceived as valid only if the explanation strongly fits the data, (Babbie & Mouton, 2001).

The major objective was to build a network of the most important variables influencing employee engagement and burnout. In this way, a structural model for evaluating the influence of the key factors within the Job Demands-Resources model (JD-R model) will be presented.

This research questions were addressed by applying an explanatory approach to examine the predicted causal relationships in this research study. This study used the JD-R model to evaluate how the latent variables' role is causing variance in work engagement and job burnout amongst inbound call centre employees in South Africa.

The chosen research methodology should be appropriate to test the above-mentioned research-initiating questions. This next section will focus on the tools and procedures utilised in this study. This section will include a description of the participants and sample included in this study. Thereafter, a discussion will follow regarding the statistical analysis, data collection and measurement instruments which were utilised during the execution of the study.

Therefore, the goal is to provide a thorough justification of the methods employed in the study. This will help knowledgeable peers assess the approach that was used objectively and better enable them to see potential mistakes that could compromise the reliability and validity of the conclusions drawn from the data, thus jeopardising the epistemic ideal (Nell, 2015).

3.2. Substantive Research Hypotheses

In Chapter 2, it was hypothesised that job demands and job- and personal-resources are mainly identified as influencing the variance in work engagement and burnout of inbound call centre employees in South Africa.

The proposed structural JD-R model depicted in Figure 3.1 indicates the hypotheses that were developed during the literature review in Chapter 2. These hypotheses are known as substantive hypotheses as it is formulated in terms of latent variables. The latent variables discussed in Chapter 2 consist of work engagement, job burnout, social support as a job resource, career competencies as a personal resource, work overload and the fear of COVID-19 as job demands. The conceptual model in Figure 2.2's overarching substantive hypotheses were condensed to the structural model, as seen in Figure 3.1. The following path-specific hypotheses can be formed from the study's overall substantive research hypotheses.

Hypothesis 1: *Job burnout (η_2) has a significant negative linear relationship with work engagement (η_1).*

Hypothesis 2: *Perceived social support (η_3) has a significant positive linear relationship with work engagement (η_1).*

Hypothesis 3: *Career competencies (ξ_1), have a significant positive linear relationship with work engagement (η_1).*

Hypothesis 4: Career competencies (ξ_1), have a significant positive linear relationship with social support (η_3).

Hypothesis 5: Work overload (ξ_2) has a significant positive linear relationship with job burnout (η_2).

Hypothesis 6: Fear of COVID-19 (ξ_3) has a significant positive linear relationship with job burnout (η_2).

Hypothesis 7: Fear of COVID-19 (ξ_3) has a significant negative linear relationship with work engagement (η_1).

Additionally, the structural model, derived from the conceptual model, also includes two interaction effects. The two hypotheses for these interaction effects include:

Hypothesis 8: Fear of COVID-19 (ξ_3), has a significant dampening effect on the relationship between social support (ξ_1), and work engagement (η_1).

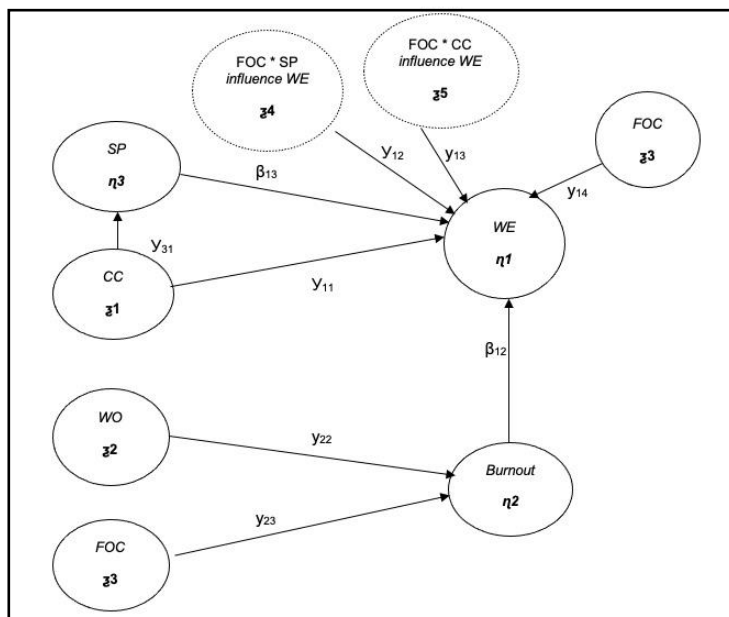
Hypothesis 9: Fear of COVID-19 (ξ_3) has a significant dampening effect on the relationship between career competencies (ξ_1) and work engagement (η_1).

3.3. The Structural Model

Section two, the literature review, resulted in the creation of a structural model. This model schematically represents the hypothesised answer to the research-initiating questions of this research study. These hypotheses need to be operationalised, after which the hypotheses can be formalised and empirically tested. The structural model is depicted in Figure 3.1

Figure 3.1

Structural Model



Note. CC: Career Competencies, SP: Social Support, WO: Work Overload, FOC: Fear of COVID-19, WE: Work Engagement.

When the Conceptual Model (Figure 2.2) is compared to the Structural Model (Figure 3.1), one can clearly observe differences. In the Structural Model (Figure 3.1), one can observe additional variables added. These variables are known as *dummy* variables. The moderating variables (indicated by “*” in Table 3.1) subsequently become a *dummy* variable that influences the endogenous variable directly.

Table 3.1

Summary of Latent Variables

Eta (η):

η_1 Work Engagement

η_2 Job Burnout

η_3 Social Support

Ksi (ξ):

ξ_1 Career Competencies

ξ_2 Work Overload

ξ_3 Fear of COVID-19

ξ_4 Fear of COVID-19 * Social Support *influences work engagement*

ξ_5 Fear of COVID-19 * Career Competencies *influences work engagement*

3.4. Statistical Hypotheses for the structural model

All the relevant latent variables were described in Chapter 2. These variables include Engagement, Burnout, Social Support, Career Competencies, Work Overload and Fear of COVID-19. After it was described in a broad context, it was narrowed down to a point where the variables influence each other, according to the literature. The statistical hypotheses will follow below, which can be compared with the formulated hypotheses found in Chapter 2. These statistical hypotheses were formulated by means of the structural model indicated in Figure 3.1.

Hypothesis 1: *Job burnout has a significant negative linear relationship with work engagement.*

$$H_{01}: \beta_{12} = 0$$

$$H_{a1}: \beta_{12} < 0$$

Hypothesis 2: *Perceived social support has a significant positive linear relationship with work engagement.*

$$H_{02}: \beta_{13} = 0$$

$$H_{a2}: \beta_{13} > 0$$

Hypothesis 3: *Career competencies have a significant positive linear relationship with work engagement.*

$$H_{03}: \gamma_{11} = 0$$

$$H_{a3}: \gamma_{11} > 0$$

Hypothesis 4: *Career competencies have a significant positive linear relationship with social support.*

$$H_{04}: \gamma_{31} = 0$$

$$H_{a4}: \gamma_{31} > 0$$

Hypothesis 5: *Work overload (ξ_2) has a significant positive linear relationship with job burnout (η_2).*

$$H_{05}: \gamma_{22} = 0$$

$$H_{a5}: \gamma_{22} > 0$$

Hypothesis 6: *Fear of COVID-19 (ξ_3) has a significant positive linear relationship with job burnout (η_2).*

$$H_{06}: \gamma_{23} = 0$$

$$H_{a6}: \gamma_{23} > 0$$

Hypothesis 7: *Fear of COVID-19 (ξ_3) has a significant negative linear relationship with work engagement (η_1).*

$$H_{07}: \gamma_{14} = 0$$

$$H_{a7}: \gamma_{14} < 0$$

Hypothesis 8: *Fear of COVID-19 (ξ_3), has a significant dampening effect on the relationship between social support (ξ_1), and work engagement (η_1).*

$$H_{08}: \gamma_{12} = 0$$

$$H_{a8}: \gamma_{12} \neq 0$$

Hypothesis 9: *Fear of COVID-19 (ξ_3) has a significant dampening effect on the relationship between career competencies (ξ_1) and work engagement (η_1).*

$$H_{09}: \gamma_{13} = 0$$

$$H_{a9}: \gamma_{13} \neq 0$$

3.5. Research design

Before any researcher can observe and analyse their data, it is a critical step to have a plan (Babbie, 2001). Firstly, the researcher needs to determine what they are going to analyse and observe, why, and how. This is what research design is all about. The aim is to reproduce the observed covariance matrix as closely as possible. If the model does not closely reproduce the matrix, a conclusion can be made that the reduced structural model does not provide an acceptable explanation of the observed covariance matrix.

Furthermore, the structural relationship that the model hypothesised does not accurately represent the psychological process that is forming the phenomenon of interest. It is, however, not true to assume that, when there is a close agreement with the matrix, the psychological process depicted in the model essentially produced the level of endogenous latent variables comprising the phenomenon of interest. The high degree of fit will only show the psychological processes provided but will provide one credible explanation for the observed covariance matrix (Babbie & Mouton, 2001).

Three types of research can be implemented for a study and include exploratory, descriptive, and explanatory research. To decide which type of research to use, one must consider the purpose of the study. The type of research that was used for this study is the explanatory research design. Explanatory research is used when a researcher wants to identify why a certain phenomenon takes place or not. Moreover, explanatory research can be distinguished by two broad design categories, which include, *experimental*, and *ex post facto* designs. During *experimental designs*, the independent variables can be manipulated by the researcher and the researcher can assign individuals to random experimental treatments. Contrary to this type of design, *ex post facto* is described as a design where the researcher does not have control over the latent variables (Theron, 2014). Therefore, *ex post facto* design was selected for this research study. This type of design also amplifies systematic error variance, control for extraneous variance, and lower levels of error variance (Theron, 2014). It is therefore expected that this type of design can improve the likelihood of offering clear empirical evidence for the hypotheses that will be tested in the study.

3.6. Sampling

Sampling consists of selecting a portion of the total population (Babbie, 2001). For this current study, the selected sample type was employees in the call centre industry, specifically focusing on inbound call centres. This means that several inbound call centre employees in South Africa were selected for this study. The use of call centres across South Africa reduces the possible bias that can be experienced. The study surveyed inbound call centre employees in a variety of industries across South Africa and the age of participants was not a determining factor. Thus, the only prerequisite for taking part in this study was that employees were permanently employed in an inbound call centre type work setting.

Additionally, the researcher had to decide on the type of sampling technique that will be used for this research study. Struwig & Stead (2001), state that researchers can use one of two types of sampling techniques, namely probability (e.g., random, stratified, cluster and systematic sampling) and non-probability sampling (e.g., purposive, quota, convenience sampling).

Probability sampling is used when each participant has a known, but not necessarily equal chance to be selected for a particular study (Babbie, 2001). Probability sampling is known as the best sampling method as it is a representation of the population from which it is drawn.

Moreover, it allows the researchers to determine the desired sample size corresponding to the margin of error that the researcher agrees on (Joubert, 2019). It is, however, not always practical to employ.

Alternatively, non-probability sampling is known as the sampling procedure where there is an unknown probability for each element to be selected for the sample population and it is not as representative of the sample. The probability of being selected is not known to everyone and the sampling method is selected based on factors such as common sense, to eliminate bias and maintain representativeness (Babbie & Mouton, 2001). Examples of non-probability sampling include snowball sampling, convenient sampling, quota, and purposive sampling.

For this study, non-probability sampling was used as the preferred technique. More specifically, a purposive sampling method was employed. Researchers utilised this type of method who wants to choose participants who are informative. This method is not a true random method but is the only one that was possible due to the practical and time constraints of South African call centres that were experienced during the execution of this study. Furthermore, this method enables the researcher to draw more accurate and representative conclusions from the study. It is important to ensure the sampling size is not too small as it can result in misrepresentation of the population. The number of participants that have been selected for this study is N=148. No participants were forced to participate in the study, as an email was sent to the participants, which included a questionnaire that could be completed on a voluntary basis.

3.7. Research Procedure

The first step in the research procedure was to receive ethical clearance from Stellenbosch University. The Departmental Ethics Screening Committee (DESC) and the Research Ethics Committee of Stellenbosch University were required to provide ethical clearance for this study before the study could proceed (project number 23938). After ethical clearance was received, various inbound call centres in South Africa, across a range of industries, were contacted to gain permission for data collection. The researcher contacted each organisation via email and telephone calls to explain the rationale of the study and obtain consent to have the organisations' call centre employees participate in this research study.

The call centre manager of the various call centre organisations was the contact person for the various call centre employees. The method that was used to collect data was through means of an internet-based questionnaire, which was sufficient to answer the research initiating questions. This method of data gathering made it possible for the respondents to complete the questionnaire anonymously and at the most convenient time for them. The researcher provided the call centre manager with an email that contained the link to the online survey to distribute to the various call centre employees. The researcher informed the participants of the purpose of the study before they completed the survey and consent was required before they could complete the survey.

Once all the abovementioned parties had agreed to the research project, the survey instructions (content and purpose) were clearly explained to the managers of the various call centre teams. The researcher ensured that the participants provide their informed consent before completing the survey. Furthermore, the researcher ensured that the participants were aware of their rights to withdraw from this study at any stage during the process and that they were allowed to leave answers blank if they were unwilling to complete them. It is also important to note that no personal information, such as names and respondents' identification numbers were asked for during this research study, to maintain their privacy and overall confidentiality.

3.8. Ethical Considerations

It is an essential step to reflect on the possible ethical risks of the research study. This is necessary to ensure the protection of human dignity, rights, safety, and well-being of the research participants involved in the study (Babbie, 2001). Empirical behavioural research requires the participation of people, be it passive or active. This affords the possibility of compromising of human dignity, rights, safety or well-being in some way or another. Therefore, it is necessary to determine whether it is justified in terms of the purpose of the research. In this chapter, the researcher outlines what attempts were made to reduce the ethical risks by proactively pre-empting possible ethical risks that might occur during the data collection stage.

When evaluating the ethical consideration, the researcher focused on factors concerning informed consent, confidentiality, the process of maintaining the security and confidentiality of all information obtained and ensuring that all the participants in the study remained anonymous.

The first step before the researcher could proceed with data collection, was to apply for ethical clearance from Stellenbosch University. Ethical clearance was obtained (project number 23938: Appendix B), and the study was designated as medium risk. It is required that researchers within the field of psychology obtain institutional permission from the company from which the respondents will be selected, found in Annexure 12 of the Ethical Rules of Conduct for Practitioners Registered under the Health Professions Act (Act no. 56 of 1974) (Republic of South Africa, 2009). Thus, permission was obtained from the various organisations before the surveys were distributed to the various call centre employees in the organisations. The surveys were distributed to the employees of each company by the consenting managers. The researcher also informed managers and employees (in the informed consent section) that the results of the study would be provided to them after the completion of the study.

To ensure that ethical risks were minimised, all questionnaires were answered anonymously, and the participants' names and identities were not disclosed to the researcher, who did not have access to the participants' email addresses. Each participant was advised of their right to make a decision on whether they wanted to take part in the research study or not. In order for the participants to make an informed decision on whether they wanted to participate in this study, each participant received information about the research objectives and purpose, as well as what the participation in the research entailed.

The participants were further advised on factors such as how the results would be interpreted and used, the identities of the researchers involved in the study and their affiliation, exactly what the participants' rights were and where they would be able to find more information on their research rights. (Babbie 2001). The informed consent was included at the start of the questionnaire and is aligned with the requirements in Annexure 12 of the act. The requirements include the following (Joubert, 2019):

- When obtaining informed consent, the researcher uses an understandable language for the participants.
- The informed consent is documented.
- The kind of research is explained to the participants.
- Participants are informed of their right to choose if they want to participate in the study or not, as well as that they can withdraw from the study at any stage.
- Inform the participants of the consequences of withdrawal or declining to participate in the study.

- Inform the participants of the potential factors, if any, that could possibly impact their willingness to partake in the study.

The abovementioned steps were followed in-depth to ensure that no ethical risk was present in the study. By ensuring all the ethical considerations are in place, the researcher is confident that the study complies with ethical as well as legal requirements (Joubert, 2019).

3.9. Measurement Instruments

Each latent variable within the model is required to be measured by an instrument that may provide empirical evidence which various hypotheses can be tested against. However, for valid and reliable conclusions to be drawn from the results obtained, the instruments are required to contain psychometric qualities. The measurement instruments operationalise the constructs by making them measurable.

For this study, a questionnaire was formulated by incorporating various measurement instruments' items. This was categorised into different sections. The first section includes the participants' biographical information, and the following sections constitute questions measuring the relevant variables. The instruments that were utilised for this study include the Utrecht Work Engagement Scale Questionnaire (UWES-9), BAT burnout inventory, Karasek's Job Content Questionnaire, Fear of Coronavirus-19 scale (FCV-19S), Social Support (Supervisor & Colleagues) questionnaire and the Career Competencies Questionnaire (CCQ). The different measurement instruments will be discussed, as well as their nature, composition, and psychometric properties.

3.9.1. Biographical information

For this study, a biographical section was included in the questionnaire to collect information regarding the participants' demographic characteristics. The biographical information that was collected included questions regarding the participants' age, gender, and the province of residence. All the results of the items that followed could then be easily compared.

3.9.2. Utrecht Work Engagement Scale Questionnaire (UWES-9)

As discussed in the previous section, work engagement is known as a multidimensional construct that consists of: *Vigour* (high levels of energy), *Dedication* (involvement in one's work, enthusiasm, and pride), and *Absorption* (immersion in one's work) (Mills et al., 2011).

Work engagement was measured by the Utrecht Work Engagement Scale Questionnaire (UWES-9). The UWES was developed to include all three dimensions of engagement as mentioned above and is widely used across various languages and occupations (Tran et al., 2020). The original engagement scale (UWES-24) consisted of a total of 24 items, which was initially shortened, after psychometric evaluation, to a 17-item scale (UWES-17). The UWES-17 was then further reduced to a 9-item scale that measures engagement as a unitary construct comprising three closely related parts. This 9-item engagement scale included 3 items for each engagement dimension (De Bruin & Henn, 2013).

The *Vigour* subscale measures the participant's energy level and mental resilience. The *Dedication* subscale measures if the participant experiences significance at work, and whether they are feeling proud of their job. The *Absorption* subscale aims to establish whether the participants are fully concentrated on their work in such a way that they feel time passes quickly (Othman, 2013).

Vigour (1) is measured with three items which include "At my work, I feel bursting with energy". *Dedication* (2) is measured with three items which include "I am enthusiastic about my job"; and *Absorption* (3) is measured with items such as "I am immersed in my work" (Tran et al., 2020). Respondents reported their answers on a 7-point Likert scale which ranges from (0) Never to (6) Always or Every day. High scores on each dimension can be interpreted as high levels of Vigour, Dedication and Absorption, whereas low scores are indicative of less Vigour, Dedication and Absorption (De Bruin & Henn, 2013). Furthermore, the scores of the subscales consist of the mean for each set of the three items. Thus, the three subscale scores are in a range of 0-6, and the overall score of work engagement is the mean of all 9 items (Tran et al., 2020).

3.9.2.1. Previous Findings on the Psychometric Properties of the Instrument.

A research study conducted across five different countries found the Cronbach's alpha coefficient to exceed the acceptable value of .70. Moreover, the Cronbach's alpha varied from .85 - .92 across 10 countries, which is satisfactory (De Bruin & Henn, 2013). The UWES was validated in various countries, including Finland and China (Bakker et al., 2008). This measure is the best tool to measure engagement for this specific research study. Therefore, it was decided to use all 9 items in the questionnaire to obtain results regarding the participants' level of work engagement.

3.9.3. *Burnout Assessment Tool (BAT)*

For this study, Burnout Assessment Tool (BAT) instrument was used to measure burnout. Burnout has been studied for more than a decade and most research focused on the Maslach Burnout Inventory (MBI), but there are various doubts regarding the definition of burnout used in the measure (Schaufeli et al., 2020). The MBI was criticised for the skewed answering patterns that negatively affect the reliability and inconsistent factorial validity, among other things (de Beer et al., 2020). The BAT is a relatively new burnout measure that aims to overcome the shortcomings of the MBI relating to the psychometric properties and practical applicability. This tool aims to measure Burnout within groups and individuals which is comprehensive and includes all relevant elements associated with burnout (Schaufeli et al., 2020).

According to Schaufeli et al. (2020), Burnout is described as both the inability and the unwillingness to expend the energy and effort at work to complete daily tasks. This is also known as the exhaustion component of burnout. Furthermore, they define “inability” as the reduced levels of energy, and “unwillingness” as the level of resistance, disengagement, and lack of commitment to the job. The most important components of burnout are thus inability (exhaustion) and unwillingness (mental distancing), with two additional core dimensions, namely, emotional and cognitive impairment (de Beer et al., 2020).

The BAT questionnaire consists of 33 items which include four core dimensions, referred to as BAT-C, and two secondary dimensions, further named BAT-S (Schaufeli et al., 2020). The BAT-C measures the following four core dimensions: exhaustion, mental distance, and impaired emotional and cognitive control, using a total of 23 items. The BAT-S evaluate the two dimensions, named psychological and psychosomatic complaints, which consist of a total of 10 items. The BAT instrument uses a 5-point Likert type scale which ranges from (1) Never to (5) Always (Schaufeli et al., 2020). It was decided to only measure the four core dimensions of the BAT questionnaire, therefore only focusing on the BAT-C which consists of 23 items.

The *Exhaustion* (1) component of the questionnaire was measured with eight items which include “When I get up in the morning, I lack the energy to start a new day at work” and “At work, I feel mentally fatigued.” *Mental distance* (2) is measured with a total of five items which include, “I feel indifferent about my job” and “I struggle to find any enthusiasm for my work.” The third component, *Cognitive Impairment* (3) was measured with five items which include “When I am working, I have trouble concentrating”.

Furthermore, *Emotional Impairment* (4) is measured with five items with an item example of “At work, I feel unable to control my emotions” (Spagnoli et al., 2021).

3.9.3.1. Previous Findings on The Psychometric Properties of The Instrument.

A study conducted on the psychometric properties of the BAT found that the factorial validity (KMO) for the BAT-C dimensions was a significant .96. All the items in the instrument loaded above .47 and explain 51.13% of the common variance (Schaufeli et al., 2020). A study conducted in Japan found a good fit for the four core dimensions with a CFI of .93 and RMSEA of .06. They found a CFI of .92 for the second-order dimensions and an RMSEA of .08 (Sakakibara et al., 2020).

Furthermore, the correlations between the items were found to be between .50 and .64. All the items except for item 6 (“inability to be active”) were found to have loadings higher than .40 on their individual factors, with a range of .40-.92 and no cross-loadings were identified (Schaufeli et al., 2020). Regarding the second-order dimensions, the KMO was found to be .92 and the two-factor solutions explain 54.89% of the common variance. The overall reliability of the BAT-C dimension was found to be above .70 with Cronbach’s alpha ranging between .90 - .92 (Schaufeli et al., 2020).

3.9.4. Social Support (Supervisor & Colleagues)

Social support is an important resource to combat the negative effects of the call centre industry. Supervisor support, as well as support from co-workers, will aid call centre employees in completing their tasks successfully (Zakaria et al., 2020). Supervisor support refers to the direct positive attention individual employees receive from their supervisors, in the form of coaching and feedback. Co-worker support refers to the degree which employees believe their co-workers are willing to support them in completing their daily work tasks (Zakaria et al., 2020).

Social support was measured using a 5-item questionnaire, developed by Caplan, Cobb, French, Van Harrison, and Pinneau in 1980 (Brough & Pears, 2004). This questionnaire measures two sources of social support, namely, the supervisor’s support and support from colleagues as well as two types of social support (practical and emotional). Examples of the items on this scale include, “How easy is it to talk to the following people?” and “How much are the following people willing to listen to your problems?” This scale is measured on a 5-point Likert scale, ranging from (0) Very Much to (4) Do Not Have Any Such Person.

These items are all reverse scored, which means that a high score on the Likert scale indicates that the employee experiences low levels of social support (Brough & Pears, 2004).

3.9.4.1. Previous Findings on The Psychometric Properties of The Instrument.

A study evaluated this measurement scale's internal consistency using Cronbach alpha statistics and found that the reliability coefficients for the social support subscales were $\alpha = .90$ (supervisor) and $\alpha = .84$ (colleagues) (Paula Brough, 2004).

3.9.5. Career Competencies Questionnaire

The Career Competencies Questionnaire (CCQ) is used to measure the career competencies of employees (Akkermans et al., 2013a). This questionnaire consists of 21 items, which are measured on a 5-point Likert scale ranging from (1) Completely Disagree to (5) Completely Agree (Akkermans et al., 2015).

The initial CCQ consisted of 32 items and was developed using qualitative data research, which was then investigated by a panel of academic researchers to check for clarity and potential overlap between items. It was then tested on 80 participants, and they concluded that 11 of the items were too unclear, which resulted in them removing those items from the CCQ and they ended up with the final 21-item questionnaire (Akkermans et al., 2013a).

The scale consists of the following six subscales: *Reflection on Motivation* (1), which is measured with 3 items. An example includes "I know what I like in my work", *Reflection on Qualities* (2), which is measured with 4 items. An example includes "I know what my strengths are at work" (Akkermans et al., 2015). The total score for these two subscales will describe the individual's present level of reflective competence.

The third subscale is *Networking* (3), which is measured with 4 items. An example includes "I know how to ask for advice from members of my network". The *Self-Profiling* (4) subscale is measured with 3 items. An example includes "I am able to show others what I want to achieve in my career". The total score for these subscales indicates the individual's level of communicative competence, and how well they are able to build sufficient networks at work that will aid in maintaining sufficient levels of well-being.

Work Exploration (5) is measured with 3 items. An example includes “I know how to search for developments in my area of work”. Lastly, *Career Control* (6) is measured with 4 items. An example includes “I can make clear career plans” (Akkermans et al., 2015). A research study conducted on the CCQ revealed that all six factors load on one common second-order factor, the overarching career competency construct (Akkermans, 2013). The questionnaire will therefore measure all 21 items and the total score will be indicative of the participant’s level of career competencies that influence the well-being of employees. The scores on the three dimensions of career competencies indicate which competencies should be further developed and which employee competencies are sufficiently developed for improving work engagement.

3.9.5.1. Previous Findings on The Psychometric Properties of The Instrument.

A study was conducted to measure the validity of the six-factor measurement scale of career competencies and found that it was the best fit for the data. The results showed that the RMSA = .046 (Akkermans et al., 2013b). The six-factor structure was also found to explain 74.67% of the common variance and all factor loadings were found to be between .72 - .91 (Akkermans, 2013). Table 2 indicates the Cronbach’s Alpha values for each subscale of the career competency measure.

Table 3.2

Cronbach’s Alpha Values for Each Career Competency Subscale

Career Competencies Subscales	Cronbach’s Alpha
Reflection of motivation	.81 - .87
Reflection on qualities	.85 - .92
Networking	.78 - .88
Self-Profiling	.75 - .87
Work Exploration	.72 - .88
Career Control	.83 - .93

3.9.6. Karasek’s Job Content Questionnaire (Work Overload Measure)

Work overload is a very important job demand that influences an employee’s well-being and often results in burnout. For this study, it was decided to measure the participants’ level of work overload by using a 4-item scale, based on Karasek’s Job Content Questionnaire (Pluta & Rudawska, 2021). These four items measure the psychological demands experienced by employees (Bakker et al., 2004).

These items are measured using a 5-point Likert type scale which ranges from (0) Never to (4) Always (Pluta & Rudawska, 2021). The first item measures how fast individuals are required to work in their job, with an example of “My job requires me to work very fast”. The second item measures an individual's perceived *lack of time*, with an example of “I have sufficient time to complete my work” (which will be reverse scored). The third item measures how individuals perceive *having to do an excessive amount of work*, with an example of “I am not asked to do an excessive amount of work” (which will be reverse scored). Lastly, perceived *work overload* is measured by “My job requires working very hard” (Choi et al., 2012). A high total score for the items on the workload measure will be indicative of high psychological demands caused by work overload.

3.9.6.1. Previous Findings on The Psychometric Properties of The Instrument.

A study conducted on the reliability and validity of the Job Content Questionnaire has found internal consistency, factorial validity, and test-retest reliability within various occupations (Brisson et al., 1998). It is also found that the Cronbach Alpha for the scale is 0.79 (Pluta & Rudawska, 2021).

3.9.7. Fear of Coronavirus Questionnaire (FCV-19S)

Employers worldwide need to determine the psychological effects of the COVID-19 pandemic on their employees. They should focus on reducing the fear related to the virus experienced by employees. This goal can be achieved by using the FCV-19S instrument to capture employees' fear associated with COVID-19 (Ahorsu et al., 2020).

The FCV-19S is a unidimensional scale that consists of 7 items. Each item is measured on a 5-point Likert-type scale which ranges from (1) Strongly Disagree to (5) Strongly Agree, in which the responses are summed with a minimum of seven and a maximum of 35.

This summated score indicates the level of fear the individual experiences towards the COVID-19, with higher scores indicating greater fear of COVID-19 (Soraci et al., 2020). Gender and age do not impact the response pattern on the FVC-19S scale. This means that the FVC-19S can sufficiently measure the psychological effects of COVID-19 among males and females of all ages. An example of the items includes “*I am mostly afraid of the coronavirus*”, and “*My hands become clammy when I think of the coronavirus*” (Ahorsu et al., 2020).

3.9.7.1. Previous Findings on The Psychometric Properties of The Instrument.

A study conducted on 717 Iranian participants found that the seven items all had acceptable item correlations of .47-.56. Furthermore, all the factor loadings of the seven items were found to be significant and strong, with loadings of .66 - .74 (Ahorsu et al., 2020). A study conducted in South Africa established the reliability of the instrument to be .87. The Cronbach's alpha coefficient was found to be .86 and the coefficient omega total coefficient of .86 (Peral et al., 2021).

3.9.8. Conclusion of the Measuring Instruments

In conclusion, the final questionnaire for this current research study consisted of a total of 69 items that measured job engagement, burnout, social support, fear of COVID-19, work overload and career competencies. The Utrecht Work Engagement Scale (Uwes-9) consists of a total of (9) items. The BAT-Burnout Tool consists of a total of (23) items. The Karasek Job Content Questionnaire (work-overload scale) consists of a total of (4) items. The Fear of COVID-19 scale consists of (7) items in total. The Social Support Instrument consists of (5) items, and the Career Competencies Questionnaire has a total of (21) items. The questionnaire started with 3 biographical-type questions to make the interpretation of the abovementioned 69 items easier. Therefore, the questionnaire comprised 72 items altogether. It is worth noting that respondents may begin to lose interest in questionnaires that contain too many items, and it is therefore important to keep the length of the survey as short as possible for the best results.

3.10. Data Capturing and Methods Used for Data Analysis

The online questionnaire was developed by the researcher using the SunSurvey platform with all the data saved on a Microsoft Excel Spreadsheet. The statistical packages that were utilised to perform the inferential statistics in this research study included Statistica, version 14 (1), which tested the internal reliability and obtained the psychometric properties of each measuring instrument, and Partial Least Squares (PLS) (2), to do SEM to evaluate the inner and outer models, and for path analysis of the proposed structural model.

3.11. Missing Values

It is almost impossible to have fully completed surveys, and missing values will often plague surveys and experiments. The reason for incomplete data can be due to attrition (which is the loss of responses from a sample during research) or non-response of the participants. The question is, what must be done to deal with these missing values found in the data?

Various methods can be implemented to deal with missing values in survey data. These methods include regression imputation, multiple imputations, likewise deletion and pair-wise deletion (Sainani, 2015). The best method chosen for dealing with missing values in this research study was the two-step approach. Firstly, missing data by imputation was conducted for those respondents who left certain parts of the survey incomplete. The process of imputation consists of replacing real values for the missing values. This means that all the available data is entered in the analysis, while the statistical software recognises the missing values and then takes them into consideration (Langenhoven, 2015). The second step is known as listwise deletion, which is utilised when too many missing values are present. This process consists of deleting the whole case to address the large number of missing values (Stemmet, 2022).

3.12. Statistical Analysis

This section will elaborate on the different techniques of statistical analysis that the researcher used for the purpose of this study. Quantitative techniques for data analysis were utilised for this study after data was collected from the surveys. These techniques include SEM and item analysis. Analysing the data is necessary to assess how well the structural model fits the data. Item analysis was employed to determine whether the constructs measure what they are intended to measure, and SEM was utilised to test the significance of the hypotheses. The techniques for data analysis will be elaborated on in the sections below.

3.12.1. Item Analysis

The measurement instrument that was used consist of various items that describe the construct being measured. The items that are present in the Questionnaire act as a stimulus which aims to motivate the participant to respond to the items of the behaviour of the construct being measured. The responses received from the participants indicate the behaviour that underlies the construct and, therefore, makes it possible for the construct to become “observable” as data (Theron, 2017).

The reason why item analysis is conducted, is to be able to identify why certain tests are reliable and can also give guidelines as to how to improve test measures. It also indicates which items have low validity and reliability and whether they need to be removed from the total items of the test to improve the validity and reliability (Maingard, 2017; Murphy & Davidshofer, 2021).

Items may be eliminated if they provide a weak signal of the construct being measured, are insensitive, inconsistent, or both (Theron, 2017). Items must have a Cronbach alpha of $>.7$ to indicate good reliability (Maingard, 2017). The sort of research questions posed determine the method that will be used to analyse the data from this study. Quantitative methods will be used to evaluate the data in this investigation.

3.12.2. Structural Equation Modelling

Data analysis is required to be able to answer the research-initiating questions that were proposed at the beginning of the research study. Structural Equations Modelling (SEM) is becoming a more widespread tool in scientific research studies. One reason for the increasing use of SEM is that it measures the direct and indirect relationships between various variables within a single model. Furthermore, SEM takes measurement error into account and can thus minimise measurement error in research studies (Civelek, 2018). The data collected for this study can be analysed either by using Partial Least Squares Structural Equations Modelling (PLS-SEM), or the hard modelling approach of covariance-based SEM (CB-SEM)). SEM is utilised to describe and analyse structured relationships between a set of variables. The SEM is used to analyse multivariate data, with a relevant testing method. Furthermore, SEM is used for the integration of a large number of dependent and independent factors, together with hypothetical latent constructs that may be represented by groups of observed data (Rožman et al., 2020).

The PLS-SEM can indicate the relationship between a set of independent variables and various dependent variables. It can also deal with various independent variables, even when the predictors are indicating multicollinearity. It is stated that the PLS-SEM further consists of two linear equations, the inner model (possible to compare to the structural model used in SEM), and the outer model (possibly comparable to the measurement model used in SEM). The outer model is utilised to investigate the relationships between the latent variables and their manifest/observed variables. The inner model measures the relationship between the unobserved/latent variables (Heneseler et al., 2009).

The CB-SEM is used when a set of model parameters are estimated in a way that the differences between the theoretical covariance matrix and the estimated covariance matrix are minimised. For this type of SEM, a set of assumptions are to be achieved. When assumptions cannot be met, or the research objectives require a prediction of data, instead of confirmation of structural relationships, then PLS-SEM is recommended (Rožman et al., 2020).

Furthermore, like other multivariate statistical techniques, the CB-SEM method has various assumptions, but the most important ones are as follows. Firstly, multivariate normal distribution of the variables: Every observed/latent variable is required to be normally distributed for each value of the other observed/latent variable. Secondly, the sample size may not be small, since CB-SEM relies on tests which are sensitive to the size of the sample (Dixit & Upadhyay, 2021). Based on the argument above, for this study, PLS-SEM was the preferred data analysis technique employed for the study. PLS-SEM is also the recommended method to use when dealing with a small sample size, which was the case in this research study (Heneseler et al., 2009).

Furthermore, after the latent variables scores were found to be valid and reliable, the structural model was evaluated. Firstly, the reliability of the latent variables were evaluated to analyse the measurement model fit. This process consisted of investigating the composite reliabilities and average variance extracted (AVE). This composite reliability value indicates how satisfactory the reliability of the measurement scales is. If it is found that the composite reliability is higher than .70, one can conclude the value to be satisfactory. The AVE value measures the number of variances in the indicator variables explained by common factors. The AVE value is strict measure of reliability (Van Zyl, 2019).

The structural model aimed to relate the latent variables to one another. The significance of the main effects, as well as the interacting effects, were assessed. As a result, the accuracy of the path estimates to the true effects was inspected. The researcher also evaluated the moderating effects using PLS-SEM modelling. The moderating effects were tested within multiple regression through PLS-SEM path modelling.

3.13. Chapter Summary

This section comprises the methodology that was used for this research study. Furthermore, the research design, sampling methods, measuring instruments, as well as the process for statistical analysis were discussed to establish the rationale for the research methods decided upon for this study.

CHAPTER 4: RESEARCH RESULTS

4.1. Introduction

This chapter will focus on the statistical findings of the data that was gathered and evaluated by means of the statistical methods discussed in Chapter 3. The findings will be elaborated on, relative to the hypotheses identified in the previous chapters. The first analysis conducted was a descriptive analysis of the sample. Secondly, to determine the quality of the measurement tools utilised, item analysis was employed. The next step in the data analysis process was to use partial least square (PLS) path analysis to determine the measurement reliability and the fit of the structural model. This was done by evaluating the quality of the paths between the constructs being measured.

4.2. Sample Characteristics

The final sample for the research study comprised (N=148) call centre employees from various industries in South-Africa. The range of industries comprising the sample include financial services organisations in Cape Town and Gauteng, a transportation services company in Cape Town, retail services in Cape Town, an educational institution in Cape Town and an organisation within the utility services industry in Gauteng.

A total of N=238 participants opened the link to the online survey but not all of them gave consent to partake in the study or they did not complete most of the questions and had to be removed from the study using listwise deletion. The biographical information that was collected for this study include gender, age and province of residence. A summary of the biographical information collected is displayed in Table 4.1.

Table 4.1 Combined Sample Characteristics

Combined Sample Characteristics (N=148)

Gender		
Category	Frequency	Percentage
Male	37	25%
Female	111	75%
Do not want to disclose	0	0
Total	148	100%

Age		
Category	Frequency	Percentage
18-30	72	49%
31-40	48	32%
41-50	20	14%
51-60	8	5%
61 and older	0	0
Total	148	100%

Province of Residence		
Category	Frequency	Percentage
Western Cape	131	89%
Eastern Cape	0	0
Northern Cape	1	1%
Gauteng	14	9%
Kwazulu-Natal	1	1%
Mpumalanga	1	1%
Limpopo	0	0
Free state	0	0
North-West	0	0
Total	148	100%

4.3. Measurement Model (Outer Model)

The outer model is conducted as a first step in the PLS-SEM analysis. The investigation of the relationships between the latent variables and their manifest variables is done by the outer model (Heneseler et al., 2009). When analysing the outer model, it is necessary to identify how sufficient all the items measure what they are intended to measure and how they relate to the latent variables (Prof. M. Kidd, personal communication, 1 August 2022).

4.3.1. Item Analysis

The item analysis provides the researcher with an initial indication of the value of the subsequent statistical analyses. Item analysis is also utilised to examine the inter-correlations between the items for each measurement that was used. These inter-correlations are known as the subtype of internal consistency reliability.

Peters (2014), states that values that are in the range of .40-1.00 are seen as indicative of excellent reliability. Whereas an average inter-item correlation of smaller than .4, suggests that the items are not correlated well with one another. During the data analysis phase of this research study, item analysis was conducted.

Table 4.2. depicts a summary of the item analysis and indicates the Cronbach's alpha coefficients and the average inter-item correlations of all the scales as well as the subscales used in this research study. Cronbach's alpha coefficients are measures of internal consistency reliabilities. Ideally, researchers would deem the values between .60 and .70 as acceptable reliability scores (Prof M. Kidd, personal communication, 1 August 2022).

Moreover, the reliability analysis was performed as part of the PLS-SEM path analysis and is indicated in Table 4.2. The reliability of the latent variable scales is measured with the composite reliability scores with scores higher than .70 indicative of expectational consistency. Furthermore, the AVE assesses the degree of variance in the indicator variables that is explained by common factors. An AVE of $>.5$ is considered satisfactory.

4.3.1.1. Work Engagement.

As discussed in Chapter 2, the literature review of the study, work engagement consists of three dimensions. These dimensions include vigour, dedication, and absorption (Zahari & Kaliannan, 2022). After investigation of the results of the data collected for the study, the Cronbach's alpha coefficients for all three subscales were satisfactory, with values ranging from .77-.88. These results indicate to the researcher that all three subscales measured the construct of work engagement. The overarching work engagement scale's Cronbach's alpha coefficient is .88 which also points to the fact that it measured what was set out to be measured. The average inter-item correlation of .72 is satisfactory and indicates that the sub-dimensions of work engagement correlate satisfactorily with one another. This suggests that these sub-dimensions, and their items, do measure the construct of work engagement.

Lastly, looking at the AVE score for the work engagement construct, the score of .81 is excellent as it indicates that the reliability of Work Engagement is very strong as it is well above the satisfactory score of .5. The score illustrates that a high amount of variance in each item is explained by Work Engagement (Prof. M. Kidd, personal communication, 1 August 2022).

Table 4.2*Reliability and AVE Scores for the PLS-SEM Measurement Model*

Latent variable	Subscale	α	Average inter-item correlation	Composite reliability (outer-model)	Average Variance Extracted (AVE)
<i>Work Overload</i>		.39	.14	.66	.38
<i>Fear of COVID-19</i>		.92	.62	.92	.61
<i>Career Competencies</i>		.86	.52	.9	.59
	Reflection on motivation	.79	.58		
	Reflection on qualities	.85	.59		
	Networking	.78	.49		
	Self-profiling	.89	.72		
	Work exploration	.84	.65		
	Career control	.92	.76		
<i>Social Support Supervisor</i>		.90	.79		
<i>Social Support Others</i>		.83	.55		
<i>Engagement</i>		.88	.72	.93	.81
	Vigour	.83	.63		
	Dedication	.88	.72		
	Absorption	.77	.53		
<i>Burnout</i>		.82	.54	.88	.64
	Exhaustion	.90	.56		
	Mental Distance	.76	.40		
	Cognitive Impairment	.89	.63		
	Emotional Impairment	.88	.60		

4.3.1.2. Perceived Social Support.

Social support was measured using a questionnaire that was developed by Caplan, Cobb, French, Van Harrison, and Pinneau in 1980 (Brough & Pears, 2004). This questionnaire measures two sources of social support, namely, the supervisor's support and support from colleagues. An interesting observation was made during the data analysis process for this study. It was found that the social support construct is a formative measurement model as it consists of support from both supervisors and colleagues.

Normally, when conducting research, a relationship between a construct and indicator are assumed to be reflective. This means that a change in the indicator X , will reflect a change in the latent construct, Y . In reflective models, the causality flows from the latent construct to the indicator. In contrast with the common reflective models, a less popular model, known as the formative measurement model, exists. In this model it is argued that combining several indicators will form a construct without assumptions to the patterns of inter-correlations between the items. Causality flows in the opposite direction to that of the reflective measurement models (Coltman et al., 2009).

Therefore, in this research study, the social support of supervisors and others are added to form the construct of social support. This illustrates that social support from supervisor does not have any inter-item correlation with social support from others as these are two independent indicators that both constitute the construct of social support separately.

The items within each indicator do have inter-item correlations, as those items explain the variance in the two separate indicators: social support from supervisor and social support from others. Social support from supervisor has a Cronbach's alpha coefficient of .9 which is satisfactory and measures what it is intended to measure.

The average inter-item correlations are also excellent with a correlation of .79. This illustrates that all the items of social support from supervisor correlate satisfactorily with one another. Furthermore, social support from others has a Cronbach's alpha coefficient of .83 which, again, is satisfactory as it is indicative of the fact that it measured what it was intended to measure. The average inter-item correlations are also good with a score of .55, although this is just above the satisfactory range of $>.5$.

4.3.1.3. Burnout.

Burnout is described by Schaufeli et al. (2020), as both the inability and the unwillingness to spend the energy and effort at work to complete daily tasks. The BAT questionnaire measured the core dimensions which include exhaustion, mental distance, and impaired emotional and cognitive control. The Cronbach's alpha coefficients for the four subscales ranged from .76 - .90.

These are all above the critical value of .70 and, therefore, provide the researcher with evidence that all four subscales indeed measured the construct of Burnout. The Cronbach's alpha coefficient of Burnout was found to be .82 which proves that it does measure what it is intended to measure. The average inter-item correlation of burnout is .54, which is slightly higher than the minimum score, which indicate that the subscales of burnout and their items are measuring the same construct. The AVE score for burnout was found to be .64 which proves that the measurement of burnout was indeed reliable.

4.3.1.4. Career Competencies.

Career Competencies consist of six subscales which include *Reflection on Motivation (1)*, *Reflection on Qualities (2)*, *Networking (3)*, *Self-profiling (4)*, *Work exploration (5)* and *Career control (6)* (Akkermans et al., 2015). The results indicate high Cronbach's alpha coefficients for all the subscales of the Career Competencies construct, with scores ranging from .78 for the *networking* subscale to .92 for *career control*.

The researcher can thus argue that all the six subscales do measure the construct of Career Competencies well. Furthermore, the Cronbach's alpha coefficient for Career Competencies was found to be .86 which indicates that the Career Competencies construct represents what the items were designed to measure.

The average inter-item correlations for Career Competencies were found to be .52 which is still higher than the satisfactory score of .5 and, therefore, one can conclude that all the subscales (and their items) of Career Competencies are measuring the same construct. The AVE for the Career Competencies construct is .59 which is a good indication that the measurement for Career Competencies was very reliable.

4.3.1.5. Work Overload.

Work Overload was measured using four items only. Two items were reverse-scored items. It is argued that sometimes when conducting research with reverse-scored items, respondents might misread the question and, therefore, answer the items incorrectly and thus negatively affect the results (Prof M. Kidd, personal communication, 1 August 2022). This could be a possible reason why the results for the measurement used for this study are indicative of being a slightly poor measure of Work Overload.

The Cronbach's alpha coefficient for Work Overload is .39 which is well below the critical score of .6. This low score suggests that the items did not effectively measure what they intended to measure. Another concerning outcome of the results is the low average inter-item correlations of .14, which indicates that all the items did not measure the same construct effectively. Lastly, the AVE of .38 is lower than the critical score of .5 and, therefore, not indicative of a highly reliable measurement of Work Overload.

There might be various reasons as to why the scores were low for the Work Overload scale, other than being a poor measure. The small sample size could also contribute to the low scores. Another possible reason could be the small number of items in the Work Overload measure. A low number of items used for the measurement of a construct, can show low reliability scores (Prof M. Kidd, personal communication, 1 August 2022). The researcher can, therefore, conclude that the measurement of Work Overload may be a limitation of the study and could possibly negatively impact the outcomes of the study. The possible negative impact on the outcomes will be elaborated on later in the study.

4.3.1.6. Fear of COVID-19.

The Fear of COVID-19 construct was measured with 7 items with the summated score indicating the level of fear the individual experiences towards COVID-19, with higher scores indicating greater fear of COVID-19 (Soraci et al., 2020). The Cronbach's alpha coefficient is .92 which is an excellent measure of reliability. This score indicates that the items of the construct, the Fear of COVID-19, measures what it is intended to measure.

The average inter-item correlation score of .62 is also satisfactory as it is higher than the critical score of .5. which indicates that all the items of the various subscales are indeed measuring the Fear of COVID-19. Lastly, with the AVE score as the best indicator of the reliability of a measurement instrument, the AVE score for Fear of COVID-19 of .61 is an indication that the measurement instrument is reliable.

4.3.1.7. Summary of the Reliability of the Latent Variables.

The reliability and quality of the measurement instruments used for this research study were investigated through means of item analysis and reported on above. The measurement instruments are required to be reliable and of high quality as they were used to collect information which attempted to answer the research-initiating questions.

After careful consideration, it was decided not to remove any items of the Work Overload construct even though the reliability scores were very low for some items.

Since there are only four items included in the measurement, it was decided that deleting one or two items would make the measurement irrelevant. The results of the items which were included would not be sufficient to make conclusions about the work overload that employees are experiencing. Furthermore, all the other subscales and items provided evidence of being very reliable and of good quality and, therefore, were not required to be removed. Based on these high reliability scores, the researcher decided to move on to the second phase of the analysis, the PLS path analysis. After the reliabilities of the latent variables were established, the significance of the different paths were tested to evaluate the strength and significance of relationships that were hypothesised, as well as to establish the fit of the structural model.

The composite reliability of the latent constructs were evaluated to test the reliability of the outer model. It was, therefore, necessary to analyse the SEM model without moderating effects to evaluate the reliability of the outer model and the fit of the SEM model (Figure 4.1.). As depicted in Table 4.2, the composite reliability of each construct resembles the Cronbach's alpha coefficient as it is analysed to measure the internal consistency of the items that form part of the measurement scales. A composite reliability score between .6 and .7 is an acceptable score and any score higher than .7 is deemed to be an excellent indicator of reliability (Ab Hamid, et al., 2017).

In this research study, all the latent constructs have a composite reliability score of higher than .6, with scores ranging from .66 for Work Overload to .93 for the Work Engagement scale (Table 4.2). These scores indicate that all the latent variables successfully represent the variables they set out to measure. Interestingly, it was noted that the composite reliability score of Work Overload also indicates a high reliability, even though all other measures of reliability and quality pointed towards being insufficient. For this reason, the researcher could continue to analyse the Work Overload measure as is, without excluding any items.

4.3.2. Discriminant Validity

To determine how effectively the constructs measure what they are intended to assess, discriminant validity was measured next (Rönkkö & Cho, 2022). Discriminant validity was assessed to determine how unique each construct is by showing evidence of a distinction between the different constructs, as well as whether the measurement instruments were indeed measuring the different constructs that they set out to measure. Table 4.3 illustrates that all the pairs of the different constructs showed discriminant validity and thus indicates that all the constructs which were investigated are unique and different from the others.

Table 4.3

Discriminant Validity

Scales	Ratio	95% lower	95% upper	Discriminate
Work overload → Fear of Coronavirus	.16	.14	.38	Yes
Work overload → Social Support	.62	.41	.92	Yes
Work overload → Career Competencies	.35	.25	.58	Yes
Work overload → Burnout	.61	.42	.81	Yes
Work overload → Engagement	.54	.33	.73	Yes
Fear of Coronavirus → Social Support	.24	.11	.47	Yes
Fear of Coronavirus → Career Competencies	.11	.08	.29	Yes
Fear of Coronavirus → Burnout	.23	.16	.39	Yes
Fear of Coronavirus → Engagement	.09	.07	.26	Yes
Social Support → Career Competencies	.37	.26	.65	Yes
Social Support → Burnout	.63	.44	.85	Yes
Social Support → Engagement	.71	.5	.97	Yes
Career Competencies → Burnout	.52	.38	.67	Yes
Career Competencies → Engagement	.54	.37	.71	Yes
Burnout → Engagement	.65	.54	.75	Yes

Note: "yes" is indicative of discriminant validity between the different constructs.

4.3.3. Evaluating the Outer Loadings

The factor loadings of the various constructs and their sub-scales were evaluated as a final step in measuring the reliability of the measures used in this research. This was done through the PLS bootstrap method to evaluate the outer loadings of the items (Henseler et al., 2009). This method aids the researcher in investigating the statistical significance of each item's factor loading used in this study. The requirement for factor loadings to be deemed as acceptable is $>.7$ but the minimum critical value researchers will accept is a score that is higher than $.4$. Therefore, researchers should consider omitting items if the items' factor loadings are found to be $<.4$ (Prof M. Kidd, personal communication, 1 August 2022).

Table 4.4 indicates the factor loadings of each item and sub scale of the various latent constructs used in this research study. Furthermore, the p values are also displayed in the table. A p value of $<.001$ is deemed to be statistically significant and it may be necessary to omit those items from the research study that are not statistically significant. Table 4.4 indicates that most of the factor loadings of the manifest variables are $>.6$ which illustrate that these items contribute to the various constructs. Furthermore, most of the manifest variables were found to be statistically significant with p values of $<.001$.

However, it was found that one item of the Work Overload scale (*work hard*) had a very low factor loading of $.17$ which points to the fact that the item might not have contributed well to the construct of Work Overload. This is further supported by the high p value of $.388$ that illustrate the item is not significant and can be removed from the study.

Even with the poor factor loading and p value, the researcher decided to keep the item in the research study as the quality of the measure will reduce if the researcher removes an item, due to the low number of items that constitute the measure. Furthermore, the factor loading of *work fast* is $.43$ which is a relatively low loading, but still deemed to be acceptable. The p value of $.002$ is also higher than $<.001$, but still within the acceptable range of $<.05$ and, therefore, it can still be deemed as acceptable and does not need to be omitted from the research study.

In conclusion, due to most manifest variables of all the constructs (Career Competencies, Burnout, Engagement, Work Overload, Fear of COVID-19, and Social Support) being deemed to be statistically significant with high factor loadings, the researcher can confirm that most of the scales are reliable.

The exception is, however, Work Overload which is slightly concerning and points to a limitation in this research study that will be elaborated on in Chapter 5.

Table 4.4*PLS-SEM Outer Loading per Scale*

Manifest variable	Latent variable	Loading	95% lower	95% upper	p-value	Sig.
CC Career Control	career competence	.76	.67	.83	<.001	Yes
CC Networking	career competence	.75	.64	.83	<.001	Yes
CC Reflection of motivation	career competence	.78	.68	.84	<.001	Yes
CC Reflection on qualities	career competence	.63	.45	.77	<.001	Yes
CC Self-profiling	career competence	.82	.73	.88	<.001	Yes
CC Work Exploration	career competence	.85	.77	.9	<.001	Yes
JB Cognitive impairment	Burnout	.73	.61	.82	<.001	Yes
JB Emotional impairment	Burnout	.74	.62	.83	<.001	Yes
JB Exhaustion	burnout	.85	.8	.89	<.001	Yes
JB Mental distance	burnout	.87	.82	.91	<.001	Yes
WE Absorption	engagement	.87	.8	.91	<.001	Yes
WE Dedication	engagement	.93	.9	.95	<.001	Yes
WE Vigour	engagement	.9	.83	.94	<.001	Yes
Work Overload Fast	work overload	.43	.09	.65	.002	Yes
Work Overload Time (R)	work overload	.78	.55	.88	<.001	Yes
Work Overload Amount (R)	work overload	.83	.68	.9	<.001	Yes
Work Overload Work Hard	work overload	.17	-.22	.53	.388	No
Fear of Coronavirus Afraid	Fear of Corona	.64	-.07	.79	.002	Yes
Fear of Coronavirus Uncomfortable	Fear of Corona	.73	-.02	.85	<.001	Yes
Fear of Coronavirus Hands	Fear of Corona	.79	.21	.87	<.001	Yes
Fear of Coronavirus Dying	Fear of Corona	.74	0	.85	<.001	Yes
Fear of Coronavirus Media	Fear of Corona	.77	.08	.88	<.001	Yes
Fear of Coronavirus Sleep	Fear of Corona	.89	.36	.94	<.001	Yes
Fear of Coronavirus Heart	Fear of Corona	.89	.32	.94	<.001	Yes
Social Support Supervisor	Social support	.9	.68	1	<.001	Yes
Social Support Others	Social support	.75	.45	.94	<.001	Yes

4.4. Validation of the Inner Structural Model

The structural model was assessed to determine the quality of the relationships between the latent constructs. The PLS structural model analysis aimed to determine how, and to what degree, the different latent variables were associated with each other. Kidd (2022) argues that the structural model is also referred to as the “*inner model*” due to determining factors inside the structural model. The exogenous variables had an influence on the endogenous variables, which was established and reported on, as well as the influence that the endogenous variables had on each other. For the analysis of the structural model to be conducted, the multi collinearity was completed, as well as the evaluation of the R-squared values. Lastly, the evaluation and interpretation of the main effects, as well as the moderating effects were required.

4.4.1. Multi Collinearity

Researchers would like to see very low correlations between the predictors but sometimes results can show high correlations between the predictors. This leads to unstable estimates of the regression coefficients. To assess the multi collinearity, the researcher made use of the variance inflation factor (VIF). The VIF is used to examine and explain the degree to which the variance in the estimated regression coefficients are inflated in comparison to an instance where the predictor variables are not linearly related (Green, 2021). It is argued that a VIF of 1 indicates that the independent variables are not correlating with one another and, therefore, the ideal value when testing for multi collinearity. Furthermore, scores ranging from 1-5 show the researcher that there is a moderate correlation between the variables (Shrestha, 2020). For this reason, the researcher will accept VIF scores of <5. Table 4.5 displays the VIF values of the variables used in the study. It is evident that all scores are <5 and thus, there are no problems identified with the multi collinearity that was measured.

Table 4.5

Multi Collinearity Between Latent Variables

Latent Variables	Burnout	Engagement
Work Overload	1	
Fear of COVID-19	1	
Social Support		1.28
Career Competencies		1.24
Burnout		1.47

4.4.2. Evaluation and Interpretation of the R-Square

The R-square value helps the researcher assess and explain the amount of variance present in the endogenous variables in the complete model. This means that the R-square value points towards the amount of variance found in the endogenous variables are explained by the exogenous variables. A summary of the R-square values for the endogenous variables are displayed in Table 4.6. below.

Table 4.6

R-Square Values for the Endogenous Variables

Scale	R^2	R^2 Adjusted
Burnout	.27	.26
Engagement	.48	.47

The R-square value for Burnout was found to be .27 which points towards the fact that 27% of variance in *job burnout* can possibly be explained by the influence of exogenous variables within the model. Furthermore, the R-square score of *work engagement* is .48 which indicates that 48% of the variance in *work engagement* can be explained by the influence of exogenous variables of the model.

4.5. Interpretations of the Proposed Main Hypotheses

The researcher further determined the reliability of the different measures for each construct that was utilised in the study. It was necessary to investigate the cause-and-effect relationships between the different latent variables of interest. This was achieved by investigating the path coefficients to establish the quality and significance of the different paths. The evaluation of the significance of the various hypothesised paths were carried out through investigation of the path coefficients. The method that was used for the PLS path modelling is the bootstrap method. The strength of the relationships between the latent variables are indicated by the PLS SEM path coefficients. Values of the path coefficients that are closer to zero is indicative of no relationship between the variables as it displays an insignificant relationship. The strength and relevance of the hypothesised correlations were established by assessing if zero fell within the 95% confidence interval. Table 4.7. is an illustration of the significance of the main hypothesised relationships and moderating hypotheses. The p values of $<.05$ are indicative of a significant relationship between the different variables.

Table 4.7*Path Coefficients Between Variables in the PLS-SEM Model*

Paths	Path coefficient	95% lower	95% upper	Sig.	p-value
H1: Burnout → Engagement	-.36	-.5	-.21	Yes	<.001
H2: Social Support → Engagement	.28	.1	.42	Yes	<.001
H3: Career Competence → Engagement	.26	.12	.42	Yes	<.001
H4: Career Competence → Social Support	.26	.1	.43	Yes	.002
H5: Work Overload → Burnout	.45	.31	.57	Yes	<.001
H6: Fear of Corona → Burnout	.27	.08	.4	Yes	.008
H7: Fear of Corona → Engagement	.24	.05	.34	Yes	<.001

Note: Sig. illustrates whether the paths are significant or not significant

Hypothesis 1: Job burnout (η_2) has a significant negative linear relationship with work engagement (η_1) among call centre employees in South Africa.

The investigation of the path coefficient for the relationship between job burnout and work engagement, found it to be statistically **significant** with a score of -.36. Furthermore, zero did not fall in the 95% confidence interval and the p value was $<.05$ ($p <.001$), which indicates that the hypothesised path is statistically significant. The literature review in Chapter 2 stated It is rare that an employee who suffers from burnout will be engaged in their job, and that an employee who is engaged will rarely experience burnout (Bakker & Demerouti 2014). It is, therefore, concluded that call centre employees who are experiencing high burnout levels will have low levels of engagement, and those employees with high levels of engagement, will have low levels of burnout.

Hypothesis 2: Social support (η_3) has a significant positive relationship with work engagement (η_1) among call centre employees in South Africa.

The path coefficient for the relationship between social support and work engagement is found to be statistically **significant**. This finding is supported by the score of .28 and zero, which does not fall in the 95% confidence interval. Moreover, the p value was $<.05$ ($P =.001$), which indicates that the hypothesised path is statistically significant. This relationship is a positive relationship, as indicated in the literature review in Chapter 2 where Schaufeli and Bakker (2004) found that social support from supervisors and colleagues as examples of job resources, have a positive interaction with work engagement.

This illustrates that when call centre employees are experiencing high levels of social support, they experience higher levels of engagement.

Hypothesis 3: *Career competencies (ξ_1) have a significant positive relationship with work engagement (η_1) among call centre employees in South Africa.*

The path coefficient for the relationship between career competencies and work engagement was found to be statistically **significant**. The path coefficient of .26 supports this finding, as well as the fact that zero does not fall in the 95% confidence interval. Furthermore, the p value was satisfactory with $p < .001$. This indicates that the hypothesised path is statistically significant, and it is considered as a positive relationship which correlates with the literature in Chapter 2 which states that employees with high self-regard will be more inherently motivated to reach their goals. This will lead to higher job performance and increased engagement in the organisation (Bakker & Demerouti, 2008). These findings suggest that when call centre employees are experiencing high levels of career competencies, they experience higher levels of engagement.

Hypothesis 4: *Career Competencies (ξ_1) have a significant positive relationship with social support (η_3) among call centre employees in South Africa.*

The path coefficient indicates a relationship between career competencies and social support with a score of .26. This score indicates that the relationship is **significant**, as well as zero not falling in the 95% confidence interval. Moreover, the p value of .002 is deemed to be satisfactory as it is $< .05$. These findings indicate that it is a positive relationship, as indicated by the literature review in Chapter 2 which indicates that perceived social support may be influenced by career competencies due to the employees' ability to build a network with others and being able to communicate their strengths and career goals (Akkermans et al., 2013c). This means that when employees are experiencing high levels of career competencies, their perceived level of social support will also be higher.

Hypothesis 5: *Work overload (ξ_2) has a significant positive relationship with job burnout (η_2) among call centre employees in South Africa.*

The path coefficient for the relationship between work overload and job burnout is found to be statistically **significant**. These findings are supported by the path coefficient score of .45, as well as the fact that zero does not fall in the 95% confidence interval. Furthermore, the p value also supports the results with a value of $p < .001$.

These findings indicate to the researcher that the hypothesised path is statistically significant and has a positive relationship, which supports the arguments in the literature that states that there is a positive relationship between work overload and job burnout. These findings collates with previous research that have found work overload to be the greatest predictor of burnout at work (Brewer & Shapard, 2004). This indicates that when employees in call centres are experiencing high levels of work overload, they will also experience high levels of job burnout.

Hypothesis 6: Fear of COVID-19 (ζ_3) has a significant positive relationship with job burnout (η_2) among call centre employees in South Africa.

The path coefficient for the relationship between fear of COVID-19 and job burnout was found to be statistically **significant**. The score of .27, together with the fact that zero does not fall in the 95% confidence interval, supports the findings. Furthermore, the p value of .008 is indicative of the relationship being significant as it is $<.05$. These findings indicate that the hypothesised path is statistically significant and has a positive relationship, which supports the literature review which argues that the fear if COVID-19 result in increased levels of continuous stress that lead to burnout (Opatha, 2020). This means that when employees are experiencing a high level of fear of COVID-19, their level of job burnout will also increase.

Hypothesis 7: Fear of COVID-19 (ζ_3) has a significant negative relationship with work engagement (η_1) among call centre employees in South Africa.

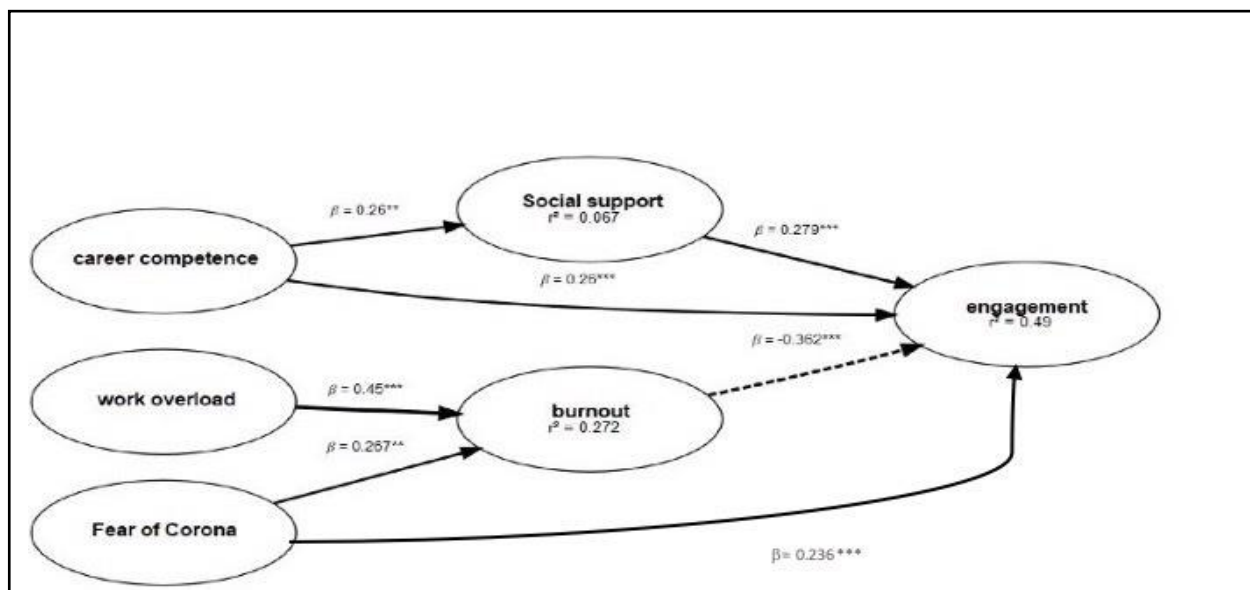
The path coefficient for the relationship between fear of COVID-19 and work engagement was found to be statistically **significant**. However, it is interesting to observe that it was, in fact, a positive relationship rather than a negative relationship as literature suggests. The path coefficient of .24 with zero not falling in the 95% confidence interval supports this finding. The positive value of the path coefficient indicates a positive relationship instead of a negative relationship. Furthermore, the p value of $<.001$ supports the argument that the relationship is statistically significant.

The fear of COVID-19 may, in this study, have been a challenging demand rather than a hindrance demand as predicted.

Research argues that COVID-19, as a job demand, may act as a challenge to motivate employees to utilise their social support and career competencies to remain engaged in their jobs and, therefore, increase their engagement instead of decreasing engagement as would have been the case if it was deemed a hindrance demand (Moreno-Jiménez et al., 2021). The SEM model without the moderators is presented in Figure 4.1

Figure 4.1

SEM Model Excluding Moderators



4.6. Evaluation and Interpretation of the Moderating Hypotheses

To evaluate and interpret the strength, significance and direction of the proposed moderating paths, the path coefficients were investigated. The significance of the hypothesised moderating paths are determined by whether zero is found to be present between the values of the upper and lower confidence intervals. Thus, to determine the significance of the hypothesised moderating paths, a 95% confidence interval was used for the analysis. A significant moderating effect will be present when the p value is $<.05$. Table 4.8 indicates the hypothesised path coefficients of the moderating paths.

Table 4.8*Path Coefficients of Moderating Effects in the PLS-SEM Model*

Paths	Path coefficient	95% lower	95% upper	Sig.	p-value
H7: Social support*Fear of Corona → engagement	-.02	-.14	.17	No	.814
H8: career competence*Fear of Corona → engagement	-.04	-.12	.08	No	.434

Hypothesis 8: *Fear of COVID-19 (ξ_3) has a significant dampening effect on the relationship between social support (ξ_1) and work engagement (η_1) of call centre employees in South Africa.*

The dampening effect of COVID-19 on the relationship between social support and work engagement was found to be **not significant**. This finding is supported by the path coefficient of -.02, with zero falling within the 95% confidence interval. The *p* value also indicates a non-significant moderating effect with a value of .814 which is much higher than the required <.05. This result does not support the arguments in previous research that found a significant moderating relationship. Previous research conducted by Xanthopoulou et al. (2007), states that when employees are experiencing high levels of social support, they will be more capable of coping with job demands such as the fear of COVID-19.

Furthermore, some research argued that when the fear of COVID-19 is perceived as a hindrance demand instead of a challenging demand, it will have a dampening effect on the relationship between the employees' perceived social support and engagement, which will result in increased levels of engagement (Moreno-Jiménez et al., 2021). These arguments contradict the findings of the current research study as no significant moderating effects were found. Figure 4.2. indicates the nature of the moderating effect of fear of COVID-19 on social support and work engagement.

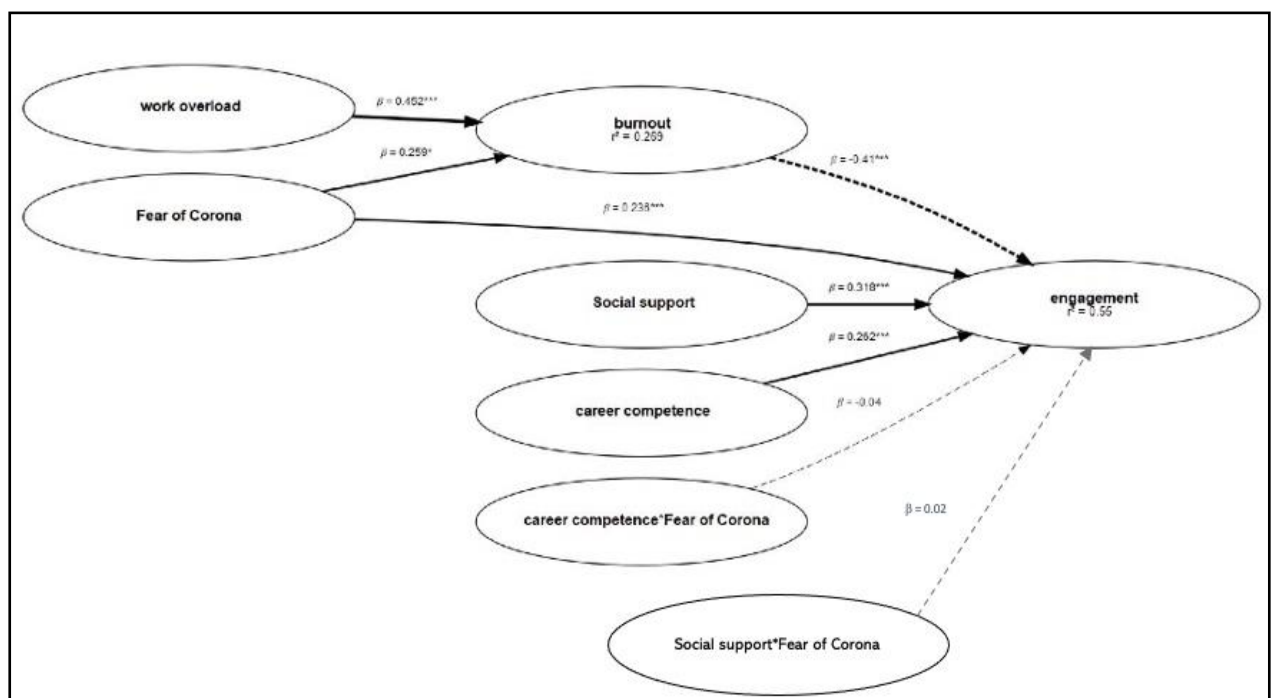
Hypothesis 9: *Fear of COVID-19 (ξ_3) has a significant dampening effect on the relationship between career competencies (ξ_1) and work engagement (η_1) of call centre employees in South Africa.*

The moderating effect of the fear of COVID-19 on the relationship between career competencies and work engagement was found to be **not significant**. These findings are supported by the path coefficient of -.04 as well as zero falling within the 95% confidence interval.

The p value is further indicative of a non-significant moderating effect with a value of .434 which is much higher than the required $<.05$. These results contradict the previous findings in research studies from Xanthopoulou et al. (2007), and Moreno-Jiménez et al. (2021), who argue that there are significant moderating effects of job demands found between personal resources and work engagement. In Figure 4.2. one can observe the SEM model which contains the moderating effects discussed above.

Figure 4.2

SEM Model with Moderating Effects



Note: The significant paths are indicated with solid lines. The non-significant paths in the model are indicated with dotted lines.

4.7. Additional Significant Relationships

Additional significant relationships were found which were not included in the hypothesised model. Job burnout was found to have a significant negative relationship with career competencies. This finding suggests that when a call centre employee is experiencing high levels of job burnout, they will have low levels of career competencies. When employees are experiencing burnout, it will inhibit them from using their personal resources to improve their work circumstances.

Furthermore, it was found that the direct relationship between social support and burnout was found to be a significant negative relationship.

This finding illustrates that when employees are experiencing high levels of social support, it directly reduces their burnout levels. These results could lead to a possible expansion of the JD-R theory as the findings suggest that job resources and personal resources may have a strong negative relationship with job burnout. These results can aid managers in the call centre industry with possible strategies to focus on improving job resources and personal resources that will directly lead to a reduction in job burnout levels. Table 4.9 depicts the significant path coefficients of the additional relationships discovered in the study.

Table 4.9

Additional Relationships Between Variables Discovered

Paths	Path Coefficient	95% Lower	95% Upper	Sig.	P-Value
burnout -> career competence	-,44	-,57	-,32	Yes	<.001
Social support -> burnout	-,31	-,45	-,16	Yes	<.001

Furthermore, an interesting finding was highlighted during the analysis of the results. It was found that social support mediates the relationship between career competencies and work engagement. The path coefficient of career competencies to social support was found to be .26 and statistically significant with a p value of .002. Moreover, the path coefficient from social support to work engagement is .28 and statistically significant with a p value of <.001. It is, however, noted that not enough research exists on career competencies and how these can affect a person's perceived social support. Akkermans et al. (2013c), stated that employees who actively communicate with others at work and utilise their developed career competencies, will create a positive energetic work environment and this may result in these employees feeling supported by their co-workers and employers, which increases their perceived social support.

Furthermore, Akkermans and Tims (2016), have argued that career competencies are displayed through job crafting behaviour as employees with developed career competencies are able to recognise job resources such as social support more easily. Therefore, it can be argued that when employees have high levels of career competencies and actively utilise these, they will perceive a higher level of social support and, as previously stated, their high levels of perceived social support will result in increased work engagement.

This finding needs to be explored further in future research as it can be of benefit to employers in the call centre industry who want to improve their employees' well-being at work.

4.8. Chapter Summary

The focus of Chapter 4 was on the statistical analysis of the collected data, the results, and interpretation of the results. The chapter evaluated both the inner and outer model and found various significant relationships between variables of interest. It was evident in the evaluation of the results that all the items that were utilised in the survey were statistically significant except for work overload, which has slightly concerning reliability values for some items, but is still deemed to be acceptable.

The main effect hypotheses that were measured in the study were all deemed to be statistically significant. These findings support the literature of the JD-R theory which suggests that burnout and engagement are impacted by the interchange between job demands and job resources. This study's findings confirm that when employees in the call centre industry are experiencing high levels of social support and career competencies, their level of work engagement increases. Furthermore, the study has confirmed that when these employees are experiencing high levels of work overload and fear of COVID-19, their levels of job burnout increase.

All the moderating variables were deemed to be non-significant. This finding could be caused by various factors. One possible reason for the non-significant moderating effects could be that there is simply no relationship between the variables or, secondly, that the measurements utilised were not statistically sound. Chapter 5 will discuss the findings in more detail, as well as limitations of the current study and recommendations for future research will be elaborated on. Furthermore, practical solutions and suggestions will be provided to employers within the call centre industry. The researcher will provide managers with practical strategies which aim to improve the well-being of call centre employees, based on the findings of the research.

CHAPTER 5: IMPLICATIONS, LIMITATIONS & RECOMMENDATIONS

5.1. Introduction

Chapter 1 of this research study provides the reader with background to the study and context around the presenting research-initiating questions, as well as the goals. The following research-initiating questions were presented in Chapter 1; *What are the levels of burnout and work engagement experienced by employees in the call centre industry, amidst the COVID-19 pandemic? Furthermore, what are the main antecedents of job burnout and work engagement among the call centre employees, amidst the COVID-19 pandemic?* The research-initiating questions led the researcher to develop research objectives for the study, which resulted in the development of the conceptual model presented in Chapter 2. The conceptual model depicts a network of the most salient factors that may influence the variance in employees' engagement and burnout levels within the call centre industry in South Africa.

The aim of the conceptual model was to measure the fit of the structural model, as well as the significance of the hypothesised paths. Chapter 2 outlines a literature review which provides an explanation of the dynamics and interrelationships between the various latent variables that were predicted to influence the engagement and burnout levels of call centre employees. Chapter 3 provides the reader with explanations regarding the chosen research methodology used, which also includes the research design, the measuring instruments used to measure each variable of interest, as well as the statistical analysis that was employed. Chapter 4 consists of an analysis of the data that was collected which describes the findings of the various hypotheses based on previous research findings.

Chapter 5 provides a discussion regarding the research findings and practical implications identified. The practical suggestions aim to provide various managers, HR departments and other institutions with guidelines and suggestions on how to improve the well-being of call centre employees in South-Africa. The findings will be discussed based on the objectives set out in the study, as well as the theory presented in the literature review. Chapter 5 further discusses the limitations of the current study and offers recommendations for future research projects.

5.2. Discussion of Research Findings

The goal of this study was to discover the common causes of the variation in job burnout and work engagement levels among South African call centre employees. These factors include work overload, social support, career competencies and the fear of COVID-19. Furthermore, a structural model was developed and tested in the study to identify the cause of variance in call centre employees' job burnout and work engagement levels, in line with the JD-R model. The findings of the research study will provide Industrial Psychologists and call centre employers with possible interventions which may be utilised to improve the well-being of the call centre employees. These suggestions will be elaborated on further in this chapter.

The hypotheses of the main effects were all deemed as significant and, therefore, the researcher was able to accept the main hypotheses. It was found that job burnout had a significant negative relationship with work engagement (H01); social support was found to have a significant positive relationship with work engagement (H02); career competencies were found to have a significant positive relationship with work engagement (H03); career competencies had a significant positive relationship with social support (H04); Work overload was found to have a significant positive relationship with job burnout (H05), and fear of COVID-19 was found to have a significant positive relationship with job burnout (H06).

Furthermore, a greater relationship was found between work overload and job burnout than the relationship between fear of COVID-19 and job burnout. The hypothesis of fear of COVID-19 having a negative relationship with engagement was however found not to be true (H07). As hypothesised, the relationship was found to be significant, but was determined to be positive, rather than the negative relationship originally hypothesised.

Secondly, it was found that none of the hypothesised moderating effects were found to be significant. Fear of COVID-19 did not show any moderating effect between social support and work engagement (H08). Furthermore, no moderating effect of fear of COVID-19 was found to be significant between career competencies and work engagement (H09). This finding contradicts the results obtained in previous studies. Therefore, it can be argued that even though work overload and fear of COVID-19 are present in call centre employees' work environment, employers can conduct interventions that focus on enhancing their employees' job- and personal resources, which will increase their work engagement levels.

Various factors could have contributed to the non-significant moderating effects found. It could have been impacted by a measurement error or Type II error, which occurs when the research results indicate no significant moderating effects even when there are moderating effects present (Coltman et al., 2009). It is, however, common for research studies to find non-significant moderating effects and it is thus necessary for further research to be undertaken on the moderating effects depicted in the JD-R theory.

Lastly, there was an additional mediating relationship found where career competencies influence social support, which then results in higher/lower levels of work engagement. This relationship was not discussed in this research study as it was not included in the hypotheses formulated at the beginning of the study. Further additional relationships which were not initially part of the hypotheses of this research were found to be significant. These include the negative relationship between job burnout and career competencies and the negative relationship between social support and job burnout. These findings suggest that when employees are experiencing high levels of burnout, they may not be able to utilise their career competencies to improve their working conditions. Furthermore, it suggests that when employees are experiencing high levels of social support, they will experience low levels of burnout as social support improves their work engagement levels.

5.3. Shortcomings of this Present Research and Recommendations for Future Research

After an intensive investigation into this current study and what has been discussed in Chapter 4, shortcomings that need to be addressed in the future have been highlighted. The limitations outlined in the following section will provide future researchers with recommendations and guidelines to consider for improvements in future research undertakings.

The questionnaire utilised comprises mostly self-report measures that can result in different forms of bias. One form of response bias that can occur is social desirability bias, where the respondent answers in a way that they believe is the most socially accepted answer (Meisters et al., 2020). It is therefore a concern that the correlations of the predictions might be inaccurately enlarged. Furthermore, acquiescent bias could have also affected the data collected. This type of bias can occur when participants agree with certain statements in a questionnaire even when they do not really agree with the statement (Smith, 2004). In addition, the questionnaire that was formulated from various measurement instruments, comprises a total of 72 items.

It is suggested that future questionnaires be kept to a minimum number of items. Future research should also incorporate more objective measures to measure the relevant variables.

The small sample size of N=148 is a cause for concern. The low rate of responses can be deemed to be a limitation of the study. A recommendation for future studies is to include a greater number of respondents who will be more representative of the general population. Limitations with small sample sizes for research studies include the possibility of producing false-positive results, or that data can over-estimate the enormity of a relationship (Hackshaw, 2008). Moreover, the biographical data that was collected was only used to describe the sample of the study. However, it could have been beneficial if the researcher had investigated whether the biographical factors influence the job burnout and work engagement levels of call centre employees.

It is also possible that the most important variables were not included in the model investigated in this research study. The study only measured social support, career competencies, work overload and fear of COVID-19 as independent variables, and the fear of COVID-19 variable was the only moderator variable chosen for the study. By selecting only certain variables for the study, the researcher has failed to test additional job demands and job resources that might have a greater influence on the engagement and burnout levels of call centre employees. It is, therefore, recommended that additional variables should be included in future studies to include additional paths to the structural model. Moreover, future research could also explore the new paths that were found to be significant in this current study, which include the significant negative relationships between social support and job burnout, as well as the relationship between job burnout and career competencies. This can impact the way interventions are implemented within the call centre industry, as an improvement in job resources and personal resources will improve call centre employees' engagement levels and decrease the prevalence of job burnout.

Moreover, the work overload measurement instrument that was utilised for the purpose of the study delivered results that are slightly concerning. Firstly, it only consisted of four items, two of which were reversed scored. The reversed scored items could have influenced the results of the work overload measure as they could have impacted the response style of respondents. Prof. M. Kidd (personal communication, 1 August), argues that respondents can read the reversed scored questions incorrectly which will affect the way they respond to the question.

The item “*I work very hard*” has a very low factor loading of .17 which is lower than the required $>.6$ and the p value was found to be non-significant with a value of $-.388$. Furthermore, the Cronbach's alpha coefficient of .39 is much lower than the $>.6$ required to indicate high reliability. It is thus argued that the work overload measurement scale should be revised for future research, and it might be necessary to utilise a different measurement scale to measure work overload in future studies.

Lastly, the study focused only on the current emotional state of the employees, and it is not possible to evaluate trends in behaviour, and the emotional well-being of employees over time. It is therefore suggested that future studies should implement longitudinal studies to gain more insight into the trends over time regarding employees' well-being.

5.4. Practical Implications

Industrial Psychologists and Human Resource managers have a profound interest in quantitative research, where significant relationships between variables are found. Work engagement and burnout are known to be organisational outcomes of the interaction between the variables, such as job demands, job resources and personal resources, as indicated in the JD-R model (Bakker, 2011). Therefore, it will benefit organisations if more importance is given to managerial efforts and interventions with regard to increasing job resource and personal resources. This is important to achieve the goal of decreasing employees' level of burnout and to increase engagement levels amidst the COVID-19 pandemic.

As discussed in this research study, the JD-R model was used as a tool to measure the impact of job demands and job resources on employee's engagement and burnout levels. Furthermore, the JD-R model can also be utilised to establish various intervention strategies that can be applied to improve the well-being of employees. From an intervention standpoint, it is argued that high job demands and poor job resources have a high risk of leading to burnout, whereas a high number of job resources will be required to improve engagement, and not just the lower presence of job demands.

Therefore, it is important for companies to focus their interventions on increasing job resources such as social support and career competencies, to minimise the risk of burnout, and to improve the engagement of their employees. If interventions focus only on decreasing the job demands, these will only impact the burnout levels of employees, and not improve their engagement levels (Schaufeli, 2018).

It is also crucial to note that eliminating job demands completely will result in the nature of employees' jobs being less challenging. If employees do not find their jobs challenging, it will reduce their engagement levels. Therefore, the focus of the intervention strategies should not be on eliminating the demands, but increasing the job resources for employees to be able to handle their challenges within their job while increasing their engagement levels (Schaufeli, 2018).

5.4.1. Organisation-level Intervention Strategies Recommended for the Call Centre Industry Using a Top-Down Approach

The organisation-level interventions which are the focus of this study include increasing job and personal resources, such as social support and career competencies, as well as reducing job demands such as work overload and the fear of COVID-19.

5.4.1.1. Job Modification to Reduce Work Overload and the Negative Effect of the COVID-19 Pandemic.

As the COVID-19 pandemic has forced most employees to work from home, it is recommended that employers ensure their employees have an appropriate technological work set-up at home. Employers should ensure that their employees have a reliable Wi-Fi network, laptops, and other technological resources to reduce the negative effects of COVID-19 on employees' well-being. Furthermore, the researcher recommends that the managers ensure a set working schedule is followed when working from home, to aid employees to work within normal working hours, without being overloaded with work. This will aid in supporting the well-being of employees during the pandemic (Kaushik & Guleria, 2020).

It is vital for the call-centre industry to re-examine their work policies and expectations to adapt to the new reality of working mostly from home. This can result in better working conditions overall, which improves employees' well-being and engagement at work. Employers who can keep employees constantly informed about changes to the working schedule and policies, as well as continuously motivate their employees, will possibly have higher rates of satisfaction and productivity among their staff members (Diab-Bahman & Al-Enzi, 2020).

5.4.1.2. Implement Adequate HR Systems in the Call Centre Industry.

Bakker (2017), has discovered the importance of organisations creating a work environment that is challenging and interesting with enough job resources to ensure an increase in employees' work engagement. The main HR systems that should be in place for a conducive work environment include effective performance management systems and training and development. Furthermore, adequate staff selection and skills training contributes to an effective HR system in organisations. It is, therefore, argued that organisation with effective HR systems in place will create a work environment which is filled with job resources that improve employee engagement and may reduce the negative effects of job demands.

The HR managers in the call centre industry should ensure they have systems in place to set employees' performance goals and targets, provide employees with regular and continuous feedback, conduct regular performance appraisals and create a culture of trust and empowerment. If these HR systems are in place, it will positively influence the perceived social support of employees and they may feel more motivated to deal with various challenges as they are more engaged at work.

5.4.1.3. Increasing Job Resources, Such as Social Support Through Transformational Leadership.

Transformational leadership is a recommended top-down approach to improve call centre employees' engagement levels. A transformational leader is an individual who demonstrates behaviours such as inspirational motivation and intellectual stimulation which lead to a transformation in employees' values and standards. Transformational leadership can have various positive results, such as employee empowerment and increased self-efficacy (Bakker, 2017). Employees with a high level of social support, may feel a sense of trust towards their employers, and are therefore more motivated to work hard. Employers will have to focus on employees' mental health now, more than ever, due to the immense negative consequences experienced during the COVID-19 pandemic.

Implementing strong social support networks amongst co-workers and supervisors will result in increased motivation to deal with job demands such as work overload and the fear of COVID-19 pandemic. It is argued that employees who receive support from their co-workers and their supervisors can cope better with stressors as they have more emotional resources to combat the negative effects in the workplace (Deery et al., 2010).

Support from supervisors is critical, especially in the current work-from-home career structure that employees experience. Interventions aimed at increasing emotional support from the leadership, such as empathy and care, can increase employees' satisfaction and engagement. It is also recommended that leadership should focus on building a high-quality relationship with their employees that will increase employees' engagement and improve their perception towards their job characteristics (Bakker, 2017).

Furthermore, leaders should give regular and constructive feedback, include employees in decision-making and provide coaching for employees, as it will encourage motivation, satisfaction, and engagement (Nasurdin et al., 2018). It is also recommended that leaders should practice support and active listening skills to reduce the negative effects of job demands (Janse van Rensburg et al., 2013).

Employers who can incorporate humour in employees' daily work life, will combat the feeling of social isolation in call centres (Deery et al., 2010). Moreover, employers who support their employees through clearly specified job requirements in their policies and practices will result in positive employee attitudes towards the organisation (Nasurdin et al., 2018).

Employers can implement regular team-building interventions among the various teams in the call centres as it is found to improve group norms that protect the team from various negative consequences associated with job demands (Deery et al., 2010). It is expected that when co-workers provide support and guidance during stressful events, employees will perceive their social support to be high, and they can therefore cope with stressors more easily.

It is thus recommended that social programmes be implemented for employees such as Employee Assistance Programmes, whereby they feel supported in times of trauma or stressful events. These EAP programmes can provide employees with free counselling sessions as a way of supporting them through difficult times. This may result in an improvement in the mental well-being of these employees as they feel supported by their organisation. It is also recommended that discussion groups be implemented for call centre teams. This will aid employees to collaboratively address complex issues and result in improved shared learning and problem solving (Janse van Rensburg et al., 2013).

5.4.1.4. Equip Call Centre Employees with Career Competencies.

The development of employees' career competencies can possibly improve career development interventions within the company. Furthermore, such action will potentially result in greater job satisfaction and engagement and ultimately lead to increased performance and success within the company. It is argued that when employees have developed career competencies, they are able to craft and manage their own careers, which is crucial in the current 21st century, especially with the consequences of the COVID-19 pandemic (Kuijpers & Scheerens, 2006).

Managers can implement HR policies and programmes that simultaneously stimulate job-related resources and career competencies of employees, in order to increase their well-being (Akkermans, et al., 2013c). When employees have developed those key career competencies, it is expected that they will flourish in their work and become more confident and resilient workers who are highly engaged in the organisation.

Employers are required to train employees on how to build their career competencies, and this can be done through continuous knowledge and skills training within employees' current roles, as well as future career goals. Furthermore, providing employees with career counselling will give them the motivation to implement career competencies to reach their career goals (Park, 2020). Employers can use the Career Competency Questionnaire to evaluate the competencies that employees need to improve on, and they can develop their counselling programmes accordingly. Through receiving focused guidance, it will improve employees' ability to manage their future career (Akkermans et al., 2013a). Research states that when employers offer career support and different career opportunities, it increases employees' career competencies as they are more willing to explore different careers and practice career control (Kuijpers & Scheerens, 2006).

Employers can also train employees on how to improve their career competencies by combining training with interventions to increase the employee's self-efficacy. It is hypothesised that when employees are able to master their career competencies while increasing their career-related self-efficacy, it will lead to greater career self-management (Akkermans et al., 2013a). Employers can implement a mentor system within call centres to give current employees a sense of purpose and motivation towards career development. Appointing more tenure employees as mentors for the younger employees, will aid them to influence others in the company (Park, 2020).

5.4.2. Individual Level Intervention Strategies Recommended for the Call Centre Industry

It is recommended that organisations ensure their employees complete the Energy Compass (EC) survey to determine each individual employee's perception of the presence of certain job demands and job resources that affect their engagement and burnout levels. The EC was developed and based completely on the JD-R model. It is a survey that guides individuals and organisations in choosing which areas within their work environment they should focus on to increase their energy. Immediately after employees have completed the EC, they should be provided with a report of their results that points to certain job resources and job demands that they perceive as affecting their engagement and burnout levels at work. These reports will provide the individual employee with personal intervention strategies to decrease their job demands and increase their resources which are considered to be important for their well-being at work (Schaufeli, 2017).

Researchers further suggest that employees may use proactive work behaviour to ensure their psychological needs are satisfied, especially during the COVID-19 pandemic. Acting proactively means that employees actively take ownership for changing their situation or themselves (Bakker et al., 2021).

5.4.2.1. Job Crafting as a Bottom-Up Approach to Improve Call Centre Employees' Personal Resources and Job Resources.

Job crafting is known as a bottom-up approach to increase work engagement. Job crafting consists of employees proactively taking control of their jobs and improving their job resources and reducing hindrance job demands. Research shows that when employees take autonomy for crafting their jobs, it results in increased work engagement, job satisfaction and overall performance at work as it increases the fit between the employee and the organisation (Bakker, 2017).

Secondly, employees can utilise their career competencies to improve their work circumstances and craft their job in such a way that it results in feelings of empowerment where employees can be motivated to enhance their career and find new career opportunities to improve job satisfaction. Furthermore, high levels of career competencies may lead to employees proactively managing their own careers, which will lead to greater productivity and satisfaction (Akkermans et al., 2015).

5.4.2.2. Self-Management as a Bottom-Up Approach to Improve Call Centre Employees' Personal Resources and Job Resources.

Employees who take ownership of their own career development, through utilising their career competencies, will be more engaged at work. Employees can use self-management strategies in the call centre working environment to increase their motivation and improve their work performance (Bakker, 2017). These employees do not require a supervisor role to observe their progress as they take control of their own development. Employees can use various self-management strategies such as self-observations, goal setting and self-reward. Self-observation refers to employees actively monitoring their own work behaviour. Goal setting refers to employees being able to identify their career goals and actively work towards reaching their goals.

Lastly, self-reward refers to employees treating themselves with something rewarding when they achieved their goals. Bakker (2017), found that self-management strategies lead to higher work engagement levels as they mobilise more job resources that aids them in reaching their goals. It is, therefore, recommended that call centre employees should take control of their own career development using self-management strategies, which will also positively affect their work engagement.

5.4.2.3. Playful Work Design as a Bottom-Up Approach to Improve Call Centre Employees' Personal Resources and Job Resources.

When employees incorporate playful work design (PWD) they are able to proactively construct conditions in their work that instil fun and challenge without changing the design of their job, which is done through job crafting. PWD improves employees' experience of their job and they can practice it in two different ways. Firstly, employees can incorporate more fun within their work activities such as reframing their work to create amusement in their job tasks and within the team.

Secondly, employees may also consider to include competition with themselves where they can try and see how fast they can complete a task on the same high standard as previously delivered. When employees are able to increase fun and enjoyment at work, it will possibly improve relationships within the team and their work environment and it may lead to greater enjoyment at work. When employees are enjoying their work, it leads to an increase in their engagement levels and lessen the negative effects of COVID-19 on their mental health (Bakker et al., 2021).

5.5. Conclusion

This research study provided valuable insights to the literature of the JD-R theory by the means of testing all the proposed paths within the JD-R model, as well as identifying additional paths. The study was able to make contributions towards understanding the causes of variance in job burnout and work engagement among call centre employees in South Africa. It was evident in this study that job demands and job resources, and personal resources, causes variance in employees' work engagement levels. Managerial implications, limitations of the current study, as well as recommendations for future research were elaborated on in this chapter. Lastly, through the findings in this research study, it has been possible to provide HR managers, Industrial Psychologists and line managers with strategies and interventions to improve work engagement levels and the overall well-being of employees within the call centre industry across South Africa.

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APPENDIX A: INFORMED CONSENT

PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

You can stand a chance to **win a R500 Takealot voucher** if you wish to participate in this study. Simply click on the link at the end of the survey to enter the lucky draw. The winner will be announced after all surveys have been completed.

FEAR OF COVID-19 AND CALL CENTRE OPERATOR ENGAGEMENT & BURNOUT:

We would like to invite you to take part in a research project which involves the completion of an online questionnaire. Your participation is **entirely voluntary**, and you are free to decline to participate or to stop completing the questionnaire at any time, even if you have agreed to take part initially. However, once you have submitted your completed questionnaire online, you will no longer be able to withdraw your responses as there will be no way of linking your responses back to you.

This study aims to...

Provide ample evidence regarding the factors that may be causing differences in work engagement and job burnout levels among the call centre employees during the COVID-19 Pandemic. Burnout is becoming more prevalent among call centre employees, especially in the times we are living in now. It is important to note what might be causing this and what can be done to stop burnout levels from rising. The purpose of this study is to understand and look at the factors that may be causing some call centre employees to be more engaged than others and some call centre employees to be more burnt-out than others. This will aid the researcher to identify ways to reduce the occurrence of burnout for these employees.

You are being asked to participate because...

You are a permanent employee working in the call centre industry, specifically within an inbound call centre. You are 18 years of age or older and reside in South-Africa.

If you agree to participate you will be requested to...

Set aside approximately 5-10 minutes to complete the questionnaire and ensure you are in a private place without any distractions. The questionnaire will contain a combination of questions evaluating your perceptions of certain job resources, personal resources, job demands, work engagement and job burnout. Please attempt to answer all the questions in the survey. Moreover, you will be able to rate your answers on a scale, for example, Strongly Disagree= 1 or Strongly Agree= 7. The questionnaire will need to be completed electronically. To ensure your confidentiality is maintained, no names or identification numbers will be asked.

The potential benefits of this research are...

There are no direct benefits for participating in this study, but the findings of this study may make it possible for the researcher to provide recommendations for employers within the call centre industry with ways to increase the engagement levels of call centre employees, by identifying those factors that aid in increasing engagement and reduce the occurrence of burnout for these employees.

The potential risks involved in participating in this research are...

Please note that there is a potential risk that you might be experiencing some discomfort when responding to the survey. You might discover that you are experiencing stressful situations at work, such as job burnout. This knowledge might cause you some psychological stress. You can then contact the South African Depression and Anxiety Group (SADAG) for support. Please click on the following link to access their website: <https://sadaq.org/> You can also contact the SADAG Mental Health Line at 0800 456 789.

You should be aware that the online survey is not being run from a "secure" https server of the kind typically used to handle credit card transactions, so there is a small possibility that responses could be viewed by unauthorized third parties (e.g., computer hackers). Your information and response to the survey will be protected by the researcher and her supervisor. No names and identity numbers will be asked. The data will be kept on a password protected laptop in a password protected file of the researcher. The only persons that will have access to the data will be the researchers and her supervisor.

You can phone the Principal Investigator of this study, Lisa Coetzee at 083 454 2056 or email: 19060041@sun.ac.za if you have any questions about this study or encounter any problems.

This study has been approved by the **Research Ethics Committee: Social, Behavioural and Education Research at Stellenbosch University (Project ID23938)**. The study will be conducted according to the ethical guidelines and principles of South Africa's Department of Health Ethics in Health Research: Principles, Processes and Studies (2015).

RIGHTS OF RESEARCH PARTICIPANTS:

You have the right to decline answering any questions and you can exit the survey at any time without giving a reason. If you have questions, concerns, or complaints regarding your rights as a research participant, please contact Mrs Clarissa Robertson [cgraham@sun.ac.za; 021 808 9183] at the Division for Research Development.

To save a copy of this text, please copy and paste the text and save it on a word document, or you can take a screen shot.

To complete the survey please click on the link provided below, if you agree to the following:

you are confirming that you are:

- **over 18 years old.**
- **have read and understood the above explanation about the study; and**
- **you agree to participate.**
- **You also understand that your participation in this study is strictly voluntary.**

Survey link:

<https://sunsurveys.sun.ac.za/surveys/EDDE5184-6E6B-48E7-80BD-4655B0643548?test=true>

APPENDIX B: ETHICAL CLEARANCE APPROVAL LETTER**CONFIRMATION OF RESEARCH ETHICS APPROVAL**

REC: Social, Behavioural and Education Research (SBER) - Initial Application Form

27 April 2022

Project number: 23938

Project Title: FEAR OF COVID-19 AND CALL CENTRE OPERATOR ENGAGEMENT & BURNOUT

Dear Miss L Coetzee

Identified supervisor(s) and/or co-investigator(s):

Dr W Boonzaier

Your response to stipulations submitted on 10/04/2022 17:28 was reviewed and approved by the Social, Behavioural and Education Research Ethics Committee (REC: SBE).

Your research ethics approval is valid for the following period:

Protocol approval date (Humanities)	Protocol expiration date (Humanities)
17 March 2022	16 March 2023

GENERAL COMMENTS PERTAINING TO THIS PROJECT:**INVESTIGATOR RESPONSIBILITIES**

1. Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.
2. Your approval is based on the information you provided in your online research ethics application form. If you are required to make amendments to or deviate from the proposal approved by the REC, please contact the REC: SBE office for advice: applyethics@sun.ac.za
3. Always use this project ID number (23938) in all communications with the REC: SBE concerning your project.
4. Please note that the REC has the prerogative and authority to ask further questions, seek additional information, and monitor the conduct of your research and the consent process, where required.

RENEWAL OF RESEARCH BEYOND THE EXPIRATION DATE

You are required to submit a progress report to the REC: SBE before the project approval period expires if renewal of ethics approval is required.

If you have completed your research, you are required to submit a final report to the REC: SBE to close the active REC record for this project.

Project documents approved by the REC:

Document Type	File Name	Date	Version
Request for permission	Institutional Permission Org Consent template EXAMPLE 2	15/10/2021	version 1
Research Protocol/Proposal	Lisa Coetzee Research Proposal Final	21/01/2022	Final Proposal
Default	TEMPLATE FOR RESPONSE LETTER	23/02/2022	1
Informed Consent Form	final SU HUMANITIES Consent template_online survey	31/03/2022	2
Data collection tool	Final Fear_of_Coconavirus_and_Call_Centre_Operator_Engagement_Burnout (2)	31/03/2022	2
Default	Privacy assessment	03/04/2022	1
Default	Final TEMPLATE FOR RESPONSE LETTER (1)	03/04/2022	2

Letter of support_counselling	5CF04EA7-4F51-400D-92AA-F8F28B1C41B4	06/04/2022 1
Letter of support_counselling	Consent docx	08/04/2022 1

If you have any questions or need further help, please contact the REC office at applyethics@sun.ac.za

Sincerely,

Mrs Clarissa Robertson (cgraham@sun.ac.za)

Secretariat: Social, Behavioral and Education Research Ethics Committee (REC: SBE)

National Health Research Ethics Committee (NHREC) registration number: REC-050411-032.

The Social, Behavioural and Education Research Ethics Committee complies with the SA National Health Act No.61 2003 as it pertains to health research. In addition, this committee abides by the ethical norms and principles for research established by the Declaration of Helsinki (2013) and the Department of Health Guidelines for Ethical Research: Principles Structures and Processes (2nd Ed.) 2015. Annually a number of projects may be selected randomly for an external audit.

Principal Investigator Responsibilities

Protection of Human Research Participants

As soon as Research Ethics Committee approval is confirmed by the REC, the principal investigator (PI) is responsible for the following:

Conducting the Research: The PI is responsible for making sure that the research is conducted according to the REC-approved research plan. The PI is jointly responsible for the conduct of co-investigators and any research staff involved with this research. The PI must ensure that the research is conducted according to the recognised standards of their research field/discipline and according to the principles and standards of ethical research and responsible research conduct.

Participant Enrolment: The PI may not recruit or enrol participants unless the strategy for recruitment is approved by the REC. Recruitment and data collection activities must cease after the expiration date of REC approval. All recruitment materials must be approved by the REC prior to their use.

Informed Consent: The PI is responsible for obtaining and documenting affirmative informed consent using **only** the REC-approved consent documents/process, and for ensuring that no participants are involved in research prior to obtaining their affirmative informed consent. The PI must give all participants copies of the signed informed consent documents, where required. The PI must keep the originals in a secured, REC-approved location for at least five (5) years after the research is complete.

Continuing Review: The REC must review and approve all REC-approved research proposals at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period**. Prior to the date on which the REC approval of the research expires, **it is the PI's responsibility to submit the progress report in a timely fashion to ensure a lapse in REC approval does not occur**. Once REC approval of your research lapses, all research activities must cease, and contact must be made with the REC immediately.

Amendments and Changes: Any planned changes to any aspect of the research (such as research design, procedures, participant population, informed consent document, instruments, surveys or recruiting material, etc.), must be submitted to the REC for review and approval before implementation. Amendments may not be initiated without first obtaining written REC approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the REC should be immediately informed of this necessity.

Adverse or Unanticipated Events: Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research-related injuries, occurring at this institution or at other performance sites must be reported to the REC within **five (5) days** of discovery of the incident. The PI must also report any instances of serious or continuing problems, or non-compliance with the REC's requirements for protecting human research participants.

Research Record Keeping: The PI must keep the following research-related records, at a minimum, in a secure location for a minimum of five years: the REC approved research proposal and all amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence and approvals from the REC.

Provision of Counselling or emergency support: When a dedicated counsellor or a psychologist provides support to a participant without prior REC review and approval, to the extent permitted by law, such activities will not be recognised as research nor the data used in support of research. Such cases should be indicated in the progress report or final report.

Final reports: When the research is completed (no further participant enrolment, interactions or interventions), the PI must submit a Final Report to the REC to close the study.

On-Site Evaluations, Inspections, or Audits: If the researcher is notified that the research will be reviewed or audited by the sponsor or any other external agency or any internal group, the PI must inform the REC immediately of the impending audit/evaluation.