# THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND EMOTIONAL REGULATION AND ITS IMPACT ON LEADER-MEMBER EXCHANGE, WORK ENGAGEMENT AND BURNOUT

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Minithesis submitted in partial fulfilment of the requirements for the degree of Master of Commerce in the Department of Industrial Psychology, Faculty of Economic and Management Sciences, University of the Western Cape





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## ABSTRACT

Organisations spend copious time and resources recruiting and selecting the best candidates to fill a vacancy. In the modern-day work environment, highperforming and engaged employees are the key drivers of organisational success. Organisations spend considerable time and resources to ensure that employees with the proper skills are selected into the organisation. More recently, companies shifted their focus from technical skills to competencies that advance teamwork and collaboration. Agile organisational structures dependent on a flexible and collaborative workforce to adapt to changing market conditions. This study focused on the role of emotional intelligence, mediated through emotional regulation on leader-member exchange (LMX). The role of strong leader-member exchange relations was examined in relation to burnout and work engagement. Although considerable research was conducted on emotional intelligence, limited studies explore the role of emotional intelligence on the leader-member exchange, mediated by emotional regulation. Based on the literature, a theoretical model is presented, translating the dynamic relationship among emotional intelligence, emotional regulation, leader-member exchange, burnout, and work engagement into six substantive hypotheses. The study employed a convenience sample of 201 participants operational in the financial industry in South Africa. The proposed theoretical model was assessed, using structural equation modelling. The proposed model was partially supported. Emotional intelligence was identified to positively relate to cognitive reappraisal and work engagement. Work engagement shares a positive relationship with leader-member exchange. Lastly, leadermember exchange was observed to negatively relate to burnout. The results hold potentially important practical implications for organisations, aiming to create high-quality leader-member dyads through emotional intelligence.

## **KEYWORDS**

Emotional intelligence

Emotional regulation

Cognitive reappraisal

Expressive suppression

Leader-member exchange (LMX)

High-quality relationships

Low-quality relationships

Work engagement

Burnout

Structural equation modelling

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## DECLARATION

By submitting this minithesis, I declare that *The relationship between emotional intelligence and emotional regulation and its impact on leader-member exchange, work engagement, and burnout* in its entirety is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or part submitted it for obtaining any qualification.



Full Name: Melissa Titus

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# CHAPTER 1: INTRODUCTION, BACKGROUND, AND OBJECTIVES OF THE STUDY

#### **1.1** Introduction and background of the study

Organisations spend copious time and resources recruiting and selecting the best candidate for a vacancy. Once successfully positioned, more investment is made into an organisation's employees. According to Stats SA (2018), the business sector spent R340 billion on employment costs in the second quarter of 2018. This includes salary, medical aid, pension funds, and other employee-related costs. This investment does not guarantee a productive labour force. The cost for organisations rises when employees are sick or absent attributable to poor emotional, physical, and psychological health. Another factor affecting employee cost is presenteeism. Presenteeism is when employees are physically at work but are unproductive due to distractions.

According to Higginbottom (2018), businesses in the United States lose \$150 billion annually because of presenteeism. The contrary is equally important organisations need healthy, productive, and engaged employees as the primary source of competitive advantage. As global industries introduce more technological advancements, human resources are becoming more important in the knowledge industry (Sapta, Muafi, & Setini, 2021). Human resources are, therefore, becoming an important source of competitive advantage as they develop and maintain the systems and processes, enabling services and technology industries.

The way work is conducted also experiences seismic changes (Klonek, Kanse, Wee, Runneboom, & Parker, 2021). The traditional psychological contract is replaced with employment in exchange for productivity. Employees are expected to do more work in team-based arrangements, often across geographical settings, collaborating with diverse teams (Klonek et al., 2021). To succeed, employees cannot solely rely on cognitive abilities and work experience, instead, success relies on relationships with additional superiors, colleagues, and subordinates (Jung & Yoon, 2016). Team-based arrangements proved to drive greater

1

productivity, work satisfaction, and creativity (Berber, Slavić, & Aleksić, 2020). Even individuals working remotely will most probably interact and collaborate with team members to achieve key personal performance outcomes (Sutherland & Janene-Nelson, 2020).

Organisations, therefore, need to focus on creating remote work environments inspiring engaged and productive workforces. Pitts, Wright, and Harkabus (2012) established that emotional intelligence in virtual teams is a significant predictor of team viability. This is not limited to subordinates; team leader emotional intelligence is also critical to team performance and satisfaction (Mysirlaki & Paraskeva, 2020). This is prevalent in the time where remote work was encouraged attributable to the COVID-19 pandemic.

Emotional intelligence, at its core, refers to an individual's ability to understand, identify and manage their own emotions and the emotions of others (Cherniss, 2000). Emotionally intelligent employees are likely to be more satisfied, have greater mental health, and progress in social situations, by that enhancing effective collaboration (Schutte & Loi, 2014). Some scholars contend that emotional intelligence is rated as a better predictor of organisational success than cognitive intelligence (Suehs, 2015).

Emotional intelligence facilitates the appropriate selection of effective emotional regulation strategies. According to Peña-Sarrionandia, Mikolajczak, and Gross (2015), emotional regulation involves influencing the type, duration, and intensity of the emotion experienced, including how the emotion is expressed. An individual low in emotional intelligence is unlikely to select the most appropriate emotional strategy in social interaction. According to Troth, Lawrence, Jordan, and Ashkanasy (2018), emotional regulation involves employing strategies to regulate emotions. Emotional regulation may, therefore, be an important mediator between the encoding of emotional stimuli and emotional response (Peña-Sarrionandia et al., 2015). Emotional regulation forms a key factor in the perception-expression sequence of emotions.

Individuals can form meaningful relationships with peers and leaders in work groups through the mechanism of emotional regulation. Understanding the role of emotional intelligence and emotional regulation in the formation of dyadic relationships in teams holds important practical and theoretical implications for organisations. Leader-member exchange was observed as a powerful predictor of increased performance; leaders can have a task completed more effectively by selecting a suitable employee based on the fit of skills to the task (Harris, Wheeler, & Kacmar, 2011; Rockstuhl, Dulebohn, Ang, Shore, & Kozlowski, 2012). Leader-member exchange refers to the relationship between a leader and a subordinate where exchanges and interactions are based on mutual trust, respect, and social exchanges (Seo, Nahrgang, Carter, Hom & Chen, 2018).

According to Rockstuhl et al. (2012), employees are more likely to be driven to perform once a high-quality relationship is formed. Leaders and members are more likely to create these high-quality relationships if they are emotionally intelligent (Xiaqi, Kun, Chongsen, & Sufang, 2012). Although emotional intelligence may be an important prerequisite for high-quality relationships, emotional regulation is likely to maintain the dyadic relationships through daily encoding and selection of appropriate emotional responses.

High-quality relationships provide employees with valuable resources that keep them motivated and engaged at work. Engaged employees contribute to organisational success through increased performance, greater commitment to the organisation and its goals, and increased financial standing of the organisation (Saks, 2006; Sundaray, 2011). Work engagement is defined as individuals who complete work tasks with energy, involvement, and efficiency while dealing with the high demands of the job (Schaufeli, Salanova, González-romá, & Bakker, 2002).

High levels of work engagement and commitment may be exceptionally important in the current work environment, characterised by high unemployment, insecurity, and alienation (Bosman, Rothmann, & Buitendach, 2005). This is especially prevalent during the COVID-19 pandemic where companies are increasingly reducing staff numbers and benefits to deal with the pandemic and its economic consequences (Jain, Budlender, Zizzamia, & Bassier, 2020). When employees are burdened by continuous work stressors, their ability to cope with these stressors may erode over time. Employees can enter a state of burnout when coping mechanisms and strategies are depleted.

Burnout refers to individuals who are exhausted, cynical, and lacking personal efficacy, whereas work engagement refers to psychologically or fully present individuals (Schaufeli et al., 2002). Since high-quality relationships provide employees with the resources they require to be engaged, high-quality relationships to mitigate the impact of burnout are also anticipated.

From the aforementioned, emotional intelligence, through employing effective emotional regulation strategies, can bear many benefits for the organisation and individual workers. It is, therefore, critical to investigate the empirical relationship between emotional intelligence and emotional regulation and its influence on leader-member exchange. High-quality relationships between leaders and their members and their impact on work engagement and burnout were also investigated as these variables are also influenced by emotional intelligence and potentially emotional regulation.

# 1.2 Problem statements TERN CAPE

Emotional intelligence is associated with several positive work outcomes, such as better interpersonal relationships, greater well-being, and stronger relationships with team members and subordinates (Schutte & Loi, 2014; Whiteoak & Manning, 2012). A wealth of studies covers emotional intelligence and its impact in the workplace (Cherniss, 2000; Kunnanatt, 2008; Mayer, Salovey, & Caruso, 2008; Schutte & Loi, 2014; Whiteoak & Manning, 2012). Whereas emotional regulation was linked or observed as a part of emotional intelligence, the relationship with these positive outcomes, as mediated by emotional regulation, was not comprehensively explored.

This study contends that emotional regulation may be a key enabler of emotional intelligence in LMX relationships. There are limited applied research findings regarding the dynamic interaction between emotional intelligence, emotional regulation, and LMX. This dynamic relationship has the potential to shape key organisational outcomes through burnout and work engagement. This remains an under-researched area in organisational behaviour, which this research aimed to address.

The job demand resources (JD-R) model is often considered contributory to enhancing work engagement (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007). The correct balance of job resources and job demands increases work engagement and performance, whereas the incorrect balance could result in burnout (Bakker, Albrecht, & Leiter, 2011). Thor (2012) also recommends that internal employee attributes be investigated in relation to work engagement. The present study investigated employee attributes, such as emotional intelligence and emotional regulation strategies, concerning positive work outcomes. These include work engagement, LMX, and burnout reduction. These positive outcomes were investigated from an individual attribute perspective rather than contextual resources perspective.

It is critical that organisations understand these outcomes to ensure that appropriate internvensions are put in place to enhance the changed work environment. The COVID pandemic has changed the way in which work is done (Jain, et al 2020). Employees have had to adapt to virtual working environments and increased workloads due to staged working shifts or retrenchments (Klonek et al., 2021). Organisations need to equip the workforce to deal with these changes and remain competitive to survive.

#### 1.3 Objectives

The primary objective of the current study was to conceptualise a structural model that investigates the relationships between emotional intelligence, emotional regulation, leader-member exchange, work engagement, and burnout. At the heart of the conceptual model is the dynamic interplay between emotional intelligence, emotional regulation, and LMX relationships. The conceptualised model can also be divided into individual hypotheses. Specific hypotheses are discussed in the subsequent section.

#### **1.4** Significance of the study

Although voluminous studies observed the impact of emotional intelligence on individual and team-based performance, few studies included emotional regulation into this equation. Troth et al. (2018) contend that many researchers erroneously assume that the fourth branch of emotional management is the same as emotional regulation. This research adds to the growing body of knowledge concerning emotional intelligence while covering this divergence by investigating the relationship between emotional intelligence and emotional regulation and its interaction with LMX. This study also elucidates the impact of the interplay between emotional intelligence, emotional regulation, and LMX on main outcomes, such as work engagement and burnout.

Empirical support for the proposed model has significant implications for organisations and applied practice. First, emotional regulation is an innate ability, related but not the same as emotional intelligence. If emotional regulation is observed as a mediator between emotional intelligence and high-quality dyadic relationships, it will imply that managers and followers should cultivate this ability. Second, high-quality relationships can have unintended consequences, such as work engagement, which should be promoted in the organisation.

In contrast, a lack of high-quality relationships can also lead to burnout because followers do not have adequate resources through leadership support to deal with the adverse work context. Finally, the reciprocal relationship between LMX and work engagement may indicate a virtuous cycle where a high-quality relationship amplifies work engagement, which leads to more investment in the dyadic relationship.

Organisations should emphasise recruiting individuals, high in emotional intelligence. This notion is supported by Whitton (2005) affirming that research

indicated that emotional intelligence skills are more important than operational skills. The study, therefore, holds potentially important implications for the applied setting as several organisations are struggling to develop strong employee-supervisor relationships and curb the spread of burnout while enhancing work engagement.

#### **1.5** Thesis structure

This study comprises the following five chapters:

- **Chapter 1:** Introduces the research and provides background on the rationale for the study. Research objectives along with the hypotheses are outlined, followed by the significance of the study.
- **Chapter 2:** Provides a review of the literature on emotional intelligence, emotional regulation, leader-member exchange, work engagement, and burnout. The hypotheses are developed throughout the literature review, resulting in developing a structural model.
- **Chapter 3:** Outlines the research methodology employed during this study. It guides the reader through the data collection and analysis process with the rationale for selecting these processes.
- Chapter 4: Presents the results obtained from implementing the research methodology discussed in Chapter 3.
- **Chapter 5:** Discusses the results relating to other literature. Practical implications for the organisation are discussed followed by the limitations of the study. Lastly, recommendations will be made for future research.

#### 1.6 Conclusion

This chapter introduces the research and details the variables included in the study. It further provides insight into the contextual background of the study. The problem statement is then discussed, followed by the objectives and hypotheses of the study. The detail is then provided in the study's significance. The chapter concludes by summarising the structure this study followed.

#### **CHAPTER 2: LITERATURE REVIEW**

#### 2.1 Introduction

Organisations realised the potential of people becoming a source of competitive advantage since an organisation's effectiveness results from the level of individual and collective employee performance (teams and organisational units) and their success in attaining these shared goals (Pfeffer, 1994).

Employee effectiveness is conditionally influenced by the interaction between environmental demands and the innate personality traits of the individuals (Bakker et al., 2007). Organisations are more than a mere collection of individuals working towards a common goal. The deterministic approach towards investigating nature suggests that workers' performance can be explained by the complex network of personal and situational variables. Performance in the workplace can only be diagnosed, explained, and predicted if the human resource function in organisations understands the complex network of variables shaping work behaviour. Becker and Huselid (1998) posit that HR practices have a direct impact on organisational functioning by influencing the motivation, skills, job design, and work structures of employees.

Increasingly, organisations are employing emotional intelligence as an indicator of organisational success. Emotional intelligence is a pivotal latent variable in this nomological network, directly and indirectly influencing the performance of workers. Emotional intelligence is essential for leadership and management performance, while it is a predictor of performance in the workplace (Furnham & Taylor, 2020). Emotional intelligence has also been associated with enhanced collaboration, teamwork, and job satisfaction (Schutte & Loi, 2014). Emotional intelligence yields benefits, such as enhanced work engagement, high LMX relations, while reducing unfavourable conditions, including burnout.

This has implications for organisations' recruitment and succession processes. Provided the benefits associated with employees with high levels of emotional intelligence, it would make sense for the organisation to target individuals with high levels of emotional intelligence when recruiting. Training interventions can be implemented to enhance emotional intelligence. Organisations need to be clear on their conceptualisation and understanding of emotional intelligence for the effective design of training interventions.

Upon closer inspection of emotional intelligence, it can be seen that emphasis is placed on the conceptualisation of emotional intelligence, but insufficient research details attaining desirable workplace goals through emotional intelligence (Peña-Sarrionandia et al., 2015). This raises the question: *What is the underlying psychological mechanism that translates emotional intelligence into employee performance?* The answer can be in part explained by individuals' ability to regulate their emotions.

According to Peña-Sarrionandia et al. (2015), the purpose of regulating emotions is to attain a specific goal. The effectiveness of regulating emotions is linked to an individual's ability to identify emotions. The subsequent section investigates the psychological mechanism that underpins emotional intelligence and regulation in the workplace.

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#### 2.2 Emotional intelligence

## 2.2.1 Defining emotional intelligence

It is important to have a basic understanding of emotions before defining emotional intelligence. According to Liyanagamage, Glavas, and Kodagoda (2019), emotions are the interface between an individual and the environment in which they operate. Individuals' emotions can be inferred by others based on how they respond to the perceptions of events, therefore, individuals display a behavioural response to how they are feeling. According to Frijda (2016), forceful, fast, and persistent emotions can be counterproductive; however, they could also drive individuals to behave to benefit them. Emotion is a boundless concept, including a wide constellation of emotions and conditions (Frijda, 2016). This is further supported by Cole, Martin, and Dennis (2004) confirming the lack of standard defining emotions. When psychologists initially focused on intelligence, emphasis was on cognitive intelligence. Researchers, such as Wechsler, suggest that intelligence encompasses non-intellective and intellective elements (Cherniss, 2000). Whiteoak and Manning (2012), in 1920 Robert Thorndike, suggest that intelligence could be fragmented into three elements, indicating:

- Abstract intelligence entails the ability to understand and manage ideas
- Mechanical intelligence refers to the ability to understand and manage concrete items
- Social intelligence is the ability to understand and manage people

The description of social intelligence resembles what emotional intelligence is. Thorndike considers that the intelligence quotient alone did not explain the variance that caused success in life (Whiteoak & Manning, 2012). Interpersonal success depends on the ability to rationalise emotional experiences and respond adaptively (Whiteoak & Manning, 2012).

According to Cherniss (2000), in the 1980s, other researchers developed multiple intelligences, proposing that intrapersonal and interpersonal intelligence are as important as emotional intelligence. It was only in 1990 that the term emotional intelligence was coined by Salovey and Mayer as the ability to monitor the emotions of others and oneself, to discriminate among them, and use this information to facilitate thoughts and actions (Zhu, Liu, Guo, Zhao, & Lou, 2015).

According to Śmieja and Kobylińska (2011), emotional intelligence is the competence to identify and express, understand, and digest emotions in thought, including the ability to regulate positive and negative emotions. Emotional intelligence involves not only the ability to know when and how to express emotion, but also includes the ability to control emotion (Cherniss, 2000). Bar-On (2006) posits that perception, understanding, and managing emotions effectively are the core competencies of emotional intelligence.

An individual with high levels of emotional intelligence can understand, assess and accurately perceive others' emotions, enabling them to better respond to changes in their social environments and build social networks (Cherniss, 2000). Those with emotional intelligence can manage their emotions and exert influence over the emotions of others (Cherniss, 2000).

#### 2.2.2 Models of emotional intelligence

According to Petrides and Furnham (2003), the operationalisation of emotional intelligence has a direct impact on its measurement. Two diverse schools of thought exist regarding emotional intelligence, indicating the ability trait and mixed emotional intelligence (Cho, Drasgow, & Cao, 2015).

Ability emotional intelligence, also known as cognitive-emotional intelligence, is defined as the ability to process sophisticated information about one's self and others and use the information to guide thinking and behaviours (Cho et al., 2015). It has a strong cognitive component since ability-based emotional intelligence largely relates to the processing of emotional information (Di Fabio & Saklofske, 2014). Salovey and Mayer's four-branch model of emotional intelligence influences the ability-based conceptualisation of emotional intelligence (Whiteoak & Manning, 2012).

Trait emotional intelligence, also known as emotional self-efficacy and the mixed model of emotional intelligence, includes a group of non-cognitive competencies individuals possess to assist them to cope under difficult circumstances (Cho et al., 2015). This model of emotional intelligence combines personality traits with social behaviours. According to Whiteoak and Manning (2012), the mixed model of emotional intelligence was developed from Bar-On's model of social intelligence (1999) and Goleman's competency-based model of emotional intelligence (2001).

Motivation, personality, temperament, character, and social skills, along with the four domains of emotional intelligence, are observed in mixed emotional intelligence models (Cho et al., 2015). Since emotional experience is considered a subjective experience, it cannot be measured employing a cognitive ability test

format; instead, emotional intelligence is measured by employing a trait-based test (Cho et al., 2015).

There are various operationalisations of mixed emotional intelligence. Petrides and Furnham (2001) through content analysis specify four broad domains of mixed emotional intelligence, such as well-being, self-control, emotionality, and sociability. These domains are further defined in Table 2.1, employed to construct emotional intelligence according to the trait model of emotional intelligence.

Well-being	- Self-esteem
	- Trait happiness
	- Trait optimism
Salf against	
Self-control	- Emotion regulation
	- Stress management
	- Low impulsiveness
Emotionality	- Emotion Perception
y	UNIVER-S Emotion Expression
	WESTER Relationship skills - Trait empathy
Sociability	- Competence / awareness
	- Emotion management
	- Assertiveness

Table 2.1: Four domains of emotional intelligence

*Source*: Cho et al. (2015).

Much debate exists surrounding the various models and to identify the most suitable model (Whiteoak & Manning, 2012). These models are discussed in the subsequent section.

#### 2.2.2.1 The four-branch model of emotional intelligence

The focus of the four-branch model, developed by Mayer and Salovey in 1997, is on ability aligned with the hierarchical model presented in Figure 2.1. This includes emotion perception, emotion facilitation, emotion understanding, and emotion management (Cho et al., 2015). This model can be thought of as a continuum of lower psychological functions to more complex functions (Mayer et al., 2008).



#### Figure 2.1: The four-branch model of emotional intelligence

Source: Mayer, Salovey, and Caruso (2008). Y of the

*Emotion perception* involves detecting emotional information in the environment while referring to the ability to identify (through faces, pictures, voices, and cultural artefacts) others' emotions and accurately express personal emotion (Salovey & Grewal, 2005). Perceiving emotions accurately in oneself and others is considered a critical lower-level skill (Mayer et al., 2008). *Emotional facilitation* refers to the ability to achieve goals by influencing the cognitive system (Salovey & Grewal, 2005). To illustrate this point, perhaps individuals focusing on positive thinking may improve their productivity. Emotional *understanding* relates to personal knowledge and understanding of the root cause of emotions and the links between emotions (Cho et al., 2015). Lastly, *emotional management* deals with controlling own emotions and the emotions of others to generate successful outcomes. Managing emotions to attain specific goals is

among the more complex skills (Mayer et al., 2008). Each skill or branch can be developed into a more complex skill with age and experience. For example, perceiving emotions usually starts with perceiving basic emotions in a tone of voice and facial expressions. These skills may develop into the accurate perception of emotional blends and recognition of emotional microexpressions (Mayer et al., 2008).

#### 2.2.2.2 Goleman's competency-based model of emotional intelligence

According to Gardner and Stough (2002), an additional theory is Goleman's (2001) competency-based model for emotional intelligence. This model was specifically developed for the work context. Emotional intelligence separates performers from non-performers (Gardner & Stough, 2002). Building on Salovey and Mayer's model of emotional intelligence, Goleman proposed a five-element model to conceptualise emotional intelligence, which he later reduced to include four elements (Whiteoak & Manning, 2012). These elements include self-awareness, self-management, social awareness, and relationship management.

*Self-awareness* deals with the personal ability to understand and accurately assess feelings (Gardner & Stough, 2002). Self-awareness is further defined as the ability to identify emotions and feelings within oneself in real-time and link those feelings with thoughts and actions (Kunnanatt, 2008). Self-awareness is a national competency that supports developing the other competencies (Whiteoak & Manning, 2012).

*Self-management* relates to the ability to manage internal states, such as impulses. This element refers to individuals' ability to use self-awareness to manage own emotions and thoughts rationally, enabling logical and socially acceptable decisions (Kunnanatt, 2008).

*Social awareness* refers to the ability to read the emotions of groups and people with accuracy.

Lastly, *relationship management* refers to the ability to influence and yield desirable responses from others (Gardner & Stough, 2002).

#### 2.2.2.3 Bar-On's model of emotional intelligence

The development of Bar-On's model of emotional intelligence is based on Darwinian concepts, recognising the importance of the expression of emotion for adaptation and survival (Stanimirovic & Hanrahan, 2012). Reuven Bar-On developed this model in 1999 (Gardner & Stough, 2002). The fundamental premise of this theory observes the individual's skill to process and use emotional information in social settings. Bar-On's major premise is that emotional intelligence is a set of abilities, capabilities, and non-cognitive skills that assist individuals to manage and overcome environmental stressors (Gardner & Stough, 2002). Most descriptions of this emotional intelligence include one or more of the following elements:

- The ability to understand and express emotions and feelings
- The ability to understand others' emotions and relate to them
- The ability to manage and control emotions
- The ability to navigate change, solve interpersonal and personal problems
- The ability to be self-motivated (Bar-On, 2006)

This model comprises five components, indicating intrapersonal, interpersonal, adaptability, stress management, and general mood. Bar-On suggests that these five components change over time and can be modified through training and development interventions (Gardner & Stough, 2002).

*Intrapersonal* refers to the ability to be aware of oneself and own strengths and weaknesses and express feelings and thoughts in a non-destructive manner. The emotional intelligence competencies assessed by this element include self-regard, emotional self-awareness, assertiveness, independence, and self-actualisation (Gardner & Stough, 2002).

The *interpersonal* component refers to an individual being socially and emotionally intelligent, in that they can make themselves aware of others' feelings, emotions, and needs. This component also refers to the ability to create and uphold mutually beneficial relations. The emotional intelligence competencies assessed in this element are empathy, social relationship, and interpersonal relationship (Gardner & Stough, 2002).

*Adaptability* refers to the effective management of changing personal, social, and environmental conditions by flexibility coping with and responding to the provided situation. In this element, reality-testing, flexibility, and problem-solving are used to test emotional intelligence competency (Gardner & Stough, 2002).

*Stress management* refers to the inclination to be calm and the ability to work under pressurised situations by that managing own emotions so that it works for a cause and not against it. In this element, individuals' stress tolerance and impulse control are tested to obtain a reading of their emotional intelligence competence (Gardner & Stough, 2002).

Lastly, *general mood* refers to the ability to be sufficiently optimistic and selfmotivated (Bar-On, 2006). Emotional intelligence competencies in this element are tested through the measurement of optimism and hope (Gardner & Stough, 2002).

#### 2.2.3 Emotional intelligence in the workplace

Various benefits are associated with emotional intelligence, specifically in the workplace. According to Mayer, Salovey, and Caruso (2008), employees with higher emotional intelligence promote better attention to their physical and mental processes. This enables employees to detect their bodily responses to certain outcomes. The emotionally intelligent can, therefore, respond better to stress (Cherniss, 2000).

Such employees can also recognise and rationalise the emotional consequences of certain events and are more likely to feel in control of their work and have better mental health. Emotional intelligence fosters better interpersonal relations (Schutte & Loi, 2014). This results in enhanced teamwork and collaboration within the workplace, which has a wealth of benefits (Schutte & Loi, 2014). This is evident in a study by Jordan and Troth (2011), observing that members with high emotional intelligence displayed greater performance than those with

members lacking emotional intelligence (Kunnanatt, 2008). Individuals with higher emotional intelligence have greater well-being and life satisfaction (Schutte & Loi, 2014).

Leaders with high emotional intelligence are more likely to build strong teams attributable to their ability to understand others' emotions (Whiteoak & Manning, 2012). Another contributing factor to leader effectiveness is the self-awareness associated with emotional intelligence. According to Whiteoak and Manning (2012), self-aware leaders can observe how their actions affect their subordinates and inspire followers to probe deeper into themselves, increasing job satisfaction.

Leaders with strong emotional intelligence create follower groups, experiencing high degrees of organisational support and psychological safety. Peers high in emotional intelligence can also create social support among their colleagues. There is, therefore, a trickle-down effect from the leader to the follower. Studies on emotional intelligence in the workplace indicated that self-aware managers have a good understanding of their own emotions and that of others. These managers, therefore, are in a better position to encourage, inspire, and challenge employees in the workplace (Kunnanatt, 2008).

Emotional intelligence explains additional variance beyond general mental ability and personality in work performance (Cho et al., 2015). Based on 121 studies across diverse organisational settings, Goleman suggests that emotional intelligence should weigh twice as much as technical and cognitive ability when considering its impact on crucial performance areas in the workplace (Kunnanatt, 2008).

Organisations requiring customer service or quality in work processes should focus on emotional intelligence since employees with higher emotional intelligence can provide improved services to clients (Whiteoak & Manning, 2012). Such employees cope proficiently in high-stress environments set against employees with lower levels of emotional intelligence. This is because they can better manage their emotions (Cherniss, 2000). In several situations, people high in emotional intelligence can cope better as they use their emotions to their advantage (Peña-Sarrionandia et al., 2015). Emotional intelligence became more significant as more employees are expected to work in virtual and cross-cultural teams (Ambrose, Chenoweth & Mao, 2009). Emphasis is on the emotional regulation of employees to be effective in these work teams since the non-verbal cues may be obscure. The subsequent section investigates the role of emotional regulation in emotional intelligence.

#### 2.3 Emotional regulation

According to Troth et al. (2018), much confusion exists surrounding research relating to emotional intelligence and emotional regulation. These authors contend that the term 'emotional regulation' was used interchangeably for the emotional management branch of Mayer and Salovey's model of emotional intelligence in error. Peña-Sarrionandia et al. (2015) produce a compelling argument that these two concepts should be viewed as related yet different. Emotional regulation concerns the process of regulating emotions to achieve a specific goal (Peña-Sarrionandia et al., 2015).

Through using emotional regulation, individuals achieve goals irrespective of their adaptive or maladaptive value. For example, using emotional regulation to increase the output of a production unit, a manager might increase his anger towards his employees to acquire them to work overtime. This may cause employees to work overtime to meet the manager's goal in the short run; however, in the long run, this strategy may have unintended negative consequences. Although the goal of the manager is met, the long-term effects are counterproductive.

An emotionally intelligent individual takes into consideration the context and the impact of their decisions on other individuals' emotions (Peña-Sarrionandia et al., 2015). Emotional regulation as a process can be used to achieve goals without an individual being emotionally intelligent. However, without emotional intelligence, the long-term effects of such regulation will not always lead to favourable outcomes.

Based on the foregoing section, emotional regulation must be separated from emotional intelligence. The subsequent section details emotional regulation and its relation to emotional intelligence.

#### 2.3.1 Definition of emotional regulation

Emotional regulation can be defined as influencing the type of emotion experienced, the length of time the emotion is experienced, the intensity of the emotion, and how the emotion is expressed (Peña-Sarrionandia et al., 2015). Emotional regulation includes changes to the emotion; for example, changing its duration or intensity, or psychological processes, such as memory or social interaction (Cole et al., 2004). Gross (2001) defines emotional regulation to include all conscious and non-conscious strategies employed to increase, maintain, or decrease one or more emotional component(s). These components include behaviours, feelings, and psychological responses. Emotional regulation is defined by alterations made to the emotion as opposed to the emotion.

A distinction needs to be made between emotion and emotional regulation. This can be explained by employing the emotion theory (Sumida, 2010). According to Sumida (2010), emotion theory refers to emotion as adaptable and able to assist individuals to process complex information quickly. Cole et al. (2004) detail an example that helps to distinguish emotion from emotional regulation. Emotion, according to the emotional regulation theory, allows a person to quickly evaluate whether it is in their best interest to stay in a certain situation or act speedily to avoid the situation. Emotional regulation assists individuals to evaluate their response option even in situations where their first reaction is to avoid the emotional situation. The emotional regulation process, therefore, is important as it helps individuals to behave in a manner that assists them to achieve their personal needs and goals and resist impulses.

Emotional regulation is conceptualised as the behaviours that purposefully keep or change emotional experiences to achieve specific goals (Liyanagamage et al., 2019). Emotional regulation is, therefore, the manipulation of emotions to accomplish a goal or specific outcome. According to Cole et al. (2004), emotional regulation is important to study as it explains why emotions facilitate other psychological processes, such as focus, attention, problem-solving, and the support of relationships. Emotional regulation can also lead to negative effects, such as disrupt focus, harm relationships, and interrupt problem-solving processes.

Emotional regulation can also be regarded as a continuous process of individuals' emotional patterns in response to contextual demands (Sumida, 2010). Those who employ emotional regulation influence emotional responses. According to Shiota, Campos, Keltner, and Hertenstein (2004), a strong emotional regulation ability is important for developing healthy interpersonal relationships and sound mental health. This could be attributable to emotional regulation playing a role in altering an individual's experience with emotions concerning what they feel, when to feel, how to feel, and how to express themselves. According to Gratz and Roemer (2008, p. 42), emotional regulation may be operationalised as involving:

(a) awareness and understanding of emotions, (b) acceptance of emotions, (c) ability to control impulsive behaviours and behave in accordance with desired goals when experiencing negative emotions, and (d) ability to use situationally appropriate emotion regulation strategies flexibly to modulate emotional responses as desired in order to meet individual goals and situational demands.

Individuals who lack these abilities may have difficulty in regulating emotions or struggle with emotional dysregulation (Gratz & Roemer, 2008). Employing this operationalisation, a clear link between emotional intelligence and emotional regulation is indicated. *Awareness and understanding emotions* relate to the *emotional understanding* branch of emotional intelligence referring to an individual's knowledge and understanding of the root cause of emotions, and the links between emotions (Cho et al., 2015).

According to Cole et al. (2004), emotional regulation can be treated as a trait; for example, someone able to regulate their emotions well is termed a 'well-regulated' individual. Emotional regulation can also be treated as a transitory

change, varying from one moment to the next as the emotional demands of the situation changes.

It is postulated that emotions are regulated on two levels, indicating the individual level and the intrapersonal level. According to Troth et al. (2018), regulating emotions at an individual level involves strategies to aid individuals to regulate their own emotional experiences and expressions. Conversely, regulating emotions on the intrapersonal level refers to employing regulation strategies to influence the emotional experiences and expression or using others to regulate their own emotions (Troth et al., 2018).

Similarly, emotional regulation may be intrinsic and extrinsic. Intrinsic emotional regulation refers to regulating own emotions. Eisenberg and Spinrad (2004, p.338) define emotional self-regulation (intrinsic emotional regulation) as:

Initiating, avoiding, inhabiting, maintaining, or modulating the occurrence, form, intensity, or duration of internal feeling states, emotional related physiological, attentional process, motivational states, and the behavioural processes, motivational states, and/or the behavioural concomitants of emotion in the services of accomplishing affect-related biological or social adaptation or achieving individual goals.

Extrinsic emotional regulation refers to regulating the emotions of others. For example, if a child cries hysterically because his mother has left the room, the nanny taking care of the child might feel sorry for the child and call the child's mother (Eisenberg & Spinrad, 2004). The child crying because the mother left, regulates the nanny's emotions to call the child's mother.

Whereas there is much confusion regarding emotional regulation and how it interplays with emotional intelligence, several authors agree on two general emotional regulation strategies commonly employed. According to Megias-Robles, Gutierrez-Cobo, Gomez-Leal, Cabello, Gross, and Fernandez-Berrocal (2019), two of the most commonly used emotional regulation strategies to study emotional regulation is cognitive reappraisal and expressive suppression. These two are discussed next within the process model of emotional regulation.

#### 2.3.2 Models of emotional regulation

According to Peña-Sarrionandia et al. (2015), the process model of regulation developed by Gross attempts to classify the emotional regulation processes at the first impact into the emotion-generative process. A summary of this process is depicted in Figure 2.2. Individuals may employ five strategies (at any time) to alter the direction of their emotions. These strategies may be used at the micro level (milliseconds after the occurrence of a possible emotional stimulus) or macro level (hours or days after the occurrence of a possible emotional stimulus). A distinction can be made between antecedent-focused strategies and responsefocused strategies (Gross, 2001). The former refers to strategies employed before response tendencies were fully activated, resulting in changed behaviour and physiological responses. The latter refers to strategies implemented once the emotion is already underway after the tendencies were generated. Typically, antecedent-focused strategies all occur during situation selection, situation attentional deployment, and cognitive change processes. modification, Conversely, response-focused strategies occur when using response modulation processes once the emotion is experienced by the individual.

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Figure 2.2: A Summary of the process model of emotional regulation

Source: Peña-Sarrionandia et al. (2015)

Figure 2.2 indicates the flow of the emotional regulation process. The first of the five processes is situation selection. Situation selection entails selecting or avoiding activities people or places attributable to their expected emotional impact. This strategy affects the emotional trajectory at the earliest stage (Peña-Sarrionandia et al., 2015). An individual choosing to modify their emotions at the situation selection can either confront the situation or avoid the situation, depending on the outcome or emotional experience the situation may elicit (Peña-Sarrionandia et al., 2015). According to Nozaki (2018), at this point, an individual can perform an action that increases or decreases the evocation of certain emotions.

The next process is *situation modification*, aiming to modify the situation to change the emotional impact (Nozaki, 2018). With this strategy, an individual may take practical actions which may directly impact the situation (direct situation modification); they may also consult others for assistance to modify the
situation (help or support seeking) or an individual may take steps to defuse the situation (conflict resolution) (Peña-Sarrionandia et al., 2015).

Attentional development refers to an individual altering how they feel by selecting the information interpreted. According to Nozaki (2018), an individual can alter how they feel by redirecting emotions. This can be achieved using distraction to shift attention, rumination (focusing on negative thoughts), and focusing on the present moment objectively (mindfulness) (Peña-Sarrionandia et al., 2015). Another strategy is cognitive change, referring to changing the way one thinks to change the feelings associated with a situation. With this strategy, an individual may appraise their self-confidence to complete the task or determine if they possess the resources to deal with the situation. An individual may also choose to reappraise the situation to observe it in a positive light (Peña-Sarrionandia et al., 2015).

Cognitive reappraisal, as indicated in Figure 2.3 below, occurs within the situation selection, situation modification, attentional deployment, and cogitative change processes (Gross, 2001). Cognitive reappraisal is conceptualised as a form of cognitive change, entailing the reinterpretation of emotion eliciting a situation to change the emotional impact (Megias-Robles et al., 2019). By using cognitive reappraisal, an individual attempts to reassess the situation before the emotional response tendency is completely triggered to alter the emotional impact of an event (Măirean, 2015). The cognitive reappraisal strategy is also termed the antecedent-focused strategy as it occurs before the emotion response tendencies have been formulated (Măirean, 2015).

The last process is *response modulation*. This occurs late within the emotionally generative process after response tendencies have already been developed. Within this strategy, an individual may choose to share their emotions, use verbal or physical aggression to reduce body tension, start using substances or suppress their behaviours (Peña-Sarrionandia et al., 2015). This is known as expressive suppression. Expressive suppression is response modulation that occurs while the individual is emotionally aroused. Expressive suppression entails the hindrance of

ongoing emotion-expressive behaviour (Megias-Robles et al., 2019). By using this strategy, an individual will change their physiological, experiential, and or behavioural responses (Nozaki, 2018). The emotional impact is already experienced; therefore, the individual will attempt to suppress any behavioural responses to the experienced emotion. The individual still experiences unwanted emotions while using this response-based emotional regulation strategy (Măirean, 2015).



#### Figure 2.3: The process model of emotional regulation

Source: Gross (2001).

The subsequent section investigates the theoretical links between emotional intelligence and emotional regulation.

#### 2.3.3 Emotional intelligence and emotional regulation

According to Brockman, Ciarrochi, Parker, and Kashdan (2017), there was much interest in deciphering which emotional strategies have good or bad outcomes. Troth et al. (2018) agree as they believe that the emotional understanding and ability to manage self and others' emotions will be more effective in emotional regulation strategy selection.

Emotional management (one branch in the emotional intelligence model) and emotional regulation were erroneously likened to the same construct (Troth et al., 2018). According to Bodrogi, Bereczkei, and Deak (2020), emotional intelligence refers to individual differences in knowledge identification and regulation of emotions, whereas emotional regulation describes the processes where emotions are experienced, expressed, and changed. Prominent researchers in the fourbranch model, such as Mayer et al. (2008), state that emotional management influences the awareness and selection of the emotional strategy. Gratz and Roemer (2008) conceived emotional regulation as awareness and understanding of emotions. Based on Mayer and Salovey's four-branch model, an emotionally intelligent person should understand and be aware of their emotions and the emotions of others before regulating emotions for a specific outcome.

This is further supported by Sumida (2010) who stated that some authors place a strong emphasis on an individual's ability to identify emotions to regulate emotions. Understanding emotions (emotional intelligence) should be a prerequisite to effectively select the appropriate regulation strategy aligned with the individual's goals. The training aimed at increasing emotional intelligence included reappraisal strategies.

These reappraisal strategies are related to emotional regulation as it is a strategy aimed at regulating emotions using the process model of emotional regulation (Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009). Emotional intelligence and emotional regulation are, therefore, related but distinct concepts. An individual can be aware of their own emotions and the emotions of others (emotional intelligence) but choose an emotional response ineffective in the provided situation (emotional regulation). Emotional intelligence is, therefore, an important prerequisite for successful emotional regulation.

Peña-Sarrionandia et al. (2015) agree that emotional intelligence positively compliments emotional regulation. This is attributable to the superior understanding of an individual's emotions of self and others. In a study by Zysberg and Raz (2019) using physiological data, it was observed that individuals

with higher emotional intelligence could easier regulate their emotions. This was indicated as individuals high in emotional intelligence had greater variations in their heart rate attributable to their ability to self-induce emotional arousal when prompted. Bodrogi et al. (2020) conducted a study into emotional intelligence and regulation, establishing that individuals with high emotional intelligence were more likely to have less difficulty in regulating their emotions.

Megias-Robles et al. (2019) revealed that emotional intelligence shares a positive relationship with cognitive reappraisal. This is significant to Hypothesis 1 as the cognitive reappraisal strategy is considered as an adaptive strategy used by individuals who can control their emotions throughout the emotion-generative process; whereas those with lower EI use expressive suppression once the emotional arousal began attributable to a lowered capacity to regulate the emotion earlier in the process (Megias-Robles et al., 2019). The following hypothesis is proposed against the aforementioned background:

#### Hypothesis 1: A positive relationship exists between emotional intelligence and the cognitive reappraisal strategy of emotional regulation.

The cognitive reappraisal strategy of emotional regulation produces favourable outcomes. According to Megias-Robles et al. (2019), these favourable outcomes include an increase in positive emotions, increased mood repair, and better social relations. (Megias-Robles et al., 2019). Based on this, a leader and follower who can successfully employ the cognitive reappraisal strategy (emotional regulation) should form stronger associations and, by definition, highly effective teams. The transmission mechanism from emotional intelligence to emotional regulation is in part only interesting in the applied setting if it can lead to valued organisational outcomes. A main outcome may indicate stronger leader-follow relationships and team effectiveness. This process can be explained through the social exchange theory (Seo et al., 2018).

#### 2.4 Leader-member exchange (LMX)

The social exchange theory was prominent in literature when explaining LMX. Relationships are described as intangible and tangible exchanges providing rewards and costs (Zafirovski, 2005). Social exchanges are in alignment with what an individual will provide concerning resources and what reward will be gained from such an expense. Using the social exchange theory, the LMX indicates relationships and mutual benefit and reciprocity, where tangible and intangible currencies are exchanged.

The quality of such relationships depends on whether each party perceives the exchange to be fair and equitable (Richards & Hackett, 2012). Differentiation in relationships between subordinates and leaders ensures leaders find the best fit among subordinates' abilities, skills and contributions, and requirements. The more reciprocal exchanges, the more stable role expectations become (Richards & Hackett, 2012). These expectations are unspecified obligations that drive either party to perform in a manner to ensure that expectations are met (Rockstuhl et al., 2012). LMX will now be explained in more detail.

#### 2.4.1 Defining leader-member exchange (LMX)

The leader-member exchange (LMX) theory had originated from socialisation and the vertical dyad linkage theory (VDL). According to Graen and Uhl-Bien (1995), the VDL theory is based on the premise that leaders differentiate among their followers in the manner where they supervise them in a way that the leader develops a closer relationship with some followers, known as the *in-group*, than the others, known as the *out-group*. This was discovered during an investigation into average leadership styles (Graen & Uhl-Bien, 1995)

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LMX moves deviate from this, focusing on dyadic relationships that take on the relationship as a partnership where the leader offers all members a leader-member exchange partnership; this is opposed to only granting one or two followers access to high-quality relationships. It depends on followers to accept this offer (Seo et al., 2018).

Leader-member exchange (LMX) is based on the rationale that leaders form specific relationships with subordinates. These range from high-quality relationships, reflecting social exchanges with followers where the relationship is based on mutual trust, respect, and obligation, to low-quality relationships, where the relationship is based on economic exchanges or contractual activities (Seo et al., 2018). The relationship the leader has with a follower differs from that of other followers. Emphasis is on the relationship between the leader and follower. It is, therefore, not a one-sided relationship, focused on the relationship of the leader with the follower (Lunenburg, 2010). High-quality LMX is based on mutual respect for the abilities of others, the expectation of mutual trust, and anticipation of growth in obligation (Els, Viljoen, Beer, & Brand-Labuschange, 2016).

The leader has more influence in determining the quality of the relationship. This is attributable to the leader offering benefits to the member, such as assistance with work problems and emotional support (Rockstuhl et al., 2012). Relationships, when defined using the LMX theory, are classified as high-quality or low-quality relationships. Low-quality relationships are characterised by mistrust, a lack of support, and a lack of respect (Agarwal, Datta, Blake-Beard, & Bhargava, 2012). This is further supported by Lee (2005), who contends that followers perceiving their leaders as unwilling to invest time in the exchange are unlikely to admire or hold respect for the leader. Conversely, high-quality relationships are formed with a perception of high value, support, and exchange of information (Doden, Grote, & Rigotti, 2018).

#### 2.4.2 Leader-member exchange in the workplace

Employees in high-quality relationships with their leaders are likely to be more committed to the organisation because of their attachment to their leader (Lee, 2005). High-quality relationships provide benefits to the leader and follower, as they can depend on each other attributable to their dyadic relationship. Employees in high-quality relationships have greater support, communication, more negotiation power while receiving a higher status in comparison with their counterparts (Myers, 2006).

Followers in high-quality relationships are perceived as more productive. Their supervisors rate them as higher performers than their counterparts in low-quality relationships (Myers, 2006). These subordinates are more satisfied with their work, position, supervisors, colleagues, and monetary compensation. Followers also benefit from increased support beyond the basic provided by leaders, reciprocated by the follower (Doden et al., 2018). Followers (part of the in-group) have a greater influence on decision-making, more responsibility, enjoy open communication, and are also are afforded consideration (Lunenburg, 2010). The organisation also benefits greatly as followers in the in-group are committed to the organisation and its success (Clarke & Mahadi, 2017).

Members belonging to the out-group are provided with the bare minimum of what is required to complete their contractual duty (Lunenburg, 2010). They will receive support, consideration, and assistance, as required from the leader as part of their duties; however, the leader will not surpass the minimum requirements. Similarly, followers in these low-quality relationships are also expected to do what is required and will not surpass their contractual obligations (Lee, 2005). An additional negative effect of having an out-group is that resentment for followers in the in-group may grow on account of being treated as inferior (Lunenburg, 2010). High-quality relationships (followers in the in-group) are, therefore, beneficial for the organisation, leader, and follower.

#### 2.4.3 Emotional regulation and leader-member exchange

Leader-member exchange (LMX) relationships are based on exchanges between the leader and their followers (Peng, Chen, Xia, & Ran, 2017). Since the relationship between leaders and followers is based on social exchanges, individuals ineffective at facilitating social interactions are likely to have lowquality relationships. Considering this, leaders and subordinates who can understand (emotional intelligence) and manage emotional situations (emotional regulation) accordingly are likely to have high-quality relationships. Xiaqi et al. (2012) agree with this as they state that an individual with emotional intelligence who can identify, control, and manage emotions can effortlessly develop social competencies, such as constructive communications and positive interpersonal relationships. Through cognitive reappraisal, leaders and followers can successfully use their emotions to achieve goals in a manner that does not harm the relationship (Peña-Sarrionandia et al., 2015). It is expected that the emotional intelligence of leaders and followers enhances their ability to regulate emotions, using the cognitive reappraisal strategy, by that facilitating strong LMX relationships.

The following hypothesis is proposed against the aforementioned background:

# Hypothesis 2: Cognitive reappraisal mediates the relationship between emotional intelligence and LMX.

Agarwal et al. (2012) also contended that one of the spill-over effects of highquality LMX relationships is the link to high degrees of work engagement. Based on the social exchange theory, it could be contended that a high LMX relationship provides an incentive for followers and leaders to invest in the relationship since the expectation and likelihood of reciprocal behaviour is high (Gutermann, Lehmann-Willenbrock, Boer, Born, & Voelpel, 2017). This observation is according to the conservation of resources theory, postulating that individuals invest resources to minimise losses (Akhtar, Boustani, Tsivrikos, & Chamorro-Premuzic, 2015). Based on this theory, team members will invest more resources in the relationship. Based on the social exchange theory, leaders will reciprocate this investment by that resulting in a high-quality LMX relationship. The link between LMX and work engagement is detailed in the subsequent section.

#### 2.5 Work engagement

#### 2.5.1 Defining work engagement

Kahn (1990) was one of the first authors that defined work engagement. The author contended employees reveal diverse parts of themselves concerning their cognitive and emotional, and physical resources when completing work tasks.

Employees engaged are present physically, cognitively, and emotionally. Kahn (1990) further named three psychological conditions related to work engagement, namely, meaningfulness, safety, and availability.

*Meaningfulness* is determined by individuals' opinion of how much they will receive in return for their cognitive, emotional, and physical capacity expended. *Safety* can be explained as the extent to which employees sense they can reveal themselves without negative consequences.

Lastly, *availability* refers to the extent to which employees believe they have the psychological resources to complete tasks.

These conditions shape how individuals inhibit their roles at work. According to Kahn (1990, p. 703), employees involuntarily ask themselves three questions each time they encounter a work assignment:

(1) How meaningful is it for me into bring myself to this performance? (2) How safe is it to do so? and (3) How available am I to do so?

It defines engaged employees as individuals who complete tasks with energy, involvement, and efficiency, dealing with the high demands of the job (Bakker & Albrecht, 2018). Engaged employees are characterised by high energy, enthusiasm, inspired and pride in their work (Breevaart, Bakker, Demerouti, & Van Den Heuvel, 2015). Engaged employees use their entire existence to complete a job-related task; they are completely immersed in their tasks (Bakker, & Albrecht, 2018). Employees, therefore, decide whether to use all their resources within their work-life; employees who dedicate their resources to their organisation are engaged.

Although varying definitions of work engagement exist, there is a consensus among researchers that work engagement ultimately constitutes employees with an exorbitant amount of energy to complete work tasks; they have a strong sense of identity in their work (Bakker, Schaufeli, Leiter, & Taris, 2008). Work engagement is a long-lasting and consistent behavioural psychological state, whereas a momentary state focuses on one aspect or event (Schaufeli et al., 2002). The employee is engaged for a lengthy period, as contrary to being engaged only some days of the week (Schaufeli et al., 2002).

#### 2.5.2 Models of work engagement

Schaufeli et al. (2002) present traits used to conceptualise work engagement. The first trait of work engagement is *vigour*, displayed by high energy and mental resilience completing tasks, the ability to preserve in trying times, and an inclination to expand the effort in their work. *Dedication* is characterised by "a sense of significance, enthusiasm, inspiration, pride and challenge" (Schaufeli et al., 2002. p.73). The last trait, *absorption*, is experienced when employees sense happiness to the extent they have difficulty in detaching from their work. Employees displaying absorption find that time passes quickly as they are focused and captivated by their tasks (Schaufeli et al., 2002). Employees who experience all three traits are engaged within the organisation. Based on this definition, employees mentally committed to their organisation are energetic when performing a task, experience happiness, assuming their tasks are important can be identified as engaged employees (Woods & Sofat, 2013).

The job demand resources (JD-R) model was employed to expose the drivers of work engagement. The JD-R model may be observed as having two working conditions that could result in employee well-being. The model is classified into job demands and job resources. *Job demands* are the physical, psychological, social, or organisational components of the intended task by employing job resources (Bakker et al., 2007).

*Job resources* are the physical, psychological, social, or organisational components of the task, enabling employees to respond to job demands and reduce its associated costs while promoting growth and assist with learning and development (Bakker et al., 2007). Job resources include a social support network at work, feedback, skill variety, autonomy, and opportunities to learn. The job resources provided to employees help limit or eliminate the negative

consequences of demanding tasks. It reduces the psychological costs employees encounter without additional resources (Maden-Eyiusta, 2016).

According to Young and Steelman (2017), the more job resources, the more geared employees are to deal with challenging work goals. Organisations should, therefore, focus on providing resources to employees, especially during high job demand periods. Bakker et al. (2011) add that engaged employees could be motivated to proactively alter their job demands and resources to reach peak performance.

The conservation of resources (COR) theory can also be used to understand work engagement. According to this theory, humans are motivated because the acquisition and accumulation of resources are observed as valuable. It is, therefore, a driving force that will initiate and preserve behaviour (Salanova, Schaufeli, Xanthopoulou & Bakker, 2010). Employees will invest in resources that will allow them to maximise appropriate returns with employees reinvesting in the workplace (Halbesleben, Harvey, & Bolino, 2009). The more perceived value is being perceived by employees, the more employees are likely to reinvest the same resources in the organisation, enhancing work engagement.

### 2.5.3 Engagement at work VERSITY of the

An engaged workforce can contribute substantially to organisational performance. According to Saks (2006), work engagement was predicted as the driving force behind several positive organisational outcomes, such as increased employee productivity, financial returns, and organisational success. Chughtai and Buckley (2011) report that work engagement concerns researchers as it positively associates with job performance, customer loyalty and satisfaction, and financial returns. George (2011) confirms that engaged human capital contributes to an organisation's bottom line.

Engaged employees were characterised as optimistic (Schaufeli et al., 2002). Concerning recognition appreciation and success, engaged employees produce positive feedback (Bakker et al., 2011). After a lengthy day's work, engaged employees describe their tiredness as a positive experience attributable to the perceived accomplishments of working. It is important to distinguish that even though engaged employees work long hours; they differ from workaholics as their efforts are because they experience work as fun and rewarding. Workaholics, conversely, have a heightened irresistible drive to work (Gorgievski, Bakker, & Schaufeli, 2010). Engaged employees are likely to be positive observers attributable to their positive attitude and experience work as entertaining.

Engaged employees are important to organisations as most organisational goals can be met through employees willing to exceed their organisations' expectations (Sundaray, 2011). With engaged employees, the staff complement will be productive, achieve targets punctually, use organisational resources efficiently, and are less likely to be absent (Sundaray, 2011).

According to George (2011), various benefits relate to work engagement; however, researchers may have disregarded some negative aspects of high levels of work engagement. Since engaged employees experience work as positive, fulfilling, meaningful, and are energised by their work, they will work longer hours, sacrificing more of their time. This increased effort may not be compensated with higher levels of remuneration for workers. Organisations may exploit employees who afford more of their time, receiving intrinsic benefits only, such as a great sense of responsibility. Organisations benefit financially, whereas employees do not. Injustice perceptions of employees may be negatively affected by the lack of equilibrium between inputs and outputs if this trend continues. Work engagement is, therefore, unlikely to continue if employees sense their ratio of inputs to outputs is inconsistent (George, 2011).

#### 2.5.4 Work engagement and leader-member exchange

A degree of agency is assumed in workers developing a degree of work engagement; however, management also plays a significant role in determining work engagement (Wiley, 2010). Leadership style as a powerful driver of work engagement is, therefore, expected. According to Wiley (2010), leaders need to encourage confidence in the organisations' prospects, while respecting and recognising employees and their value.

Leaders will understand and influence others towards a goal through high-quality relationships. Agarwal et al. (2012) observed that individuals in high-quality LMX relationships receive more time, direction, and emotional support from leaders. This contributes to employees' psychological safety emotions. According to Agarwal et al. (2012), psychological safety is important to promote work engagement because it lessens the depletion of the vigour dimension of work engagement. Employees will have more job resources (according to the JD-R model) to conduct their work tasks with a spill-over effect on work engagement. This is because LMX results in employees in high-quality relationships receiving more resources from their leaders, such as additional time to complete tasks, direction, and emotional support (Agarwal et al., 2012).

According to the social exchange theory discussed previously, the LMX relationship is based on exchanges of intangible and tangible currencies that mutually benefit both parties (Richards & Hackett, 2012). The quality of this relationship depends on the quality of the exchanges. The more a leader or follower offers high-quality exchanges, the more they can expect to be reciprocated. Expectations are that if employees are engaged at work, they will use their whole being to complete job-related tasks (Kahn, 1990). Leaders who observe this work engagement will be more likely to reciprocate such behaviour, forming a high-quality relationship. These reciprocal relationships can be explained by employing the crossover theory.

The crossover theory postulates that psychological states transfer from one individual to another, creating social learning (Gutermann et al., 2017). A crossover is a dyadic, inter-individual transference of well-being among closely connected individuals within a specific domain, such as the workplace or family (Bakker & Demerouti, 2009). Both negative and positive psychological traits can be transferred. Since leaders interact with their followers regularly, followers can identify these behaviours in the motivational and affective states of their leader.

When their leader shows work engagement, they can observe and learn this behaviour through social learning. The following hypothesis is formulated against this background:

#### Hypothesis 3: A significant positive reciprocal relationship exists between work engagement and LMX.

The foregoing section indicates that work engagement can emanate from the relationship between leaders and followers. Work engagement can also be formed from the emotional control that employees enjoy while completing their work tasks. According to Extremera, Mérida-López, Sánchez-Álvarez, and Quintana-Orts (2018) employees with higher levels of emotional intelligence regulate their emotions while completing a task which may promote greater feelings of task ownership. The subsequent explores the link between emotional intelligence and work engagement in more detail.

#### 2.5.5 Emotional intelligence and work engagement

Emotional intelligence adds valuable personal resources aiding individuals in their performance. Extremera et al. (2018) posit that emotionally intelligent employees are equipped to control and regulate their emotions. They can, therefore, respond more energetically and have more pride in their work. CAPE

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This links to the vigour dimension of work engagement, defined as mental resilience while working. Schutte and Loi (2014) assert that emotionally intelligent employees are more likely to have control of their work and are more inclined to be satisfied at work. This links to the absorption trait of work engagement. Employees displaying high degrees of this intelligence are more likely to feel in control of their work, embracing better mental health (Schutte & Loi, 2014).

According to the COR theory, people invest personal resources to reduce losses and maximise gains. Emotional resources present a personal resource likely to cause positive attitudes, therefore increasing work engagement (Akhtar et al., 2015). Emotionally intelligent individuals have successful interactions with their colleagues, collecting more emotional resources which motivates them to exert more effort at work to maximise outcomes as required by the COR theory (Akhtar et al., 2015). Those who can control and manage their personal resources are more likely to be engaged at work, holding a wealth of personal resources to deal with job demands. The following hypothesis is formulated against this background:

## Hypothesis 4: A significant positive relationship exists between emotional intelligence and work engagement.

Emotional intelligence is hypothesised to positively relate to work engagement; however, it can be expected that the inverse would be true for burnout. This is attributable to observing burnout as the inverse of work engagement (Schaufeli et al., 2002). An engaged employee may have a positive attitude and feel rewarded by long hours of work, whereas an employee experiencing burnout will feel exhausted and disconnected. Not all employees work in high-quality LMX relationships where emotional investments are reciprocated. Those who experience burnout withdraw cognitively and emotionally, limiting building high-quality relationships (Kahn, 1990). The subsequent explores burnout concerning emotional intelligence and LMX.

## 2.6 Burnout UNIVERSITY of the 2.6.1 Defining burnout STERN CAPE

The term burnout was first used in the United States in 1960 as a metaphor to describe mental exhaustion (Schaufeli, 2003). The term was informally used among the working class of poverty lawyers, social workers, psychiatrists, teachers, probation officers, and hospice counsellors. It described the gradual depletion of energy, motivation, and commitment, concurrent with physical and mental symptoms (Schaufeli, 2003). According to Rothmann (2003), burnout emerged as a social issue as opposed to a scholarly construct.

Burnout is defined as a persistent negative, work-related state, including feelings of exhaustion, a feeling of lessened effectiveness, and the growth of dysfunctional attitudes and behaviours affecting employees (Asiwe, Jorgensen, & Hill, 2014).

According to Schaufeli and Greenglass (2001), burnout results from demanding work duties causing physical, emotional, and mental resources to be depleted over a prolonged period.

According to Kahn (1990), disengaged employees disconnect themselves from their work duties through physical, cognitive, and emotional withdrawal. The main reason for the withdrawal (often involuntary), is to regain the psychological and cognitive resources to cope effectively with daily work and life-related demands. Disengaged employees may also result in unjustified work expectations, a mismatch between skills and required duties, unequal distribution of work, workplace stressors, and a lack of recognition in the workplace (Heikkeri, 2010).

#### 2.6.2 Models of burnout

#### 2.3.1.1 The Maslach model

Maslach (1982) conceptualised burnout as a psychological syndrome of emotional exhaustion, depersonalisation, and a reduced sense of personal accomplishment among people completing work tasks. This definition is divided into three subscales used to measure burnout in the Maslach Burnout Inventory (MBI) among employees in people's services. *Emotional exhaustion* refers to the feeling of overextending oneself emotionally and feeling drained by others. *Depersonalisation* refers to being de-sensitised and cynical towards people who receive services from the burnt-out individual. Lastly, *reduced personal accomplishment* refers to a reduced feeling of ability to competently and successfully complete work.

This conceptualisation was tailored to individuals in the human sciences. The MBI-GS (Maslach burnout inventory–general survey) measurement was later refined to measure the general public compared to individuals providing services for other people. This inventory comprises three subscales, indicating emotional exhaustion, cynicism, and reduced personal efficacy (Shirom & Melamed, 2006). *Emotional exhaustion* refers to the depletion of physical energy and fatigue. The subscale, *cynicism*, refers to an individual's attitude of insignificance or distance

towards their work. *Reduced personal efficacy* refers to a reduction in an individual's belief in the competent and successful completion of work. Various conceptualisations of burnout based on the population are analysed.

Schaufeli and Enzmann (1998) identify exhaustion coupled with a sense of reduced effectiveness as a fundamental indicator of burnout. These authors also added three additional symptoms, indicating (i) affective cognitive, physical, and behavioural; (ii) reduced motivation; (iii) dysfunctional attitudes and behaviours at work. Rothmann (2003) proposes that constant exhaustion can lead to individuals disconnecting themselves emotionally and cognitively from work, leading to them being de-sensitised to job demands.

#### 2.3.1.2 The phase model

The phase model of burnout was introduced by Golembiewski, Munzenrider and Stevenson (Crow. 2004). This model proposes the MBI dimensions (depersonalisation, personal accomplishment, and emotional exhaustion) be split into high and low levels, forming eight phases of burnout (Taris, Le Blanc, Schaufeli, & Schreurs, 2005). Individuals progress through these phases while becoming burnt out. As individuals pass through the low and high levels of the three dimensions of burnout, the deterioration of work and personal well-being occurs (Crow. 2004).

Based on this model, burnout results from first depersonalisation, then reduced personal accomplishment followed by emotional exhaustion (Goodman, & Boss, 2002). By using the phase mode, an individual is rated on a scale of low or highs on each dimension to identify their phase of burnout. Phase one indicates low burnout, whereas phase eight indicates high burnout. According to Goodman and Boss (2002), this model is unique, focusing on how individuals have experienced a stressor irrespective of its intensity or duration.

#### 2.3.1.3 The conservation of a resources model

According to the COR model, people strive to obtain, maintain, and create resources they value (Hobfoll, 1989). These resources include objects (resources

that have a physical presence), condition resources (social relationships), personal characteristics (coping skills), and energy (valued skills and abilities) (Prapanjaroensin, Patrician & Vance, 2017). When these resources are at risk of being lost for a prolonged period, it may lead to burnout (Prapanjaroensin et al., 2017). The threat may arise because of work-related demands, or loss of work resources, such as unemployment, or the insufficient return for resources invested. These threats are first perceived as a stressor, developing into burnout if the threat or loss of resources continues for a lengthened period (Halbesleben & Buckley, 2004).

#### 2.3.1.4 Job resources model

According to Bakker and Demerouti (2009), burnout occurs when the physical, psychological and emotional efforts required to complete (*job demands*) a task supersedes the physical, psychological, and social resources (*job resources*) that an individual has. Job demands include demands, such as work overload and time pressures (Schaufeli & Salanova, 2014). Conversely, job resources include a lack of feedback and job control (Schaufeli & Salanova, 2014).

Job resources help reduce job demands with psychological and physiological costs, and assist with achieving work goals, and stimulate personal growth (Schaufeli & Bakker, 2004). Without job resources to cope with job demands, burnout is the most likely outcome. Schaufeli and Bakker (2004) confirm that job demands are not negative in nature; however, when job demands require a high effort to be achieved, it may develop into job stressors. These cause the high cost to job resources, leading to negative outcomes, such as depression, anxiety, or burnout. A mismatch between an individual's job resources in relation to job demands over a persistent period can cause burnout (Rothmann, 2003).

Maslach and Leiter developed a model in 1997, focusing on a misfit between an individual's resources and the six domains of the job environment, resulting in burnout (Rothmann, 2003). The greater the divergence between the individual resources and job environment, the greater the chances of burnout. These six

domains of the job environment include workload, control, rewards, community, fairness, and values:

- When job demands supersede human limits, it is called work overload. This is because individuals lack resources to deal with job demands, therefore, resulting in work overload (Rothmann, 2003)
- When individuals have little control over their work activities attributable to inflexible policies, strict monitoring, or disordered working conditions, they lack control over their workload (Rothmann, 2003)
- Employees not rewarded appropriately for their work are also prone to burnout. Rewards entail extrinsic rewards, such as salary and benefits, and intrinsic rewards, such as the pride in doing something important (Rothmann, 2003)
- A reduced sense of community or interpersonal connection with colleagues follows when people lose a sense of positive connection with their colleagues in the workplace. This is caused by continuous unresolved conflicts on the job which cause the breakdown of a community (Rothmann, 2003)
- Dissimilarity in an individual's values and that of the organisation is also one divergence that could cause burnout (Rothmann, 2003)

Several causes can lead to individuals' burnout and these effects may have detrimental consequences for their functioning in the workplace. This contributes negatively to the workplace.

#### 2.6.3 Burnout in the workplace

There are various drawbacks to burnout. For the individual experiencing burnout, the negative impact may include mental health challenges, such as anxiety and depression (Schaufeli & Salanova, 2014). Persons experiencing burnout may also suffer from poor sleep, headaches, nausea, and hypertension. An individual's physical health may become compromised with cardiovascular disease and common infections, such as the flu (Schaufeli & Salanova, 2014). Schaufeli (2003) further adds that typical symptoms, such as sleep disturbance, inability to relax, and irritability, are likely to accompany burnout. Burnout could also cause

cognitive impairments where the individual cannot concentrate, become forgetful, and have difficulty when tasked with complex work duties.

Organisations also suffer when their employees experience burnout. According to Schaufeli and Salanova (2014), organisations, where burnout is prevalent is characterised by high turnover, turnover intentions, job absenteeism, and low performance.

Persons experiencing burnout will withdraw and be be less involved with work tasks to conserve their limited sources of energy and emotional resources (Kotze, 2018). These employees will be negative, cynical, uncaring, and detached from various aspects of the job. Individuals experiencing burnout can also be burdened with lowered levels of motivation, increased headaches, irritability, frustration, and suspiciousness (Rožman, Treven, & Cingula, 2018). Depending on the severity of the burnout, individuals can also start to self-medicate with alcohol or other substances. Because of these responses, the individual will experience feelings of reduced professional accomplishments. Additional negative effects of burnout include decreased productivity, increased absenteeism, poor physical and mental health, and lowered job satisfaction (Rožman, et al., 2018). According to Schaufeli, Leiter, and Maslach (2009), employees lose the capacity to exert influence. If burnt-out employees continue working they are likely to render an insignificant contribution to their work—if any at all.

#### 2.6.4 Burnout and work engagement

Burnout and work engagement can be explained on a circumflex model, assuming all human emotions can be plotted. Figure 2.4 represents the taxonomy of a wellbeing model (Schaufeli & Salanova, 2014).

Figure 2.4: Taxonomy of well-being



Source: Schaufeli and Salanova (2014).

As observed in Figure 2.4, two dimensions exist on the opposite side of the continuum, indicating pleasure to displeasure, and activation to deactivation. According to Schaufeli and Salanova (2014), a combination of these two continuums represents an emotion. Some emotions are depicted in Figure 2.4. The two concepts which captured this research's interest are burnout and work engagement. Burnout has low activation and is unpleasant, whereas work engagement has high activation and is pleasant. The emotions further away from the centre of the circle are more intense. From this model, burnout and work engagement are on the opposite sides of the circle.

Burnout refers to exhausted individuals who are cynical and lacking personal efficacy. Conversely, work engagement refers to individuals psychologically present at work (Schaufeli et al., 2002). Since LMX relationships are exemplified by high levels of psychological safety, high LMX relationships are expected to foster high levels of work engagement. According to the COR theory and the job demand resources model, employees can use emotional resources to counter the negative effects of burnout (Akhtar et al., 2015). Against this background, one would expect positive correlations between high-quality LMX relationships and

work engagement and negative correlations between low LMX relationships and burnout.

Employees experiencing burnout are often exhausted, cynical, and withdrawn from their jobs, indicating resource depletion. Leaders in high-quality relationships, therefore, support and encourage employees. Thus, it is suggested high-quality LMX acts as a substitute for the resources depleted for employees experiencing burnout (Lai, Chow, & Loi, 2018). According to Lai et al. (2018), high-quality LMX will result in higher job satisfaction, increased feelings of energy, and higher performance. This contradicts burnout and cynicism. LMX is, therefore, effective in reducing burnout. The following hypothesis is proposed against the foregoing background:

# Hypothesis 5: A significant negative relationship exists between LMX and burnout.

Individuals low in emotional intelligence are likely to use the emotional regulation suppression strategy to navigate negative emotions. This may lead to negative consequences for psychological and physical health, causing psychosomatic diseases and interpersonal problems (Śmieja & Kobylińska, 2011). These negative consequences also include burnout. According to Andela, Truchot, and Borteyrou (2015), suppressing negative emotions may lead to adverse social behaviour. For this reason, suppressing negative emotions sprouting from low emotional intelligence may lead to burnout. The following hypothesis is proposed against the foregoing background:

# Hypothesis 6: Expressive suppression mediates the relationship between emotional intelligence and burnout.

#### 2.7 Summary

The primary goal of the current chapter is to embed the problem statement and research initiating question in the literature review. The primary objective of the current study was to examine the transmission mechanism between emotional intelligence and emotional regulation in relation to burnout and work engagement through LMX. Although numerous studies examined the relationship between emotional intelligence, work engagement, and burnout, the link between emotional intelligence, emotional regulation, burnout, and work engagement is under-researched. This chapter contends that emotional regulation is an important mediator between emotional intelligence and LMX, and between emotional intelligence and burnout. Figure 2.5 provides a summary of the hypotheses formulated in this chapter.





#### **CHAPTER 3: RESEARCH METHODOLOGY**

#### 3.1 Introduction

Chapter 1 underlined the contextual basis of the study which provided the reader with the primary purpose of the study in response to the primary research question. The literature review in Chapter 2 resulted in the formulation of a conceptual model informed by previous research. This model was translated into a graphical representation, as depicted in Figure 2.5. Each of the linkages in the model can be expressed in statistical hypotheses to empirically test the proposed model.

The aim of Chapter 3 is to describe the research design used to analyse the structural model to investigate the relationships between emotional intelligence, emotional regulation, leader-member exchange, and burnout, as emphasised in the literature review. The section outlines the investigated hypotheses, the research design employed, and the instruments and procedure for data collection. Chapter 3 also explains the descriptive and inferential statistical methods employed to investigate and analyse the data collected. The way missing data are treated is explained. Lastly, the chapter concludes with the ethical considerations guiding the study.

## **3.2 Research objective and hypotheses**

The research objectives discuss the primary question that the research aims to answer (Sekaran, 2003). The overarching research objective of the current study was to determine if the proposed model depicted in Figure 2.5 provided a valid account of the psychological mechanism that drives leader-member exchange, work engagement, and burnout in the workplace. The graphical model represents individual hypotheses.

The research hypotheses formulated in this study are presented as an integrated conceptual model in Figure 3.1. Each path in the model is considered a single hypothesis. Besides the four direct effects, two indirect effects (mediator effects)

were also hypothesised. The overarching model is divided into the following substantive hypotheses:

**Hypothesis 1:** A positive relationship exists between emotional intelligence and the cognitive reappraisal strategy of emotional regulation.

**Hypothesis 2:** Cognitive reappraisal mediates the relationship between emotional intelligence and LMX.

**Hypothesis 3:** A significant positive reciprocal relationship exists between work engagement and LMX.

**Hypothesis 4:** A significant positive relationship exists between emotional intelligence and work engagement.

**Hypothesis 5:** A significant negative relationship exists between LMX and burnout.

**Hypothesis 6:** Expressive suppression mediates the relationship between emotional intelligence and burnout.

Figure 3.1: A proposed theoretical model



Perforated lines: Mediated relationship; -: negative relationship; +: Positive relationship

#### 3.3 Research design

The research design is the strategy compiled to assimilate the various constituents of the study comprehensively and logically (De Vaus, 2001). This ensures that the research problem is effectively discussed as the research design comprises the blueprint for the collection, measurement, and examination of the data.

Quantitative research is defined as the collection of numerical data, focusing on testing theories (deductive) (Bryman & Bell, 2015). Conversely, qualitative research focuses on building theories and typically entails collecting data through semi-structured, opened-ended questions to obtain impressions, words, and sentences (Choy, 2014). Cresswell (2003) poses that when the purpose of the study is to determine relationships among variables, quantitative research is appropriate. Since the proposed theoretical model depicts relationships among variables, a quantitative research design was appropriate for the current research.

A quantitative research design allowed for the statistical analysis of data assisting to respond to the research questions. Employing a quantitative research design has several benefits, such as the generalisability of data attributable to the objectivity of information collected and statistical analysis, which can be performed. A drawback of quantitative data is that questions are often phrased in a close-ended manner. This prevents the researcher from obtaining rich data and human perception on the matters researched (Bryman & Bell, 2015; Choy, 2014).

The study employed an *ex-post facto* research design. The design is similar to an experimental design, with the exception that the independent variables cannot be manipulated. This is attributable to the independent variable and dependant variable occurring before the researcher's observations (Sharma, 2019). An *expost facto* research design inspects the effects (dependant variable) followed by attempts to determine the causes of the effects (independent variable) (Salkind, 2010). This research design enables researchers to identify causal effects of a phenomenon that occurred.

*Ex-post* facto research design is beneficial in the study of human behaviour, as it allows researchers to study a phenomenon in a natural setting. It does not require participants to be exposed to harmful variables, such as suicide, illness, and car accidents (Salkind, 2010). This assists researchers to adhere to ethical guidelines. Although an *ex-post facto* research design was employed for the current study, there are drawbacks associated with this design. According to Salkind (2010), due to the non-random selection of participants and the lack of control of the independent variable, internal validity issues could arise. Since the hypotheses were statistically tested, the drawbacks of internal validity issues are limited. This design fits the current study as the researcher could manipulate none of the variables or analyse the phenomenon before it occurred.

#### **3.4** Statistical hypotheses

The primary research objective was to test whether the substantive model in presents a valid account of the mechanism between emotional intelligence, emotional regulation, LMX, burnout, and work engagement. The validity of the proposed model was evaluated, employing the fit indices of the SEM analyses.

The overarching substantive model can be further divided into specific statistical hypotheses:  $H_{01}: \gamma_{11} = 0$   $H_{a1}: \gamma_{11} > 0$   $H_{02}: \gamma_{11}\beta_{31} = 0$   $H_{a2}: \gamma_{11}\beta_{31} > 0$   $H_{03,1}: \beta_{43} = 0$   $H_{a3,1}: \beta_{43} > 0$ 

 $H_{03.1}$ :  $\beta_{34} = 0$ 

 $H_{a3.1}:\,\beta_{\,34}\,{>}\,0$ 

$$\begin{split} H_{04}: \gamma_{41} &= 0 \\ H_{a4}: \gamma_{41} &> 0 \\ H_{05}: \beta_{53} &= 0 \\ H_{a5}: \beta_{53} &> 0 \\ H_{06}: \gamma_{21}\beta_{52} &= 0 \\ H_{a6}: \gamma_{51}\beta_{52} &> 0 \end{split}$$

#### 3.5 Participants

The population of a study refers to all the participants that the researcher wishes to know something about or is involved in the study (Sekaran, 2003). The population for the current study was all individuals working in the financial services industry in the Western Cape, South Africa.

A sample can be defined as a subset of the selected population to form part of the study (Sekaran, 2003). A sample can be selected in various ways. For this study, convenience sampling, which is a non-probability sampling technique, was employed. This technique has restrictions in terms of generalising the results obtained; however, benefits include the cost-effective and time-efficient collection of data.

To determine the appropriate sample size required for structural equation modelling, a power analysis was conducted. Power analysis is a sophisticated tool using the probability of detecting a significant effect with a provided sample. Statistical power is often calculated to determine the sample size required to observe the true relationship in the data (Wolf, Harrington, Clark, & Miller, 2013). Concerning SEM, power relates to the probability of rejecting a proposed model (i.e., rejecting the null hypothesis of close fit, H0:  $\leq$  0.05) when it should be accepted (i.e. the model fit is mediocre, = 0.08). To calculate the ideal sample size for the structural model in this study, provided a statistical power of 0.80 of rejecting the incorrect model and a significance level ( $\alpha$ ) of 0.05, the SAS syntax

created by MacCallum, Brown, and Sugawara (1996) was converted to statistical programme for the Social Sciences (SPSS) syntax. Results indicated that a sample size of 1075 was required for the current study.

Conversely, Netemeyer, Bearden, and Sharma (2003) recommend a sample size ranging between 150 to 200 as sufficient, especially if the data are to be analysed through factor analysis. According to Anderson and Gerbing (1988), when relatively simple models as specified in structural equation modelling, sample sizes as small as 150 may return unbiased standard errors and model parameters. Although the sample size did not meet the strict criteria of the power analysis, it met the liberal sample sizes recommended in the literature.

The questionnaire was distributed electronically to participants, but only 201 participants responded to the questionnaire. No items were incomplete as respondents were required to respond to all questions. Table 3.1 indicates the characteristics of the sample. Most of the sample were females (62.19%), followed by males (36.23%) and other (1.49%). Most participants were aged 31 to 40 (48.26%) with the least number of participants aged 51 and older (4.98%).

Concerning experience in their current role, most participants had two to four years of experience (41.97%). Concerning education, most of the sample completed Grade 12 concerning their highest qualification. Over 40% of the sample obtained a degree in their formal education. The ethnic distribution of the sample was 18.91% African, 15,42% were White, 61,69% were Coloured, 3,48% were Indian, while 0.50% of participants classified themselves as other. Lastly, 32.84% of participants were single, 55.22% were married, 8.46% were divorced whereas 3.48% described their marital status as other.

Sample (	Characteristic	Frequency	Percentage
	Male	73	36,32%
Gender	Female	125	62,19%
	Other	3	1,49%
	Total	201	100,00%
	18 - 30 years	47	23,38%
	31 - 40 years	97	48,26%
Age	41 - 50 years	47	23,38%
	51 years or older	10	4,98%
	Total	201	100,00%
	0 - 1 year	29	14,43%
	UN <sup>2</sup> -4 years SIT	Y of the	41,79%
Tenure	$WES^{5-7}$ years	<b>CA</b> <sup>38</sup> <b>E</b>	18,91%
	8 - 9 years	12	5,97%
	10 or more years	38	18,91%
	Total	201	100,00%
	Grade 11	1	0,50%
	Grade 12	56	27,86%
Qualifica	ation National Certificate	53	26,37%
	Diploma	9	4,48%
	Degree	28	13,93%
	Honours Degree	37	18,41%

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Sample Charac	teristic	Frequency	Percentage		
	Master's Degree	17	8,46%		
	Total	201	100,00%		
	African	38	18,91%		
	White	31	15,42%		
Ethnicity	Coloured	124	61,69%		
	Indian	7	3,48%		
	Other	1	0,50%		
6	Total	201	100,00%		
17	Not Married	66	32,84%		
Marital Status	Married	111	55,22%		
لللے	Divorced	17	8,46%		
	Other	7	3,48%		
UP	Total	Y of the 201	100,00%		
WESTERN CAPE					

**3.6 Data collection procedure** 

Approval by the Ethics Committee at the University of the Western Cape was obtained before data were collected in the current study. Data was collected employing online self-administered surveys. The survey took approximately 15 minutes to complete. To ensure that only appropriate participants for the study, various screening questions were directed to eliminate irrelevant participants. Certain inclusion criteria were presented for potential participants. Potential participants needed to be part of the financial services industry and were excluded if they were employed in a sales or call centre environment at the time of the study. This decision was made due to sales and call centre environments operating differently from other environments which could have potentially impacted the data. Therefore, these categories of employees were excluded.

According to Sekaran (2003), electronic questionnaires are easier to administer. An additional benefit of using electronic questionnaires is that geographically dispersed individuals can participate. Using this method to collect data is relatively cost-effective, and it allows respondents to respond from the comfort of their homes. The drawbacks of this measure are that the sample is limited to the computer literate and respondents may not be motivated to participate in the study.

In weighing up the advantages and disadvantages of employing an online survey, it was concluded that the risks are manageable. All instruments were converted to Google forms and distributed through email and LinkedIn to participants. Participants had to provide consent before they could respond to the questionnaires. Participants' anonymity was protected, as no personal information was disclosed, and confidentiality was maintained throughout the study. Participants were also informed that they could withdraw from the study at any time without repercussions.

Permission was obtained from the partnering organisations for data collection. A link containing the survey and instructions was initially emailed to custodians within the partnering organisations. The custodians sent the survey to various participants within the organisation to complete. Unfortnantely, limited responses were obtained which resulted in the researcher using LinkedIn to bolster the sample size. Since social media was used, the number of surveys that were sent out and received were difficult to assess. Thus, a response rate could not be established.

#### **3.7** Research instruments

The data were collected by employing five questionnaires. These questionnaires comprised the Genos Emotional Intelligence Inventory, the Emotion Regulation Questionnaire, the Leader-member Exchange Questionnaire, the Utrecht Work Engagement Scale and the Maslach Burnout Inventory General Survey. Besides these questionnaires, a biographical section was included to collect demographic information used to describe the characteristics of the sample. The biographical questions included 'gender?', 'age?' 'marital status?', and 'educational qualification?'.

#### 3.7.1 Genos Emotional Intelligence Inventory

The Genos Emotional Intelligence Inventory (short version) was employed to measure emotional intelligence. According to Gignac (2010), the Genos EI does not form part of the mixed model of intelligence. This inventory has 14 items measuring participants' emotional intelligence. Examples of statements requiring responses were:

I appropriately communicate decisions to stakeholders [and] I fail to recognise how my feelings drive my behaviour at work.

Participants were expected to rate items on a 5-point Likert scale ranging from 'almost never' (1) to 'almost always' (5). Items 2, 4, 6, 8, 10, and 12 are negatively worded and should, therefore, be reverse scored.

#### 3.7.2 Reliability of the Genos Emotional Intelligence Inventory

In a study in Greece among branch managers and their employees, the Cronbach alpha for the Genos Emotional Intelligence Inventory was 0.77 (Chrysafi & Platsidou, 2012). This indicates that the measure is reliable as this is well above the normative 0.70 cut-offs suggested by Foxcroft and Roodt (2013). Assess retest reliability correlations of the Genos Emotional Intelligence Inventory reported correlations of 0.83 and 0.72 based on two and six-month intervals, respectively (Palmer, Stough, Harmer, & Gignac, 2009). In a study by Waglay, Becker, and Du Plessis (2020) in the banking sector in South Africa, the Genos Emotional Intelligence Inventory short version reported a reliability coefficient of 0.75. This indicates that the measure can be considered reliable for use in the South African context.

#### 3.7.3 Validity of the Genos Emotional Intelligence Inventory

The Genos Emotional Intelligence Inventory was administered to a sample of 4775 across various occupations such as finance, sales, and administration across eight countries (USA, Australia, Hong Kong, India, New Zeeland, Singapore, South Africa, and the United Kingdom). Validity data revealed comparative fit index (CFI) = 0.948 and RMSEA=0.066, while the rater-reports revealed CFI= 0.962 and root-mean-square error of approximation (RMSEA)= 0.06 (Gignac, 2010). According to Hooper, Coughlan, and Mullen (2008), an acceptable level of CFI is a coefficient of 0.90 or higher, and RMSEA should be less than 0.08. According to Palmer et al. (2009), the Genos Emotional Intelligence Inventory has high face validity. It can, therefore, be concluded that the Genos EI is valid.

#### **3.8 Emotion Regulation Questionnaire (ERQ)**

Gross and John (2003) developed the Emotion Regulation Questionnaire (ERQ). The instrument measures the habitual use of two emotional regulation strategies, indicating cognitive reappraisal and expressive suppression. According to Freire and Tavares (as cited in Gouveia, de Moura, de Oliveira, Ribeiro, Rezende, & Brito, 2018), those using cognitive reappraisal are likely to transform and reinterpret an event by that changing its emotional implications. This would enable improved emotional and social functioning, decreased depressive symptoms, and increased optimism self-esteem and optimism.

Conversely, Freire and Tavares (as cited in Gouveia et al., 2018) state that expressive suppression hinders the expression of emotional behaviour, which does not necessarily prevent the individual from experiencing negative emotions. The ERQ is a self-reported measure that contains 10 items. Participants are expected to rate items on a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7). Examples of items are:

When I want to feel more positive emotions (such as joy or amusement), I change what I'm thinking about [and] I keep my emotions to myself.

The items measuring cognitive reappraisal are 1, 3, 5, 7, 8, and 10, whereas the items measuring expressive suppression are 2, 4, 6, and 9.

#### 3.8.1 Reliability of the ERQ

The ERQ was administrated to three general communities in Australia with sample sizes of 300, 400, and 348. The ERQ measure was tested for internal consistency. The cognitive reappraisal had Cronbach alphas ranging between 0.89 – 0.90 and expressive reappraisal had Cronbach alphas ranging between 0.76 – 0.80 (Preece, Becerra, Robinson, & Gross, 2020). An additional study conducted among 859 participants in Nigeria revealed reliability coefficients of 0.73 and 0.77 for cognitive reappraisal and expressive reappraisal respectively (Chukwuorji, Ifeagwazi, & Eze, 2017). Since high Cronbach alphas were obtained across all three samples, the measure can be considered as internally consistent.). The measure meets the minimum requirement for acceptable internal consistency (Foxcroft & Roodt, 2013).

#### 3.8.2 Validity of the ERQ

In a study conducted among 127 Italian and 147 German undergraduate students, the model fit indices indicated a CFI of 0.959, a Tucker-Lewis Index (TLI) of 0.959, and an RMSEA of 0.07. For the German sample, the CFI was 0.903, TLI was 0.871 and RMSEA was 0.07 (Sala, Molina, Abler, Kessler, Vanbrabant, & van de Schoot, 2012). In another study among 344 African Americans and 723 European American undergraduate students, the following indices were observed: CFI of 0.92, TLI of 0.90, and RMSEA of 0.055. For the African American sample, the following statistics were reported: CFI of 0.95, TLI OF 0.93, and RMSEA of 0.45 for the European American sample (Melka, Lancaster, Bryant, & Rodriguez, 2011).

#### **3.9** The Leader-member Exchange Questionnaire (LMX 7)

The LMX 7 is a self-reported questionnaire developed by Scandura and Graen, comprising seven questions (Munshi & Haque, 2017). Participants are required to

rate all seven questions on a 5-point rating scale. The response anchors differ for each question asked. For example, Item 1:

Do you know where you stand with your leader, and do you usually know how satisfied your leader is with what you do? [is rated by respondents on a scale from 1 (rarely) to 5 (very often)].

Item 2:

How well does your leader understand your job problems and needs? [is rated by respondents on a scale from 1 (not a bit) to 5 (a great deal)].

Completion of this questionnaire revealed whether the participant has a highquality relationship, a moderate relationship, or a low-quality relationship with their leader. The questionnaire could be completed by subordinates or leaders. A leader needed to complete the questionnaire for each of their subordinates. In the current study, the subordinates rated the quality of the relations they have with their direct supervisors.

#### 3.9.1 Reliability of the LMX 7

In a study among 330 male soccer players in Turkey, the LMX7 revealed a Cronbach alpha of 0.84 (Caliskan, 2015). Another study among random organisations with a sample size of 596 employees yielded a Cronbach alpha of 0.90 (Aryee & Chen, 2006). A study of 300 respondents from the manufacturing sector in China revealed a Cronbach alpha of 0.82. This is well above the normative cut-off of 0.70 (Doden, et al., 2018). In a study conducted in South Africa among 402 participants working in the financial industry, a Cronbach alpha of 0.93 was obtained (Els et al., 2016). The LMX-7 questionnaire can be considered as reliable.

#### 3.9.2 Validity of the LMX 7

The validity of the LMX7 was tested on a sample that worked for a mailing and posting company in the Netherlands. The study revealed an SRMR of 0.03, an
RMSEA of 0.04, and a CFI of 0.99 (Radstaak & Hennes, 2017). Similarly, findings of a confirmatory factor analysis conducted by Caliskan (2015) with a sample of 330 soccer players in Turkey indicated acceptable fit indices: a GFI of 0.95, a CFI of 0.97, and an SRMR 0.05. In another study conducted among 121 football players, confirmatory factor analysis results indicated acceptable fit indices: a GFI of 0.96, a CFI of 0.99, and an RMSEA 0.05 (Yildiz, 2011). The LMX7 questionnaire reported strong support for the construct validity of the measure and, therefore, appears as construct valid.

# 3.10 Utrecht Work Engagement Scale-9 (UWES-9)

To measure work engagement, the Utrecht Work Engagement Scale-9 (UWES-9) was used. UWES is a self-reporting questionnaire with nine items representing the three dimensions of work engagement, indicating vigour, dedication, and absorption, and each is measured by three items. Participants are required to rate their answers on a five-point Likert scale that ranges from 1 (strongly agree) to 5 (strongly disagree). The higher the score, the higher the individual's work engagement level. Below is a brief description of each dimension:

• Vigour

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Vigour is measured by three items which measure levels of energy and resilience, the inclination to exert effort, the ability to avoid fatigue, and persistence when challenging times arise (Schaufeli & Bakker, 2004). This subscale indicates that individuals who obtain high scores can be said to have energy, zest, and stamina. An example of an item on the vigour scale is:

At my work, I feel bursting with energy.

• Dedication

Dedication is measured by three items measuring significance at work and feelings of enthusiasm, being proud, and inspired (Schaufeli & Bakker, 2004). Individuals who obtain high scores on this facet experience strong feelings of

identification with their work, as they find their work to have meaning, be inspiring, and challenging. An example of an item on the dedication scale is:

I am proud of the work that I do.

• Absorption

Three items measure absorption by determining the degree an individual is happily immersed in work and experiences difficulty in detaching (Schaufeli & Bakker, 2004). High scorers on this sub-dimension are engaged, committed, and immersed in their work. An example of an item in the absorption scale is:

I get carried away when I'm working.

# 3.10.1 Reliability of the Utrecht Work Engagement Scale

In a study conducted in South Africa among 402 participants working in the financial industry, Cronbach's alphas of 0.78 for vigour, 0.89 for dedication, and 0.77 for absorption were obtained (Radstaak & Hennes, 2017). The total Work Engagement Scale yielded an alpha of 0.91. In addition, in a study among 1053 participants in India, reliability coefficients for vigour, dedication, and absorption were reported to range between 0.78 and 0.86 (Gupta, Bakhshi, & Einarsen, 2017).

# According to Schaufeli, Shimazu, Hakanen, Salanova, and De Witte (2019), studies across ten diverse samples reveal internal consistency coefficients of between 0.85 and 0.92. An additional study by Sinval, Marques-Pinto, Queirós, and Marôco (2018) among rescue workers reported reliability coefficients ranging between 0.82 and 0.91 for each of the three subscales and a coefficient of 0.95 for

the entire scale. This measure meets the proposed cut-off percentage of 0.70 (Foxcroft & Roodt, 2013).

# 3.10.2 Validity of the Utrecht Work Engagement Scale

A study was conducted across 10 countries (including South Africa) with a sample of 14 521 from different occupations (teaching, social workers, blue-collar

workers, and white colour works). Through confirmatory factor analysis, the study revealed a GFI of 0.95, an RMSEA of 0.03, a CFI of 0.96, and an NNFI of 0.93 (Schaufeli, Bakker & Salanova, 2006).

In another study by Seppälä, Mauno, Feldt, Hakanen, Kinnunen, Tolvanen, and Schaufeli (2009) among a sample of 699 participants from a public health care centre in Finland, findings indicated that a three-dimensional model supported the data. The study revealed CFI = 0.98, RMSEA= 0.077 and NNFI= 0.096. According to Hooper et al. (2008), an acceptable level of CFI is a coefficient of 0.90 or higher, acceptable GFI is greater than 0.95, an NFI greater than 0.80 is acceptable, SRMR of less than 0.08 is acceptable and RMSEA should be less than 0.08. The UWES-9 appears to be construct-valid. According to the authors, the UWES-9 can either be specified as a single dimension or three-dimensional model.

# 3.11 Maslach Burnout Inventory – General Survey (MBI-GS)

According to Aguayo, Vargas, Emilia, and Lozano (2011), the MBI-GS is the most widely used measure of burnout. The MBI-GS comprises 16 items and contains three subscales, such as emotional exhaustion, cynicism, and professional accomplishment (Kitaoka-Higashiguchi, Nakagawa, Morikawa, Ishizaki, Miura, Naruse, Kido, & Higashiyama, 2004). This instrument allows for the measurement of burnout in occupations concerning individuals' work. Participants are required to rate the statement on a Likert scale from 0 (never) to 6 (every day). Exhaustion is measured by five items and refers to being overextended or exhausted by one's work (Bakker, Demerouti, & Schaufeli, 2002). An example of an item on this scale is:

I feel emotionally drained from my work.

Cynicism is measured by five items and refers to the distancing of an individual from the work, with a negative attitude towards work (Bakker et al., 2002). An example of an item on this scale is:

I have become less interested in my work since I started this job.

Professional accomplishment is measured by six items, referring to both social and non-social accomplishments with a focus on efficiency (Bakker et al., 2002). An example of an item on this scale is:

I can effectively solve the problems that arise in my work.

Items 4, 6, 9, 10, 12, and 16 are reversed.

Although there are more recent instruments to measure burnout such as the Burnout Assessment Tool (BAT), the researcher used the MBI GS due to the psychometric properities found in the South African contex.

## 3.11.1 Reliability of the MBI-GS

In a study conducted in the South African police force, the MBI-GS questionnaire revealed an internal consistency ranging between 0.78 and 0.88 (Storm & Rothmann, 2003). A study conducted across South African universities among 565 academic staff indicated that reliability coefficients for the three subscales ranged from 0.81 to 0.87 (Barkhuizen & Rothmann, 2008). Similarly, Narainsamy and Van Der Westhuizen (2013) conducted a study among 202 South African medical laboratory staff and identified reliability coefficients ranging from 0.77 to 0.89. This meets the normative 0.70 cut-off (Foxcroft & Roodt, 2013). The MBI-GS can, therefore, be considered as reliable.

# 3.11.2 Validity of the MBI-GS

Schutte, Toppinen, Kalimo, and Schaufeli (2000) conducted a study among employees in the forestry industry in Finland, Sweden, and the Netherlands. The study revealed an NFI of 0.95, NNFI of 0.94, and CFI of 0.95. In a study conducted among the South African police force, the MBI-GS questionnaire revealed GFI of 0.97, NFI of 0.96, CFI of 0.96, and an RMSEA of 0.05 (Storm & Rothmann, 2003). In a study conducted among 583 bus drivers, 588 lawyers, 684 nurses, 683 physicians, 685 church ministers, 684 teachers, 601 employees in IT in Norway, the MBI-GS was analysed for validity. The result indicated a RMSEA of 0.081 to 0.095, NNFI of 0.94 to 0.94 and CFI of 0.95 to 0.97 (Langballe,

http://etd.uwc.ac.za/

Falkum, Innstrand, & Aasland, 2006). This indicates that the MBI-GS was proven valid in several studies.

## 3.12 Data analysis

To test the hypotheses of this study, the SPSS version 27 was used. Both descriptive and inferential statistics were used to analyse the data obtained. The measurement and structural model were tested with Mplus (version 8.1).

# **3.13** Descriptive statistics

Descriptive statistics are calculations, such as the mean, frequency, and standard deviation, which help describe the distribution of scores for each of the variables (Sekaran, 2003). The descriptive statistics used in this study included frequencies, means, and standard deviations. Descriptive statistics were also used to test the sample-specific assumptions underlying structural equation modelling. These assumptions include multivariate normality, linearity, collinearity, and homoscedasticity of residuals.

According to Schumacker and Lomax (2016), inferential statistics often rely on the assumption that data are normally distributed. The default estimation technique in SEM is a maximum likelihood that assumes multivariate normality (Kline, 2015). Researchers can assess the normality of data by examining skewness and kurtosis values (Pallant, 2001). Skewness refers to the degree of symmetry or the lack of symmetry, whereas kurtosis indicates the peakedness of the distribution. To assess normality, visual tables and graphs can be used, such as inspection of histograms, stem-and-leaf plots, boxplot, probability-probability plot, and quantile-quantile plot (Ghasemi & Zahediasl, 2012). The visual technique is simplistic, though it does not guarantee normal distribution. Additional tests of normality include the Kolmogorov-Smirnov test and Shapiro-Wilk test. Both of these tests can be conducted using SPSS. According to Ghasemi and Zahediasl (2012), the Shapiro-Wilk test is based on the correlation between data and the parallel normal scores, providing better power than the Kolmogorov-Smirnov test. Collinearity of data refers to the notion the independent variables do not overlap. When collinearity is low, the researcher can conclude that the regression coefficients occur attributable to the impact of the independent variable on the dependant variables (Keith, 2006). This allows for accurate inferences to be made. Conversely, multicollinearity occurs when two or more independent variables are highly correlated, creating difficulty in separating the cause of the results (Hair, Anderson, Tatham, & Black, 1995). According to Kline (2015), if the correlation between two variables is exceptionally high, it could be considered to be measuring the same construct. This could lead to measurement errors. To assess multicollinearity, the researcher looked at the correlations among the variables.

The assumption of homoscedasticity was also reviewed. Homoscedasticity is represented by the equal variance of errors at all levels of the independent variables that implying that error is spread consistently among variables (Keith, 2006). Data could be heteroscedastic (the opposite of homoscedasticity). This could be attributable to outliers, non-normality of observed scores, varying measurement error in the predictors, or specification errors (Kline, 2015). When data are heteroscedastic, it means that error is not consistently spread which could lead to misinterpretation of results by that increasing the probability of making a Type 1 error. This was assessed by visual inspection of the plotted standardised residuals. If residuals are randomly scattered around zero, it indicates an equal distribution spread and therefore indicates homoscedasticity.

#### **3.14** Inferential statistics

Sekaran (2003) stated that inferential statistics are used to make inferences or certain judgements from a sample to the group from which the sample was drawn. The inferential statistical techniques employed in this study are confirmatory factor analyses (CFA) and structural equation modelling (SEM).

# 3.14.1 Missing data

Missing data can be extremely problematic for studies as improper treatment of missing data can cause biased inferences and estimates (Rezvan, Lee, & Simpson,

2015). According to Enders and Bandalos (2001), missing data is a common problem researchers encounter using SEM. Various types of missing data can affect studies. Missing data classified as missing completely at random (MCAR) is when the missing data does not depend on any values or potential values of any variable (McNeish, 2017). If the missing data relate to other variables but are not based on variables excluded in the dataset, then it is classified as missing at random (MAR). Missing not at random (MNAR) refers to missing values related to other variables not included in the data or hypothetical values of interest that were not missing.

There are various ways to manage missing data. A few methods include complete case analysis, single imputation, multiple imputation, and expectationmaximisation. Complete case analysis, as the name implies, only uses participants with no missing data in their responses (Jakobsen, Gluud, Wetterslev, & Winkel, 2017). This method excludes any participants with missing data. If data are classified as MCAR, the observed data will not be biased.

However, MCAR reduces the sample size by that reducing the statistical power. If data are not MCAR, then this method may produce biased observations. An additional method that can treat missing data is single imputation. In this method, all missing data are replaced with a defined rule, indicating the mean for that value, last value carried forward, or worst value carried forward (Jakobsen et al., 2017). The validity of this approach does not depend on whether data are MCAR, rather it depends on the assumptions. Missing data can also be analysed through multiple imputation analyses. Unlike single imputation analysis, multiple imputations replace each missing value with a set of plausible values (Yuan, 2010). The imputation data sets are then analysed using standard procedures for complete data.

Missing data can also be analysed using expectation-maximisation (EM). This method is a maximum likelihood procedure that deals with the relationship between the unknown parameters of the data model and the missing data (Howell, 2007). In this approach, parameters are estimated, followed by the missing values.

Thereafter, the complete data set is used to re-estimate parameters followed by the missing values (Howell, 2007).

Little's MCAR test differentiates whether missing observations are MCAR or MAR (Nicholson, Deboeck, & Howard, 2017). This method arranges data into groups based on whether variables are observed or missing throughout all cases to identify missing data patterns. Thereafter, variable means are calculated for each subgroup and across groups for each variable. Little's test uses the chi-squared statistic to summarise the standardised mean difference for each subgroup means and overall mean.

According to Enders (2010), a significant chi-test statistic suggests a significant deviation in the mean differences in one or more subgroups resulting in the rejection of the null hypothesis that the data are MCAR. There are, however, limitations to using Littles' test. First, the test does not identify the variables that violate MCAR or indicate which variables are causes of missing data (Enders, 2010). There is a risk of Type II errors because of failing to detect a MAR attributable to the low statistical power of the test. MNAR and MAR can also be defined by equal means by that potentially causing incorrect analysis of Little's test (Enders, 2010).

Since there were no missing values in the current dataset as a result of the online collection method, there was no need to estimate missing values. As a result, Little's MCAR test was not conducted on the data.

# 3.14.2 Item analysis

The purpose of item analysis is to identify items that should be removed attributable to their misfit within the instrument (Maree, 2016). This analysis assists to increase an instrument's reliability and excluding items that contribute inadequately to it. Theron (2007) noted that item analysis assists in detecting items that do not contribute to the internal consistent description of the dimensions of the construct being measured. Item analysis, therefore, helps to

identify inferior items that unsatisfactorily represented the underlying latent variable that can be considered for deletion.

Item analysis using SPSS version 27 was conducted to determine whether scales/subscales have appropriate reliability and whether deleting certain items would allow the researcher to improve the reliability of the scale. Reliability was assessed by employing Cronbach's alpha coefficient. As described by Nunnally (1967), measurements with a Cronbach alpha of 0.90 and above are considered to be excellent, 0.89 to 0.80 as good, 0.70 to 0.79 as adequate, and below 0.70 as having limited applicability.

The relationship among items was also analysed using the correlations among items. The higher the correlation, the more related the items are, indicative of all the items measuring the same latent variable. Cohen's (1988) guideline for interpreting strength ranges from weak ( $\mathbf{r} = 0.10$ ), moderate ( $\mathbf{r} = 0.30$ ) to strong relationships (0.50) was applied. Inter-item-total correlations were also assessed. This correlation indicates the correlation between each item and the total score. According to Pallant (2001), items with lower than 0.30 corrected inter-item correlations indicate that the item is measuring something different from the rest of the items.

3.14.2.1 Confirmatory factor analysis FRN CAPE

Confirmatory factor analysis (CFA) is employed among researchers to analyse and investigate the structure of data sets in psychology (Curran, West, & Finch, 1996). According to Netemeyer et al. (2003), CFA is an accepted way to test and confirm the dimensionality of measures. When researchers use CFA, they need to specify all the characteristics of the model. Therefore, CFA is a theory-based approach to hypothesis testing. There are four main purposes of CFA, such as psychometric evaluation of measures, construct validation, testing methods effects, and testing measurement invariance (Harrington, 2009).

According to Buchanan, Valentine, and Schulenberg (2014), using CFA for construct validation entails determining whether the data fits the theory, analysing

whether the data replicates the theoretical background which underpins it. Usually, Exploratory Factor Analysis (EFA) is conducted before CFA to confirm the dimensionality of the instruments used. Since the measures used in the current study were established measures employed across multiple studies, EFA was not conducted. CFA was used to confirm measurement properties before structural paths in the model were interpreted.

The appropriateness of CFA models can be assessed by fit indices. Many researchers have acknowledged that human behaviour is characterised by a complicated network of individual and situational variables that can only be proportionally and imperfectly reflected by SEM (Millsap, 2007). Goodness-of-fit indices assist researchers to answer questions surrounding the validity of the proposed model.

Assessing the fit of an SEM model is complex as there is no single index that best indicates whether the proposed model should be accepted for good fit (Lance, Beck, Fan & Carter, 2016). Instead, multiple fit indices need to be considered before assessing the fit of a proposed model. Fit indices are approximation tools that assist researchers to assess the degree to which a proposed research model fits reality (Lance et al., 2016). Kline (2011) cautions against failing to reject a proposed model by that implying overzealous accuracy of that model. Considering this discussion, various fit models were contemplated and reported on.

The following goodness-of-fit indices were employed to assess the model in this study: the chi-square ( $\chi$ 2) statistic, the RMSEA, the standardised root mean squared residual (SRMR), the CFI, and the TLI.

Satorra-Bentler Chi-square test of model fit is used when working with robust maximum likelihood.  $\chi^2$  tests the null hypothesis that states the covariance matrix equals the population matrix. It is, therefore, desirable not to reject the null hypothesis in that the null hypothesis indicates either close or exact fit; however, this test is described as overly rigid and affected by sample size (Diamantopoulos & Siguaw, 2000; Hu & Bentler, 1999). Studies with small samples could indicate

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a good model fit when the model has limited value in reality. According to Nevitt, and Hancock (2000), it is well recognised that a hypothesised model is an approximation of reality and would not fit the data exactly in applied research.

The RMSEA indicates how well the model fits the population covariance matrix if it were available (Brown & Cudeck, 1993). Good model fit is defined by an RMSEA value of 0.05 and below, values between 0.05 and 0.08 as reasonable fit, and those above 0.08 indicate poor fit (Diamantopoulos & Siguaw, 2000). The test of close fit was also employed to assess fit. Confidence intervals are compared with the RMSEA value to test the null hypothesis assumes that the data support a close-fitting model (H0:  $\varepsilon \leq c$ ) (Kline, 2015).

An additional absolute fit index as an indicator is the *Standardised root-mean-square residual (SRMR)*. Good fitting models are indicated by an SRMR value of less than 0.05 (Diamantopoulos & Siguaw, 2000). According to Hu and Bentler (1999) values as high as 0.08 were acceptable. In the current investigation, a value of 0.08 is considered the upper boundary for SRMR.

The Comparative fit index indicates the model fit compared to a baseline/independent model. The two comparative fit indices that will be used is the Comparative fit index (CFI) and the Tucker-Lewis Index (TLI) (also referred to as the Non-Normed Fit Index). CFI ranges from 0 to 1 with a larger value indicating better model fit. An acceptable model fit is indicated by a CFI value of 0.90 or greater (Hooper et al., 2008). The TLI generally varies between 0 and 1 with larger values indicating better fit. TFL values of 0.90 or greater are indicative of a good model fit with the data.

In addition to model fit, it is a good idea to describe the model parameters. Defining model fit at a more molecular level by inspecting patterns of relationships among model parameters provides diagnostic information about model fit, both at an overall level and at the level of pairs of observed variables (Kline, 2011). The following CFA parameters were investigated to validate and refine measurement models:

#### • Examination of residuals

The difference between observed and predicted covariance is known as a residual (Hildreth, 2013). When residuals are present, it indicates that the prediction is imperfect. Residuals should be small (Z-score  $\pm |2.58|$ ), centred around zero, and have a symmetrical distribution. When residuals are not symmetrical or are too large, it indicates that the model is a poor fit (Kelloway, 1998). The overall misfit of a proposed model can be inferred by various indices, such as the absolute average standardised residual values, largest positive and negative standardised residuals, and the number of significant positive and negative standardised residuals (Jöreskog & Sörbom, 1996).

Factor loadings

Factor loadings are used to indicate the relationship between observed variables and are interpreted as regression coefficients (Kline, 2011). Factor loadings can take negative and positive values between -1 and +1 and are considered significant (p < 0.05) when the *t*-value exceeds 1.96 (Diamantopoulos & Siguaw, 2000). Standardised factor loadings are squared to decipher the amount of variance explained by items on a specific factor that it should theoretically be linked to. Preferably, standardised factor loadings should be 0.70 or higher to be optimal, or at least 0.50 (Kline, 2011).

• Modification indices

Model modification is often conducted after discovering a poorly fitting structural equation model (Whittaker, 2012). The modification index (MI) is used by researchers to assess the impact on  $\chi$  2 if parameters were altered (Thoemmes, Rosseel & Textor, 2018). If a model is observed as inadequate, the model may be modified or respecified followed by the testing of the modified model. Model modification may be beneficial in SEM as it can help rectify specification errors by that creating a better fit; however, that model modification was met with much controversy in SEM literature as it could cause a data-driven model that is not underpinned by theory and far from reality (Mansolf, Jorgensen, & Enders, 2020).

This could lead to a study not being replicated with new samples (Thoemmes et al., 2018). The most widely used statistic that is evaluated in model modification is the modification index that is used to estimate the value of the chi-square test statistics. The modification index provides a reading on whether the chi-square test statistic would decrease if a fixed parameter was added to the model and freely estimated (MacCallum, Roznowski & Necowitz, 1992).

#### 3.14.2.2Structural equation modelling (SEM)

Structural equation modelling (SEM) emerged from various traditions, such as factor analysis, multiple regression analysis, and path analysis (Hayashi, Bentler, & Yuan, 2007). This analysis method is employed in social sciences and various other disciplines, such as education and marketing. This technique tests both the factor solution and the individual factor loadings (Kelloway, 1998). It is a flexible technique, allowing for the specification and testing of complex path models, which include mediation. According to Weston and Gore (2006), an advantage of SEM is its ability to estimate and test relationships among constructs by using multiple measures to represent constructs and discuss measure specific errors.

Structural equation modelling is a quantitative tool, enabling researchers to describe the relationship among variables by that testing or validating a theoretical model (Thakkar, 2020). SEM allows researchers to understand the correlation or covariance among variables and help explain these variances within the greater model. SEM is, therefore, a powerful tool to investigate complex relationships among observed and latent variables.

Anderson and Gerbing (1988) recommended a two-step approach be employed in the estimation and evaluation of path models using SEM. The idea is that the measurement quality of the latent variables be confirmed to avoid spurious relationships in the structural model. Once the quality of the measurement models is confirmed, the structural components of the model can be interpreted with confidence (O'Rourke & Hatcher, 2013). In addition to the fit indices in the structural model, the path coefficients are of interest in answering the research hypotheses. Path coefficients robust and congruent with the original theorising are considered to be statistically significant. According to O'Rourke and Hatcher (2013), significant pathways can be regarded as convincing evidence that the null hypothesis can be rejected in favour of the alternative hypothesis.

The most common method used to estimate parameters in SEM is the maximum likelihood (ML) method (Hox & Bechger, 1998). The ML method is an iterative process used to find the observed covariance matrix that would appear if the true population values were used. The improvements made to the ultimate solution are based on tentative estimates. The ML estimation method assumes that the data distributions are multivariate normal (Mîndrilã, 2010). ML assumes the data are distributed normally. When the data are not distributed normally, ML can lead to biased fit and parameter estimates (Mîndrilã, 2010). Jöreskog and Sörbom (1996) recommended employing Robust Maximum Likelihood estimation when the assumption of a multivariate normal distribution does not hold. Robust Maximum Likelihood was used in the current study.

# 3.14.2.3 Mediation analyses IVERSITY of the

Most researchers focus on the relations between two variables, such as the independent variable (X) and the dependent variable(Y) (MacKinnon, Fairchild, & Fritz, 2007). Mediation, in its most simplistic form, entails the addition of a third variable, known as the mediator (M), to this relationship. Introducing the mediator variable influences the hypothesised outcome, as indicated in Figure 3.2. These relationships result in three potential effects that include the direct effect, the indirect effect, and the total effect (Hayes, 2009).

The direct effect refers to the effect the independent variable (X) has on the dependent variable (Y). This is called the 'c' coefficient. The indirect effect is the effect that the independent variable (X) has on the dependent variable (Y) through the mediator (M). This can be calculated by using the product of coefficients a and b. It is important to note the mediation model assumes that changes in X will

result in a change of M by that altering the effect of Y (Shrout & Bolger, 2002); therefore, X has an indirect effect on Y. The total effect comprises the indirect effect and the direct effect to yield the total effect of the independent variable on the dependent variable.





Source: Hayes (2009).

Traditionally, Baron and Kenny's (1986) causal steps to set criteria were employed to test if M can be considered a mediator of the effect of X on Y (Hayes, Montoya, & Rockwood, 2017). The first criterion is that X must be related to Y as indicated by a statistically significant path c in Figure 3.2. According to Kenny, Kashy, and Bolger (1998), this confirms a significant relationship that may be mediated. Second, X is required to be statistically related to M. This entails treating the mediator as it is the outcome variable. Next, a significant association between M and Y when X is statistically controlled must be identified. Finally, once all three conditions are met, and if the effect of X on Y when M is held constant (coefficient 'c' in Figure 3.1) is closer to zero than X's effect without controlling for variable M, then M can be considered a mediator of the relationship between X and Y (Hayes et al., 2017).

Baron and Kenny's (1986) causal steps were heavily criticised (Shrout & Bolger, 2002). The criticism stems from some researchers pointing out that the framework provided assumes that mediation processes can be analysed by linear regression

analysis (Shrout & Bolger, 2002). Researchers also question the power of using these causal steps to determine mediation. For example, if X's effect on Y is carried in part indirectly through the M, the casual steps approach is least likely to detect the effect (Hayes, 2009). The causal steps approach is not based on quantification but is reliant on logical inferences from multiple hypotheses to observe mediation, which increases the error rate (Hayes, 2009).

Despite several concerns, the Baron and Kenny model is still widely used and supplemented by the Sobel test (Hayes, 2009); however, Hayes (2009) does not support using the Sobel test, as it does not consider the sample size and the significance of the indirect effect. The test also assumes that the indirect effect is normally distributed. According to Caron (2019), the product of regression coefficients is not always normally distributed in practices as assumed by the Sobel test.

Other approaches to mediation include the difference in coefficients and the product of coefficients. Unlike the causal steps, these approaches estimate the mediated or indirect effect and its standard error, allowing for formal tests of significance (MacKinnon, Cheong, & Pirlott, 2012). When using the difference in coefficients approach, the mediated effect is estimated by comparing the relationships between X and Y when adjusted for the mediator. The difference is divided by the standard error of the difference and the ratio then gets compared to a standard normal distribution (MacKinnon et al., 2007). The product of the mediated effect. To test for significance, the product is divided by the standard error of the ratio is compared to a standard normal distribution (MacKinnon et al., 2007).

The MacKinnon et al. (2007) approach is built into modern-day SEM software packages, including AMOS, EQS, LISREL, and Mplus. Computerised methods enable researchers to test significance and construct intervals in multiple situations where analytical formulas for quantities may not be available

(MacKinnon et al., 2007). These methods also do not rely on or require assumptions likely to cause more accurate results than traditional methods.

In this study, Mplus was used to calculate the mediated effects. Since the sample size was limited and did not have a normal distribution, the bootstrapping method was used to calculate the confidence interval. A benefit of the bootstrapping method is that it does not assume a normal distribution (Muthén, 2011). Bootstrapping mimics the original sampling process where the resampling of the sample is conducted with replacement. This is conducted by a computer-intensive method and creates an empirical distribution of the causal effect (Valente, Rijnhart, Smyth, Muniz, & MacKinnon, 2020).

# 3.15 Ethical considerations

Apart from obtaining approval from the Ethics Committee at the University of the Western Cape, the following efforts were made to ensure that ethical standards were upheld during this study.

# 3.15.1 Informed consent

The necessary steps were taken to ensure that the rights of participants were protected. Informed consent refers to providing participants with all the required information about the research (Blumberg, Cooper, & Schindler, 2011). Informed consent was attached to the electronic survey. Participants had to provide informed consent before they could participate in the research.

## 3.15.2 Confidentiality and anonymity

The confidentiality and anonymity of participants were respected at all times. Confidentiality and anonymity refer to the non-disclosure of the name and identity of participants in the study (Blumberg et al., 2011). No personal details, such as full names, surnames, and contact details, were requested. Their anonymity and confidentiality were, therefore, protected. The researcher and supervisors were the only persons with access to the collected data.

# 3.15.3 Beneficence and non-maleficence

According to Blumberg et al. (2011), a study should not bring any harm to the participants physically or emotionally and should only provide benefits to the research participant. No physical or emotional trauma or harm was experienced based on the participation in this research.

# 3.15.4 Psychometric properties

To ensure that the research is conducted ethically responsibly, based on the data obtained, the reliability and validity of the instruments were established. This ensured that the instruments did not discriminate unfairly against a certain group based on characteristics other than the intended discrimination. Data collected was not distorted or transformed to lead to misguided interpretations.

# 3.15.5 Data interpretation

Participants were not compensated to participate in the study; therefore, the data were not influenced by monetary gain. The data collected was not distorted or misrepresented in any manner.

# 3.16 Summary UNIVERSITY of the

This chapter details the research methodology used to investigate the hypotheses arising from the literature review. This chapter reveals the statistical hypotheses investigated while describing the research design. This study was conducted quantitatively and followed a non-probability sampling approach. The measurement instruments were described along with their reliability and validity properties. The manner where missing data was treated is outlined. Descriptive and inferential statistical analysis techniques are discussed. Normative values to interpret CFA and SEM model fit indices are discussed, and the methodology used to assess mediation effects is proposed. Lastly, the ethical considerations considered are emphasised. Chapter 3 forms the action that governs the treatment discussed of the findings in Chapter 4.

# **CHAPTER 4: PRESENTATION OF RESULTS**

# 4.1 Introduction

Chapter 1 emphasises the background of the study, describing the main objectives in response to the primary research question. This is followed by Chapter 2 summarising the literature, which resulted in the formulation of a conceptual model comprising six hypotheses. Thereafter, Chapter 3 outlines the research design, sampling strategy, and statistical techniques used to empirically validate the proposed structural model. The current chapter aims to describe the results of the statistical data analyses. The chapter is structured into sections, starting with the discussion of missing values and descriptive statistics. This is followed by inferential statistics through CFA, item analyses, and SEM.

# 4.2 Missing data

This study did not have any missing data. The online questionnaire was designed in such a way that all the questions were compulsory. Data analysis could, therefore, commence without the need to deal with missing data; 201 complete cases were collected through the data analyses.

# 4.3 Inferential statistics and data screening

**WESTERN CAPE** The collected data were entered on the SPSS, Version 25 (2017), and screened for outliers and typos. Descriptive statistics were also employed to test the samplespecific assumptions underlying SEM (multivariate normality, linearity, collinearity, homoscedasticity of residuals). The following section discusses the treatment of missing values in the data.

# 4.3.1 Normality

When employing ML as an estimation method in the absence of multivariate normality, the chi-square fit statistic for the model is biased towards Type 1 error (i.e., rejecting the model when it should not be rejected). The Shapiro-Wilk test is a test of normal distribution. From Table 4.1 it is evident that only the emotional suppression scale is normally distributed. Since the data on most of the scales were not normally distributed, as indicated in Table 4.1, it employed Robust Maximum Likelihood as an estimation technique.

Factors	Shapiro-Wilk			
	Statistic	Sig.		
FAC_EQ	.958	.000		
FAC_ER_RAP	.939	.000		
FAC_ER_SUP	.992	.341		
FAC_MBI_TO	.975	.001		
FAC_LMX	.965	.000		
FAC_UWES	.982	.010		

#### Table 4.1: Output for the test of normality

FAC\_EQ: Emotional Intelligence; FAC\_ER\_RAP: Cogitative Reappraisal; FAC\_ER\_SUP: Expressive Suppression; FAC\_MBI\_TO: Burnout; FAC\_LMX: Leader-Member Exchange; FAC\_UWES: Work Engagement; Sig: Significance.

# 4.3.2 Homoscedasticity and linearity

Scatterplots and Q-Q plots were employed to assess the homoscedasticity of residuals. The data did not seriously violate the assumptions of homoscedasticity. Most of the data points did not deviate from the 45-degree trendline suggesting that the residuals are uniformly distributed.

Concerning linearity, the bivariate correlation Table 4.2 below indicates the correlations among latent variables included in the structural model. The means and standard deviations are also included for each of the factor scores included in the structural model.

Table 4.2: Cross-tabulation of variables showing means, standard deviations, andcorrelationsbetween emotional intelligence, cognitive reappraisal,expressive suppression, burnout, LMX and work engagement

	М	SD	1	2	3	4	5
1. Emotional Intelligence	3.91	0.51					
2. Cognitive Reappraisal	5.44	1.09	0.448**				
3. Expressive Suppression	3.79	1.19	- 0.269**	0.085			
4. Burnout	2.84	1.02	-0.458**	-0.256**	0.160*		
5. Leader-Member Exchange	3.80	0.82	0.273**	0.190**	-0.140*	-0.460**	
6. Work Engagement	5.08	0.98	0.425**	0.307**	-0.096	-0.710**	0.418**
	TIME						

\*Sig: *p* < 0.05; \*\* Sig: *p* < 0.01

Results from Table 4.2 suggest that most variables were linearly related to one another. The assumption of linearity is, therefore, met. The direction of the relationships is congruent with *a priori* expectation.

# 4.4 Multicollinearity STERN CAPE

The correlations among the latent variables were assessed through Mplus. The correlation between total burnout and work engagement was observed to correlate at -0.942. This high correlation is a cause for concern because it may have implications for the replication of the factor matrices in CFA models (Kline, 2015). The remainder of the correlations were all below 0.07. According to Schaufeli et al. (2002), burnout and work engagement are viewed as polar opposites, which could be the reason for the high multicollinearity.

# 4.5 Statistical outliers

Statistical outliers were assessed by examining box-and-whisker plots. According to Pallant (2001), SPSS defines extreme outlines if they extend over three box

lengths from the edge of the box. Since the author did not expect these two outliers to significantly bias the results of the inferential statistical analyses, it was decided to retain all the cases in the dataset.

# 4.6 Item analysis

During this study, five instruments were employed to collect the data. These instruments included the Genos Emotional Intelligence Inventory, the Emotion Regulation Questionnaire, the Maslach Burnout Inventory General Survey, the Leader-member Exchange Questionnaire and the Utrecht Work Engagement Scale. Since uni-dimensionality is a prerequisite for Cronbach coefficient alpha, it was decided to conduct EFA using ML extraction before CFA analyses (Netemeyer et al., 2003). Most of the items making up each of the measures were uni-dimensional and for this reason, it was permissible to conduct the item analyses. The items making up the MBI were loaded on three scales according to the original specification of the authors. As a result, item analyses were conducted on the total scale and each of the sub-dimensions. Item analysis provides important diagnostic information about the quality of items. Both the reliability levels and the individual item parameters (item-total correlations) were considered.

# 4.6.1 Item analysis: Genos Emotional Intelligence Inventory

The Genos Emotional Intelligence Inventory comprised 14 items. The results of the item analysis for this scale are indicated in Table 4.3.

'L'abla /L'3+'L'ha itam analysis autnut far tha ( 'anas k'matianal Intalliganga Inv	
Table 4.3. The heli analysis output for the Genos Emotional Intempence my	ntorv

<b>Reliability Statistics</b>				
Cronbach's alpha	Cronbach's alpha Based	N of Items		
	on			
	Standardised			
	Items			

						_	
		.768		.781	14	-	
		Iten	n-total s	tatistics			
	Scale Mean if Item Deleted	Scale Variance Item Delet	C if Ite ed Co	orrected em-Total orrelation	Squa Multi Correla	red iple ation	Cronbach's alpha if Item Deleted
A1.1	51.24	39.9	57	.23	35	.179	.774
R_A1.2	51.53	39.7	24	.26	54	.181	.770
A1.3	51.32	39.4	-55	.38	38	.276	.754
R_A1.4	51.12	38.5	511	.43	34	.336	.750
A1.5	51.02	39.4	-22	.48	34	.329	.747
R_A1.6	50.99	38.9	17	.40	)1	.319	.753
A1.7	50.87	41.0	65	.34	1	.207	.759
R_A1.8	51.21	38.5	45	.47	75	.326	.746
A1.9	50.78	40.5	62	$\mathbf{T}\mathbf{v}^{41}$	4	.249	.753
R_A1.10	51.44	38.0	62	.44		.284	.748
A1.11	51.55	39.3	83	.37	74	.311	.756
R_A1.12	51.34	40.0	93	.36	54	.218	.756
A1.13	50.69	41.2	.97	.39	02	.282	.756
A1.14	51.36	38.8	82	.47	'3	.337	.747

As indicated in Table 4.3 the Genos Emotional Intelligence Inventory obtained a Cronbach alpha of  $\alpha = 0.768$  representatives of adequate reliability (Nunnally, 1967). This indicates that approximately 77% of the variance is true variance, whereas 33% represents random error. Most of the items reported satisfactory item-total correlations ranging between 0.235 to 0.484. This indicates that most of the items contribute towards the overall scale reliability. Upon inspection of the

corrected total correlation, items R1.1 (0.235) and R\_A1.2 (0.264) were identified as problematic, as the corrected item correlations were below the recommended cut-off values of 0.30 (Pallant, 2001). The Cronbach's alpha would also be improved marginally if item R1.1 was deleted. Based on these findings, items R1.1 and R\_2.1 were considered for deletion.

# 4.6.2 Item analysis: Emotion Regulation Questionnaire

The Emotion Regulation Questionnaire comprises 10 items. The items measuring cognitive reappraisal are 1, 3, 5, 7, 8, and 10, against the items measuring expressive suppression are 2, 4, 6, and 9. The item analyses for expressive suppression and cognitive reappraisal are presented in Table 4.4 and Table 4.5 below.

# 4.6.2.1 Cognitive reappraisal

As indicated in Table 4.4 the cognitive reappraisal subscale reported a Cronbach alpha of  $\alpha = 0.838$ , which can be considered as good internal consistency (Nunnally, 1967). This indicates that approximately 84% of the variance is true variance, whereas 16% represents random error. Upon inspection of the Cronbach alpha if deleted column, item B1.5 may be problematic. If item B1.5 was deleted, Cronbach's alpha would increase to 0.859. The corrected item-total correlations were at acceptable levels, ranging between 0.372 to 0.755. This is indicative that the items are correlating towards the internal consistency of the measure and demonstrated discriminant validity.

Reliability statistics					
	Cronbach's				
	alpha based				
	on				
Cronbach's	standardised				
alpha	items	N of Items			
.838	.841	6			

#### Table 4.4: The item analysis output for the cognitive reappraisal subscale

Item-total statistics						
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's alpha if Item Deleted	
B1.1	27.15	30.451	.585	.444	.819	
B1.3	27.29	29.136	.675	.532	.799	
B1.5	27.21	34.179	ST.372	f the	.859	
B1.7	27.04	29.353	.755 R N <sup>.755</sup>	.615	.784	
B1.8	27.13	31.107	.665	.551	.803	
B1.10	27.27	30.630	.671	.514	.801	

Attributable to the strong corrected item-total correlation for item B1.5, it was decided not to delete the item from the scale.

# 4.6.2.2 Expressive suppression

As indicated in Table 4.5 expressive suppression yielded a Cronbach alpha of  $\alpha$  = 0.664. This indicates that approximately 66% of the variance is a true variance, whereas 44% represents random error. The reliability for this scale is not unideal and therefore this scale will have limited applicability in practice (Nunnally, 1967). A reason for the low-reliability score could be attributable to the limited

number of items on this scale. According to Yang and Green (2011), the internal consistency of a scale is profoundly influenced by the number of items on a scale. Upon inspection of the Cronbach alpha if deleted column, item B2.4 seems to be problematic. If item B2.4 was deleted, Cronbach's alpha would increase to 0.677. The corrected inter-item correlations ranged from 0.310 to 0.575, indicating relationships among items are moderate to strong. Although the Cronbach's alpha level would increase with the deletion of item B2.4, the author decided to retain this item attributable to the limited number of items in the scale coupled with the small increase in the alpha if the item would be deleted.



Table 4.5: The item analysis output for expressive suppression subscale

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's alpha if Item Deleted
B2.2	10.77	13.527	.500	.274	.559
B2.4	12.55	16.519	.310	.107	.677
B2.6	11.33	12.073	.575	.346	.498
B2.9	10.78	14.735	.403	.196	.624

## 4.6.3 Item analysis: Maslach Burnout Inventory

The MBI-GS comprises 16 items and contains three subscales, such as emotional exhaustion, cynicism, and professional accomplishment. In the section below, the reliability is presented and the reliability of the three subscales.

# 4.6.3.1 Maslach Burnout Inventory: total scale

As indicated in Table 4.6 a Cronbach alpha of  $\alpha = 0.881$  was reported for the overall scale, indicative of good internal consistency reliability (Nunnally, 1967). This indicates that approximately 88% of the variance is true variance whereas 12% represents random error. The corrected item-total correlations range from 0.247 to 0.677. Most of the items contribute to the reliability of the scale. Upon inspection item, R\_C3.4 reported a relatively low item-total correlation of 0.247. Cronbach's alpha would also increase marginally to 0.883 if this item were deleted.

 Table 4.6: The item analysis output for Maslach Burnout Inventory total scale

		<u> </u>
Reli	ability statistic	cs
UNIVE	Cronbach's	of the
WESTI	alpha Based on	APE
Cronbach's	Standardised	
alpha	Items	N of Items
.881	.880	16

Item-total statistics					
	Scale Mean if	Scale Variance if	Corrected Item-Total	Squared Multiple	Cronbach's
	Item Deleted	Item Deleted	Correlation	Correlation	Deleted
C2.1	41.5423	232.779	.611	.622	.870

Item-total statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's alpha if Item Deleted
C1.2	42.8905	230.008	.675	.523	.868
C2.3	42.2239	229.885	.601	.584	.871
R_C3.4	43.4677	254.980	.247	.202	.883
C2.5	42.0995	229.520	.658	.766	.868
R_C3.6	43.0299	240.229	.439	.526	.878
C1.7	43.1592	234.065	.618	.697	.870
C1.8	42.9552	228.903	.677	.734	.868
R_C3.9	43.4776	249.911	.343	.448	.880
R_C3.10	43.2388	245.093	.404	.443	.879
C2.11	41.7164	225.404	.636	.674	.869
R_C3.12	42.1542	240.701	SITY.402	<i>the</i> .451	.879
C1.13	41.4129	<b>E S</b> 235.854	N C.384	<b>PE</b> .235	.882
C2.14	42.0100	226.510	.659	.550	.868
C1.15	42.6468	227.900	.649	.535	.869
R_C3.16	43.3184	246.598	.412	.385	.878

4.6.3.2 Maslach Burnout Inventory: cynicism

Table 4.7 displays the output of the item analysis for the cynicism subscale. A Cronbach alpha of  $\alpha = 0.800$  was reported, indicative of good reliability (Nunnally, 1967). This indicates that approximately 80% of the variance is true whereas 20% represents random error. The corrected item-total correlation is at an acceptable level, as it ranges from 0.355 to 0.707. This indicates that relationships

among items are moderate to strong. Upon inspection of the Cronbach alpha if deleted column, item C1.8 is problematic. If item C1.8 was deleted, Cronbach's alpha would increase to 0.850. Since the item reported a strong corrected interitem correlation, it was decided not to delete the specific item.

Reliability Statistics					
		C al	Cronbach's pha Based		
	(	Cronbach's St alpha	on andardised Items N	of Items	
	M4-0	.800	.817	5	
Item-total statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's alpha if Item Deleted
C1.2	11.52	<b>ES</b> 31.131	<b>RN</b> .604	<b>PE</b> .403	.756
C1.7	11.79	30.259	.701	.687	.730
C1.8	11.58	29.164	.707	.703	.724
C1.13	10.04	31.428	.355	.134	.850
C1.15	11.27	29.220	.641	.434	.743

 Table 4.7: The item analysis output for cynicism subscale

4.6.3.3 Maslach Burnout Inventory: emotional exhaustion

As indicated in Table 4.8, a Cronbach alpha of  $\alpha = 0.898$  was reported concerning the emotional exhaustion subscale. This indicates that approximately 90% of the variance is true variance whereas 10% represents random error. This illustrates good reliability (Nunnally, 1967). Item C2.14 is potentially a candidate for deletion. If item C2.14 is deleted, Cronbach's alpha would increase to 0.899. The corrected item-total correlations for the individual items were at an acceptable level, as they ranged between 0.640 to 0.860. Since the corrected inter-item correlation was acceptable for item C2.14 (0.640) it was decided to retain the item attributable to the limited number of items on the scale.

Reliability Statistics						
	Cronbach's alpha Based					
			on			
	(	Cronbach's S	tandardised			
	6	alpha	Items N	of Items		
		Item-Te	otal Statistics			
	Scale Mean if	Scale Variance if	Corrected Item-Total	Squared Multiple	Cronbach's alpha if Item	
	Item Deleted	Item Deleted	Correlation	Correlation	Deleted	
C2.1	13.64	39.301	.753	.588	.875	
C2.3	14.32	38.170	.719	.554	.882	
C2.5	14.20	36.940	.860	.758	.852	
C2.11	13.82	35.691	.782	.645	.868	
C2.14	14.11	39.488	.640	.414	.899	

Table 4.8: The item analysis output for the emotional exhaustion subscale

4.6.3.4 Maslach Burnout Inventory: professional accomplishment

The results of the item analyses of the professional accomplishment scale are summarised in Table 4.9. The results suggest an adequate Cronbach alpha of  $\alpha = 0.801$ , regarded as good reliability (Nunnally, 1967). This indicates that

approximately 80% of the variance is true variance whereas 20% represents random error. The corrected item-total correlations ranged from 0.406 to 0.652. This indicates moderate to strong relationships among items.

	<b>Reliability Statistics</b>				
	Cronbach's alpha Based on Cronbach's Standardised alpha Items N of Items				
	ų.	.801	.799	6	
	Ĥ	Item-tot	al statistics		
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's alpha if Item Deleted
R_C3.4	11.8955	NIV <sub>34.254</sub>	SITY.406	<i>the</i> .188	.800
R_C3.6	11.4577	ES 77.229	<b>C</b> .652	<b>PE</b> .443	.746
R_C3.9	11.9055	30.916	.599	.407	.762
R_C3.10	11.6667	30.033	.573	.399	.766
R_C3.12	10.5821	26.794	.629	.444	.753
R_C3.16	11.7463	32.180	.489	.323	.784

Table 4.9: The item analysis output for the professional accomplishment subscale

# 4.6.4 Item analysis: leader-member exchange

Results of the reliability analyses on the LMX measure are reported in Table 4.10. A Cronbach alpha of  $\alpha = 0.894$  was reported for the measure. This indicates that approximately 89% of the variance is true variance whereas 11% represents random error. The corrected item-total correlation is at an acceptable level, as it

ranges from 0.627 to 0.772. This indicates strong relationships between the items and the total score. No improvements can be made to the reliability by deleting items.

	<b>Reliability Statistics</b>					
	Cronbach's alpha Based					
		Cronbach's S	tandardised			
		alpha	Items N	of Items		
	Ę	.894	.899	7		
	Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's alpha if Item Deleted	
D1.1	22.54	NI 24.029	SITY.703	f the .543	.877	
D1.2	22.80	ES <sub>23.590</sub>	RN 9709	<b>PE</b> .512	.877	
D1.3	22.71	24.566	.704	.519	.877	
D1.4	22.80	25.133	.675	.473	.880	
D1.5	23.29	24.106	.627	.424	.888	
D1.6	22.59	25.683	.719	.583	.877	
D1.7	22.49	25.401	.772	.642	.872	

 Table 4.10: The item analysis output for the leader-member exchange subscale

# 4.6.5 Item analysis: Utrecht work engagement

As indicated in Table 4.11, a Cronbach alpha of  $\alpha = 0.914$  was reported concerning the Work Engagement Scale. This indicates that approximately 91%

of the variance is true variance whereas 9% represents random error. The corrected item-total correlation is at an acceptable level, as it ranges from 0.447 to 0.832. Results indicate that deleting item E3.9 would result in an increase in Cronbach's alpha. Since the corrected inter-item correlation was acceptable for item E3.9 (0.447) it was decided to retain the item.

	<b>Reliability Statistics</b>				
	Cronbach's alpha Based				
			on		
	(	Cronbach's St	andardised		
	5	alpha	Items N c	of Items	
	_	.914	.914	9	
		Item-To	otal Statistics		
		Caala	Compoted	Canonad	Cranhashia
	Scale Moon if	Scale Variance if	Lorrected	Squared	Cronbach s
	Item Deleted	Item Deleted	Correlation	Correlation	Deleted
	TA			nT	Deneted
E1.1	41.06	62.836	.677	.548	.906
E1.2	40.94	61.546	.761	.707	.900
E2.3	40.57	58.896	.831	.792	.895
E2.4	40.73	58.400	.810	.752	.896
E1.5	40.85	61.258	.709	.557	.904
E3.6	40.44	63.387	.672	.535	.906
E2.7	39.97	61.764	.742	.628	.901
E3.8	40.35	64.418	.669	.536	.907
E3.9	40.63	66.504	.447	.376	.922

Table 4.11: The	item analysis	output for U	trecht work	engagement	subscale
1 abic 7.11. 1 iii	num analysis	output for 0	uccht work	ingagement i	subscare

92 http://etd.uwc.ac.za/ The reliability of the measures was acceptable except for the expressive suppression subscale. The items identified as potentially problematic in the item analyses were investigated with CFA before their removal from the respective subscales.

Table 4.12: Summary	of reliability	<b>coefficients</b>	per scale /	subscale

Scale / Subscale	Reliability
Genos Emotional Intelligence Inventory	0.768
Cognitive Reappraisal	0.838
Expressive Suppression	0.664
Maslach Burnout Inventory	0.881
Leader-Member Exchange	0.894
Utrecht Work Engagement	0.914

# 4.7 Confirmatory factor analyses of measures

CFA was used to assess the construct validity of measures included in the structural model. According to Kline, (2015), the results of the path model will remain ambiguous if the measurement quality of the individual measures is not established initially.

# 4.7.1 CFA of Genos Emotional Intelligence Inventory

When considering the fit for the EQ scale collective and by considering the normative cut-off values reported in Chapter 3, it becomes apparent that the overall fit can be regarded as mediocre. Although the RMSEA (0.075) and the SRMR (0.073) values are below the recommend cut-off scores, the CFI and TLI values fall short of the recommended 0.90 cut-offs. Taken as a whole, the fit can probably best be described as mediocre. The fit indices are reported in Table 4.13.

		Indices	
Index	Goodness-of- Fit	Absolute	Incremental
χ2	162.250		
Df	77		
P-Value	0.000		
Scaling Correction Factor	1.1815		
RMSEA		0.075	
90 Percent C.I.		0.059 0.092	
Probability RMSEA <=.05		0.006	
SRMR		0.073	
CFI	WEDST	W. Cale	0.780
TLI UN	IVER311	1 of the	0.739

# Table 4.13: Genos Emotional Intelligence Inventory fit indices

χ2: Satorra-Bentler Scaled Chi-Square; Df: Degrees of freedom; RMSEA: Root Mean Square Error of Approximation; C.I. Confidence Interval; SRMR: Standardised Root Mean Squared Residual; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index

Table 4.14 displays the standardised solution of factor loadings for the emotional intelligence scale. Although all the factor loadings are statically significant, item A1\_1 appears to be problematic in that it reported a low standardised factor loading of 0.275. According to Pallant (2001), items with inter-item correlations lower than 0.30 are problematic. Notwithstanding this problematic item, the measure demonstrates good internal validity.

Item	Factor Loading	Two- Tailed P Value
A1_1	0.275	0.001
R_A1_2	0.329	0.000
A1_3	0.472	0.000
R_A1_4	0.531	0.000
A1_5	0.574	0.000
R_A1_6	0.500	0.000
A1_7	0.433	0.000
R_A1_8	0.573	0.000
A1_9	0.492	0.000
R_A1_10	0.504	0.000
A1_11	0.477	0.000
R_A1_12	<b>IVE 0.465IT</b>	Y of t <sup>0,000</sup>
A1_13	STE <sup>0.476</sup>	$CAP^{0.000}$
A1_14	0.503	0.000

 Table 4.14: Genos Emotional Intelligence Inventory output

## 4.7.2 CFA of the emotional regulation—cognitive reappraisal

Table 4.15 displays the fit indices for the cognitive reappraisal scale. Considering the fit indices, the scale model demonstrates mediocre fit. RMSEA (0.107) was above the normative cut-off of 0.08. Whereas SRMR (0.047) indicated a good fit. The incremental fit indices CFI and TLI were both marginally below the normative cut of 0.90. Considered in totality, the model fit can be described as mediocre.
#### Table 4.15: Cognitive reappraisal fit indices

	Indices				
Index	Goodness-of-Fit	Absolute	Incremental		
χ2	29.031*				
Df	9				
P-Value	0.0006				
Scaling Correction Factor	1.5146				
RMSEA		0.107			
90 Percent C.I.		0.065 0.151			
Probability RMSEA <=	.05	0.016			
SRMR		0.047			
CFI	<u>,</u>		0.897		
TLI	NIVERSITY	the	0.828		

 $\chi^2$ : Satorra-Bentler Scaled Chi-Square; Df: Degrees of freedom; RMSEA: Root Mean Square Error of Approximation; C.I. Confidence Interval; SRMR: Standardised Root Mean Squared Residual; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index

Table 4.16 displays the standardised solution of factor loadings for the emotional regulation scale. All items are statistically significant however, item B1\_5 (0.369) appears to contribute less to the common variance. However, the standardised factor loading is still higher than the normative cut of 0.30 and will therefore be retained. Although one item was flagged as less than ideal, the scale can be considered valid.

Item	Factor Loading	Two-Tailed P-Value
B1_1	0.643	0.000
B1_3	0.693	0.000
B1_5	0.369	0.000
B1_7	0.840	0.000
B1_8	0.701	0.000
B1_10	0.642	0.000

## Table 4.16: Cognitive reappraisal factor loading output

# 4.7.3 CFA of the emotional regulation—expressive suppression

Table 4.17 indicates the results of the fit indices of expressive suppression. The fit indices are indicative of a good model fit. RMSEA (0.040) indicates that the model has a good fit further supported by an SRMR (0.021) value that indicates a good fit. The incremental fit indices CFI (0.994) and TFL (0.983) were above the normative cut-off, indicative of a good fit. Considering the indices in their entirety, it can be concluded that data fit the model well.

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#### Table 4.17: Expressive suppression fit indices

		Indices	
Index	Goodness-of- Fit	Absolute	Incremental
χ2	2.623		
Df	2		
P-Value	0.2694		
Scaling Correction Factor	0.8779		
RMSEA		0.040	
90 Percent C.I.		0.000 0.154	
Probability RMSEA <=.05		0.427	
SRMR		0.021	
CFI			0.994
TLI UNIV	ERSITY	f the	0.983

 $\chi^2$ : Satorra-Bentler Scaled Chi-Square; Df: Degrees of freedom; RMSEA: Root Mean Square Error of Approximation; C.I. Confidence Interval; SRMR: Standardised Root Mean Squared Residual; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index

Table 4.18 displays the standardised solution of factor loadings for the emotional regulation expressive suppression scale. All items are statistically significant however item B2\_4 (0.397) appears to contribute less to the common variance however it is above the cut of 0.30 and will therefore be retained (Pallant, 2001). This scale can, therefore, be regarded as valid.

#### Table 4.18: Expressive suppression factor loadings

Item	Factor Loading	Two-Tailed P-Value
B2_2	0.615	0.000
B2_4	0.397	0.000
B2_6	0.831	0.000
B2_9	0.529	0.000

# 4.7.4 CFA of the leader-member exchange

Table 4.19 indicates the fit indices for the LMX scale. Results appear to indicate adequate model fit. The RMSEA (0.084) narrowly missed the normative cut of acceptable fit. Conversely, the SRMR (0.034) reflected a good model fit. The incremental fit indices CFI (0.963) and TLI (0.945) were both above the normative cut of 0.90. Considered collectively, the fit of the measurement model to the data can be regarded as satisfactory.

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#### Table 4.19: Leader-member exchange fit indices

		Indices	
Index	Goodness-of-Fit	Absolute	Incremental
χ2	33.199		
Df	14		
P-Value	0.0027		
Scaling Correction Factor	1.2807		
RMSEA		0.084	
90 Percent C.I.		0.047 0.121	
Probability RMSEA <=.05		0.063	
THE THE	11-11-11-1	?	
SRMR		0.034	
CFI			0.963
TLI			0.945
THNEWAR	<b>DSITV</b> of t	ha	

χ2: Satorra-Bentler Scaled Chi-Square; Df: Degrees of freedom; RMSEA: Root Mean Square Error of Approximation; C.I. Confidence Interval; SRMR: Standardised Root Mean Squared Residual; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index

Table 4.20 displays the standardised solution of factor loadings for the LMX questionnaire. All items are statistically significant and higher than the 0.30 cutoff (Pallant, 2001). Therefore, all items will be retained. On analysis of the information provided, the LMX scale can be regarded as construct valid.

#### Table 4.20: Leader-member exchange factor loadings

Item	Factor Loading	Two-Tailed P- Value
D1_1	0.772	0.000
D1_2	0.753	0.000
D1_3	0.760	0.000
D1_4	0.704	0.000
D1_5	0.647	0.000
D1_6	0.786	0.000
D1_7	0.825	0.000
TTR. W		THE REAL

# 4.7.5 CFA of the Maslach Burnout Inventory

Unlike most of the other scales, the CFA model for the MBI-GS was specified as a higher-order model. In hierarchical CFA models at least one construct is not directly measured by any indicator. In the case of MBI-GS, burnout was specified as a second-order factor and has direct effects with the first-order factors (i.e., Cynicism, Reduced Efficacy, and Emotional Exhaustion). The reason for this decision was based on the premise that theorising took place on the overall construct level, rather than the individual subscale level. Provided the dimensionality in the burnout syndrome, the author did not feel comfortable combining all the items in a single uni-dimensional first-order CFA model.

The results of the second-order CFA model are presented in Table 4.21. The results show that RMSEA was 0.071 which indicated that the model has an acceptable fit as it is below the normative 0.08 cut-off (Hooper et al., 2008). SRMR revealed a value of 0.069 which indicates a good fit. The incremental fit indices CFI and TLI were 0.914 and 0.897. Whereas CFI meets the fit criteria, TLI marginally misses the criteria. Although the test of close and exact fit had to

be rejected, the overall fit indices indicated that the model fitted the data well. This confirms support for the argument of adequate fit.

	Indices			
Index	Goodness-of-Fit	Absolute	Incremental	
χ2	198.976			
Df	101			
P-Value	0.0000			
Scaling Correction Factor	1.1456			
RMSEA 90 Percent C.I.		0.071 0.056 0.085		
Probability RMSEA <=.05		0.012		
SRMR UNIX	TERSITY of th	0.069		
CFI	ERDITION	3	0.914	
TLI WES	IEKN CAPI	e.,	0.897	

# Table 4.21: Maslach Burnout Inventory fit indices

χ2: Satorra-Bentler Scaled Chi-Square; Df: Degrees of freedom; RMSEA: Root Mean Square Error of Approximation; C.I. Confidence Interval; SRMR: Standardised Root Mean Squared Residual; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index

Table 4.22 displays the standardised solution of factor loadings for the MBI-GS scale. For this scale and the SEM, a second-order model was fitted, which is the total scale. The fit indices apply to the total MBI-GS scale. All items are statistically significant; however, item C1\_13 reported the lowest factor loaded at 0.388. Since this is above the 0.30 cut-off, it was decided not to delete the item. Considering the statistics above, the MBI can be regarded as valid.

Item	Factor Loading	Two- Tailed P- Value
C1_2	0.667	0.000
C1_7	0.869	0.000
C1_8	0.872	0.000
C1_13	0.388	0.000
C1_15	0.687	0.000
C2_1	0.781	0.000
C2_3	0.761	0.000
C2_5	0.912	0.000
C2_11	0.836	0.000
C2_14	0.675	0.000
R_C3_4	0.477	0.000
R_C3_6	0.732	Y 0,6.000
R_C3_9	0.619	<b>A</b> 0.000
R_C3_10	0.689	0.000
R_C3_12	0.722	0.000
R_C3_16	0.484	0.000

#### **Table 4.22: Maslach Burnout Inventory factor loadings**

4.7.6 CFA of the Utrecht Work Engagement Scale

Upon inspection of the fit indices for the UWES in Table 4.23, the fit can be regarded as mediocre. The RMSEA index (0.132) indicated that the model does not have an acceptable fit. The SRMR (0.881) revealed a value that supported an acceptable model fit. The incremental fit indices CFI (0.881) and TFL (0.842) were both slightly below the normative cut-off. The CFI and TLI values,

therefore, support the fit of the model; however, the RMSEA and SRMR are indicative of poor fit between the sample and reproduced matrices.

	Indices			
Index	Goodness-of-Fit	Absolute	Incremental	
χ2	118.059			
Df	27			
P-Value	0.0000			
Scaling Correction Factor	1.2434			
1				
RMSEA		0.132		
90 Percent C.I.		0.108 0.156		
Probability RMSEA <=.(	05	0.000		
SRMR U	NIVERSITY	of 0.065		
CFI W	ESTERN C	APE	0.881	
TLI			0.842	

Table 4.23: Utrecht Work Engagement Scale fit indices

χ2: Satorra-Bentler Scaled Chi-Square; Df: Degrees of freedom; RMSEA: Root Mean Square Error of Approximation; C.I. Confidence Interval; SRMR: Standardised Root Mean Squared Residual; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index

Table 4.24 displays the standardised solution of factor loadings for the UWES items. All items are statistically significant and report strong standardised factor loadings. It is concluded that the UWES measure is valid.

Items	Factor Loading	Two- Tailed P- Value
E1_1	0.733	0.000
E1_2	0.836	0.000
E2_3	0.909	0.000
E2_4	0.880	0.000
E1_5	0.740	0.000
E3_6	0.634	0.000
E2_7	0.779	0.000
E3_8	0.632	0.000
E3_9	0.427	0.000

## Table 4.24: Utrecht Work Engagement Scale factor loadings

4.8 Structural equation modelling two-step approach

Anderson and Gerbing (1988) suggest a two-step approach in the estimation and evaluation of path models using SEM. This approach requires not only the test of individual measurement models with CFA but also to test of the exogenous and endogenous measurement models before specifying the structural model (Kline, 2015).

# 4.8.1 The endogenous model

The endogenous model comprises all the variables dependent on the structural model. In the proposed structural model includes the following variables: emotional intelligence, cognitive reappraisal expressive suppression, leader-member exchange, burnout and work engagement. Table 4.25 displays the fit indices for the endogenous measurement model. The RMSEA (0.058) indicated an acceptable fit, further supported by the SRMR (0.077). The incremental fit indices CFI (0.861) and TFL (0.851) were both marginally below the normative

cut-off value of 0.90. Based on this analysis, the overall fit of the endogenous measurement model is confirmed.

		Indices	
Index	Goodness-of-Fit	Absolute	Incremental
χ2	1341.311		
Df	806		
P-Value	0.0000		
Scaling Correction Factor	1.0590		
RMSEA		0.058	
90 Percent C.I.		0.053 0.064	
Probability RMSEA <=.05		0.007	
للصلللج			
SRMR		0.077	
CFI UNIV	VERSITY	of the	0.861
TLI WES	TERN CA	APE	0.851

Table 4.25: Endogenous measurement model fit indices

 $\chi$ 2: Satorra-Bentler Scaled Chi-Square; Df: Degrees of freedom; RMSEA: Root Mean Square Error of Approximation; C.I. Confidence Interval; SRMR: Standardised Root Mean Squared Residual; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index

Table 4.26 indicates the standardised correlation between the latent variables in the dependent measurement model. As indicated, correlations range from small (0.036) to large (-0.924). The high correlation between the burnout and Work Engagement Scale remains problematic and a source of concern for the validity of the structural model. The factor loadings were assessed and were all above the normative cut-off of 0.30 and statistically significant. Considered in totality, this model can be considered to be valid.

	ER_SUPP	ER_REP	MBI_TOTA	LMX	UWES
ER_SUPP	1				
ER_REP	0.111	1			
MBI_TOTA	0.096	-0.298*	1		
LMX	-0.076	0.181*	-0.612**	1	
UWES	-0.036	0.244**	-0.942**	0.477**	1

Table 4.26: Correlation's matrix of the endogenous measurement model

\*\*: p < 0.01; \*: p < 0.05

Based on the foregoing section, one can conclude that the endogenous measurement model fits the data reasonably well and can be used with confidence to specify the structural model. The high correlation between burnout total and work engagement violates the assumption of independence and may lead to spurious results in the structural model.

# 4.8.2 The exogenous model

The fit of the exogenous measurement model is the same as that of the emotional intelligence CFA model, since there was only one independent variable in the proposed structural model, indicating emotional intelligence. The fit of the CFA model for emotional intelligence scale was as follows: Satorra-Bentler Scaled Chi-Square (206.710), RMSEA (0.075), SRMR (0.073), CFI (0.780), and TLI (0.739). Considered collectively, the model demonstrated mediocre fit provided the acceptable normative cut-off values; however, the authors did not want to omit items from the scale since it can lead to altering the substantive meaning of the measure. In the final analyses, the fit and model parameters did not pose a serious risk to the validity of the structural model and therefore the author was comfortable including the exogenous and endogenous measurement models in the structural model.

# 4.8.3 The structural model

The structural model was employed to describe the relationship between the latent variables and specifies the amount of explained variance. Although the researcher is interested in the relationships between the latent variables, it is important to evaluate the tenability of the structural model. The overall fit of the structured model with the findings is presented in Table 4.27.

When considering the fit for the structural model, it is apparent that the overall fit can be regarded as mediocre. The SRMR value (0.111) was below the recommended cut-off score, the RMSEA (0.063) value met the criteria for acceptable fit. The CFI (0.769) and TLI (0.758) values fall short of the recommended 0.90 cut-off. Considered in totality, the fit can probably best be described as mediocre. Observing the overall model fit—the model fit can be described as mixed. Some of the metrics are in the target range of acceptable values (e.g., RMSEA), whereas other metrics are approaching the normative values (CFI and TLI). The value for SRMR is significantly higher than the normative acceptable cut-off values.

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# Table 4.27: Structural model fit indices

		Indices	
Index	Goodness- of-Fit	Absolute	Incremental
χ2	2597.817		
Df	1473		
P-Value	0.0000		
Scaling Correction Factor	1.0383		
RMSEA 90 Percent C.I.		0.063	
Probability RMSEA <=.05			
SRMR		0.111	
CFI	u u u		0.769
TLI UNIV	ERSITY	of the	0.758

χ2: Satorra-Bentler Scaled Chi-Square; Df: Degrees of freedom; RMSEA: Root Mean Square Error of Approximation; C.I. Confidence Interval; SRMR: Standardised Root Mean Squared Residual; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index

The structural model comprises individual hypotheses, culminating from theory in Chapter 2. The pathways represent each hypothesis, grouped into a structural model. The structural model is graphically depicted in Figure 4.1 below.

Figure 4.1: Structured model with findings



\*\*: p < 0.01; \*: p <0.05; H: Hypothesis

The structural model needed to be evaluated to assess whether theoretical relationships specified during the conceptualisation process are valid. Primarily, evaluating the signs of the parameters which signify the paths between the latent variables is essential to determine the degree of consistency with the nature of the causal effect hypothesised existing among the latent variables. It is critical to determine whether the parameter estimates are significant (p < .05) (Diamantopoulos & Siguaw, 2000).

**Hypothesis 1:** A positive relationship exists between emotional intelligence and the cognitive reappraisal strategy of emotional regulation.

As indicated in Figure 4.1, the relationship between emotional intelligence and the cognitive reappraisal strategy of emotional regulation was observed as statistically significant (p < 0.05). Support was authenticated for the direction of the relationship through the positive correlation ( $\gamma_{11} = 0.513$ , p < 0.05). Therefore, the null hypothesis was rejected in favour of the alternative hypothesis.

**Hypothesis 2:** Cognitive reappraisal mediates the relationship between emotional intelligence and LMX.

As indicated in Figure 4.1, the mediation of the cognitive reappraisal on the relationship between emotional intelligence and LMX was non-significant ( $\gamma_{11}\beta_{31} = 0.015$ , p > 0.05). Therefore, the null hypothesis could not be rejected. Empirical support was not observed for this hypothesis.

**Hypothesis 3:** A significant positive reciprocal relationship exists between work engagement and LMX.

As indicated in Figure 4.1, although support was observed for the relationship between work engagement and LMX ( $\beta_{43} = 0.736$ , p < 0.05), the positive reciprocal relationship between emotional intelligence and LMX was observed as non-significant ( $\beta_{34} = 0.363$ , p > 0.05). Therefore, only partial support was observed for the proposed hypothesis.

**Hypothesis 4:** A significant positive relationship exists between emotional intelligence and work engagement.

As indicated in Figure 4.1, the relationship between emotional intelligence and work engagement was observed as statistically significant ( $\gamma_{41} = 0.629$ , p < 0.05). Support was found for the direction of the relationship through the positive correlation. The null hypothesis was rejected in favour of the alternative hypothesis.

**Hypothesis 5:** A significant negative relationship exists between LMX and burnout.

As indicated in Figure 4.1, the relationship between LMX and burnout was statistically significant ( $\beta_{53} = -0.573$ , p < 0.05). Support was observed for the direction of the relationship through the negative correlation. Therefore, the null hypothesis was rejected in favour of the alternative hypothesis.

**Hypothesis 6:** Expressive suppression mediates the relationship between emotional intelligence and burnout.

As indicated in Figure 4.1, the mediation of expressive suppression on the relationship between emotional intelligence and burnout was non-significant

 $(\gamma_{21}\beta_{52} = 0.038, p > 0.05)$ . Therefore, the null hypothesis could not be rejected in favour of the alternative hypothesis.

Squared multiple correlations ( $\mathbb{R}^2$ ) should also be considered. Squared multiple correlations indicate the amount of variance in the manifest variables that can be explained by the variance in the latent variables which it was designed to reflect (Diamantopoulos & Siguaw, 2000). Values closer to 1 indicate a high degree of variance attributed to random error. As indicated in Table 4.28,  $\mathbb{R}^2$  values range from 0.014 to 0.344. The practical significance of the findings is explained in more detail in Chapter 5.



#### **Table 4.28: Squared multiple correlations**

Note: Mplus is unable to calculate R-squared values for reciprocal relationships

#### 4.9 Summary

This chapter summarises the results according to the research methodology in Chapter 3. Statistical analysis was conducted on the data collected by employing SPSS version 27 and Mplus. First, the assumptions of SEM were discussed employing homoscedasticity of residuals, normality, linearity, and collinearity. This was followed by item analyses that identified several problematic items. CFA was employed to identify the measurement integrity of the individual scales. Lastly, the structural model was examined. Support was attained for three of the six hypotheses, with partial support for one of the hypotheses. The subsequent section examines these findings, presents recommendations for future research, and describes the limitations of the study.



# **CHAPTER 5: DISCUSSION OF RESULTS**

# 5.1 Introduction

Chapter 1 introduces the background and the purpose of the study. This is followed by Chapter 2, providing a review of the literature cumulating in the formulation of a conceptual model described through six hypotheses. Chapter 3 outlines the research process, and the methods to execute the data collection and statistical analysis. Chapter 4 presents the study results. Chapter 5 discusses the results, emanated from Chapter 4.

The purpose of this study was to test the proposed model, developed to explain the dynamic interaction between emotional intelligence, emotional regulation, and LMX. The main outcomes of the proposed model are burnout and work engagement. The proposed model is supported to some degree as Hypotheses 1, 4, and 5 were supported; Hypotheses 2 and 6 were not supported; Hypothesis 3 was partially supported. These hypotheses are discussed along with practical implications, followed by the study limitations. Finally, recommendations for future research and practical implications for organisations are proposed.

#### 5.2 **WESTERN CAPE** 5.2 Discussion of hypotheses

As indicated in Figure 4.1, partial support was observed for the proposed model. These hypotheses are discussed with reference to the literature.

**Hypothesis 1:** A positive relationship exists between emotional intelligence and the cognitive reappraisal strategy of emotional regulation.

The relationship between emotional intelligence and the cognitive reappraisal strategy of work engagement received empirical support. A statistically significant positive relationship between emotional intelligence and cognitive reappraisal was observed. This finding was consistent with other studies. A study was conducted with an Australian sample comprising 73 participants recruited from the

community service sector. This study reveals that emotionally intelligent people regulate their emotions earlier in the emotional development process by applying the antecedent-focused regulation strategy (Schutte, Manes, & Malouff, 2009). This was indicated by a statistically significant relationship between emotional intelligence and antecedent-focused regulation. Findings of another study among 712 higher education centres across Spain, support this hypothesis. The study recognised a statistically significant positive relationship between emotional intelligence and cognitive reappraisal (Megias-Robles et al., 2019). This relationship could due to individuals' (higher in emotional intelligence) ability to identify emotions before attempting to regulate (Sumida, 2010). Individuals with skills in emotional identification, such as identifying emotional cues and their associated meaning, have an enhanced capacity to successfully regulate their emotions. By that, they are reducing the need to suppress emotions (Bodrogi et al., 2020). Persons higher in emotional intelligence also have a good understanding of themselves thereby supporting successful emotional regulation (Peña-Sarrionandia et al., 2015).

**Hypothesis 2:** Cognitive reappraisal mediates the relationship between emotional intelligence and LMX.

No support was observed for the relationship between emotional intelligence and LMX being mediated by cognitive reappraisal. This could imply that employees' level of emotional intelligence does not contribute to the quality of their relationship with their leader through the mediation of cognitive reappraisal. The rationale for this could be that LMX was only measured from the follower's perspective. The emotional intelligence and emotional regulation strategy for the leader were not taken into account. According to a study by Sears and Holmvall (2010) among 48 Canadian federal public service employees, emotional intelligence strongly relates to LMX when both the leader and followers displayed high levels of emotional intelligence. This could imply that both the leader and the follower need to perceive the relationship similarly. This supports the dyadic nature of LMX, where the relationship between a leader and follower is considered a partnership (Seo et al., 2018).

Emotional intelligence could have a direct impact on LMX with a possibility that the relationship is not mediated by emotional regulation. A study among 599 employees, comprising administration, pathology collection, laboratory assistants/technicians, pathologist/medical officers, and scientists, determined support for the direct relationship as emotional intelligence positively correlated to LMX dimensions (Jordan & Troth, 2011). The quality of LMX is based on leaders' and followers' ability to maintain social relationships, accelerated by emotional intelligence. These are especially important relationships that involved dealing with the emotions of oneself and others (Jordan & Troth, 2011).

An additional study among 106 participants operating in the public sector in Quetta Pakistan, observed a positive relationship between emotional intelligence and LMX (Karim, 2011). This was attributed to emotionally intelligent followers' ability to manoeuvre through the stages of the relationship. This was attributable to the ability to accurately identify, appropriately use, and understand emotions. As a result, followers formed part of the in-group with the leader, determining high-quality relationships (Karim, 2011).

Hypothesis 3: A significant positive reciprocal relationship exists between work engagement and LMX.NIVERSITY of the

The relationship between LMX and work engagement was perceived as nonsignificant, although support was observed for the relationship between work engagement and LMX. Partial support was, therefore, observed for the proposed hypothesis. Conversely, a study in Finnish organisations among 879 respondents identified a positive, statistically significant relationship between LMX and work engagement (Tanskanen, Mäkelä, & Viitala, 2019). The authors hypothesised this relationship based on leaders in high-quality relationships, providing employees with resources, such as trust and professional respect. These resources enhanced work engagement.

This study measured the quality of the relationship with the leader from the follower's perspective. A dissimilar approach where the leader's perception of the relationship is also measured could yield diverse results. In a study by Matta,

Scott, Koopman, and Conlon (2015), it was found that where followers' and leaders' LMX scores were high, a perception by both leaders and followers of a high-quality relationship indicated higher work engagement among employees (Matta et al., 2015).

In line with the findings of the current study, Matta et al. (2015) also observed a negative (but not statistically significant) relationship between LMX and work engagement when the leaders' perception of LMX quality is higher than that of the followers. According to Matta et al. (2015), this is attributable to perceptions or subordinates' experiences of the resources provided. If a leader perceives a high-quality relationship with the subordinate, whereas the subordinate perceives a low-quality relationship, the resources provided by the leader will be perceived or experienced through the low-quality relationship lens.

This finding could also be attributable to a methodological artefact. Reciprocal relationships should strictly be assessed through time-series data. In the current study, only cross-sectional data were available. The risk of testing reciprocal relationships with cross-sectional data is that it only provides a glimpse of the phenomenon at a certain moment. According to Wong and Law (1999), it is generally believed that a reciprocal relationship should not be measured at one point in time because the cause should precede the effects. This cannot be confirmed with cross-sectional studies. Cross-sectional studies could lead to common method variance, which could mean that the observed variance could result from the measurement process rather than the constructs measured (Rindfleisch, Malter, Ganesan, & Moorman, 2008).

**Hypothesis 4:** A significant positive relationship exists between emotional intelligence and work engagement.

As indicated in Figure 4.1, the relationship between emotional intelligence and work engagement was statistically significant. Support was observed for the direction of the relationship through the positive correlation. This finding concurs with the literature discussed in Chapter 2. In a study by Thor (2012) among 5 186 United States and Canadian process improvement experts, a statistically

significant positive relationship between emotionally intelligent employees and their levels of work engagement was observed. In a study conducted among 361 lecturers, a statistically significant positive relationship was observed between work engagement and emotional intelligence (Nagalingam, Kadir, & Hoesni, 2019). Since emotions can lead to both negative and positive energy, individuals who can identify, understand, and control their emotions are, therefore, are more inclined to have a positive perspective. The result is higher levels of work engagement (Nagalingam et al., 2019). Emotionally intelligent people are attuned to their emotions. They, therefore, understand what will elicit positive feelings and are likely seek out activities that make them happy. This enhances their work engagement levels (Thor, 2012).

Hypothesis 5: A significant negative relationship exists between LMX and burnout.

The relationship between LMX and burnout was observed as statistically significant. Support was discerned for the direction of the relationship through the negative correlation. A study in Turkey among 121 professional football players revealed a negative and statistically significant relationship between LMX and burnout (Yildiz, 2011). Similar results were obtained in a study among 342 social workers (Kang, 2013). This study identified that LMX statistically negatively relates to burnout. This indicates that if followers perceive a high-quality relationship with their leader, they will be less prone to burnout.

According to Kang (2013), employees in high-quality relationships receive more emotional and social support, communication, and rewards from their supervisors. Such resources and support may enhance work performance and reduce work pressure, resulting in reduced burnout. Yildiz (2011) similarly observed that professionals embracing high-quality relationships with their coach gain access to resources, resulting in reduced burnout. This finding is in alignment with the literature discussed in Chapter 2.

**Hypothesis 6:** Expressive suppression mediates the relationship between emotional intelligence and burnout.

The mediation of the expressive suppression on the relationship between emotional intelligence and burnout was observed as non-significant. The null hypothesis was, therefore, rejected. This is contrary to what was expected, based on the literature discussed in Chapter 2. While analysing the data, a nonsignificant relationship between emotional intelligence and emotional suppression was observed. This is contrary to a study conducted among 349 by Śmieja-Nęcka, Mrozowicz-Wrońska and Kobylińska, (2011). They observed that emotional intelligence negatively relates to suppression. The same study indicated that gender signifies a huge difference in the emotion regulation strategy; males are more likely to suppress their emotions. The study further observed that males, low in emotional intelligence, are likely to suppress their emotions. This finding was attributed to expressing emotions being more socially acceptable for females than for males (Śmieja-Nęcka et al., 2011). Gender, therefore, could have influenced the findings from the current study since most participants were female. The breakdown in the linkage between emotional intelligence and emotional suppression will result in a non-significant mediation linkage.

In summary, Figure 5.1 presents all the supported hypotheses and the partially supported hypothesis in the current study. From the illustration of the model, it is evident that emotional intelligence can increase work engagement. The preferred strategy used by emotionally intelligent people is cognitive reappraisal rather than emotional suppression. This is attributable to individuals more capable to identify and understand their emotions. Consequently, they can alter the meaning of the emotion earlier in the emotional developmental process, reducing the need to suppress emotions (Schutte et al., 2009).

The study also observed that engaged employees are more likely to perceive highquality relationships with their leaders. Conversely, those perceiving low-quality relationships with their leaders are more likely to suffer burnout. This is attributed to the support and resources received by those in high-quality relationships compared to those in low-quality relationships. More resources and support are provided to those in high-quality relationships. The job resources required for work engagement are, therefore, enhanced. This reduces the lack of resources that results in burnout (Kang, 2013). These findings have practical implications for research and organisations, discussed in the subsequent section.



Figure 5.1: Restated model illustration of the supported hypotheses

# **5.3 Practical implications for organisations**

This study contributed to the body of knowledge surrounding emotional intelligence and emotional regulation. The findings indicate a relationship between emotionally intelligent people and their preferred emotional regulation strategy of cognitive reappraisal. Since emotional intelligence can be developed, organisations can use this finding for training and development purposes.

Trainers can focus on the cognitive reappraisal strategy as a mechanism of choice to deal with situations in the workplace. Employees low in emotional intelligence can still be trained to use cognitive, reappraisal strategies in the workplace. Employees using cognitive reappraisal reinterpret stressful events through a positive lens resulting in employees bouncing back from adversities and finding opportunities in threats (Zhang, Zhang, Lu, Liu, Kong, Baker, & Zhang, 2021). This may help them choose emotions that may have unintended positive consequences in the workplace, similar to those of emotional intelligence.

<sup>\*\*:</sup> p < 0.01; \*: p <0.05; H: Hypothesis

This study observed a positive relationship between emotional intelligence and work engagement. Organisations can focus their efforts to enhance work engagement during pre-employment. Since emotionally intelligent people are attuned to their emotions, self-aware, and can manage their emotions, they are more inclined to be engaged at work (Thor, 2012). Emotional intelligence tests should become an important device to consider in the selection process within the workplace. Engaged employees are mentally committed and energised while completing tasks. They perceive their work as important. Organisations obtaining such a workforce will, therefore, have a more productive staff complement achieving targets on time, use resources efficiently, and are less likely to be absent (Sundaray, 2011).

This will offset an unproductive labour force as employees will work more energised and use company resources, such as time, more efficiently. Technically competent employees may have the capacity to do the job, but if they are not engaged at work they may not perform as productively in the workplace thereby (Aslam, Muqadas, Imran, & Rahman, 2018). Organisations should consider the trade-off between technically competent candidates and those high in emotional intelligence.

Organisations need to focus on how employees perceive their leaders. Observing work engagement positively relates to LMX whereas LMX negatively relates to burnout. Employees' perception of their leaders is a beneficial indicator to monitor. The perceived quality of relationship employees have with their leaders is pivotal concerning burnout or work engagement. Competent leaders form the support of any successful organisation since they attract top talent and help to create an environment where they can prosper. The indirect effect is also true—the most talented employees could leave organisations with toxic and exploitative management practices (Dykes & Winn, 2019).

The uncovered correlations between work engagement, LMX, and burnout will help organisations identify potential leadership challenges. Considering this model, an increase in burnout and a decrease in work engagement levels may indicate a low standard perception of LMX quality between subordinates and leaders.

Attributable to the relationship between work engagement and LMX, engaged employees are likely to realise high-quality relationships with their managers. This is an interesting finding as there might be low-quality relationships with leadership that could be undetected attributable to an engaged workforce. Organisations should be mindful of this phenomenon as it could (misleadingly) appear that teams are benefiting from LMX. These benefits include enhanced productivity, open communication, and organisational commitment (Clarke & Mahadi, 2017). Conversely, it could be that the team is engaged, and the positive outputs have little in common with high-quality LMX relationships. The researchers believe that this observation is limited since voluminous research identified the spill-over effects of high LMX relationships (Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016). This finding may be unique to the current study. Future research will need to explicitly assess this relationship to confirm the external validity.

In summary, this study observed a positive relationship between emotional intelligence and work engagement, followed by a positive relationship between work engagement and LMX. This is concluded by a negative relationship between LMX and burnout. If organisations invest in emotionally intelligent employees, other benefits could ensue, such as enhanced work engagement, employee perception of high-quality relationships with leaders in the workplace, and a reduced inclination to burnout.

# 5.4 Limitations of the study

This study contributes to the existing body of knowledge. It presents a recommendation for organisations. Some limitations should be noted and improved for future research.

The subscale of emotional regulation (expressive suppression) scored a lower than acceptable Cronbach alpha of 0.664. This indicates that the scale has limited

applicability in practice (Nunnally, 1967). While this reliability score could be attributed to the limited number of questions on the scale, it limits the study concerning the findings relating to the expressive suppression subscale (Yang & Green, 2011). Low reliability or internal consistency of a construct limits the potential correlation between the variable in question and any other variable (Nimon, Zientek & Henson, 2012). Reliability, correspondingly, has a truncating effect on correlations. This may be one reason why none of the relationships involving emotional regulation suppression observed any statistical support.

An additional limitation of the study is attributed to the employed self-report instruments. Self-report instruments rely on participants' self-perception and the topics to accurately respond to questions. Consequently, social desirability could play a role in how participants respond to questions. Participants could have responded socially acceptable to questions, framing themselves in a positive light rather than truthful responses (Lavrakas, 2008).

Since a quantitative data analysis method was followed, the researcher could not obtain a deeper understanding of why participants responded particularly. This limited depth of information obtained in the study, therefore, forcing the researcher to treat the data obtained as objective facts. For example, while measuring LMX, participants could value other aspects as contributing factors to high-quality relationships, in addition to questions in the instrument.

Although the sample size met the acceptable cut-off proposed by Netemeyer et al. (2003), the power analysis suggested a sample size of 1075 was needed to limit the Type 1 error. Smaller samples increase the chances of producing sample-specific results that may suffer from Type 1 errors. The low statistical power limits the generalisability of the results. Another limit on the generalisability of the study is the non-probability sampling method employed. The present study focused on the financial industry and, therefore, should not be generalised to other industries. An additional limitation is that all the participants did not function within the same working environment. This makes it challenging to control major sources of extraneous variances in the study design.

#### 5.5 **Recommendations for future research**

A major limitation of the study was that LMX was not measured from the perspective of the leader and the followers. Consensus regarding the quality of the relationship from both perspectives is crucial in validating the dyadic relationship. Matta et al. (2015) demonstrated that findings with external variables, such as work engagement and organisational citizenship behaviours, will differ in a disagreement between leaders' and followers' perceptions of the quality of the LMX relationship. Emotional intelligence, work engagement, and LMX could be measured from a leader's and follower's perspectives. This will help assess whether leaders' emotional intelligence plays a role in enhancing work engagement and high-quality relationships while reducing burnout.

Brinberg, Ram, Hültür, Brick, and Gerstorf (2018) suggest (linked to the measurement of LMX) that the quality of dyadic relationships should be measured through time-series data to identify intra-dyad dynamics that may be lost in single score techniques. Perceptions of the LMX relationship can fluctuate depending on the tenure of the follower with the leaders (Park, Sturman, Vanderpool, & Chan, 2015). More tenured employees would have stable LMX perceptions. Park et al. (2015) also emphasise the importance of identifying trends when measuring LMX relationships. Diary studies provide an alluring alternative to measuring fluctuations in LMX perceptions, and how it relates to emotional regulation, emotional intelligence, and work engagement. This may provide crucial information identifying more conducive to high-quality leadership activities and which ones reduce LMX perceptions. Leadership decisions and actions may form important moderators in the proposed model that can amplify or buffer the impact of emotional intelligence on LMX.

Provided the low-reliability score obtained for the expressive suppression subscale, researchers conducting studies into emotional regulation should gravitate toward the side of caution when using the subscale from the ERQ. The measure may benefit from adaptations, modification, and validation in the South African context. Figure 5.1 displays a model of the supported hypotheses, which future researchers can develop to further explore the impact of emotional intelligence on favourable workplace states. Further research could identify positive outcomes arising from cognitive reappraisal; this strategy is more productive in developing high-quality relationships. The role of cognitive reappraisal has only been investigated in a nomological network of a few variables. The current model should be expanded to include additional emotional states, such as flow and emotional adaptation, concerning LMX. This would have far-reaching implications and shift greater focus on cognitive reappraisal and its importance in the workplace. Furthermore, the absence of emotional intelligence, may be experienced as emotional labour which could be investigated within the model displayed.

#### 5.6 Conclusion

The purpose of this study was to contribute to the body of knowledge encompassing emotional intelligence and emotional regulation and to investigate how these variables could potentially affect work engagement, LMX, and burnout. The study observed support for three of the hypotheses whereas only partial support was observed for one hypothesis. These three supported hypotheses, along with the partially supported hypothesis, were reaffirmed in Figure 5.1, emphasising the significance of the study on organisations and the potential for other researchers to further contribute to this study. The study also observed certain limitations to ensure that the study conclusions are implemented cautiously. Recommendations are proposed for future researchers to continue contributing to the body of knowledge on the study topic.

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