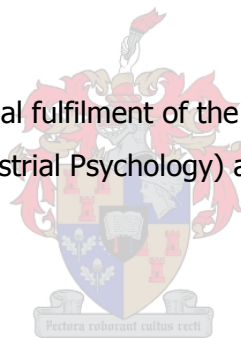# The relationship between servant leadership, emotional intelligence, trust in the immediate supervisor and meaning in life: An exploratory study

Marieta van Staden

Thesis presented in partial fulfilment of the requirements for the degree

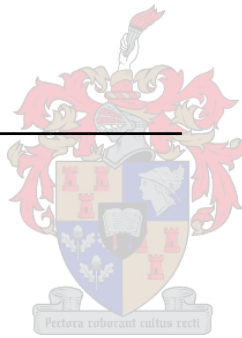Master of Arts (Industrial Psychology) at Stellenbosch University

Dr Z Dannhauser

November 2007

i

DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:　　＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

Date:　　＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

ABSTRACT

Constructs in this study are explored from a positive organisational scholarship paradigm, which is largely concerned with the investigation of positive outcomes, processes and attributes of organisations and their employees. The aim of the study is to investigate the respective relationships that exist between the positive organisational psychological constructs, namely servant leadership, emotional intelligence and trust in the immediate supervisor, and the influence of these variables on the meaning in life experienced by individuals. Based on literature, a model depicting a sequential process of interrelationships amongst the constructs is proposed in the study.

Both survey and statistical modelling methodologies were employed to guide the investigation. Standardised questionnaires were used for the four different constructs, using the responses of 154 employees on a composite questionnaire. To determine the applicability of the factor structures of these instruments on the current sample, exploratory factor analysis was conducted. The suggested factor structures were confirmed through confirmatory factor analysis with acceptable levels of fit. The revalidated instruments provided better levels of fit than the original instruments. The configurations of the measurement instruments were found to be different in a South African cultural organisational setting for the Servant Leadership Questionnaire, the Emotional Intelligence Index and the Life Regard Index. However, the configuration of measurement on trust in the immediate supervisor, when applied to the respondents in this study, appeared to be similar to those found in different cultural settings. The results of a Pearson correlation analysis, stepwise multiple regression and structural equation modelling (SEM) analysis indicated significant relationships between servant leadership, emotional intelligence and trust. The relationship of these constructs with meaning did not show significant relationships.

The contribution of this study to the existing theory and literature is the exploration of the portability of the measurement instruments to a South African context. A further contribution is the findings with regard to the interrelationships between servant leadership, emotional intelligence and trust in the immediate supervisor. Some recommendations for further research and some suggestions regarding servant leadership development interventions are also made.

OPSOMMING

In hierdie studie word konstrukte vanuit 'n paradigma van die positiewe organisatoriese benadering benader, wat op die ondersoek van positiewe uitkomste, prosesse en kenmerke van organisasies en hul werknemers fokus. Die doel van die studie is om ondersoek in te stel na die verhoudinge wat bestaan tussen positiewe organisatoriese konstrukte, naamlik diensleierskap, emosionele intelligensie, vertroue in die direkte toesighouer, en die invloed van hierdie veranderlikes op die sinvolheid van die lewe wat individue ervaar. Op grond van die literatuur word 'n model voorgestel wat 'n logiese volgorde daarstel van hoe die verskillende konstrukte aan mekaar verwant is.

Sowel opname- as statistiese modelleringsmetodiek is in hierdie studie gebruik. Vier gestandaardiseerde vraelyste is gebruik om response van 154 werknemers op 'n saamgestelde vraelys te verkry. Verklarende faktorontleding is gebruik om die geldigheid van die vraelyste op die betrokke steekproef te bepaal. Die geldig verklaarde vraelyste het aanvaarbare passings gelewer wat beter as die oorspronklike vraelyste was. Die ontledings het aangedui dat die konfigurasies van die meetinstrumente, soos toegepas in 'n Suid-Afrikaanse kulturele organisatoriese opset, verskil het van die konfigurasies wat deur die oorspronklike opstellers van die *Servant Leadership Questionnaire*, die *Emotional Intelligence Index* en die *Life Regard Index* voorgestel is. Die konfigurasie van die meetinstrument vir vertroue in die direkte bestuurder, toegepas op hierdie studie se respondente, het egter ooreengestem met dít wat in ander kulturele kontekste bevind is. Die resultate van die Pearson-korrelasie-ontleding, stapsgewyse meervoudige regressie- en struktuurvergelykingsmodellering- (SVM-)ontledings het aangedui dat daar beduidende verwantskappe tussen diensleierskap, emosionele intelligensie en vertroue in die direkte bestuurder bestaan. Daar is geen beduidende verwantskap tussen hierdie konstrukte en sinvolheid van die lewe gevind nie.

Die studie maak 'n bydrae tot die bestaande teorie ten opsigte van die ondersoek rakende die oordraagbaarheid van die meetinstrumente na 'n Suid-Afrikaanse konteks. 'n Verdere bydrae is die bevindinge rakende die verhoudinge tussen diensleierskap, emosionele intelligensie, en vertroue in die direkte bestuurder. Die studie maak aanbevelings vir verdere navorsing en maak verskeie voorstelle ten opsigte van intervensies met betrekking tot die ontwikkeling van diensleierskap.

ACKNOWLEDGEMENTS

I would like to take the opportunity to express my gratitude to the following individuals for support, guidance and interest:

To my heavenly Father, who is my role model in servant leadership, emotional intelligence and trustworthiness and in whom I find meaning. I am blessed by Your grace and provision and humbled by the opportunity to serve You in this way.

To my family, colleagues and friends, for your unconditional support, wisdom, prayers and interest in the completion of this work. Many times you held up my arms when I felt I could not go further. I love you all dearly.

To my studyleader, Dr Zani Danhauser, thank you for assisting in my learning. I truly appreciate all your efforts and willingness to serve.

I would also like to thank Dr Petrus Nel who has voluntarily provided assistance and support in this study. I have found your input and teaching invaluable. Thank you also for providing friendship and support throughout.

A note of gratutide to Prof Adre Boshoff, who birthed the idea of this study and voluntarily provided an invaluable input.
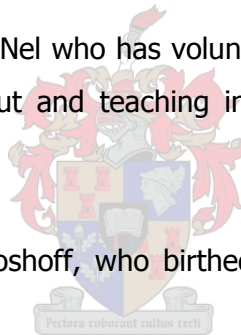
To the two organizations who allowed me to conduct my research in their organisations, thank you for your efforts in distributing the documents and allowing the individuals time to complete the questionnaires.

To the readers of this study who have a specific interest in this field, I am grateful for the opportunity I have had to learn through the completion of this thesis. I am indebted to the many wise individuals whom I have quoted in this study and who have informed not only this thesis, but my way of life. I look forward to the journey of learning still to come and reading about your further exploration and research in this field.

TABLE OF CONTENTS

CHAPTER 5: DISCUSSION OF RESEARCH RESULTS AND RECOMMENDATIONS FOR FUTURE RESEARCH   83

REFERENCES   98

LIST OF TABLES:

LIST OF FIGURES:

CHAPTER 1: THE PROBLEM AND ITS SETTING

1.1 Introduction

This chapter provides a general introduction to the context of the study, exploring the postulated relationship between emotional intelligence, meaning, servant leadership and trust. The chapter begins by setting the context for the study through an exploration of the field of positive organisational scholarship in which the study is set. This is followed by the objectives and aims of the study. Finally the benefits of the study are identified and an outline of the remainder of the thesis is presented.

1.2 Setting the context for the study

Since the beginning of psychology as a science, three objectives were stated: repair psychological damage, prevent psychological problems, and build psychological strengths in people (Linley, Joseph, & Wood, 2006; Luthans, 2002a, 2002b; Park, Peterson, & Seligman, 2004). Emphasis was placed on the negative impact of dysfunctional behaviour in organisations and employees – the focus of the first two objectives. This pathogenic perspective (Coetzee, & Cilliers, 2001; Vaillant, 2003) is gradually being replaced by a positive approach to both psychology and organisational behaviour (Luthans, 2002a). The focus of the positive approach is on individual well-being and coping skills to effectively deal with changes and problems in organisations and careers.

According to Cameron, Dutton and Quinn (2003), positive organisational behaviour (POB) does not represent a singular theory, but focuses on the dynamics that are typically described by words such as "excellence, thriving, flourishing, abundance, resilience, or virtuousness" (p. 4). POB can therefore be defined as the study and application of human resource strengths and psychological capabilities. These strengths and capabilities must be measured, developed, and managed to improve organisational performance (Luthans, 2002a, p. 59). Emphasis must therefore be placed on the development of these psychological strengths to the benefit of organisations and individuals. Without such a developmental approach, improvements that are focussed on positive outcomes in both individual and organisational performance cannot be achieved.

The traditional organisational science approach demonstrates the deficit approach, which can be defined as the effort to understand and correct poor outcomes. Although this is of importance, the overwhelming focus on these issues may deflect attention from more positive outcomes (Caza, & Caza, 2005). The aim of POB is therefore to find out what it is that makes

individuals and organisations strong and thriving and then to develop interventions that can be measured and managed to attain this state. Within this framework, leadership too is being approached from a more positive perspective, e.g. servant, spiritual, and authentic leadership.

Since the essay on servant leadership was published by Greenleaf in the 1970s, the concept was embraced by scholars and researches in the field of positive organisational scholarship (POS) (Spears, 2002). In the positive organisational behaviour/scholarship field (Luthans, 2001, 2002a, 2002b; Luthans, & Jensen, 2002) it is reasoned that the notion of servant leadership fits with the positive approach to leadership (PAL), as advocated by Luthans, Luthans, Hodgetts and Luthans (2002). PAL, drawing on positive psychology, demands sound theory and research in positive psychology, as well as the criteria from POB being (a) measurable, (b) open to development, and (c) manageable in both self and others for performance improvement in today's organisations (Luthans et al., 2002). PAL proposes that realistic optimism, intelligence (especially emotional intelligence), confidence and hope best meet the criteria for PAL for leaders themselves and for others' performance improvement in the organisation (Luthans et al., 2002).

Recently, servant leadership has been included in studies on effective leadership. According to Higgs (2003), the past 50 years have seen flawed leadership determinants being used to measure success. Instead of using short-term determinants such as market share growth, financial improvement, decreased turnover, and reduced absenteeism, real leadership success should be measured by the degree to which it contributes to creating and building a sustainable long-term asset – follower capacity (Higgs, 2003).

In POB it is not appropriate to study only the impact of positive predictors without linking the latter to positive outcomes (Peterson, & Steen, 2005). In the current study, the positive outcome to be studied is servant leadership and its associated predictors (i.e. antecedents). Barbuto and Wheeler (2006) argued that leaders following a service-oriented philosophy of, and approach to, leadership are more likely to be displayed once certain antecedents are in place. The following sections provide a brief overview of emotional intelligence and trust as proposed antecedents of servant leadership.

1.3 Proposed antecedents of servant leadership

Emotional intelligence has originated from positive psychology, and now POB, as having a more relevant and greater impact on PAL than traditional IQ. Daniel Goleman popularised the concept of emotional intelligence, which has received considerable attention in the popular press and in

management practitioner journals and programmes. Goleman (1998) defines emotional intelligence (EI) as comprising self-awareness (the ability to recognise and understand moods), self-management (the appropriate channelling of individual initiative), social awareness (empathy and sensitivity to the concerns of others), and social skill (behaviours aimed at coordinating goal-oriented behaviour). Goleman has noted that EI can positively impact human functioning in a variety of ways. He proposes, for example, that superior academic performance can be attributed to emotional traits of enthusiasm and persistence in the face of obstacles (Goleman, 1995).

The leadership intelligence that is needed in PAL involves not only recognising emotions in oneself and others, but also knowing how and when emotions unfold, and using this to lead accordingly (Luthans et al., 2002). Goleman (1998, 2000) has noted that emotional intelligence is at the very centre of effective leadership. For example, leaders who are capable of regulating their emotions are more likely to be adaptive and able to create an environment of trust and fairness (Luthans et al., 2002).

Accordingly, servant leadership and emotional intelligence can be linked to an organisational culture of trust (Luthans et al., 2002; Reinke, 2004). Reinke (2004) proposes a model linking servant leadership, characterised by openness, stewardship and vision, to an organisational culture of trust and to the creation of trusting relationships. According to Ferres (2001), openness of communication, perceived organisational support, and justice are examples of organisational aspects that have been specified in research as determinants of trust.

Lester and Brower (2003) explore the relationship between servant leadership and emotional intelligence by specifically investigating how subordinates' perceptions of their leaders' trust in them influence their performance, organisational citizenship behaviour (OCB), and job satisfaction. Their findings supported their hypotheses that subordinates' perceptions of their leaders' trust in them (felt trustworthiness) are positively related to the subordinates' performance, OCB, and job satisfaction. Consequently, the authors conclude that when employees perceive that they are trusted, they will work harder, go beyond the call of duty, and be more content with their work.

It becomes apparent that, in modern-day society where work forms such a significant part of daily life, many people are searching for meaning in life through their work. Several researchers investigated the psychological functions of work in the human life, and work as a source of purpose stood out strongly (Friedman, & Havighurst, 1954; Morse, & Weiss, 1955). Meaning, as

a POB construct, is therefore studied as an outcome of servant leadership as a component of PAL.

1.4 Theoretical framework for the research

Servant leadership, emotional intelligence, trust and meaning have been identified as constructs that can be included in the positive organisational behaviour approach. Although these constructs still warrant further research and validation, it is important to determine the possible relationship between the constructs in order to understand how to effectively develop and implement an intervention that will enhance the positive outcomes and performance of organisations.

1.5 Defining the constructs

Servant leadership describes leaders' deep-rooted desire to make a positive difference in others' lives, their commitment to and skill in fostering spiritual recovery from hardship or trauma for others, a combination of awareness of surroundings and anticipation of consequences, the extent to which they use sound reasoning and mental frameworks, and the extent to which they prepare an organisation to make a positive contribution to society through community development programmes (Barbuto, & Wheeler, 2006).

Emotional intelligence is the capacity for organising one's own feelings and those of others, for motivating oneself, and for managing emotions well in oneself and in relationships (Goleman, 1998).

Trust in the immediate supervisor is the belief or willingness that one can rely on the likelihood that another's future actions will be beneficial, or at least not detrimental, to one's interests (Robinson, 1996).

Meaning relates to finding or having a reason for 'being' and a feeling, experience or perception that this 'being' is of significance (De Klerk, Boshoff, & Van Wyk, 2001).

The assumption in this study is that certain antecedents affect servant leadership. The possible antecedents that will be explored are emotional intelligence and trust in the immediate supervisor. It is also assumed that a servant leader's leadership style will have an impact on the meaning that a subordinate experiences.

1.6 Research objectives

According to Barbuto and Wheeler (2006), an operational measure of servant leadership leads to many research questions. A major precept of servant leadership proposes that followers will become healthier, wiser, freer, more autonomous, and more likely to become servants themselves (Greenleaf, 1970). The extent to which servant leadership fosters emotional health, organisational wisdom, and self-determination provides key research opportunities to test these assertions. There also appears to be significant relationships between servant leadership and positive outcomes such as employees' extra effort, employees' satisfaction and experience of meaning, and perceptions of organisational effectiveness (Barbuto, & Wheeler, 2006).

This highlights the importance of servant leadership, and therefore the relationship between servant leadership, emotional intelligence trust and meaning that could shed light on the development of servant leadership skills and attributes. Therefore, the main objective of the research is to present organisations with knowledge that will assist them to foster actively and develop servant leadership skills.

This research is expected to contribute to the existing understanding of servant leadership in general, and specifically in terms of the following:

- No previous research study investigating the relationships between these specific constructs has been conducted locally.
- Positive organisational psychological constructs have not yet been integrated to understand servant leadership and its influence on an individual's experience of meaning.
- Quantitative methodologies have been lacking conspicuously in previous research on servant leadership. The current research will study servant leadership from a quantitative perspective and will provide statistical information on the servant leadership construct developed by Barbuto and Wheeler (2006).
- A realistic workplace environment will be used to determine the impact of servant leadership behaviour on the specified variables.

The study aims to investigate the respective relationships that exist between the discussed constructs. A proposed theoretical model, integrating the relationships between the constructs, will be tested in the statistical analysis. The study will attempt to validate this model partially by investigating the relationships between the constructs. The aim of this study can thus be described as follows:

1.6.1 Conceptual aim of the study

This study aims to investigate the respective relationships that exist between the positive organisational psychological constructs, namely servant leadership, emotional intelligence, trust in the immediate supervisor, and the influence of these variables on the meaning in life experienced by individuals.

1.6.2 Operational aim of the study

Operationally the aim of this study is to determine whether a model of sequential relationships among the constructs, namely servant leadership, emotional intelligence, trust in the immediate supervisor, and meaning, within the realm of positive organisational behaviour (POB), can be built successfully. The operational aim subsequently led to the formulation of the research questions for the study, stated at the end of Chapter 2.

The constructs evaluated in this study have not previously been integrated into one study and therefore it could contribute to the field of POB. Given the specific POB approach and limited research pertaining to the unique combination of constructs as utilised in this study, this study was largely exploratory in nature.

1.7 Study outline

Chapter 2 focuses on the definition of the constructs used for the purposes of this study. The constructs of servant leadership, emotional intelligence, trust in the immediate supervisor and meaning are defined and described. The chapter also includes cited research on the inclusion of each of these constructs in the study of effective leadership. Previous research conducted on these constructs and possible relationships between the respective constructs are also discussed. Finally, the research propositions are stated and the theoretical model of the study is outlined.

Chapter 3 describes the methodology employed in this study, which includes exploratory and confirmatory factor analysis, correlation analysis, structural equation modelling and multiple regression analysis. The results of the quantitative data analyses, including the obtained factor structures for each of respective constructs, are presented in Chapter 4.

The interpretation and discussion of the research findings and their link to the research propositions are presented in Chapter 5. Moreover, limitations of the study and recommendations for future research are discussed.

1.8 Summary

The positive organisational scholarship movement, focusing on the application of positively oriented human resource strengths and psychological capacities, has as its aim to discover what makes individuals and organisation strong and thriving. This information is then utilised to help organisations to develop proactive interventions that can be measured and managed to attain this positive state.

Servant leadership, emotional intelligence, trust and meaning have been identified as constructs that can be included in the positive organisational scholarship approach. This study aims to explore and investigate the relationship between these respective constructs in order to offer suggestions for the development of a successful servant leadership intervention for implementation in organisations.
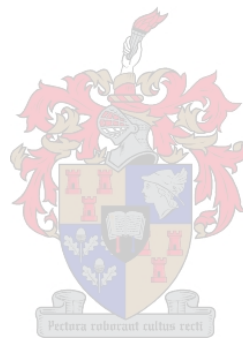
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of the current literature on each of the respective constructs used in this study, namely servant leadership, emotional intelligence, trust in the immediate supervisor and meaning. A summary of the definition of each construct and its history is provided. Relationships between the constructs that have been found in previous research are also highlighted. The chapter concludes with the research propositions and the theoretical model for this study.

2.2   The history and notion of servant leadership

Literature suggests that the prime motivation for leadership should be a desire to serve (Baggett, 1997; Batten, 1997; Block, 1993; Briner, & Pritchard, 1998; Covey, 1990; Fairholm, 1997; Gaston, 1987; Greenleaf, 1977; Kouzes, & Posner, 1993; Manz, 1998; Oster, 1991; Pollard, 1996; Rinehart, 1998; Senge, 1995; Snyder, Dowd, & Houghton, 1994; Turner, 2000). This desire to serve will invoke leaders to play the role of a servant in their relationship with their fellow employees. Therefore, their motivation will not be one of self-interest, but will rather change to a motivation that focuses on the needs of others (Greenleaf, 1977; Pollard, 1996; Wilkes, 1996). If this desire and motivation to serve is evident, then servant leadership takes place.

Robert Greenleaf (1977) provided a foundation for the study of the emerging discipline of servant leadership through his pioneering work. Greenleaf's (1977) essay entitled *The servant as leader* proposed, "The great leader is seen as servant first, and that simple fact is the key to his greatness" (p. 21). For Greenleaf, servant leadership begins with the innate feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead. "That person is sharply different from one who is leader first […] The difference manifests itself in the care taken by the servant-first to make sure that other people's highest priority needs are being served" (p. 27). Greenleaf posits that the best test of a servant leader, but difficult to administer, is this: "Do those served grow as persons? Do they, *while being served*, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? *And*, what is the effect on the least privileged in society; will they benefit, or, at least, not be further deprived?" (p. 27). A further differentiation of this theory with other theories of leadership is that while persons in the 'leader-first' model may utilise service at times for the purpose of realising the visions and goals of the leader and/or the organisation, the 'servant-first' model is focussed on serving the highest priority needs of the people and as such is a follower-oriented

theory of leadership (Irving, & Longbotham, 2006). Greenleaf's greatest contribution to the study of servant leadership was its conceptualisation and his understanding of what characterises a servant leader.

In building on this 'servant-first' notion of leadership, various researchers, including Laub (1999), Stone, Russell, and Patterson (2004), and Matteson and Irving (2006), argue that the focus of the servant leader is on that which is best for their followers. Laub (2005) elaborates on this idea in his writing: "[S]ervant leadership is an understanding and practice of leadership that places the good of those led over the self-interest of the leader" (p. 160). Stone et al. (2004) identify this point as a key to understanding what differentiates servant leadership from transformational leadership. In both servant leadership and transformational leadership, leadership is viewed as a relational process that meaningfully engages all participants and enables each person to contribute to achieving the vision. In relational leadership theories such as these, interpersonal relationships are seen to be the most important facet of leadership effectiveness (Daft, 2005). Yet, while transformational leadership tends to be focussed on an organisational vision (what is best for the organisation), servant leadership is focussed foremost on that which is best for the followers (Stone et al., 2004). A brief elaboration on these two relational leadership theories will follow.

2.2.1 The similarities and differences between servant leadership and transformational leadership

Transformational leadership, initiated by Burns (1978) and Bass (1985), is a very popular concept, widely studied as an effective leadership theory. Both researchers and practitioners have embraced this theory and have employed it in a variety of organisational settings. Bass (1990b) specifies that transformational leadership:

… occurs when leaders broaden and elevate the interests of their employees, when they generate awareness and acceptance of the purposes and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group (Bass, 1990b, p. 21).

Bass (1990a) stipulates that this transcending beyond self-interest is for the "group, organization, or society" (p. 53). Yukl (1998) summarises the essence in saying that "transformational leadership is a process of building commitment to organizational objectives and then empowering followers to accomplish those objectives".

Based on the definitions of transformational and servant leadership, various similarities can be identified. A study by Stone et al. (2004) reveals that transformational leadership and servant leadership have relatively analogous characteristics. A possible explanation could be that transformational and servant leadership are attempts to define and explain people-oriented leadership styles. In both of the concepts, the leadership framework incorporates influence, vision, trust, respect or credibility, risk-sharing or delegation, integrity, and role-modelling. Both theories therefore emphasise the importance of appreciating and valuing people, listening, mentoring or teaching, and empowering followers. The greatest similarity in this respect could be seen in the emphasis upon individualised consideration and appreciation of followers (Stone et al., 2004).

However, transformational leadership and servant leadership do have points of dissimilarity. In servant leadership, the emphasis upon service to followers is much greater than in transformational leadership. Servant leaders also gain influence in a more non-traditional manner, a manner that derives from servanthood itself (Russell, & Stone, 2002).

Even though servant leadership and transformational leadership can be seen as complementary theories, the principal difference between the two is the focus of the leader (Stone et al., 2004). While transformational leaders and servant leaders both show concern for their followers, the prevailing focus of the servant leader is upon service to their followers (Stone et al., 2004). The transformational leader has a greater concern for engaging followers in supporting organisational objectives. The extent to which the leader is able to shift the primary focus of his or her leadership from the organisation to the follower is the distinguishing factor in determining whether the leader may be a transformational or servant leader. Following on this primary characteristic, other characteristics and outcomes are influenced, which can be seen as secondary differences between the concepts (Stone et al., 2004). However, this will not be discussed here since it is beyond the scope of this study.

2.2.2 Previous research on servant leadership

From the early 1990s through 2003, the work surrounding servant leadership focused on identifying themes to help operationalise the concept of servant leadership. The need for operationalisation and scientific conceptualisation of the concept of servant leadership became apparent, especially when the lack of empirical research contributed to such claims as Eicher-Catt's (2005) that servant leadership is a myth. In operationalising the concept of servant leadership, several authors comment on what they consider the servant leadership construct. Graham (1991) stresses the inspirational and moral dimensions. Buchen (1998) argues that self-identity, capacity for reciprocity, relationship building, and preoccupation with the future

are essential themes. Spears (1998) emphasises the dimensions of listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment, and community building. Farling, Stone and Winston (1999) argue for the importance of vision, influence credibility, trust, and service. Laub's (1999) model of servant leadership puts forward valuing people, developing people, building community, displaying authenticity, providing leadership, and sharing leadership. Page and Wong's (2002) model of servant leadership includes authenticity, caring for others, decision making, goal setting, integrity, leading, modelling, team building and visioning. Russell and Stone (2002) argue that the appreciation of others, credibility, empowerment, influence, integrity, internal self-change, modelling, persuasion, pioneering, service and trust needs to be included in a model of servant leadership. Sendjaya and Sarros's (2002) model of servant leadership includes authentic self, empowerment, equality, mentoring, role modelling, self-awareness, self-perception, trust and vision. Patterson (2003) presents the dimensions of *agapáo* love, humility, altruism, vision, trust, empowerment, and service as the essential dimensions of servant leadership in her model.

The Spears model (1995, 1998) includes 10 characteristics of a servant leader, as drawn from Greenleaf's writings. Spears (1998) defines these characteristics as follows:

- *listening* – servant leaders clarify the will of a group by listening receptively to what is being said;
- *empathy* – servant leaders strive to understand and empathise with others;
- *healing* – servant leaders have the potential for healing self and others;
- *awareness* – servant leadership is strengthened by general awareness, and especially self-awareness;
- *persuasion* – servant leaders rely upon persuasion, rather than positional authority, in making decisions within an organisation;
- *conceptualisation* – servant leaders seek to nurture their abilities to dream great dreams;
- *foresight* – servant leaders have the ability to foresee the likely outcome of a situation in the future;
- *stewardship* – servant leaders' first and foremost commitment is to serve the needs of others;
- *commitment to the growth of people* – servant leaders are deeply committed to the personal, professional, and spiritual growth of each and every individual within the institution; and
- *building community* – servant leaders seek to identify means of building community among those who work within a given institution.

Barbuto and Wheeler's (2006) research combines these 10 characteristics and includes an eleventh dimension on the Spears model, termed calling. Barbuto and Wheeler (2006) define calling as the natural desire to serve others, a concept which was fundamental to servant leadership in the early writings of Greenleaf (1977). The inclusion of this eleventh dimension of servant leadership in their research was aimed at developing operational definitions and scales to measure the eleven potential characteristics of servant leadership. This study focuses on Barbuto and Wheeler's (2006) servant leadership themes: (a) altruistic calling, (b) emotional healing, (c) persuasive mapping, (d) wisdom, and (e) organisational stewardship.

2.2.3. The servant leadership construct

While servant leadership was previously seen as an elusive concept, more theoretical in nature, recent developments regarding empirical measures for servant leadership have provided a platform for quantitative studies of servant leadership. These quantitative instruments include measures developed by Laub (1999), Page and Wong (2000), Sendjaya and Sarros (2003), Patterson (2003), Dennis and Bocarnea (2005) as well as Barbuto and Wheeler (2006).

Barbuto and Wheeler's (2006) research on the concept of servant leadership and the 11 potential characteristics of servant leadership resulted in the refinement of the servant leadership construct as a five-dimensional construct. The five dimensions of their servant leadership model are briefly be elaborated on here:

Altruistic calling describes a leader's innate desire to make a positive difference in others' lives. It is a generosity of the spirit consistent with a benevolent purpose in life. Since the ultimate goal is to serve, leaders high in altruistic calling will put others' interests ahead of their own and will diligently work to meet followers' needs (Barbuto, & Wheeler, 2006).

Emotional healing describes a leader's commitment to and skill in fostering spiritual recovery from hardship or trauma. Leaders using emotional healing are highly empathetic and excellent listeners, making them adept at facilitating the healing process. Leaders create environments that are safe for employees to voice personal and professional problems and concerns. It is argued that followers that experience personal traumas will turn to leaders high in emotional healing (Barbuto, & Wheeler, 2006).

Wisdom can be understood as a combination of awareness of surroundings and anticipation of consequences, similarly described by classic philosophers (Kant, 1978; Plato, 1945). When these two characteristics are combined, leaders are adept at picking up cues from the environment and understanding their implications (Barbuto, & Wheeler, 2006). Leaders high in wisdom are characteristically observant and anticipatory across most functions and settings

(Bierly, Kessler, & Christensen, 2000).

Persuasive mapping describes the extent to which leaders use sound reasoning and mental frameworks. Leaders high in persuasive mapping are skilled at mapping issues and conceptualising greater possibilities, and are compelling when articulating these opportunities. They encourage others to visualise the organisation's future and are persuasive, offering compelling reasons to act and complete tasks (Barbuto, & Wheeler, 2006).

Organisational stewardship describes the extent to which leaders prepare an organisation to make a positive contribution to society through community development, development programmes, outreach and corporate social responsibility. Organisational stewardship involves an ethic or value for taking responsibility for the well-being of the community and making sure that the strategies and decisions undertaken reflect the commitment to give back and improving on the status quo. They also work to develop a community spirit in the workplace, one that is preparing to leave a positive legacy (Barbuto, & Wheeler, 2006).

Barbuto and Wheeler (2006) developed a measure for servant leadership, namely the Servant Leadership Questionnaire (SLQ), based on these five dimensions. The original structure of this instrument includes these dimensions as five factors in the rater-version.

In a recent study by Dannhauser (2007), the SLQ was used on a South African sample (n=417) in order to investigate the structural equivalence of the SLQ on North American and South African samples. An exploratory factor analysis was conducted on the items and one factor was extracted, thereby specifying a uni-dimensional factor structure of the SLQ for the specific sample.

In another recent study conducted on a South African sample (n=496), Schlechter, Boshoff and Engelbrecht (2005) explored the factor structure for transformational leadership. In this study, it was not possible to replicate the original five-factor structure of transformational leadership, as only one factor emerged. Schlechter et al. (2005) concluded that the sample used in the study did not differentiate between the dimensions of transformational leadership.

For the purpose of this study, the SLQ as developed by Barbuto and Wheeler (2006) is utilised. The factor structure of the instrument for the sample utilised in this study will be determined in order to establish the replicability of the original five-factor structure to a South African sample.

2.2.4 Servant leadership and emotional intelligence

Servant leaders are described as unconditionally wise, and their decision processes and service orientation elicit organisational wisdom, described as the integration of applied knowledge and informed experience to make both optimal and altruistic choices (Bierly et al., 2000).

It is argued that a service-oriented philosophy of, and approach to, leadership are more likely to manifest once certain antecedents are in place. These sources could include variables such as emotional intelligence, sources of motivation, flexibility and openness to experience, or situational variables such as education, basis of social power, early childhood experiences, organisational culture, and exposure to and mentorship of other servant leaders (Barbuto, & Wheeler, 2006).

Winston and Hartsfield (2004) conceptually scrutinised the four-factor concept of emotional intelligence as defined by Mayer and Salovey (1997): (a) the ability to appraise and express emotion; (b) the use of emotion to enhance cognitive processes and decision making; (c) the ability to understand and analyse emotions; and (d) the reflective regulation of emotion, with five servant leadership models as presented by Page and Wong (2000), Patterson (2003), Russell and Stone (2002), Sendjaya and Sarros (2002), and Winston (2003). Winston and Hartsfield (2004) found strong correlations between servant leadership and the emotional intelligence factors suggested by Mayer and Salovey (1997), with the exception of the ability to understand and analyse emotions.
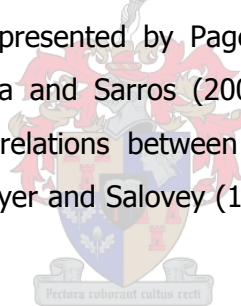
In addition, a recent study by Parolini (2005) focussed on the impact of leaders' emotional intelligence on followers' perception of servant leadership behaviours and servant leadership culture. However, the study did not find support for the proposition that emotional intelligence predicts servant leadership. It would appear, however, that some relationship exists between the two constructs. The study showed some relationship between supervisor emotional intelligence and follower perceptions of servant leadership behaviours, specifically 'self emotion appraisal' and servant leadership total (a=.175, $p \leq .05$.) and 'other's emotions appraisal' and servant leadership (a=.226, $p \leq .05$). This study was conducted only in religious organisations, and therefore the findings might be biased based on religious preference. A small sample (n=88) was also utilised and the researcher did note that further research in a larger and more generalised sample is needed to find valid results (Parolini, 2005).

It is in this regard that emotional intelligence and its relationship to servant leadership will be investigated in this study.

2.2.5 Operational definition of servant leadership

For the purpose of this study servant leadership is defined as a leader's deep-rooted desire to make a positive difference in others' lives, their commitment to and skill in fostering spiritual recovery from hardship or trauma for others, a combination of awareness of surroundings and anticipation of consequences, the extent to which the leader uses sound reasoning and mental frameworks and the extent to which leaders prepare an organisation to make a positive contribution to society through community development programmes (Barbuto, & Wheeler, 2006).

2.3 The history and notion of emotional intelligence

Although the existence and importance of intelligences beyond memory and problem solving (mostly defined as intelligence and tested by an IQ test) had long been recognised, it was not until relatively recently that serious efforts were made to define emotional intelligence (EI) (Salovey and Mayer, 1990; Goleman, 1995), or that significant attention was paid to the concept (Goleman, 1995). However, in the last decade various research processes and efforts were made to define and measure the impact of emotional intelligence on organisational outcomes (Goleman, 1995, 1998; Cherniss, 2000; Cooper, & Sawaf, 1997; Mayer, & Salovey, 1997; Mayer, Salovey, & Caruso, 2000; Ryback, 1998; Weisinger, 1998).

In the process and scientific debate to determine an operational model of emotional intelligence, two markedly different, yet related, models of EI have been suggested (Ciarrochi, Chan, & Caputi, 2001). The first model is an 'ability model', which combines emotion with intelligence, and the second is what is termed a 'mixed model', which combines traits with social behaviours and competencies. The ability model has largely evolved from Salovey and Mayer's (1990) original definition of EI, and has attracted considerable research attention (Mayer, & Salovey, 1997; Salovey, & Mayer, 1990). Salovey and Mayer (1990) originally defined EI as the ability to deal with one's own emotions and those of others to benefit in problem solving and decision making. The mixed model, an approach generally embraced and advocated by Goleman (1995, 1998), arose largely from the work of Bar-On (1997). Bar-On (2000) argues that emotional and social intelligence is a "multifactorial array of interrelated emotional, personal, and social abilities that influence our overall ability to actively and effectively cope with daily demands and pressures" (p. 385).

The last decade has seen a robust debate regarding the appropriateness and efficacy of the two models, a debate which has been fully joined in the academic literature (e.g. Emmerling, & Goleman, 2003). Advocates of the ability model argue that their models and measurement instruments are scientifically derived and psychometrically independent from other measures of

personality (Mayer, & Salovey, 1997; Salovey, & Mayer, 1990). On the other hand, advocates of the mixed model argue that their approach is highly correlated with desired organisational outcomes and of significant value to organisational and leadership development (Emmerling, & Goleman, 2003; Goleman, 1995, 1998).

In the current study, the researcher utilises the mixed-model approach as a result of its value in organisational and leadership development, as suggested by Goleman (1995, 1998). The definition of emotional intelligence in this regard consists of three categories of abilities: evaluation and expression of emotion, regulation of emotion, and using emotions in decision making. The definition provided by Goleman (1998) will also be used as the definition of EI in this study: Emotional intelligence is "the capacity for organising one's own feelings and those of others, for motivating oneself, and for managing emotions well in oneself and in relationships" (p. 317).

2.3.1 The construct emotional intelligence

Goleman (1998) suggests that emotional intelligence in the work situation is a multidimensional construct consisting of five components. The resulting competencies associated with these components are self-awareness, self-regulation, motivation, empathy and social skills. These components will briefly be elaborated on.

Self-awareness is associated with emotional awareness, accurate self-assessment, and self-confidence. According to Goleman (1995), self-awareness is the keystone of emotional intelligence. Knowing one's emotions (i.e. possessing the ability to monitor feelings on an ongoing basis) is important to psychological insight and self-understanding. Specifically, Goleman (1995) defines self-awareness as knowing one's internal states, preferences, resources, and intuitions. Researchers have identified certain dispositional attributes as antecedents of self-awareness such as purpose in life (Frankl, 1984), and both private and public self-consciousness (awareness of inner thoughts and general awareness of the self as a social object) (Fenigstein, Scheier, & Buss, 1975).

Self-regulation, or emotional management, is associated with self-control, trustworthiness, conscientiousness, adaptability, and innovation. It involves managing one's internal states, impulses, and resources (Goleman, 1995). Self-regulation also involves self-monitoring, which refers to an individual's ability to adjust his or her behaviour to external, situational factors.

Motivation, or self-motivation, involves the control of emotional tendencies that guide or facilitate reaching one's goals (Goleman, 1995). Some of the key elements include achievement

drive, commitment and initiative. Seligman (1990) also suggest that optimism is another key element and determinant of motivation and performance outcomes.

Empathy, or the awareness of others' feelings, needs and concerns, refers to understanding and developing others, developing service orientation, leveraging diversity, and increased political awareness. Empathy is an important social competency that several authors have claimed to be a crucial component of emotional intelligence (Goleman, 1995).

Social skills or relationship management is one's adeptness at effectively handling interpersonal relationships (Salovey, & Sluyter, 1997). According to Goleman (1995), this component of emotional intelligence involves influence tactics, effective communication with others, conflict management skills, leadership abilities, change management skills, instrumental relationship management, collaboration and cooperation abilities, and effective team membership capabilities (Goleman, 1995, 1998).

Rahim and Minors (2003) developed a mixed-model measure of emotional intelligence that includes the five dimensions suggested by Goleman (1995). The original structure of the Emotional Intelligence Index (EQI) developed by Rahim and Minors (2003) thus comprises five dimensions, namely self-awareness, self-regulation, motivation, empathy, and social skills. Rahim and Minors (2003) used this measure in a study that investigated the effects of emotional intelligence on problem solving. This 30-item version of the EQI is utilised in the present study.
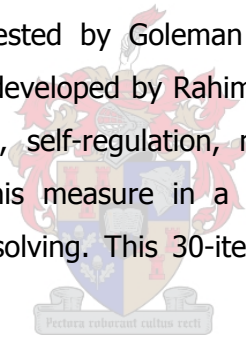
Currently, there are no South African research results are available for the Rahim and Minors (2003) 30-item EQI instrument. In a South African study (n=496) by Schlechter et al. (2005), the 40-item Rahim and Minors EQI was used. This study yielded a three-factor structure of the instrument, proposing the factors self-awareness, motivation and self-regulation.

As with servant leadership, thorough studies on emotional intelligence and its influence on leadership and organisations are lacking and therefore the literature, however informative, is deficient in several aspects. Despite the increasing interest in emotions and their impact on leadership style and performance, research investigating the role of emotion on employees and its influence on inter-worker relationships and different leadership styles has yet to be fully explored (Fitness, 2000; Lewis, 2000). Some research on the role of emotional intelligence in transformational leadership exists, namely that conducted by Leban and Zulauf (2004), Barling, Slater and Kelloway (2000), Gardner and Stough (2002). In a study conducted by Winston

(2004), strong similarities between the constructs of emotional intelligence and servant leadership were found.

2.3.2 Emotional intelligence and leadership

Today's effective leadership skills have been described to depend, in part, on the understanding of emotions and the behaviour associated with emotional intelligence (Cooper, & Sawaf, 1997; Goleman, 1998; Ryback, 1998). Where leaders were once seen to control, plan and inspect the overall running of an organisation, in today's more service-oriented industries, leadership roles are also to motivate and inspire others, to foster positive attitudes at work, and to create a sense of contribution and importance with and among employees (Hogan, Curphy, & Hogan, 1994). It has been proposed that, in leadership, dealing effectively with emotions may contribute to how the leader responds to the needs of individuals, how the leader effectively motivates employees, and make them 'feel' at work (Goleman, 1998).

According to Goleman, Boyatzis and McKee (2002), leaders possessing a high level of emotional intelligence demonstrate positive behaviours, positive thinking and positive emotions. They go on to describe leaders with high levels of emotional intelligence as being able to manage their own motivation, collaborate with others, manage conflict, get along with others, and get people to maintain a positive state. Goleman et al. (2002) argue that the fundamental task of leaders is to prime good feeling in those they lead, thereby creating resonance. These authors cite studies that examine the relative importance (to success in all jobs) of high levels of technical and professional skills and IQ versus high levels of emotional intelligence. For all jobs looked at in their research, among the top 10% of 'star performers', 66% had high levels of emotional intelligence while only 33% had high levels of IQ and technical skills; among the top 10% of 'star performers' in leadership jobs, 85% had high levels of emotional intelligence while only 15% had high levels of IQ, technical or professional skills. Based on these findings, they concluded that the critical factor behind the performance of the most successful employees and leaders is not IQ or professional/technical competence, but emotional intelligence (Goleman et al., 2002).

Gardner and Stough (2002) investigated the influence of EI and leadership specifically in the workplace and organisations. Their findings solidify the predictive abilities of EI for effective leadership. These authors identified a strong relationship between EI and transformational leadership, which has been confirmed in further research by Leban and Zulauf (2004).

Dulewicz and Higgs (1999) examined the link between self-reported EI and job competence and, unlike many previous studies, did not focus on the transformational-transactional model.

These researchers examined leadership effectiveness from the perspective of progression within the hierarchy of an organisation amongst 58 managers from the UK and Ireland. Using a self-report measure of EI, which they derived from a job competency survey, they found that EI was able to explain a greater proportion of an individual's advancement than either cognitive intelligence (also derived from elements of the job competency survey) or personality traits (using the 16 personality factors and organisational personality questionnaire).

Other studies conducted within organisations include that by Palmer and Stough (2001), who administered a self-report EI measure to 43 managers in order to evaluate the link between EI and leadership style. They found significant correlations with several components of the transformational leadership model. Specifically, the inspirational, motivation and individualised consideration components of transformational leadership correlated with the ability to monitor emotions and the ability to manage emotions.

Similarly, Barling et al. (2000) conducted an exploratory study on the relationship between EI and transformational leadership. Their results suggest that EI is associated with three aspects of transformational leadership, namely idealised influence, inspirational motivation and individualised consideration. The leaders who report exhibiting these behaviours were assumed to be more effective in the workplace.

2.3.2.1 Similarities between emotional intelligence and servant leadership

In 2004, Winston and Hartsfield conducted an exploratory study to determine the ties between emotional intelligence and servant leadership. The study concluded that there appears to be relative application of emotional intelligence to the servant leadership concept, although what could not be explicated is whether emotional intelligence is specifically tied to servant leadership, or just to leadership in general. Winston and Hartsfield (2004) nevertheless state that the amount of similarity between the two constructs warrants researchers to consider the role of emotional intelligence in servant leadership.

Winston and Hartsfield's summary table of the relationship between emotional intelligence and servant leadership is included in this study. The summary table aptly describes the similarities between emotional intelligence dimensions and servant leadership models across the different servant leadership models.

Table 2.1: The relationship of EI dimensions to dimensions of servant leadership models

EI dimensions	Page & Wong's SL model (2000)	Patterson's SL model (2003)	Russell & Stone's SL model (2002)	Sendjaya & Sarros' SL model (2002)	Winston's SL model (2003)

Appraise and express emotion	Caring for others	Trust	Trust Appreciating others	Authentic self	Commitment to the leader Trust
Use emotion to enhance cognitive processes	Integrity	Altruism Trust Service to the follower	Trust Integrity Credibility	Equality Trust	Altruism Commitment to the leader Service to the leader
Understand and analyse emotions	Authentic	*Agapao* Humility	Internal self-change	Self-awareness Self-perception	*Agapao*
Reflective regulation of emotion	Visioning Goal setting Leading Modelling Teambuilding Decision making	Vision Trust Empowerment Service	Persuasion Influence Service Modelling Pioneering Appreciation of others Empowerment	Vision Trust Role-modelling Empowerment Mentoring	Service

Source: Winston, B.E., & Hartsfield, M. (2004). Similarities between Emotional Intelligence and Servant Leadership. *Servant Leadership Roundtable – August, 2004.* Regent University, Virginia Beach.

2.3.3 Emotional intelligence and trust

Research moreover found that leaders who are able to identify and understand the emotions of others can influence the feelings of subordinates in such a way that enthusiasm, productivity, cooperation and trust in other employees are maintained (George, 2000). Leaders who are able to understand and manage their emotions and display self-control act as role models for followers, in so doing enhancing the followers' trust and respect for the leader (Gardner, & Stough, 2002).

In a study conducted by Schlechter et al. (2005), the composite score for EI correlated significantly with trust in the leader. It is therefore argued that subsequent to the relationship between servant leadership and emotional intelligence, a relationship exists between emotional intelligence of the leader and subordinates' trust in the leader. Therefore, it is conceptually argued that trust in the leader can also be seen as an important correlate for the interdependence that exists between leaders and followers in servant leadership. Followers place their trust in the leader as a result of the leader's concern that puts the followers' self interest first (Farling et al., 1999).

2.3.4 Operational definition of emotional intelligence

For the purpose of this study, emotional intelligence is defined as the capacity for organising one's own feelings and those of others, for motivating oneself, and for managing emotions well in oneself and in relationships (Goleman, 1998).

2.4   The variable of trust in the immediate supervisor

In the striving to arrive at a definition of trust, several scholars have over the years focussed their definitions of trust on the notion that the trustor believes that the trusted party will behave in a way that is beneficial to the trustor (Simons, 1999). Hosmer (1995, p. 393) synthesises definitions from previous work and proposes that:

> trust is the reliance […] on a voluntarily accepted duty on the part of another […] to recognize and protect the rights and interests of all others engaged in a joint endeavour or economic exchange.

Robinson (1996, p.574) correspondingly defines trust as "one's expectations or beliefs about the likelihood that another's future actions will be beneficial, or at least not detrimental, to one's interests". By these definitions, trust is a person's sense that another will protect and maximise the trustor's interests, even though the extent to which the trusted person is expected to sacrifice his/her own interests in doing so is not specified.

Other scholars have focussed on the element of vulnerability or risk in their definitions of trust. Mayer, Davis and Schoorman (1995, p. 712) define trust as:

> the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party.

Mishra (1996, p.265) builds upon this definition in defining trust as "one party's willingness to be vulnerable to another party based on the belief that the other party is (a) competent, (b) open, (c) concerned, and (d) reliable". For the individual, vulnerability means that there is a significant potential for loss to him-/herself. Trust in leadership is therefore driven by individuals' perceptions of trustworthiness of the leader. Several core dimensions of trustworthiness have been identified, including integrity, competence, a concern for the welfare of others, and openness (Butler, 1991; Mayer et al., 1995; Mishra, & Spreitzer, 1998). Simons (1999) argues that the integrity can also be related to what he terms behavioural integrity. Behavioural integrity is the perceived degree of congruence between the values expressed by words and those expressed through action (Simons, 1999). In other words, the perceived congruence between and role-modelling of words and behaviour is also a core dimension of trustworthiness.

Winston and Patterson (2006) argue that the follower's act of trusting results in a condition of vulnerability for the follower, just as an act of faith leaves a person vulnerable to the chance of

the faith being misplaced, and requires the acceptance of the ramification of the leader not performing as expected. Gregersen (2003) argues that as the probability of negative events decreases, so does the perceived risk. As risk decreases, willingness to engage in behaviour by the follower increases.

Even though researches have not been able to explicate a universal definition of trust, there is widespread support for the notion that this elusive construct has important consequences (Simons, 1999). Tyler and Degoey (1996) propose that employee trust in leadership enhances subordinates' compliance with organisational rules and laws, increases the zone of indifference, and facilitates the implementation of organisational change. Robinson (1996) found that employees' trust in their employers directly influenced those employees' contributions to their organisations in terms of performance, intent to remain with the organisation, and increased organisational citizenship.

In a study of trust as a part of organisational culture, Cufaude (1999) identified factors that are associated with a culture of trust in an organisation. These include (a) the depth and quality of interpersonal relationships; (b) clarity of roles and responsibilities; (c) frequency, timeliness, and forthrightness of communication; (d) competence to get the job done; (e) clarity of shared purpose; (f) direction and vision; and (g) honouring promises and commitments. It is evident that several of these factors result from leader behaviour. Levin (1999) confirmed the leader's role in creating a culture of trust in the organisation, in that a climate of trust exists in organisations when managers do what they say they are going to do (credibility) and behave in a predictable manner (consistency).

2.4.1 The construct of trust in the immediate supervisor

The Workplace Trust Survey (WTS), designed and developed by Ferres and Travaglione (2003), explicates three dimensions of trust, namely: (a) trust in the organisation, (b) trust in co-workers and, (c) trust in the immediate supervisor/manager. For the purpose of this study only the 12-item trust in the immediate supervisor subscale is utilised.

The trust in the immediate supervisor-scale was also utilised in a recent study conducted in a South African sample (n=417) by Dannhauser (2007). An exploratory factor analysis was conducted which resulted in a uni-dimensional factor structure.

A study by Schlechter et al. (2005) utilised the three-dimensional WTS and found a replicated factor structure in a South African sample (n=492). The emergence of the same three factors in a South African sample was also found by Ferres and Travaglione (2003), which provided the

assurance that the underlying variables were being measure successfully. Schlechter et al. (2005) conclude that this measurement scale can be considered robust and stable. The authors further presume that the trust construct may be universal and that it is understood on different continents in different cultures in very much the same way.

2.4.2 Previous research on the relationship between trust in the leader and servant leadership

The main rationale of examining trust in the present study is to establish the relationship with and understand the role it plays in servant leadership (Farling et al., 1999). In servant leadership (like in other leadership models), trust is "an important factor in the interdependence that exists between leaders and followers" (Mayer et al., 1995, p. 710). According to Sarkus (1996), relationships built on trust and service is the basis for the influence of servant leadership. Greenleaf (1977) states that trust is central to servant leadership since leadership legitimacy begins with trust. He notes that "the only sound basis for trust is for people to have the solid experience of being served by their institutions" (p. 83). He further asserts that, in servant leadership, leadership is bestowed upon persons who are trusted because of their stature as servants. Servant leaders are "trusted because they empathise with and fully accept followers" (p. 35), "because of their dependability, which results from their exceptional intuitive insight" (p. 56), and "because they lead by example" (p. 342). Trust and respect are highest in circumstances where a community is created through service in which the liability of "each for the other" and "all for one" is unlimited (p. 52). Greenleaf (1977) posits that "institutional trust is created when their trustees (leaders) reach distinction as servants who understand the institution and care for all the persons touched by it" (p. 100).

The calling to serve takes one into an active role as servant, building trust not only between the leader and follower but also between followers (Spears, 1998). Servant leaders build trust by: (a) genuinely empowering workers; (b) involving employees early; (c) honouring commitments and being consistent; (d) developing coaching skills and fostering risk taking (Melrose, 1998); (e) an appropriate management style; and (f) trustworthiness that is built on integrity and competence (Covey, 1990. According to Banutu-Gomez (2004), servant leaders elicit trust in followers because they respond to crises by owning the problem. Trust is therefore regarded as the vital prerequisite for servant leadership (Autry, 2001; Greenleaf, 1997; Kiechel, & Rosenthal, 1992).

McGee-Cooper (2003, p.13) states that trust is an essential aspect of servant leadership:

> The most precious and intangible quality of [servant] leadership is trust. The confidence that the one who leads will act in the best interest of those who follow. The assurance that s/he will serve the group without sacrificing the rights of the individual.

In a study conducted by Joseph and Winston (2005), a positive correlation between employee perceptions of servant leadership at an organisational level and leader trust was found. It was also found that employee perceptions of organisational servant leadership resulted in higher levels of leader trust than perceptions of non-servant leadership. The value of this finding is that is provides support for models proposing that servant leadership is one of the specific leadership behaviours that elicits trust from others (Farling et al., 1999; McGee-Cooper, 2002; Russell, & Stone, 2002). Greenleaf (1977) himself perceived servant leadership as both a product and an antecedent of leader and organisational trust. This may be due to the fact that servant leadership increases perceptions of leader trustworthiness, which has a reciprocal relationship to leader trust (Zolin, 2002).

2.4.3 Trust in the leader and meaning

As described in 2.1.1, the main principle that differentiates servant leadership from other leadership theories is the servant leader's focus on the follower. Therefore, the servant leader allows freedom for followers to exercise their own abilities. The leader also places a much higher degree of trust in their followers than would be the case in any leadership style that requires the leader to be directive to some extent (Russell, & Stone, 2002).

Lester and Brower (2003) argue that when employees perceive that they are trusted, they will work harder, go beyond the call of duty, and be more content with their work. Their conclusions regarding leader trustworthiness are similar to previous research (e.g. Dirks, & Ferrin, 2001), in that subordinates' perceptions of how trustworthy their leaders were demonstrated a significant, positive correlation with job satisfaction.

While emotional intelligence and trust in the immediate supervisor is proposed to have some relationship to servant leadership, these constructs also possibly impact on the employee's sense of meaning and of being significant. According to Barbuto and Wheeler (2006), individuals (leaders) possessing servant leadership characteristics may infuse greater emotional health, wisdom, and a legacy of service-oriented individuals. It is argued that these individuals are inspired to fulfil a purpose and to be of significance in serving the needs of others, and therefore to enhance their sense of meaning.

2.4.4 Operational definition of trust

For the purpose of this study trust in the immediate supervisor is defined as the belief or willingness that one can rely on the likelihood that the supervisor's future actions will be beneficial, or at least not detrimental, to one's interests (adapted from Robinson, 1996).

2.5 The variable of meaning

The subject of meaning in life has traditionally been the domain of philosophy and literature. One of the most well-known works in this regard is arguably the work of Viktor Frankl, an Austrian physician and philosopher, whom the Nazis incarcerated in more than one concentration camp during the Second World War. In the face of the violence and tragedy of his wartime experience, Frankl found that under all circumstances life continues to have meaning. When people begin to lose hope in the most adverse of circumstances, they need to see that even in hopeless situations one can find dignity and meaning in the struggle. Frankl (1984, p. 104) and other concentration camp counsellors reminded their fellow prisoners that they had a responsibility to others – spouses, friends, children, parents, people living or dead, or perhaps God – to have courage in the face of death.

According to Frankl (1984), individuals find meaning in one of three ways: (a) by creating something or doing some good; (b) by experiencing something or discovering someone – e.g. the awe realized in an epiphanic moment or loving someone; and (c) by our attitude towards suffering.
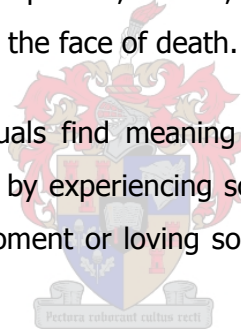
During the last two decades, meaning has also been recognised as a central dimension of psychological health and quality of life (Debats, Van der Lubbe, & Wezeman, 1993). De Klerk et al. (2001) proposed a definition of meaning to entail a "significance of being". This means that finding meaning relates to finding or having a reason for 'being' and a feeling, experience or perception that this 'being' is of significance. For these authors, the term also relates to having and fulfilling a higher purpose that is more than just surviving, but essentially making a difference in the world. Meaning therefore includes both cognitive and emotional experiences of 'significance of being'.

Battista and Almond (1973) propose that there is agreement in the literature on four issues of meaning. When individuals state that their life is meaningful, it implies that (a) they are positively committed to some concept of purpose, (b) this concept provides them with a framework or goal from which to view their lives, (c) they perceive their lives as related to or

fulfilling this concept, and (d) they experience this fulfilment as a feeling of significance (Battista, & Almond, 1973).

It becomes more apparent in modern-day society, where work forms such significant part of daily life, that people are searching for meaning in their work. Several researchers investigated the psychological functions of work in the human life, and work as a source of purpose stood out strongly as one of the functions of work (Friedman, & Havighurst, 1954; Morse, & Weiss, 1955).

The general view of the function of work emphasises an instrumental or economic orientation, stating that people work in order to secure their basic sustenance and satisfy their material needs. The second view of the importance of work is socio-psychological or intrinsic in nature. It maintains that work not only contributes to one's sense of personal identity, but it also prolongs this sense, as a part of one's identity is formed around one's work. Consequently, work plays a crucial role in helping individuals to achieve and maintain their self-esteem, status, and sense of accomplishment (Harpaz, 2002).

In order to determine which of these approaches was most true for people, Morse and Weiss (1955) first posed the 'lottery question' in their classic study on the function and meaning of work. Their research posed what is now known as the lottery question – namely "If there were no financial reasons to carry on working, would you stop or continue working? – to a national USA sample of employed men. In this sample, Morse and Weiss (1955) found that 80% of respondents indicated that they would continue to work even in the absence of any further need to earn money. Similar responses (some lower and some higher) were found in subsequent studies conducted by others among different occupational and cultural groups (Campbell, Converse, & Rodgers, 1976; Kaplan, & Tausky, 1974; Quinn, & Staines, 1979; Tausky, 1969; Vecchio, 1980).

According to previous research, work prevents signs of alienation, isolation and meaninglessness. Therefore the prospect of having a purpose, such as helping to achieve a common aim, may be a powerful incentive to individuals who desire to find personal meaning in their life through their work (Fagan, & Little, 1984; Firth, 1972; Friedman, & Havighurst, 1954; Gill, 1999; Johada, 1982; Morse, & Weiss, 1955; Steers, & Porter, 1979; Terkel, 1985). With this in mind, this study proposes that the meaning found in work does not only affect one's meaning in work, but effectively one's meaning in life.

Several researches (e.g. Harding, & Hikspoors, 1995; Harpaz, 1999; MOW International Research Team, 1987) also studied the importance of the role that work plays. Work is usually considered to be of more importance than leisure, community and religion and was found in the mentioned studies to be ranked second only to family. Kanungo (1982) posits that work centrality has been found to be positively related with important organisation variables such as job satisfaction, participation in decision making and longer job tenure.

2.5.1 Measuring the construct of meaning

Battista and Almond (1973) developed the Life Regard Index (LRI). This two-dimensional instrument measures the degree to which meaning in life is being sought and fulfilled. The LRI measure is divided into two subscales, namely framework and fulfilment. Framework is designed to assess the degree to which individuals can see their lives within some perspective or has derived a set of life-goals or life-view from them. Fulfilment, on the other hand, measures the degree to which the individuals see themselves as having fulfilled or as being in the process of fulfilling their framework or life goals.

In a study by De Klerk et al. (2001), which was conducted on a South African sample (n=458), the factor analysis results on the LRI failed to yield a uni-dimensional factor solution. The original two-factor structure of the LRI was therefore not replicated to the South African sample utilised in this study.

A study conducted by Schlechter et al. (2005) utilised the LRI in a South African sample (n=492). In this study, both of the original two factors of the LRI emerged. However, almost a third of the items did not meet the inclusion criteria and had to be rejected. The authors posit that this severely limited the way in which the dimension was assessed.

2.5.2 The relationship between meaning, servant leadership and emotional intelligence

As the positive organisational behaviour approach brought a shift in the field of organisational intervention, from a preoccupation with how to correct weaknesses and deal with problems such as stress, it also brought a shift from focussing on how to improve employee motivation to the positive approach of building theories and conducting research on how to enhance the experience of meaning for individuals (Seligman, & Csikszentmihalyi, 2000).

Pratt and Ashforth (2003), as positive organisational scholars, suggest that organisational practices that could increase meaningfulness in work include job redesign, employee

involvement practices, leadership, and nurturing callings. When one's work is a calling, it is seen as an end in itself, in becoming the person that only you can be (Pratt, & Ashforth, 2003).

Research by Jacobson (1995 strongly suggests that mature leaders and other workers in organisations are seeking more than merely economic rewards. There is a redefinition of work to include satisfaction of inner needs for meaning and satisfaction. Jacobson's survey of national leaders confirm a growing need for workplace cultures, leadership and work processes that celebrate the whole individual with needs, desires, values, and a need for meaning. There is peculiar power in this new leadership model defining a holistic, community conception of the organisation both as an economic enterprise and as a human system. This holistic approach includes services that address the personal as well as the professional lives of workers (Kouzes, & Posner, 1993). It is conceptually proposed that servant leadership provides this holistic leadership approach and addresses individuals' need and search for meaning, by providing a shared vision and putting the needs of the employee first.

2.5.3 Operational definition of meaning

For the purpose of this study, meaning is defined as finding or having a reason for 'being' and a feeling, experience or perception that this 'being' is of significance (De Klerk et al., 2001).

2.6   Conclusions and theoretical support based on the literature review

From the preceding discussion on the respective constructs, it appears that servant leadership is a relational leadership style, and that it can be expected that individuals' perception of their manager's servant leadership behaviour would be higher if the manager had higher emotional intelligence. However, this would not be the case if the individuals do not trust their manager. If the manager is perceived to have a high level of servant leadership, then it could possibly contribute to increased levels of individuals' experience of meaning. This argument led to the formulation of the research questions and propositions for the present study, explicated in the following sections.

Although the concept of servant leadership has been explored for decades, most of this literature is philosophical in nature and does not have the necessary empirical research regarding the classification of servant leader attributes (Northouse, 1997; Russell, & Stone, 2002). Even though Winston (2004) states that servant leadership is undergoing a renaissance – moving from an anecdotal phase to validation, where it is supported by empirical research – this paradigm shift has not taken place in South African research or practice on leadership.

In gaining a better understanding of servant leadership and the ontology of the construct, it is also imperative to explore the correlates of servant leadership within the positive organisational behaviour framework. Understanding the relationship between servant leadership and different possible correlates will aid in understanding how servant leadership is developed and implemented within a company and if there are factors that need to precede the servant leadership development intervention. A vast amount of practical guidance for businesses and individuals, supported by solid theoretical research, is needed to develop servant leadership skills and organisations.

Currently, the views on servant leadership of Greenleaf (1970, 1977 and Spears (1995, 2002) are the most widely accepted. As already mentioned, Barbuto and Wheeler (2006) developed the Servant Leadership Questionnaire (SLQ) based on the ten characteristics discussed by Spears (1995), combined with the dimension *calling*. As this instrument is quite new, the portability, and thus the reliability and validity, of the measurement scale to the South African organisational context necessitates continued research in the field of servant leadership. Only once the instrument's reliability and validity in this particular context has been proven can it be used to study the relationships between the constructs.

Based on the discussed theoretical foundation, instrumentation and conclusions regarding the literature review, specific research questions were used to guide this study. These are discussed in the following section.
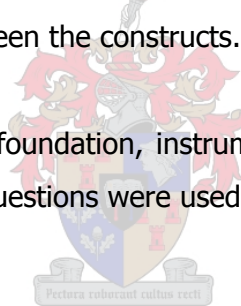
2.7   The research problem

Kerlinger (1992) states the importance of defining propositions as speculative statements about the relation between two or more variables, arguing that propositions (a) are the working instruments of theory, (b) can be tested and shown to be probably true or probably false, and (c) are powerful tools for the advancement of knowledge. Kerlinger and Lee (2000) argue that there are two primary criteria for good propositions: (a) propositions/hypotheses are statements about the relationships between variables, and (b) propositions/hypotheses carry clear implications for testing the stated relations. In order to provide the theoretical basis for the proposed research questions and propositions a discussion of the theoretical support found in the literature was presented in the preceding section.

In accordance with the aim of the study and the proposed relationships that are believed to exist between the concepts as stated in Chapter 1, the following research questions were formulated.

<u>Research question 1:</u>

Do the manifestations of the constructs each exist in the same form within a South African sample as was identified by the original author(s) of the scales for:

      a)   servant leadership;

      b)   emotional intelligence;

      c)   trust in the immediate supervisor; and

      d)   meaning?

Related propositions: 1–5

<u>Research question 2:</u>

Can a valid model of the causal relationships among the combinations of variables and their dimensions, namely emotional intelligence, trust in the immediate supervisor, servant leadership, and meaning, within the realm of positive organisational psychology, be built?

Related propositions: 6–13

2.8   Research propositions

In order to answer the two research questions developed for this study, thirteen propositions were formulated that had to be tested. A correlational research design was used so that causal relationships in the identified constructs could be determined. In addition to identifying the relationships, it becomes possible to understand the dynamic relationships between the constructs. In accordance with the aim of the study and the findings of previous research, the proposed relationships were believed to exist between the constructs.

The sequence of testing these propositions is important. Propositions 1 to 5 form the basis of evaluating which factor structures are applicable to the current sample. Since the operationalised measures of the variables are from foreign studies, it is important to determine if a similar or different factor structure emerges within a South African sample. If a different structure emerges, it must be interpretable and understandable given the theoretical basis of the construct being measured. The factor structures identified through propositions 1 to 5 will be used in further data analysis for the current study. The remaining research propositions (propositions 6 to 13) are then evaluated on the basis of the identified factor structures applicable to the South African sample in Chapter 4. As discussed in the previous sections, the following research propositions were formulated and used to empirically investigate the research questions.

Proposition 1: The servant leadership scale of Barbuto and Wheeler (2006) is portable to a South African cultural organisational setting and it is possible to demonstrate acceptable validity and reliability in this setting.

Proposition 2: The leader emotional intelligence scale of Rahim and Minors (2003) is portable to a South African cultural organisational setting and it is possible to demonstrate acceptable validity and reliability in this setting.

Proposition 3: The trust in the immediate supervisor scale of Ferres (2001) is portable to a South African cultural organisational setting and it is possible to demonstrate acceptable validity and reliability in this setting.

Proposition 4: The meaning in life scale of Battista and Almond (1973) is portable to a South African cultural organisational setting and it is possible to demonstrate acceptable validity and reliability in this setting.

Proposition 5: There will be interpretable and understandable factor structures for each of the identified construct measures.

Proposition 6: There is a significant positive relationship between emotional intelligence and servant leadership.

Proposition 7: There is a significant positive relationship between servant leadership and trust in the immediate supervisor.

Proposition 8: There is a significant positive relationship between servant leadership and meaning in life.

Proposition 9: There is a significant positive relationship between emotional intelligence and trust in the immediate supervisor.

Proposition 10: There is a significant positive relationship between emotional intelligence and meaning.

Proposition 11: There is a significant positive relationship between trust in the immediate supervisor and meaning.

Proposition 12: Each of the identified constructs will contribute separately to a significant proportion of variance in meaning in individuals.

Proposition 13: A model of the relationship between emotional intelligence, servant leadership, trust and meaning can be constructed and tested.

In addition to guiding the research methodology in the current study, the thirteen propositions also determined the data analysis techniques used. Appropriate data analysis methods to evaluate each of these propositions are discussed in Chapter 3.

2.9   Summary

The history as well as the definition of each of the respective constructs were explicated in this chapter. Emphasis was placed on research postulating that relationships will be found between the respective variables in the positive organisation behaviour field.

The variables that will be researched and explored in this study is servant leadership, emotional intelligence, trust in the immediate supervisor and meaning. The conceptual argument states that relationships exist between these variables. The relationship between the variables will also be analysed with regard to antecedence and effects. This information will support the development of an effective intervention to develop servant leadership. It is proposed that emotional intelligence and trust act as antecedents of servant leadership and that meaning experienced by individuals is a product of servant leadership, as illustrated in Figure 2.1.
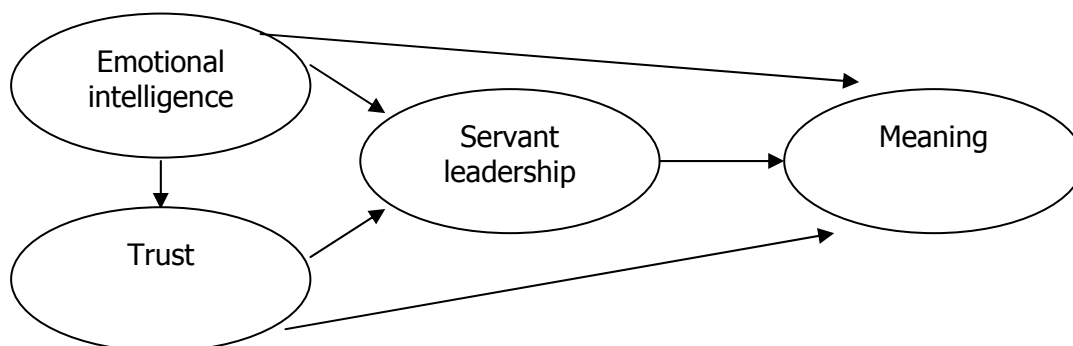
Figure 2.1: Theoretical model of the relationship between emotional intelligence, trust, servant leadership and meaning

CHAPTER 3: METHODOLOGY

3.1. Introduction

This study is guided by the research aim of investigating whether relationships exist between the following positive organisational psychological constructs: supervisor servant leadership, supervisor emotional intelligence, trust in the immediate supervisor, and meaning experienced by respondents. To provide an answer to this research problem, two research questions were developed to guide the study (see 2.7). To systematically provide answers to these research questions, an appropriate research design is required. In this chapter, the research design, research methodology, and statistical techniques used to test the research propositions stated in 2.8 are discussed. The sample design as well as the data collection procedures and different measuring instruments are also discussed. The sample characteristics are also reported on in this chapter. The chapter ends with a discussion of additional data analysis methods used for this study.

3.2 Overview of research design

The choice of a research design is governed by the research problem and research questions of a given study. The research questions are derived from the literature review and suggest the most appropriate methodology to answer the research problem.

3.2.1 Reason for choosing research design and research methodology

To determine the interpretable and understandable factor structures associated with each of the constructs (proposition 1 to 5) requires the use of a suitable research design. This research design should enable the empirical collection of the data from a large sample of respondents. One approach to collect empirical information is through the use of a survey from a large enough sample. In addition to empirical evidence obtained, the research design must also enable the statistical evaluation and statistical modelling of these identified factor structures. This is primarily done by using statistical modelling studies. The research design must also make possible the evaluation of a theoretical model's goodness of fit. A statistical modelling study is required to evaluate the statistical model which is developed.

It can be suggested that a combination of a survey and a statistical modelling study (Babbie, 1998; Kerlinger, & Lee, 2000; Mouton, 2001; Newman, 1997) is the most appropriate research design to evaluate the propositions discussed in 2.8. The characteristics of these two types of studies are briefly discussed below.

3.2.1.2 Survey studies

In order to sufficiently provide an answer to both the research questions and the resultant propositions, a survey methodology, making use of standardised measuring instruments, was followed. Primary data was collected through standardised questionnaires that allows for numerical manipulation. Survey research entails the administration of questionnaires to a sample of respondents that form part of a larger population in order to discover the relative incidence, distribution, and interrelations of sociological and psychological variables (Kerlinger, & Lee, 2000). Surveys take various forms, including mail, self-administered, face-to-face and telephone surveys and can be utilised for descriptive, exploratory and explanatory research.

The self-administered survey form (in which respondents independently complete questionnaires) was the method employed in this study. This method is only appropriate when the population under study is adequately literate, a requirement that was set to all respondents. This method holds certain advantages: (a) It makes the analysis of large datasets possible through the use of computer technology, (b) it is relatively inexpensive and concise, enabling quick completion, (c) it minimises interviewer bias and is largely accurate, and (d) it allows for anonymous and honest responses from respondents. Some disadvantages of survey research include: (a) the possible low response rate to the survey and a chance for significant response bias, (b) the researcher's lack of control over the conditions accompanying questionnaire completion, (c) receiving incomplete questionnaires, and (d) the researcher's lack of observation with regard to how respondents react towards questions and the research setting (Babbie, & Mouton, 2002; Newman, 1997; Kerlinger, & Lee, 2000).

Due to the assumption that survey studies employ statistical techniques, it is appropriate to elaborate on statistical modelling studies in the following section.

3.2.1.3 Statistical modelling studies

Although survey studies provide a broad overview of the phenomenon being studied, it lacks the ability to evaluate the theoretical models developed through a literature review. To overcome this limitation, statistical modelling studies must also be combined with survey studies. The theoretical model is developed through a process of theorising about the process as observed in previous research studies. Data collected through the use of survey studies is used to quantitatively validate the theoretical model. Most often multivariate statistical analyses are used to evaluate and validate theoretical models. These analyses include multiple regression analysis and structural equation modelling (Kerlinger, & Lee, 2000; Mouton, 2001). Multiple regression and structural equation modelling are discussed in 3.6.

Both survey and statistical modelling studies have in common the use of survey data based on a sample. This highlights the importance of choosing a sample that is appropriate for the study with regard to sample size, level of education and other prerequisites of the specific study. The importance of sampling and the sampling design used for this study is elaborated on in the next section.

3.3   Sample design and participants

The aim of sampling is to obtain a representative indication regarding a sample's opinions and attitudes regarding the phenomenon being studied which is reflective of the total population (Kerlinger, & Lee, 2000; Mouton, 2001; Newman, 1997). The population of this study is defined in the following section.

3.3.1. Research participants

The research data was gathered in two private sector organisations, in different industries within the South African context. The first organisation was a media and printing company based in Cape Town. The second organisation was a pharmaceutical organisation in Johannesburg.

For the current study, the sample population is defined as follows: all individuals who were employed at two specific South-African private sector organisations at the time of the study.
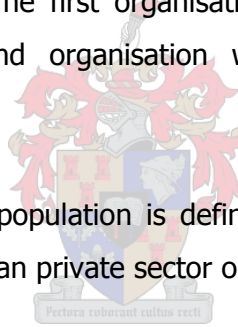
3.3.2 Defining the sample

The sample used for this study is defined as follows: Individuals within the selected private sector organisation who have an adequate level of literacy (at least Grade 12) and have a direct reporting relationship within the organisation. The methods for obtaining respondents from the sample that represent the population are briefly discussed below.

3.3.3 Sample of participants

The characteristics of the sample of respondents that completed the survey questionnaires are described in this section. Their characteristics are provided in terms of the following variables: gender, age, home language, ethnic group, education, religious orientation, and reporting period to their current manager.

The sample consisted of 101 (65.6%) female respondents and 53 (34.4%) males, indicating a majority of female respondents. Most of the respondents indicated their home language to be

Afrikaans (60.8%), followed by English (27.5%). Of the respondents, 1.9% indicated Xhosa as their home language. Regarding ethnic group, the biggest proportion of respondents is white (62.5%), followed by coloured (23%) and black (12.5%). The education breakdown indicates that most respondents (39.7%) have a Grade 12 qualification or equivalent, followed by 29.1% with a tertiary certificate or diploma, and 12.6% with a bachelor's degree. The mean age of respondents was 34 years, with a standard deviation of 10.5.

The reporting period to current manager reflects a mean period of two years (SD=32,136). Of the respondents, 57.9% have been reporting to their current manager for one year or less.

3.3.4 General sample comments

After distributing the questionnaires to the population, a total of 154 candidates with usable responses were included in the sample. The sample was representative of the population in which the psychometric instruments were used. Thus, in terms of size and composition, this sample is adequate for use in a validation study.

However, the study did yield quite a low response rate of 34%. Of the 390 questionnaires that were distributed, only 154 were returned. In one of the organisations the response rate was especially low. This can be explained by the fact that respondents received their questionnaire on or after the due date for completion. This was due to operational difficulties at that organisation's human resources department at the time.

Every effort was made to ensure demographical representation of the population.

3.4. Measuring instruments

Measuring the identified variables require the use of standardised measuring instruments to operationalise each variable. Four questionnaires were identified through the literature review as being reliable, valid, and applicable to this study. A general discussion of each questionnaire's properties in terms of content, structure, and psychometric features, as presented in the literature, follows.

3.4.1 Servant leadership

The Servant Leadership Questionnaire (SLQ) developed by Barbuto and Wheeler (2006) consists of 28 items. The questionnaire was originally developed to operationalise the servant leadership construct and the servant leadership characteristics were reviewed by these authors. Items for these characteristics were validated and created. Face validity was achieved by a

priori categorisation of 80% acceptance criterion. Factor analysis reduced the data to five unique subscales, which were used to test reliability, convergent, divergent and predictive validity. When the reliabilities of each of the ten servant leadership subscales (five self, five rater) were assessed, the self-version of the subscales demonstrated reliabilities ranging from .68 to .87. The rater version of the subscales demonstrated reliabilities ranging from .82 to .92. Subscale inter-correlations ranged from $r=.28$ to $r=.53$ for self-versions and from $r=.47$ to $r=.71$ for rater versions of the servant leadership measure.

For the purpose of this study only the rater version was utilised, as respondents were asked to evaluate their supervisor's perceived servant leadership. The original structure of this instrument includes five factors in the rater-version, namely altruistic calling, emotional healing, wisdom, persuasive mapping, and organisational stewardship. The Cronbach alpha coefficients for each of the five dimensions was established as altruistic calling 0.82, emotional healing 0.91, wisdom 0.92, persuasive mapping 0.87 and organisational stewardship 0.89. Examples of items measuring servant leadership are provided in Table 3.1.

Table 3.1: Examples of SLQ items

Item	My manager
1	puts my best interests ahead of his or her own
3	is one I would turn to if I had a personal trauma
4	seems alert to what's happening
5	offers compelling reasons to get me to do things
11	believes that the organisation needs to play a moral role in society

3.4.2 Emotional intelligence

Leader emotional intelligence was measured by a 30-item Emotional Intelligence Index (EQI), developed by Rahim and Minors (2003). For the purpose of this study the rater-version of this instrument was utilised, which means that employees was asked to rate their immediate supervisor's emotional skills. The five dimensions of the original structure of the scale were self-awareness, self-regulation, motivation, empathy, and social skills. Rahim and Minors (2003) reported reliabilities for the subdimensions ranging from .62 to .98 for the six countries in which the research was conducted. Cronbach alpha reliabilities for these studies ranged between .84 and .94.

Examples of items measuring emotional intelligence are provided in Table 3.2.

Table 3.2: Examples of EQI items

Item	My manager
1	keeps his or her distressing emotions in check
2	accepts rapid change to attain the goals of his or her group/organisation
3	is well aware of which emotions he or she is experiencing and why
4	expresses feelings in a way that inspires peak performance
5	is well aware of his or her moods

3.4.3 Trust in the immediate supervisor

Trust was measured by the Workplace Trust Survey (WTS), developed by Ferres (2001). The original 36-item questionnaire was developed using focus group narratives and content analysis, which transcribed obtained 'trust themes' into items measuring trust at the organisational, managerial and co-worker levels (α=.93 to α=.95). The questionnaire underwent further validation in South Africa and Australia (n=496) (Ferres, & Travaglione, 2003. Cronbach alpha coefficients ranged between 0.90 and 0.97 (Van Wyk, personal communication, 12 September 2002) and thus were satisfactory (trust in the organisation: α=.97; trust in co-workers: α=.94; and trust in supervisor: α=.90). In the South African standardisation sample, these three factors explained 59.47 per cent of the variance in the data (trust in the organisation = 48.58%; trust in co-workers = 5.41%; and trust in supervisor = 5.48%). For the purpose of this study, only the trust in the immediate supervisor subscale was utilised. This subscale comprises 12 items. Examples of items measuring the trust in the immediate supervisor subscale are provided in Table 3.3.

Table 3.3: Examples of items from the WTS trust in the immediate supervisor subscale

Item	
2	I feel that my manager is available when needed
4	I proceed on the basis that my manager will act in good faith
5	I act knowing that my manager will keep his or her word

3.4.4 Meaning

The Life Regard Index (LRI), originally developed by Battista and Almond (1973), is a 28-item scale which is designed to assess positive life regard, or in other terms, degree of experienced meaningfulness of one's life. The theoretical LRI structure distinguishing two dimensions, namely framework and fulfilment, was substantially supported by empirical data from various studies (Debats et al., 1993). Each dimension has 14 items, half phrased positively (e.g. "I have

a very clear idea of what I'd like to do with my life") and half negatively (e.g. "I don't really value what I am doing".)

Examples of items measuring framework and fulfilment are provided in Tables 3.4 and 3.5 respectively.

Table 3.4: Examples of items measuring framework

Item	
1	Other people seem to have a much better idea of what they want to do with their lives than I do
7	I have a very clear idea of what I would like to do with my life
12	I have really come to terms with what is important for me in my life

Table 3.5: Examples of items measuring fulfilment

Item	
2	When I look at my life I feel satisfaction of really having worked to accomplish something
4	I do not really value what I am doing
8	I feel that I am really going to attain what I want in life

The test-retest reliability was measured as $r=.87$ for the total index, $r=.82$ for framework, and $r=.81$ for fulfilment. Cronbach alpha coefficients were .92, .83, and .87 respectively (Harris, & Standard, 2001).

3.5. Procedure

The sampling method employed for this study was non-probability sampling, more specifically availability sampling (Babbie, & Mouton, 2001) in which the researcher makes use of the available subjects. This sampling technique was chosen due to the constraints of gathering data in a private sector organisation, where the researcher did not have direct access to the candidates.

3.5.1 Data collection

This study followed a hard-copy approach in distributing the questionnaires, as this was the express preference of the private sector organisation. The survey consisted of five sections that had to be completed by members of the sample. Instructions were provided on the covering page of the questionnaire to ensure respondents of confidentiality (regarding their identities) as

well as explain the reason for conducting this study. The questionnaires were submitted to the human resources department, who assumed the responsibility to distribute the questionnaires to the individuals chosen to partake in the study.

The respondents completed the questionnaires over a period of approximately two weeks and returned them by placing the questionnaire in a pre-addressed envelope and then into internal mail, where the questionnaires was stored in a marked carton box. An electronic approach was then utilised in capturing the hard-copy data to computer.

3.5.2 Nature of the measuring instruments

All the measuring instruments employed in the study utilised a seven-point Likert scale. The servant leadership measurement instrument (SLQ) utilised a seven-point frequency Likert scale. This scale had the following anchors: (1) never, (2) seldom, (3) sometimes, (4) unsure, (5) often, (6) mostly, and (7) always.

The emotional intelligence measure (EQI), trust in the immediate supervisor (WTS trust in the immediate supervisor subscale) and the meaning measure (LRI) utilised an intensity Likert scale. Respondents had to indicate the intensity of events/observations by assigning a number to each of the items on the questionnaire. The seven-point intensity Likert scale had the following anchors: (1) strongly disagree, (2) disagree, (3) slightly disagree, (4) undecided, (5) slightly agree, (6) agree, and (7) strongly agree.

3.6 Data analysis

The choice of data analysis technique is dependent on the type of research question the study is aiming to answer. As stated earlier, this study's research question is guided by several propositions, each focussing on a specific purpose associated with scientific research. In general, data analysis techniques focus on relationships, significance of group membership, and structure (Field, 2005; Hair, Black, Babin, Anderson, & Tatham, 2006).

The data in this study was analysed by means of quantitative techniques. The following sections elaborate on the various data analysis techniques that were employed to test the various propositions. These include factor analysis, Pearson product-moment correlation analysis, multiple regression analysis, and structural equation modelling.

3.6.1 Determining the underlying structures of the constructs

One of the aims of this study was to determine the underlying structure associated with each of the measured constructs. Since the measuring instruments utilised in this study have all been developed abroad, it was seen as crucial that the measurement equivalence of the different instruments, when used in a South African sample, had to be re-assessed. Data obtained from the respondents were used to test the internal consistency, confirm the factor structure, and determine in general the portability of the measuring instruments to the South African situation.

Exploratory factor analysis was utilised to explore the data and gain information on how many factors were needed to best represent the data. With exploratory factor analysis (EFA), all measured variables are related to every other factor by a factor loading estimate (Hair et al., 2006). Confirmatory factor analysis (CFA) was then utilised to confirm the observed structure of the constructs. In this study, factor analysis (EFA and CFA) was conducted with regard to each construct for the purpose of establishing the existence (or absence) of an underlying portability of each of the measured constructs' factor structures in a South African sample.

The following sections focus on the two major approaches to factor analysis, namely exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

3.6.1.1 Exploratory factor analysis

Exploratory factor analysis is conducted when there are no explicit expectations regarding the number and nature of the underlying factors in each of the constructs. Although this study does have information on the original, foreign factor structures associated with each of the constructs, it was important to determine the factor structures applicable for the South African sample.

The exploratory factor analysis and the associated item analysis guard against deliberate measurement errors that do not provide a valid representation of the constructs being measured in the South African sample of this study. Although the original factor structures (based on foreign samples) may have construct validity when used on the participants on whose responses they are based, construct validity cannot automatically be assumed for the South African sample.

In order to conduct exploratory factor analysis on the identified variables in respect of the South African sample, the following steps are proposed (Field, 2005; Grimm, & Yarnold, 1995; Hair et al., 2006; Kerlinger, & Lee, 2000): (a) determining how many factors can be extracted,

(b) deciding which method of extraction should be used to extract the factors, (c) identifying the most appropriate method of rotating the factors, and (d) determining how factor scores must be computed if factor scores are of interest.

3.6.1.1.1 Determining the number of factors to be extracted

Before determining how many factors can be extracted, it is important to first determine if the identified construct can be factor analysed. This was done by calculating both the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity.

The KMO can be calculated for individual and multiple variables and represents the ratio of the squared correlation between variables to the squared partial correlation between variables. The KMO statistic varies between 0 and 1. A value of 0 indicates that the sum of partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlations, thereby deeming factor analysis inappropriate. A value close to 1 indicates that patterns of correlations are relatively compact and therefore factor analysis should present distinct and reliable factors. The cut-off value that will be utilised in this study is 0.7. Kaiser (cited in Field, 2005) recommends the following interpretation of the values: (a) >.9 superb; (b) .8-.9 great values; (c) .7-.8 good; (d) .5-.7 mediocre; and (e) <.5 barely acceptable.

Another method of determining the appropriateness of factor analysis examines the entire correlation matrix. The Bartlett test of sphericity is one such measure as it is a test for the presence of correlations among the variables. It examines the correlations among all variables and assess whether, collectively, significant intercorrelations exists (Hair et al., 2006). Significance is measured at the 0.05 level.

The factor analysis method employed to extract factors in the present research study is principal axis factoring with oblique rotation (Bless, & Higson-Smith, 2000; Field, 2005; Hair et al., 2006; Kerlinger, & Lee, 2000). In this method, the factor rotation is computed in order that the extracted factors are correlated. Rather than arbitrarily constraining the factor rotation to an orthogonal solution, the oblique rotation identifies the extent to which each of the factors are correlated (Hair et al., 2006). This method is deemed suitable "if the ultimate goal of the factor analysis is to obtain several theoretically meaningful factors or constructs" (Hair et al., 1998, p.110). Conclusions drawn from this method are restricted to the sample collected and generalisation of the results can be achieved only if analysis using different samples reveals the same factor structure (Field, 2005).

In deciding whether a factor in the factor analysis is statistically important enough to extract from the data for interpretation purposes, the decision is made on the eigenvalue associated with the factor. The eigenvalue (or Kaiser's criterion) is based on the idea of retaining factors with associated eigenvalues greater than 1. The scree plot is consulted in the decision of extraction by looking at the point of inflection of the curve.

3.6.1.1.2 Item analysis

An item analysis was conducted on the scales that were used for data gathering. The purpose of item analysis was twofold, namely to determine acceptable factor loadings, and to investigate reliability and inter-item correlations.

In determining acceptable factor loadings the general rule is used that factors have to have a loading of ≥0.250 to be accepted. In the event of a two-factor (or more) structure, items are also analysed for possible cross-loadings. That means that the difference between the item factor loadings must be more than 0.250 to be accepted.

The purpose of investigating reliability and inter-item correlations is to ascertain which of the items in a scale, if any, have a negative effect on the overall reliability of the scale due to their inclusion in the particular scale. If a significant improvement in overall scale reliability occurs as a result of excluding a particular item, such item is also excluded from the subsequent factor analysis. The inter-item correlations must also be ≥0.250 to be accepted (Hair et al., 2006).
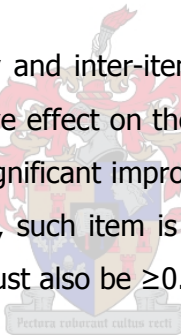
To evaluate the quality of the measurements in terms of the data obtained (i.e. measurement models), confirmatory factor analysis must be conducted. This is discussed in the following section.

3.6.1.2   Confirmatory factor analysis

Confirmatory factor analysis is a way of testing how well measured variables represent a smaller number of constructs (Hair et al., 2006). CFA is similar to EFA in many respects, but according to Hair et al. (2006), philosophically it is quite different. In CFA, the researcher must specify the number of factors that exist within a set of variables and also which factor each variable will load highly on before results can be computed. This information is obtained from the EFA, and therefore the CFA serves to confirm the observed structure of the constructs. Structural equation modelling is then used to test how well the researcher's a priori pattern of factor loadings fits the actual data. Therefore, CFA assists researchers to either reject or accept their preconceived theory.

In this study, CFA was used for two reasons, namely to confirm the factor structure of each of the respective variables, and to provide a confirmatory test of the measurement theory. Confirming the factor structure of each construct aims to answer research question 1 (see Chapter 1) and to provide information on the construct's portability to a South African sample. Only once this is done and the factor structure is accepted with confidence can the researcher continue to evaluate the second research question. This will involve constructing a model of relationships that are tested by the measurement theory. The measurement theory specifies a series of relationships that suggest how measured variables represent a latent construct that is not measured directly. Once the researcher uses measurement theory to specify a priori the number of factors as well as which variables load on these factors, a measurement model will be operationalised (Hair et al., 2006).

The following section explores the variables and matrices used in conducting confirmatory factor analysis of each of the measurement models for the constructs.

3.6.1.2.1 Variables in CFA

There are several identified constructs used in this study. However, these constructs are measured through several indicators (i.e. items in a questionnaire). Thus, latent variables are equivalent to the identified variables used in the study. The indicator variables (also known as manifest/observed variables) are equivalent to the items or parcels that are used to measure these constructs (Tabachnick, & Fidell, 2001).

3.6.1.2.2 Comparison of groups

In order to increase the robustness of the CFA, a comparison of groups and cross-validation was done for each construct. This indicates the degree to which one sample produces the same results as another sample (Hair et al., 2006). In other words, cross-validation of a structural equation model refers to the ability of the model to be equivalent across two or more random samples from the same population.

In the current study, the sample (n=154) was randomly divided into two groups in order to determine the cross-validation within the sample. Two methods were employed to determine this, namely loose cross-validation, and tight cross-validation.

In loose cross-validation, the same CFA model used with the original sample is imposed on the validation sample. A CFA is then conducted using only the validation sample. If the CFA fits the

original sample well, there is evidence of cross-validation. It is important to note that for this method both samples will have the same number of degrees of freedom because the same factor structure is used. In this method, no comparison of fit is made (Hair et al., 2006).

Tight cross-validation adds a constraint that error variance associated with each residual is equal between groups (Hair et al., 2006). The null hypothesis for this states that the measurement model parameters (factor loadings, factor variances, factor covariances and measurement error variances) are equivalent across the two samples. The alternative hypothesis states that at least two parameters of the measurement model are not equivalent across the two samples (Meels, 2002).

The degree to which the observed matrix fits the sample matrix is determined through goodness-of-fit tests, discussed in the following section.

3.6.2 Goodness-of-fit statistics

Several goodness-of-fit statistics were used to determine the validity of the measurement models in the current study. For the purposes of this study, only the following goodness-of-fit statistics are discussed, as they are the most widely reported and used fit statistics (Byrne, 1998; Hair et al., 2006): chi-square (χ^2), chi-square (χ^2)/degrees of freedom (df) ratio, goodness-of-fit index (GFI), standardised root mean square residual (SRMR), root mean square error of approximation (RMSEA), normed fit index (NFI), and comparative fit index (CFI). Each of these fit statistics is discussed briefly below.

a) Chi-square

The chi-square difference test is used to assess the cross-validation of the measurement model, and is therefore used to test the null and alternative hypothesis. The resultant test statistic value for the chi-square difference test is merely the difference between the goodness-of-fit chi-square test statistic values of measurement models under the null and alternative hypothesis. Therefore, a non-significant chi-square indicates that the model shows good fit with the obtained data (Hair et al., 2006).

b) Chi-square (χ^2)/ degrees of freedom (df) ratio

As a result of the chi-square reported sensitivity to sample size, the chi-square expressed in relation to its degrees of freedom (df) can indicate the quality of fit between a measurement model and the data (Kelloway, 1998). Bollen (1989) first developed this incremental fit index that is based on the ratio of χ^2/df. The Satorra-Bentler scaled chi-square is used for calculating

this ratio. It is suggested that values between 2 and 5 are indicative of acceptable levels of model fit (Kelloway, 1998).

c) Goodness-of-fit index (GFI)

The goodness-of-fit index was an early attempt to produce a fit statistic that is less sensitive to sample size. The possible range of GFI values are 0 to 1, with higher values indicating better fit (Hair et al., 2006). It is suggested that values higher than 0.9 are indicative of acceptable model fit (Bentler, & Bonett, 1980).

c) Standardised root mean residual (SRMR)

The SRMR is the standardised square root of the mean of the squared residuals, in other words, an average of the residuals between individual observed and estimated covariance and variance terms. Lower SRMR values represent better fit and higher values represent worse fit. The average SRMR value is 0, meaning that both positive and negative residuals can occur (Hair et al., 2006). An arbitrary cut-off of between 0.05 and 0.08 can be suggested for SRMR (Hair et al., 2006).

d) The root mean square error of approximation (RMSEA)

The RMSEA is a good representation of how well the model fits the population, not just the sample used for estimation. Lower RMSEA values indicate a better fit (Hair et al., 2006). In general, as with SRMR, values below 0.10 for the RMSEA are indicative of acceptable fit, with values below 0.05 suggesting a very good fit (Hair et al., 2006).

e) Comparative fit index (CFI) and normed fit index (NFI)

A general guideline for the interpretation of the CFI and NFI is that values of 0.90 and higher indicate satisfactory fit between the postulated model and theoretical data (Hair et al., 2006).

3.6.2.3 Item parcelling

Item parcelling refers to combining measured items into sets of several parcels by either summing or averaging the items, in other words a mathematical combination summarising multiple variables into one. This method provides a way of dealing with an unmanageable number of items measuring a specific dimension per construct. The current study has 93 items, and SEM applications are difficult to manage with this number of constructs (Hair et al., 2006).

However, there are various problems associated with item parcelling. This includes: (a) the appropriateness of parcelling, (b) which items should be combined into a parcel, and (c) the

effect of parcelling on evaluating models. These questions have arisen due to the fact that parcelling has the potential to improve model fit simply because it reduces the complexity of the model. Furthermore, item parcels often mask problems with item measures and suggest a better fit than exists in reality (Hair et al., 2006).

Hair et al. (2006) suggest that when items suggest unidimensionality, the best parcels are formed with items that display approximately the same covariance, which should lead them to have approximately the same factor loading estimates. In the current study, item parcels were constructed by using the factor loadings as a guide: (for a two-parcel approach) the highest loading is placed in the first parcel, the second-highest loading in the second parcel, the third-highest loading again in the first parcel, and so forth.

The results of the EFA and CFA on the survey will be presented in Chapter 4. As this analysis aims to answer the first research question regarding the factor structures of the respective constructs, the factor structure found through the EFA and CFA will be used to answer the second research question and propositions 6 to 13 (as explained in Chapter 2). One of the analyses that will be performed is the Pearson product-moment correlation analysis.

3.6.3   Determining the degree of relationship between variables

In Chapter 2, seven research propositions (6–13) were identified suggesting statistical analysis techniques that can determine the relationships among the measured constructs. These propositions focus on both the descriptive and predictive purpose of research, and they all focus on the question of relationships between variables.

Two of the most appropriate data analysis techniques that can be employed in evaluating these propositions are bivariate r and multiple R (Bless, & Higson-Smith, 2000; Field, 2005; Hair et al., 2006; Kerlinger, & Lee, 2000;. Both of these techniques are discussed below.

3.6.3.1 Correlation (Bivariate r)

The Pearson product-moment correlation coefficient is a standardised measure of the strength of the relationship between variables. It can take any value from -1 (as one variable changes, the other changes in the opposite direction by the same amount), through 0 (as one variable changes the other doesn't change at all), to +1 (as one variable changes, the other changes in the same direction by the same amount) (Field, 2005).

The interpretation of -1 (a perfect negative correlation), +1 (a perfect positive correlation) and zero (no correlation) is simple; the interpretation of values falling between 0 and -1, and 0 and +1, however, poses some difficulty. Guilford (cited in Sprinthall, 1987) sheds some light by providing informal interpretations of statistically significant Pearson correlation coefficients (Tredoux, & Durrheim, 2002). These guidelines are: <0.2 slight, almost no relationship; 0.2-0.4 low correlation, definite but small relationship; 0.4-0.7 moderate correlation, substantial relationship; 0.7-0.9 high correlation, strong relationship; and 0.9-1.0 very high correlation, very dependable relationship. The Pearson product-moment correlation results for this study are presented in Chapter 4.

The following section elaborates on multiple regression analysis to evaluate which independent variables contribute significantly to the variance in the dependent variable.

3.6.3.2 Multiple regression

Multiple regression analysis, a form of general linear modelling, is a multivariate statistical technique that is used in this study to examine the relationship between a single dependent variable and set of independent variables. With its broad applicability, multiple regression has been used for many purposes. This application falls broadly within two groups, namely prediction and explanation. Prediction involves the extent to which the regression variate (one or more independent variables) can predict the dependent variable. Explanation examines the magnitude, sign and statistical significance of the regression coefficients (the amount of change in the dependent variable for a one unit change in the independent variable) for each independent variable and attempts to develop a substantive or theoretical reason for the effects of the independent variables (Hair et al., 2006).

Even if one is able to find a the best possible line of good fit, there will still be some inaccuracy, which is represented by the differences between each observed data point and the value predicted by the regression line. These differences are then squared before their sum total is calculated. This result is known as the residual sum of squares.

In this study, predictors were entered into the model based on a purely mathematical criterion, known as a stepwise multiple regression. In this analysis, an initial model is defined that contains only the constant. The computer then searches for the predictor that best predicts the outcome variable, by selecting the predictor that has the highest correlation with the outcome variable. If this predictor significantly improves the ability of the model to predict the outcome, this predictor is retained in the model and the computer searches for a second predictor, and so

forth. In the statistical package used for analysis in this study, namely SPSS, a removal test is done each time a predictor is added to the equation to determine the least useful predictor. Therefore the regression equation is constantly being reassessed to see whether any redundant predictors can be removed (Field, 2005).

The result of the multiple regression analysis for this study will be discussed in Chapter 4. The results of the multiple regression will assist in predicting the sequential nature of the manifestation of the respective constructs. To understand how structural equation modelling is able to test a theory of multiple correlations, the following section provides an overview of the logic of structural equation modelling.

3.6.4 Structural equation modelling (SEM)

Structural equation modelling is used to test a theory; it is in fact a confirmatory technique. SEM can examine a series of dependence relationships simultaneously and is therefore particularly useful in testing theories that contain multiple equations involving dependence relationships. SEM estimates a series of separate, but interdependent, multiple regression equations simultaneously by specifying the structural model used by the statistical programme. SEM therefore combines both multiple regression and CFA. For the purpose of this study, Lisrel was used for SEM.

Regarding measuring the full model fit, latent variable models best practice dictates that "a sequence of model tests" (Kelloway, 1998, p.107) should be performed in which the measurement model is fitted first, followed by an investigation into the relevant structural parameters. This methodology is recommended in light of the complexity inherent in evaluating model fit: If the model under consideration does not fit the data, this could be due to (a) a measurement model with poor fit, (b) a structural model that is ill-fitting, or (c) both (Anderson, & Gerbing, cited in Kelloway, 1998).

Once the measurement models have been specified, the next step is to determine how the measurement model will be estimated. The standard, and most widely researched, method of estimation used in CFA and structural equation modelling is maximum likelihood (ML). This is a very robust estimation method that functions well under less-than-perfect conditions (i.e. non-normality) (Hair et al., 2006). Even though the maximum likelihood method of estimation may be appropriate, there is an alternative estimation method available. If the data does not follow a multivariate normal distribution and the sample size is not large, then the robust maximum likelihood method (RML) is recommended (Jöreskog & Sörbom, 2006). This method will require

an estimate of the asymptotic covariance matrix of the sample variances and covariances (Jöreskog & Sörbom, 2006). In the present study, Robust Maximum Likelihood method of estimation is utilized in order to accommodate for constructs that has non-normal distributions in relation to a standard error of skewness.

In addition, the so-called "full model, incorporating both structural and measurement relationships, cannot provide a better fit to the data than does the measurement model" (Kelloway, 1998, p.107). Thus, a comprehension of the structure and fit of the measurement model should improve the evaluation and interpretation of the full latent variable model. This is also the methodology followed in this research study.

The fit statistics discussed in 3.6.2.3 will again apply in the evaluation of the fit between the measurement model and the structural model.

3.7   Summary

In this chapter, an overview of the methodology used for this study was provided. The methodology included both a survey and statistical modelling research. Emphasis was placed on using both exploratory and confirmatory factor analysis to identify and verify interpretable and understandable factor structures associated with each of the measured constructs.

The techniques that will be used for data analysis, including correlation analysis and multiple regression analysis, were also discussed. The chapter also provided support for the use of structural equation modelling in evaluating the theoretical model depicting the relationships between the constructs that are investigated in this study.

In Chapter 4, the results of data analyses conducted using the methodology explained in this chapter will be presented. Emphasis will be placed on determining the factor structure of each of the measured constructs, statistically describing the correlations between the measured constructs (emphasising Pearson's r), statistically explaining the modelling of the relationship between the constructs (emphasising structural equations modelling), as well as statistically predicting the sequential relationship between the constructs (emphasising multiple regression analysis).

CHAPTER 4: PRESENTATION OF RESEARCH RESULTS

4.1. Introduction

The statistical results that highlight the distribution of the data, the factor structures of each of the constructs, as well as the relationships among the various constructs are presented in this chapter. In doing so, the methodology for analysing the survey data (as explained in Chapter 3) is fitted onto the data.

More specifically, the statistical results applicable to the research aim, the two research questions and the propositions stated in Chapter 2 are presented in this chapter. The presentation of these results are categorised according to the two research questions. Thus, the first section of the chapter reports on the exploratory and confirmatory factor analysis in order to determine whether each of the constructs is portable to a South African setting. The second section of the chapter reports on the statistical results of the relationships between the constructs. In the third and final section of the chapter, an attempt is made to determine the sequential relationships between the constructs. These results will be interpreted in Chapter 5 in the same sequence.

The distribution of the data for the sample used in this research will be discussed in the following section.

4.2 Distribution of data

One of the assumptions in data analysis is that of normality. It is assumed that the samples from which researchers work are drawn from populations that are distributed normally. In the current study, it was suspected on the basis of initial observation of the raw data that the data may not be distributed normally. In order to confirm this suspicion, the Shapiro Wilk W test was utilised to check for the normality of the data, as this test is suggested for its good power properties (Hair et al., 2006). The descriptive statistics revealed that the emotional intelligence, trust and meaning data was highly positively skewed with skewness values for emotional intelligence -.897 (standard error .195); servant leadership -.313 (standard error .195); trust -.844 (standard error .195); and meaning -.672 (standard error .195). The Kurtosis values were as follows: emotional intelligence .329; servant leadership -.747; trust .077; and meaning .604.

Field (2005) suggests that a general measure of significant deviation from normality is when the skewness statistic divided by the standard error exceeds 1.96. Using this measure, the data obtained from this sample on emotional intelligence, trust and meaning is significantly positively

skewed. In order to test the goodness-of-fit statistic of the data, the data was normalised and the fit statistic for each of the constructs were recalculated. This normalisation did not make a significant difference to the fit statistics of the constructs. It is therefore argued that the method utilised for confirmatory factor analysis in this study, namely robust maximum likelihood, is robust enough in the analysis of the data. Therefore, following the protocols established in the literature concerning the assumptions of normality, the original values were used (Hair et al., 2006).

The results of the factor analysis performed on each of the constructs, namely emotional intelligence, meaning, servant leadership, and trust in the immediate supervisor, are presented in the following section.

4.3. Results of the factor analysis performed on each of the identified constructs

In the current study, confirmatory, then exploratory and confirmatory factor analysis provided the answer to the first research question of this study (and resultant propositions 1-5), namely:

Do the manifestations of the constructs emotional intelligence, servant leadership, trust and meaning each exist in the same form within a South African sample as was identified by the original author(s) of the scales?

4.3.1. EFA of the construct servant leadership as measured by the Servant Leadership Questionnaire (SLQ)

The following sections report on the results regarding the factor structure of the instrument that was used to measure the construct servant leadership applicable to the current sample.

The KMO index and the Bartlett's test of sphericity were calculated and yielded values of 0.959 and a chi-square value of 3712.981 (df=253, p=000) respectively. This was regarded as proof that exploratory factor analysis (EFA) could be carried out on the responses to the Servant Leadership Questionnaire.

With an indication that the responses of the servant leadership measurement can be factor analysed, based on the KMO statistic as well as a significant value for Bartlett's test of sphericity, the scree plot of the eigenvalues obtained are shown in Figure 4.1.
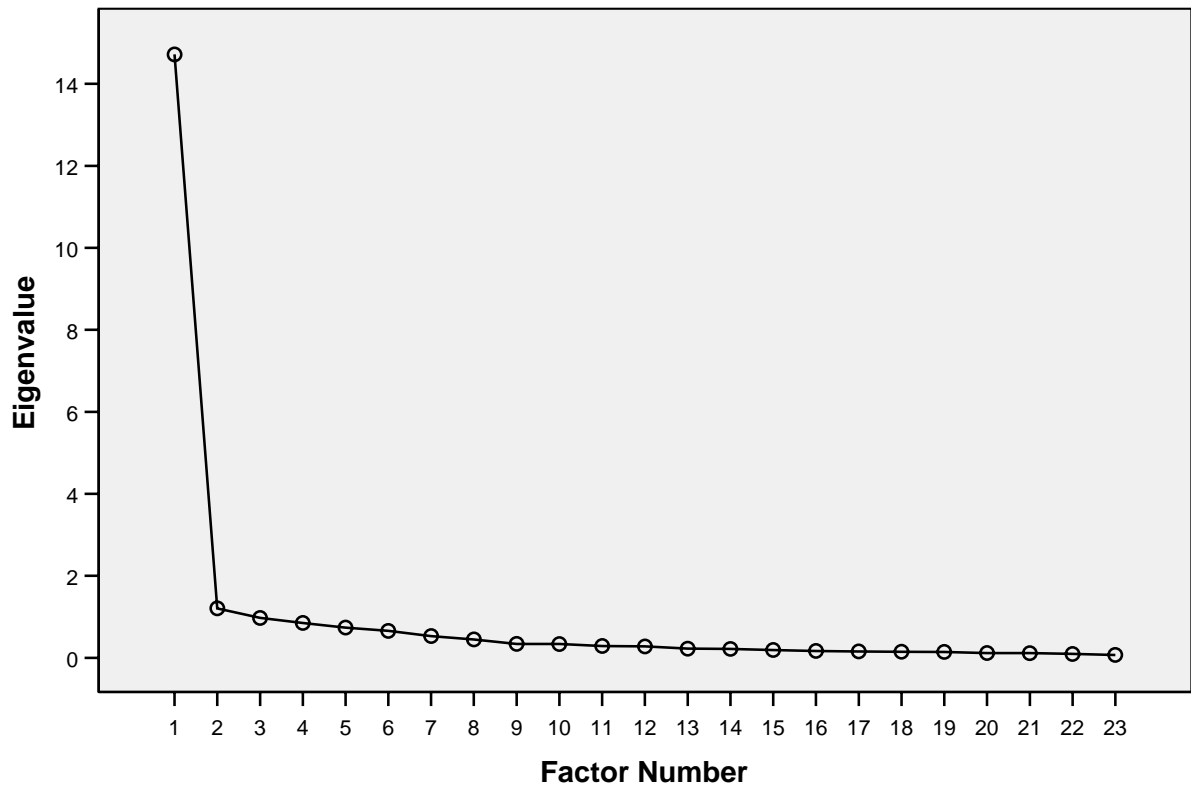
Figure 4.1: Scree plot: Servant leadership as measured by the SLQ

A two-factor solution, based on the scree test, seems to be indicated in Figure 4.1. Two factors were identified to have eigenvlaues higher than 1 (14.718 and 1.207 respectively). These two factors respectively explained 62.604% and 4.119% of the variance. Although there are two eigenvalues above 1 (as the rule states), a better suggestion of a uni-dimensional structure is suggested by the scree plot.

The following section reports on the second round of the exploratory factor analysis. This analysis suggests a one-factor solution regarding the instrument that was used to measure the construct servant leadership.

The KMO index and the Bartlett's test of sphericity were calculated and yielded values of 0.959 and a chi-square value of 3712.981 (df=253, p=000) respectively. This was regarded as proof that exploratory factor analysis (EFA) could be carried out on the responses to the SLQ. The one extracted factor explained 62.428% of the variance.

The factor matrix results seemed to suggest that all of the items in the servant leadership measuring instrument may be retained, as scores ranged between .548 (SL5) and .875 (SL15).

The following section reports on the item analysis results for each of the items of the uni-dimensional factor extracted based on the responses for the servant leadership construct. Both inter-item correlations and reliability are reported on.

Table 4.1: Item analysis for servant leadership

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha coefficient if item deleted
SL1	99.3803	1023.743	.762	.972
SL2	99.0273	1017.777	.755	.972
SL3	99.3018	999.610	.728	.973
SL4	98.1384	1018.468	.806	.972
SL5	98.9932	1038.268	.542	.974
SL6	99.2564	1005.072	.732	.973
SL7	98.4522	1016.658	.805	.972
SL8	99.0656	1006.307	.744	.973
SL9	98.0722	1013.099	.814	.972
SL10	98.3288	1025.351	.690	.973
SL11	98.3616	1021.796	.756	.972
SL12	99.2103	1000.488	.838	.972
SL13	98.1646	1010.352	.840	.972
SL14	98.3541	1008.259	.823	.972
SL15	98.2103	1021.709	.736	.973
SL16	99.2818	1009.954	.796	.972
SL17	99.2363	995.707	.865	.972
SL18	98.6875	1000.991	.863	.972
SL19	98.4538	1021.951	.735	.973
SL20	98.6809	1005.805	.801	.972
SL21	99.0610	995.125	.860	.972
SL22	98.5025	1016.049	.790	.972
SL23	98.4064	1015.581	.772	.972

All the items in the emotional intelligence measurement provide acceptable levels of above 0.250 for the inter-item correlations. The 23-item servant leadership measuring instrument has a reliability coefficient of 0.973.

With an indication of the factor structures of servant leadership, emotional intelligence is explored in the following section.

4.3.2. EFA of the construct emotional intelligence as measured by the EQI

The following sections report on results regarding the factor structure of the instrument that was used to measure the construct emotional intelligence applicable to the current sample.

The KMO statistics for the exploratory factor analysis is 0.942. According to Kaiser (cited in Field, 2005), this is a superb value and therefore the factor structure is accepted as interpretable.

The scree plot of the eigenvalues obtained is shown in Figure 4.2.
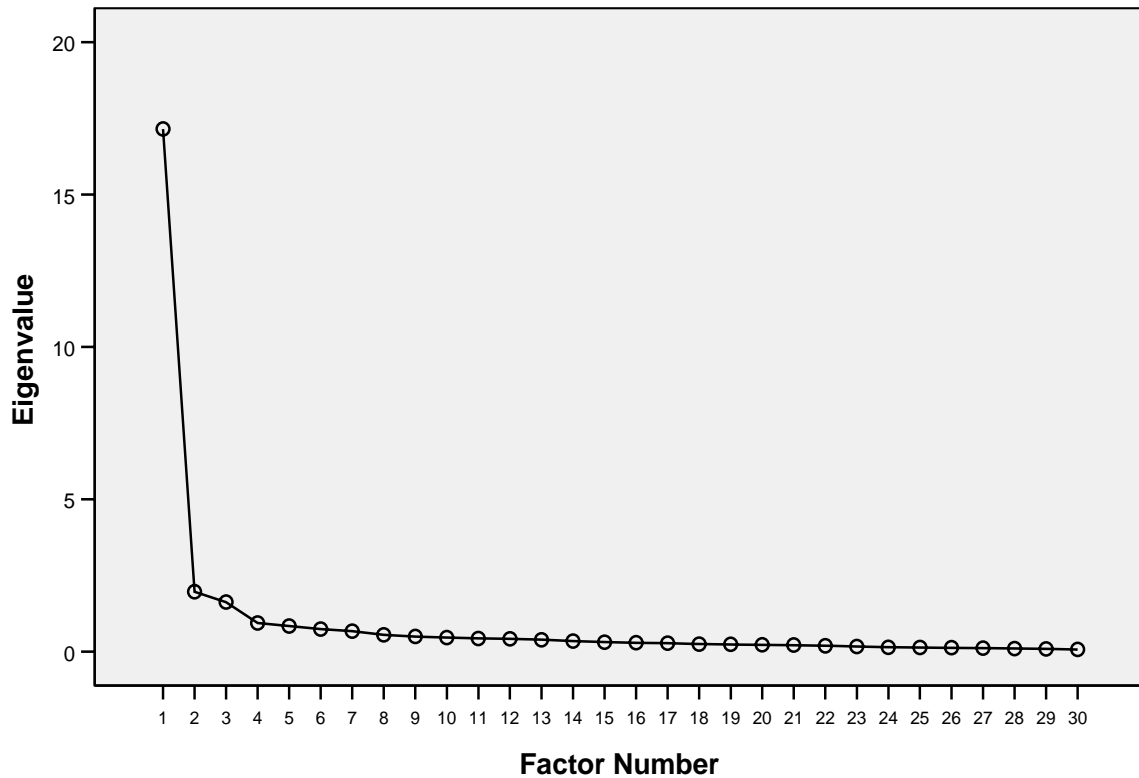
Figure 4.2: Scree plot: Emotional intelligence as measured by the EQI

A three-factor solution, based on the scree test, seems to be indicated in Figure 4.2. The results from the three-factor extraction are shown in Table 4.2.

Table 4.2: Eigenvalues and total variance explained: EQI

Factor	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings(a)
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total
1	17.150	57.166	57.166	16.814	56.047	56.047	13.966
2	1.966	6.553	63.719	1.637	5.457	61.504	12.682
3	1.626	5.420	69.139	1.312	4.374	65.879	11.485
4	.941	3.136	72.275				
5	.841	2.804	75.079				
6	.740	2.468	77.547				
7	.673	2.243	79.789				

8	.553	1.843	81.632				
9	.497	1.656	83.288				
10	.462	1.539	84.827				
11	.433	1.445	86.272				
12	.420	1.402	87.673				
13	.390	1.301	88.975				
14	.348	1.160	90.135				
15	.313	1.042	91.177				
16	.292	.973	92.149				
17	.279	.932	93.081				
18	.248	.826	93.907				
19	.240	.801	94.708				
20	.223	.742	95.450				
21	.217	.724	96.173				
22	.192	.640	96.814				
23	.169	.562	97.375				
24	.140	.468	97.844				
25	.138	.460	98.304				
26	.130	.434	98.738				
27	.115	.384	99.122				
28	.101	.335	99.457				
29	.092	.308	99.765				
30	.070	.235	100.000				

Based on Table 4.2, it is suggested that a three-factor structure should be used due to the extraction sum of squared loadings with eigenvalues larger than 1.

Although there are three eigenvalues above 1 (as the rule states), a better suggestion of a uni-dimensional structure is suggested by the scree plot.

The following section reports on the second round of the EFA. This analysis suggests a one-factor solution regarding the instrument that was used to measure the construct emotional intelligence.

In proposing a one-factor solution, the KMO-statistic was 0.942. This, as well as the significant value for Bartlett's test of sphericity, gave an indication that the construct could be factor analysed. In exploring the eigenvalues and total variance explained, it was determined that a one-factor solution explains 55.736% of the variance.

In examining the factor matrix, the factor scores ranged between .616 (EI25) and .848 (EI17). The scores seem to suggest that all of the items in the emotional intelligence measuring instrument may be retained.

The following section reports on the item analysis results for each of the items of the uni-dimensional factor extracted based on the responses for the emotional intelligence construct. Both inter-item correlations and reliability are reported on.

Table 4.3: Item analysis for emotional intelligence

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha coefficient if item deleted
EI1	149.4526	1275.385	.694	.973
EI2	148.9126	1285.184	.648	.973
EI3	148.9233	1289.445	.654	.973
EI4	149.4593	1250.806	.824	.972
EI5	149.2259	1283.433	.612	.974
EI6	149.1537	1257.254	.727	.973
EI7	149.0993	1259.121	.767	.973
EI8	149.2393	1283.011	.643	.973
EI9	149.2653	1270.313	.692	.973
EI10	149.3457	1261.572	.749	.973
EI11	149.3656	1271.346	.719	.973
EI12	148.7894	1288.702	.628	.973
EI13	149.3325	1257.734	.807	.972
EI14	149.1404	1263.523	.766	.973
EI15	149.6659	1257.283	.771	.973
EI16	149.2059	1260.065	.785	.973
EI17	149.4450	1247.462	.837	.972
EI18	148.7894	1270.232	.739	.973
EI19	148.7488	1275.222	.757	.973
EI20	148.9859	1260.139	.754	.973
EI21	148.6393	1294.404	.677	.973
EI22	149.2000	1275.323	.728	.973
EI23	148.9219	1280.539	.662	.973
EI24	149.3393	1258.802	.780	.973
EI25	149.0874	1277.353	.761	.973
EI26	149.2662	1264.950	.790	.973
EI27	149.1934	1265.848	.798	.973
EI28	149.3059	1266.086	.729	.973
EI29	149.3793	1258.407	.759	.973
EI30	149.1868	1269.046	.770	.973

All the items in the emotional intelligence measurement show acceptable levels of above 0.250 for the inter-item correlations. The 30-item emotional intelligence measuring instrument yielded a reliability coefficient of 0.974.

With an indication of the factor structures of servant leadership and emotional intelligence, the third construct, which is trust in the immediate supervisor, is explored in the following section.

4.3.3. EFA of the construct trust in the immediate supervisor as measured by the Workplace Trust Survey: trust in the immediate supervisor subscale

The following sections report on results regarding the factor structure of the instrument that was used to measure the construct trust in the immediate supervisor applicable to the current sample.

The KMO index and the Bartlett's test of sphericity were calculated and yielded values of 0.928 and a chi-square value of 1540.172 (df=66, p=000) respectively. This was regarded as proof that EFA could be carried out on the responses to the WTS: trust in the immediate supervisor subscale.

With an indication that the responses of the trust in the immediate supervisor measurement can be factor analysed, based on the KMO-statistic as well as a significant value for Bartlett's test of sphericity, the scree plot of the eigenvalues obtained are shown in Figure 4.3.
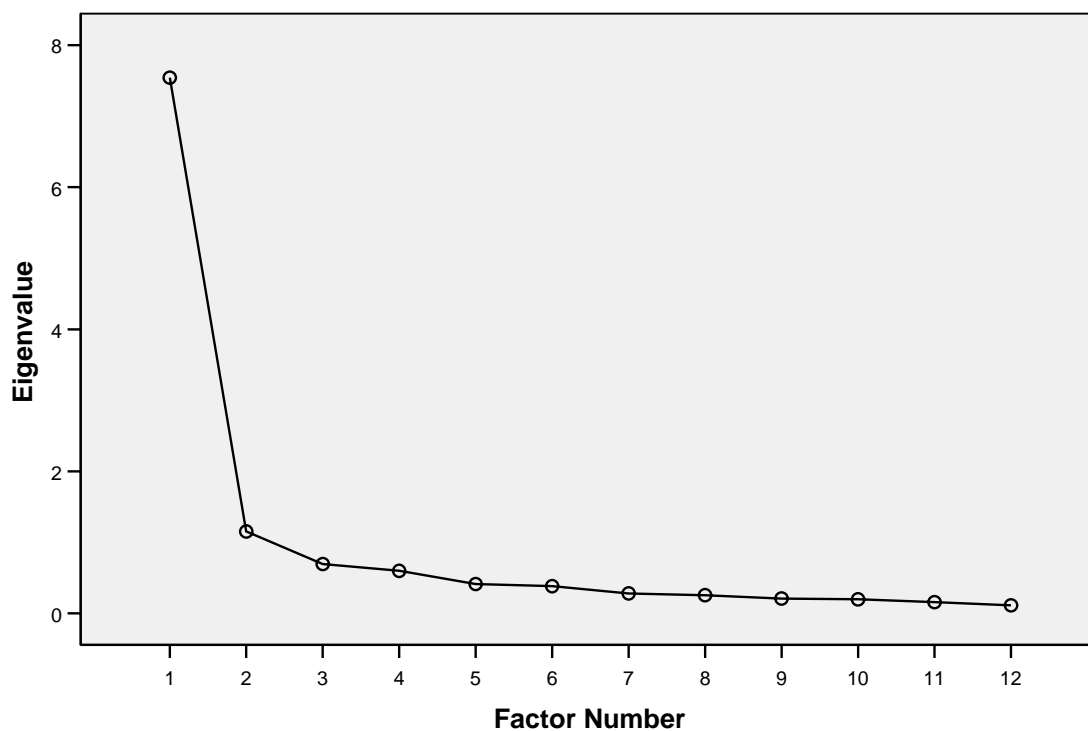
Figure 4.3: Scree plot: Trust in the immediate supervisor as measured by the WTS subscale

A two-factor solution, based on the scree test, seems to be indicated in Figure 4.3. It is suggested that a two-factor structure should be used due to the extraction sum of squared loadings with eigenvalues larger than 1. The two factors respectively explained 60.307% and 6.865% of the variance.

Although there are two eigenvalues above 1 (as the rule states), a better suggestion of a uni-dimensional structure is suggested by the scree plot.

The following section reports on the second round of the EFA. This analysis suggests a one-factor solution regarding the instrument that was used to measure the construct trust in the immediate supervisor.

The KMO index and the Bartlett's test of sphericity were calculated and yielded values of 0.928 and a chi-square value of 1540.172 (df=66, p=000) respectively. This was regarded as proof that EFA could be carried out on the responses to the Workplace Trust Survey: trust in the immediate supervisor subscale. The one factor described 59.795% of the variance for the construct trust in the immediate supervisor.

The factor matrix suggested that all items could be retained, as factor scores ranged from .577 (TR12) to .897 (TR9).

The following section reports on the item analysis results for each of the items of the uni-dimensional factor extracted based on the responses for the construct trust in the immediate supervisor. Both inter-item correlations and reliability are reported on.
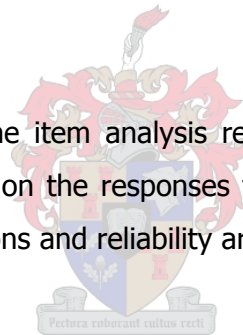
Table 4.4: Item analysis for trust

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha coefficient if item deleted
TR1	55.4437	233.250	.576	.944
TR2	55.5222	224.017	.808	.936
TR3	55.5564	222.794	.792	.937
TR4	55.3914	227.518	.773	.938
TR5	55.3980	225.285	.803	.937
TR6	55.3551	228.279	.794	.937
TR7	55.7837	220.952	.789	.937
TR8	55.2642	226.689	.806	.937
TR9	55.6213	220.561	.861	.934
TR10	56.2704	226.474	.698	.940
TR11	56.5629	228.771	.639	.942
TR12	56.5941	235.024	.579	.944

All the items in the trust in the immediate supervisor measurement provide acceptable levels of above 0.250 for the inter-item correlations. The 12-item trust in the immediate supervisor measuring instrument has a reliability coefficient of 0.943.

With an indication of the factor structures of servant leadership, emotional intelligence and trust in the immediate supervisor, the fourth construct, namely meaning, is explored in the following section.

4.3.4. EFA of the construct of meaning as measured by the LRI

The following sections report on results regarding the factor structure of the instrument used to measure the construct of meaning applicable to the current sample.

The KMO index and the Bartlett's test of sphericity were calculated and yielded values of 0.873 and a chi-square value of 2316.845 (df=378, p=000) respectively. This was regarded as proof that EFA could be carried out on the responses to the Life Regard Index (LRI).

With an indication that the responses of the meaning measurement can be factor analysed, based on the KMO statistic as well as a significant value for Bartlett's test of sphericity, the scree plot of the eigenvalues obtained are shown in Figure 4.4.
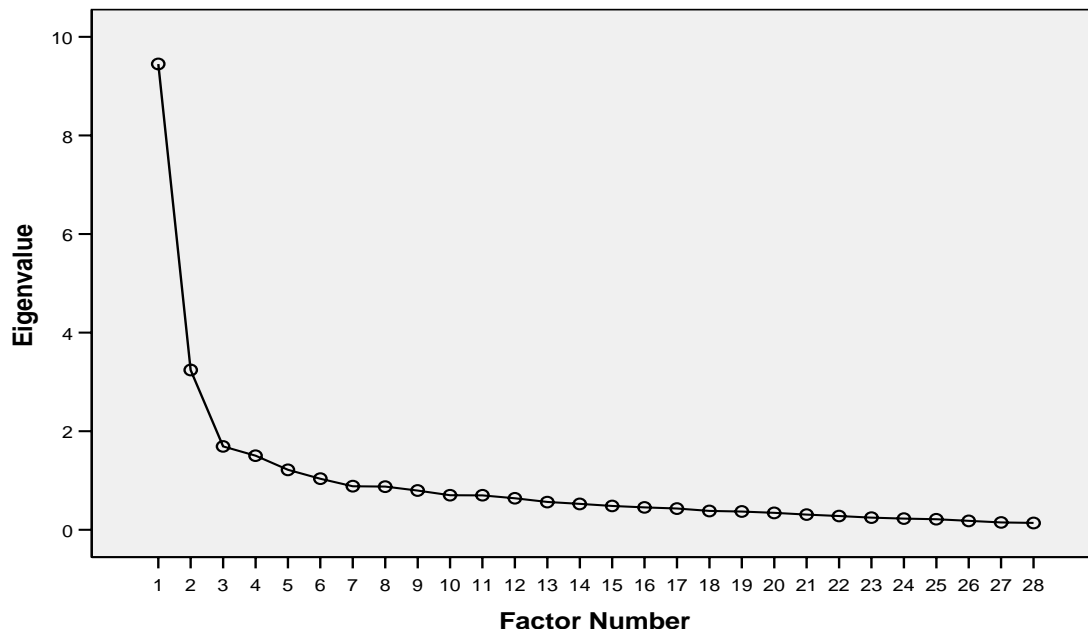
Figure 4.4: Scree plot: Meaning as measured by the LRI

The scree plot of the meaning construct seems to suggest a five-factor solution, as depicted in Figure 4.4.

The following section reports on results of the exploratory factor analysis for a five-factor solution of the construct meaning. Both the eigenvalues and the structure matrix results are reported and interpreted for a five-factor solution of the meaning construct.

Table 4.5: Eigenvalues and total variance explained: LRI

Factor	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings(a)
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total
1	9.451	33.754	33.754	9.034	32.264	32.264	4.665
2	3.241	11.575	45.329	2.804	10.015	42.279	6.031
3	1.691	6.039	51.368	1.269	4.532	46.811	4.849
4	1.502	5.364	56.732	1.025	3.662	50.473	1.995
5	1.216	4.341	61.073	.820	2.927	53.400	3.609
6	1.036	3.700	64.773	.578	2.064	55.465	4.618
7	.884	3.157	67.931				
8	.875	3.126	71.056				
9	.797	2.846	73.902				
10	.700	2.501	76.403				
11	.700	2.498	78.901				
12	.638	2.277	81.178				
13	.562	2.007	83.185				
14	.523	1.867	85.053				
15	.482	1.720	86.772				
16	.452	1.615	88.387				
17	.429	1.532	89.919				
18	.380	1.358	91.277				
19	.370	1.320	92.597				
20	.341	1.219	93.816				
21	.306	1.094	94.909				
22	.278	.993	95.902				
23	.244	.873	96.775				
24	.226	.806	97.581				
25	.213	.760	98.341				
26	.179	.640	98.981				
27	.148	.530	99.512				
28	.137	.488	100.000				

Based on Table 4.5, it is suggested that a five-factor structure should be used due to the extraction sum of squared loadings with eigenvalues larger than 1. However, a five-factor structure is inconsistent with the original two-dimensional structure of the measuring instrument. Table 4.5 shows that the largest proportion of the variance is explained by two factors, 32.264% and 10.015%.

The following section therefore describes the EFA statistics and structure matrix for a forced two-factor structure of the construct meaning as measured by the LRI.

The two factors respectively explained 31.804% and 9.579% of the variance.

The following section reports on additional results of the EFA for a two-factor solution of the construct meaning. Only the structure matrix results are reported and interpreted for a two-factor solution of the construct meaning.

Table 4.6: Structure matrix of the construct meaning (two-factor solution, round 2)

	Factor	
	1	2
Recode ME1	.568	.232
ME2	.433	.480
Recode ME3	.755	.386
Recode ME4	.647	.301
Recode ME6	.768	.368
Recode M10	.559	.133
Recode ME11	.540	.364
Recode ME13	.588	.104
Recode ME14	.656	.389
Recode ME15	.700	.266
Recode ME18	.705	.352
Recode ME20	.433	.133
Recode ME22	.682	.336
Recode ME25	.249	.205
Recode ME27	.722	.319
ME5	.465	.549
ME7	.541	.630
ME8	.417	.601
ME9	.448	.644
ME12	.342	.569
ME16	-.020	.427
ME17	.220	.679
ME19	.335	.739
ME21	.371	.709
ME23	.208	.542
ME24	.327	.816
ME26	.346	.671
ME28	.209	.661
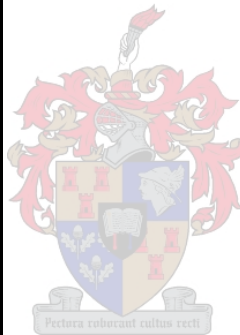
The structure matrix of the construct meaning suggests that items ME2, Recode ME11, Recode ME25, ME5, ME7, ME8, ME9 and ME12 be removed due to them having higher than 0.250 cross-loadings on the two factors, as evident from Table 4.6. Due to the amount of cross-loadings found, the researcher investigated whether the items of the original two dimensions of the scale was consistent with the two-factor structure found in the EFA. The researcher could

not observe any similarities in the two-factor structure found with that of the original items if the measurement instrument. It was therefore decided to perform a third round of EFA obtain a one-factor structure. The third round of EFA is reported on in the following section.
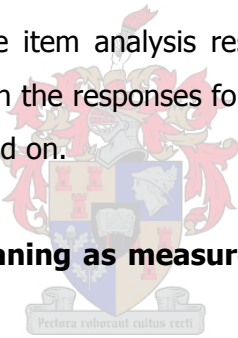
The KMO index and the Bartlett's test of sphericity were calculated and yielded values of 0.873 and a chi-square value of 2316.845 (df=378, p=000) respectively. This provided evidence that the meaning construct still provides evidence of factor analysability.

The one factor explained 31.458% of the variance for the construct meaning, as measured by the LRI.

The factor matrix results yielded factor scores above the cut-off point of >0.250, except for ME16, which yielded a score of 0.220. All items in the meaning measuring instrument were retained, except for ME16.

The following section reports on the item analysis results for each of the items of the uni-dimensional factor extracted based on the responses for the meaning construct. Both inter-item correlations and reliability are reported on.

Table 4.7: Item analysis for meaning as measured by the LRI (one factor solution, round 3)

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha coefficient if item deleted
Recode ME1	145.3752	584.720	.482	.918
Recode ME3	145.1025	569.993	.678	.915
Recode ME4	144.9596	578.736	.573	.917
Recode ME6	145.0960	572.541	.677	.915
Recode M10	144.6544	594.364	.431	.919
Recode ME11	144.3038	591.836	.531	.918
Recode ME13	146.7778	577.729	.421	.920
Recode ME14	145.2129	572.812	.628	.916
Recode ME15	146.0700	565.558	.577	.917
Recode ME18	145.1999	578.720	.634	.916
Recode ME20	147.2583	590.772	.352	.921
Recode ME22	145.5051	572.558	.621	.916
Recode ME25	144.9531	603.514	.275	.921
Recode ME27	145.4272	570.484	.628	.916
ME2	144.9012	590.990	.516	.918
ME5	145.3038	581.762	.571	.917
ME7	144.8752	578.106	.656	.916
ME8	144.7518	590.168	.556	.917

ME9	144.7924	586.547	.592	.917
ME12	144.9035	587.860	.491	.918
ME16	**144.4911**	**615.256**	**.192**	**.922**
ME17	144.9613	592.523	.468	.918
ME19	145.0046	584.193	.573	.917
ME21	144.8730	591.892	.577	.917
ME23	145.4980	595.620	.394	.919
ME24	144.7427	589.324	.596	.917
ME26	144.7626	593.131	.543	.917
ME28	144.9322	595.462	.453	.919

All the items in the meaning measurement provide acceptable levels of above 0.250 for the inter-item correlations, except for ME16. This item was removed and a fourth round of EFA was performed.

The following section reports on the round 4 factor analysis of the construct meaning with item ME16 removed.

The KMO index and the Bartlett's test of sphericity were calculated and yielded values of 0.876 and a chi-square value of 2236.602 (df=351, p=000) respectively. This provided evidence that the construct meaning still provides evidence of factor analysability.

The one extracted factor explained 32.446% of the variance of meaning as measured by the LRI.
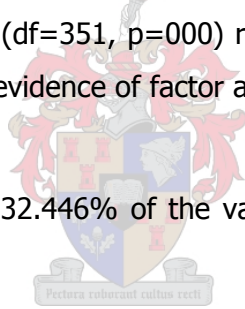
The factor matrix showed factor scores ranging between .266 (Recode ME25) and .696 (Recode ME3), which seems to suggest that all of the items in the meaning measuring instrument may be retained.

The following section reports on the item analysis results for each of the items of the uni-dimensional factor extracted based on the responses for the meaning construct. Both inter-item correlations and reliability are reported on.

Table 4.8: Item analysis for meaning (with item ME16 deleted) as measured by the LRI (one factor solution, round 4)

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha coefficient if item deleted
Recode ME1	139.3222	572.002	.488	.919
Recode ME3	139.0495	557.574	.683	.916
Recode ME4	138.9067	566.119	.578	.918
Recode ME6	139.0430	560.227	.679	.916
Recode M10	138.6015	581.651	.436	.920
Recode ME11	138.2508	579.413	.533	.919
Recode ME13	140.7248	564.321	.433	.922
Recode ME14	139.1599	560.525	.630	.917
Recode ME15	140.0170	552.145	.591	.918
Recode ME18	139.1469	565.865	.644	.917
Recode ME20	141.2054	577.587	.361	.922
Recode ME22	139.4521	559.907	.627	.917
Recode ME25	138.9002	592.164	.261	.923
Recode ME27	139.3742	557.930	.633	.917
ME2	138.8482	578.902	.513	.919
ME5	139.2508	569.520	.572	.918
ME7	138.8222	566.215	.651	.917
ME8	138.6989	578.366	.548	.919
ME9	138.7394	574.472	.589	.918
ME12	138.8506	576.018	.485	.919
ME17	138.9083	581.371	.451	.920
ME19	138.9516	572.678	.562	.918
ME21	138.8200	579.724	.574	.918
ME23	139.4450	583.530	.390	.921
ME24	138.6898	577.351	.590	.918
ME26	138.7096	581.017	.539	.919
ME28	138.8792	584.071	.438	.920

Table 4.8 indicates that all the items in the meaning measurement (with item ME16 deleted) provide acceptable levels of above 0.250 for the inter-item correlations. The 27-item meaning measuring instrument (with item ME16 deleted) has a reliability coefficient of 0.922.

The previous sections reported on the factor structures that are applicable to the current sample. EFA was done to determine these factor structures. In summary, the following constructs had uni-dimensional structures: servant leadership, emotional intelligence, trust in the immediate supervisor, and meaning. Table 4.9 provides a summary of the instruments' dimensionality and Cronbach alpha coefficient.

Table 4.9: Characteristics of measuring instruments

Instrument	Dimension (n items)	Cronbach alpha coefficient
SLQ	Uni-dimensional (23)	0.973
EQI	Uni-dimensional (30)	0.974
WTS: trust in immediate supervisor subscale	Uni-dimensional (12)	0.943
LRI	Uni-dimensional (27) <one item excluded>	0.922

4.3.5 Structural equivalence of each of the constructs

Data on various biographical variables, including race and gender, was gathered in this study. Unfortunately the proportions of the groups do not allow for comparing different groups on the identified variables. The researcher therefore arrived at two samples by randomly assigning cases, as explained in Chapter 3.

In order to determine measurement equivalence, more stringent techniques and approaches are followed (Hair et al., 2006). This requires the use of structural equation modelling. The technique implies that three constraints are placed on the model of the two groups, namely (a) factor loading equivalence, (b) interfactor covariance, and (c) error variance equivalence (Hair et al., 2006). This technique involves testing the null hypothesis that all three parameters are assumed to be equal across the two groups. The alternative hypothesis states that at least two of the parameters of the measurement model are not identical across the two groups. By determining the chi-square difference between the two groups, it is possible to determine measurement equivalence (i.e. metric invariance) based on a non-significant difference between the chi-square values of the two groups.

To evaluate the quality of the measurements in terms of the data obtained (i.e. measurement models), confirmatory factor analysis must be conducted. The latter procedure is discussed in the following section.

4.3.6 Confirmatory factor analysis

The purpose of carrying out confirmatory factor analysis (CFA) was to provide statistical evidence on whether each of the identified variables is adequately defined in terms of the common variance among the indicators (i.e. items) in a measurement model (MacKenzie, Podsakoff, & Jarvis, 2005). The difference between CFA and EFA is that in the latter all factors affect the measured variables. In contrast, CFA is based on the specification of which factors affect which measured variables. In this study, theory is obtained from the theoretical

background developed through the literature reviewed in Chapter 1 and Chapter 2. This theory ensures that the structures identified during EFA can be compared with the original structures of the instruments.

The following section explores both the variables and matrices used in conducting CFA of each of the measurement models for the constructs.

4.3.6.1 The reason for using matrices in CFA

The reason for using CFA is based on the need for two matrices to be compared with each other. The first matrix is known as the population/estimated covariance matrix (Σ_k). This is the matrix that is derived from the stated measurement model that depicts the direct effect of the factors on the measured variables. The second covariance matrix (the sample/observed covariance matrix) (S) is derived from the observed data. CFA then compares these two matrices and determines how well the observed data fits the proposed structure. In CFA, only x-indicators (i.e. the different items) are required since there is not a full structural model. The degree to which the observed matrix fits the sample matrix is determined through goodness-of-fit tests, as discussed in Chapter 3 (Tabachnick, & Fidell, 2001).

In order to determine how well the observed/sample covariance matrix fits the population/estimated covariance matrix, the method of estimation must be identified. This is briefly highlighted in the following section.
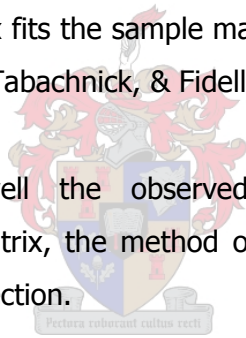
4.3.6.2 Method of estimation

Once the measurement models have been specified, the next step is to determine how the measurement model will be estimated. The standard, and most widely researched, method of estimation used in CFA and SEM is maximum likelihood (ML). This is a very robust estimation method that functions well under less-than-perfect conditions (Hair et al., 2006).

After the measurement model has been specified and the parameters have been estimated, the following step is the assessment of the validity of each of the measurement models using a number of goodness-of-fit statistics, including chi-square (χ^2), chi-square (χ^2)/degrees of freedom (*df*) ratio, goodness-of-fit index (GFI), standardised root mean square residual (SRMR), root mean square error of approximation (RMSEA), normed fit index (NFI), and comparative fit index (CFI), as discussed in Chapter 3 .

4.3.6.3 Item parcelling

Hair et al. (2006) suggest that when items suggest unidimensionality, the best parcels are formed with items that display approximately the same covariance, which should lead them to have approximately the same factor loading estimates. In the current study, item parcels were constructed by using the factor loadings as a guide: (for a two-parcel approach) the highest loading is placed in the first parcel, the second highest loading in the second parcel, the third highest loading again in the first parcel, and so forth.

The servant leadership construct item parcels were initially grouped into seven item parcels for the CFA of the servant leadership construct. These seven parcels were then grouped into two item parcels (respectively containing three and four of the initial parcels).

The emotional intelligence construct item parcels where initially grouped into ten item parcels for the CFA of the emotional intelligence construct. For the purpose of testing the structural model, these ten parcels where then parcelled again into five item parcels.

The trust construct items was initially kept as separate items for the CFA of the trust construct. However, for the purpose of testing the structural model the construct was grouped into four item parcels.

The meaning construct item parcels where initially grouped into nine item parcels for the CFA of the meaning construct. For the purpose of testing the structural model, these nine parcels where then parcelled again into three item parcels.

Table 4.10 provides an explication of the number of item parcels per construct and the amount of items that each parcel contains.

Table 4.10: Item parcels formed per construct

Constructs	Number of parcels	Amount of items in parcel
Emotional intelligence	5	6
Meaning	3	9
Servant leadership	2	12 and 13
Trust in the immediate supervisor	4	3

After the item parcels for each latent variable (i.e. construct) were constructed, a measurement and a structural model were tested. The aim of structural equation modelling (SEM) is to

determine the predictive ordering of factors (i.e. latent/unmeasured variables) that relate to measured variables (Klem, 2000). The measurement model links each observed indicator (i.e. item parcel) to the unobserved variables (constructs), thereby depicting the relationship of the indicators to their respective constructs. The structural model, on the other hand, moves to describe the nature and magnitude of the relationships between constructs (Hair et al., 2006).

A summary of all the goodness-of-fit indexes for all the constructs are presented in the following section.

4.3.6.4 CFA of the measurement models for each of the constructs

On the basis of the suggested factor structures obtained from exploratory factor analysis of the constructs, the qualities of the measurements in terms of the data obtained were tested through confirmatory factor analysis.

4.3.6.4.1 CFA of the measurement model for servant leadership (proposition 1)

The information obtained in the CFA of the measurement model performed for the servant leadership construct as measured by the Servant Leadership Questionnaire is presented in Table 4.11, where the original structure as well as the new structure of the instrument is portrayed. RS1 and RS2 represent the two randomly assigned groups.

Table 4.11: Comparison of goodness-of-fit statistics across different structures and samples of the servant leadership construct

	Original structure	New structure	RS1 (New structure)	RS2 (New structure)
χ^2	438	68.63	45.08	34.14
df	220	14	14	14
RMSEA	0.080	0.16	0.171	0.138
SRMR	0.057	0.019	0.022	0.020
CFI	0.98	0.97	0.96	0.96
NFI	0.97	0.96	0.95	0.95
GFI	0.76	0.87	0.84	0.87

Table 4.11 provides a comparison of the original structure of the servant leadership construct as measured by the Servant Leadership Questionnaire, as well as the new structure as determined in EFA. The new structure shows acceptable fit statistics. Even though the RMSEA for the original structure (0.080) shows a better fit than that of the new structure (0.16), it can be construed as more valid to use the new structure for further analysis as it is more applicable to the population in this study. In order to test the stability and replicability of the factor

structure, the sample was divided into two equivalent groups, namely RS1 and RS2. For the servant leadership construct, both of the groups show good fit statistics in comparison with the new factor structure of the construct, except for the RMSEA statistic for both group RS1 (0.171) and RS2 (0.138), which is above the acceptable level of fit (>0.1).

Table 4.12: Determining equivalence of the measurement model across Random Sample 1 and Random Sample 2 of the servant leadership construct (new structure)

	RS1 and RS2 simultaneously	
	All parameters constrained (H_0)	No constraints on parameters (H_a)
χ^2	89.82	73.41
df	42	31
RMSEA	0.122	0.134
NFI	0.95	0.95
CFI	0.97	0.96
Difference in χ^2 between H_0 and H_a	16.41	
Critical value $\chi^2_{(11; 0.05)}$	19.6751	
Significant	No	

Table 4.12 shows that the factor structure proves to be stable as the goodness-of-fit statistics of loose cross-validation and tight cross-validation are comparable, and within the acceptable levels of fit.

4.3.6.4.2 CFA of the measurement model for emotional intelligence (proposition 2)

The information obtained in the CFA of the measurement model performed for the emotional intelligence construct as measured by the EQI is presented in Table 4.13, where the original structure of the instrument as well as the new structure is portrayed. RS1 and RS2 represent the two randomly assigned groups.

Table 4.13: Comparison of goodness-of-fit statistics across different structures and samples of the emotional intelligence construct

	Original structure	**New structure**	**RS1 (New structure)**	**RS2 (New structure)**
χ^2	55.48	87.09	53.74	69.35
df	25	35	35	35
RMSEA	0.089	0.099	0.084	0.114
SRMR	0.033	0.028	0.030	0.035
CFI	0.98	0.97	0.97	0.97
NFI	0.97	0.97	0.96	0.95
GFI	0.89	0.84	0.82	0.77

Table 4.13 provides a comparison of the original structure of the emotional intelligence construct as measured by the EQI, as well as the new structure as determined in EFA. The new structure shows acceptable fit statistics, and also poses a more valid representation of the factor structure for the population utilised in this study. In order to test the stability and replicability of the factor structure, the sample was divided into two equivalent groups, namely RS1 and RS2. For the emotional intelligence construct, both of the groups show good fit statistics in comparison with the new factor structure of the construct, except for the RMSEA of RS2 (0.114) compared to the RMSEA of the new structure (0.099).

Table 4.14: Determining equivalence of the measurement model across Random Sample 1 and Random Sample 2 of the emotional intelligence construct (new structure)

	RS1 and RS2 simultaneously	
	All parameters constrained (H_0)	No constraints on parameters (H_a)
χ^2	125.10	101.02
df	90	73
RMSEA	0.072	0.071
NFI	0.95	0.95
CFI	0.97	0.97
Difference in χ^2 between H_0 and H_a	24.08	
Critical value $\chi^2_{(17;\,0.05)}$	27.5871	
Significant	No	

Table 4.14 shows that the factor structure proves to be stable as the goodness-of-fit statistics of loose cross-validation and tight cross-validation are comparable, and within the acceptable levels of fit.

4.3.6.4.3 CFA of the measurement model for trust in the immediate supervisor (proposition 3)

The information obtained in the CFA of the measurement model performed for the trust in the immediate supervisor construct as measured by the Workplace Trust Survey subscale is presented in Table 4.15, where the original structure as well as the new structure of the instrument is portrayed. The original structure of the trust in the immediate supervisor is uni-dimensional and forms part of a larger battery of trust indicators. RS1 and RS2 represent the two randomly assigned groups.
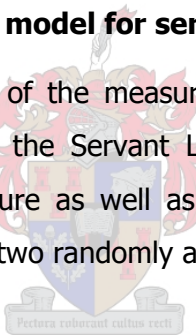
Table 4.15: Comparison of goodness-of-fit statistics across different structures and samples of the trust construct

	Original structure	New structure	RS1 (New structure)	RS2 (New structure)
χ^2	N/A	183.31	104.03	141.96
df		54	54	54
RMSEA		0.125	0.110	0.146
SRMR		0.070	0.062	0.096
CFI		0.94	0.96	0.89
NFI		0.93	0.94	0.86
GFI		0.75	0.77	0.64

Table 4.15 shows the fit statistics of the new structure, as well as the fit statistics of the two equivalent samples. Due to the unidimensional original structure of the trust in the immediate supervisor, only the new structure's fit statistics are reported. The new structure shows acceptable fit according to generally accepted fit statistics, except for the RMSEA (0.125) which is higher than the norm of >0.1. The two equivalent samples show comparable fit with the new structure.

Table 4.16: Determining equivalence of the measurement model across Random Sample 1 and Random Sample 2 of the trust construct (new structure)

	RS1 and RS2 simultaneously	
	All parameters constrained (H_0)	No constraints on parameters (H_a)
χ^2	309.39	285.11
df	132	111
RMSEA	0.133	0.144
NFI	0.90	0.90
CFI	0.93	0.93
Difference in χ^2 between H_0 and H_a	24.28	
Critical value $\chi^2_{(21; 0.05)}$	32.6705	
Significant	No	

Table 4.16 shows that the factor structure proves to be stable as the goodness-of-fit statistics of loose cross-validation and tight cross-validation are comparable, and within the acceptable levels of fit.

4.3.6.4.4 CFA of the measurement model for meaning (proposition 4)

The information obtained in the CFA of the measurement model performed for the meaning construct as measured by the LRI is presented in Table 4.17, where the original structure as well as the new structure of the instrument is portrayed. RS1 and RS2 represent the two randomly assigned groups.

Table 4.17: Comparison of goodness-of-fit statistics across different structures and samples of the meaning construct

	Original structure	New structure	RS1 (New structure)	RS2 (New structure)
χ^2	74.39	54.41	45.35	35.41
df	19	27	27	27
RMSEA	0.138	0.081	0.095	0.064
SRMR	0.063	0.046	0.058	0.050
CFI	0.94	0.97	0.96	0.97
NFI	0.93	0.96	0.94	0.94
GFI	0.83	0.89	0.84	0.88

Table 4.17 provides a comparison of the original structure of the meaning construct as measured by the LRI, as well as the new structure as determined in EFA. The new structure shows acceptable fit statistics and also better fit statistics than the original structure. In order to test the stability and replicability of the factor structure, the sample was divided into two equivalent groups, namely RS1 and RS2. For the meaning construct, both of the groups show good fit statistics in comparison with the new factor structure of the construct.

Table 4.18: Determining equivalence of the measurement model across Random Sample 1 and Random Sample 2 of the meaning construct (new structure)

	RS1 and RS2 simultaneously	
	All parameters constrained (H_0)	No constraints on parameters (H_a)
χ^2	86.01	67.06
df	72	57
RMSEA	0.051	0.048
NFI	0.93	0.94
CFI	0.97	0.97
Difference in χ^2 between H_0 and H_a	18.95	
Critical value $\chi^2_{(15;\ 0.05)}$	24.9958	
Significant	No	

Table 4.18 shows that the factor structure proves to be stable as the goodness-of-fit statistics of loose cross-validation and tight cross-validation are comparable, and within the acceptable levels of fit.

Table 4.19: Summary table of structural equivalence results

Construct	α	Number of dimensions	RMSEA	SRMR	CFI	GFI
Emotional intelligence	0.974	1	0.099	0.028	0.97	0.97
Meaning	0.923	1	0.081	0.046	0.97	0.96
Servant leadership	0.973	1	0.16	0.019	0.97	0.96
Trust	0.943	1	0.125	0.070	0.94	0.93

Table 4.19 provides a summary of the structural equivalence results and goodness-of-fit statistics of each of the constructs. The RMSEA values generally show a somewhat higher value than what is deemed an acceptable fit (>0.10) (Hair et al., 2006). The SRMR shows acceptable values for all of the constructs (>0.10) (Hair et al., 2006). The CFI shows acceptable fit of >0.9 for each of the constructs. Similarly, the GFI statistic also shows acceptable model fit for all of the constructs (<0.9) (Bentler, & Bonett, 1980).

Considering that the factor structures for each of the respective constructs were determined through a process of exploratory and confirmatory factor analysis in answer to research question 1, the next section uses the new factor structures to explain the degree of relationship between the identified variables as described in research question 2:

Can a valid model of the causal relationships among the combinations of variables and their dimensions, namely emotional intelligence, trust in the immediate supervisor, servant leadership, and meaning, within the realm of positive organisational psychology, be built?

Pearson correlation analysis, multiple regression analysis and structural equation modelling will provide information on the strength of the relationship between each of the constructs, in order to answer research question 2.

4.3   Results of Pearson correlation analysis

The Pearson product-moment correlation coefficient is a standardised measure of the strength of the relationship between variables and is used in this study to determine the strength of the relationship between the constructs emotional intelligence, meaning, servant leadership and trust in the immediate supervisor. This analysis answers research propositions 6 to 11.

The data was analysed by conducting a Pearson product-moment correlation analysis in SPSS. Through EFA and CFA the uni-dimensionality of all four constructs were confirmed. Therefore, the correlation between the composite scores of each construct was entered into a correlation

analysis. The correlations between the constructs are summarised in Table 4.20, using their total scores.

Table 4.20: Correlation matrix of uni-dimensional constructs (n=154)

		Emotional intelligence TOTAL	Meaning composite score	Servant leadership TOTAL	Trust composite score
Emotional intelligence TOTAL	Pearson Correlation	1	.054	.830(**)	.847(**)
	Sig. (2-tailed)		.507	.000	.000
Meaning composite score	Pearson Correlation	.054	1	.109	.089
	Sig. (2-tailed)	.507		.178	.273
Servant leadership TOTAL	Pearson Correlation	.830(**)	.109	1	.847(**)
	Sig. (2-tailed)	.000	.178		.000
Trust composite score	Pearson Correlation	.847(**)	.089	.847(**)	1
	Sig. (2-tailed)	.000	.273	.000	

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

Servant leadership total is significantly related to emotional intelligence total (r=.830, p<.01) and trust composite score (r=.847, p<.01).

Emotional intelligence total is significantly related to servant leadership total (r=.830; p<.01) and trust composite score (r=.847; p<.01).

Trust composite score is significantly related to emotional intelligence total (r=.847; p<.01) and servant leadership total (r=.847, p<.01).

Meaning composite score is not significantly related to any of the constructs. The relation shown with emotional intelligence (r=.054), servant leadership (r=.109) and trust (r=.089) shows no significant relationships, according to Table 4.21 It is interesting, however, to observe that there is a significant relationship between the servant leadership dimension organisational stewardship and the meaning construct total (r=.179, p<.05) as well as with the meaning dimension fulfilment (r=.194, p<.05) of the correlation analysis of the constructs using their original factor structure (see Table 4.21).

The next table (Table 4.21) describes the correlation analysis of the constructs using their original factor structure.

Table 4.21: Correlation analysis of original factor structure and dimensions of the constructs (n=154)

		Emotional intelligence TOTAL	Meaning composite score	Servant leadership TOTAL	Trust Composite Score	Emotional intelligence (Self-Awareness)	Emotional intelligence (Self-regulation)	Emotional intelligence (Motivation)	Emotional intelligence (Empathy)	Emotional intelligence (Social Skills)	Meaning Framework	Meaning Fulfillment	Servant leadership (Altruistic Calling)	Servant leadership (emotional Healing)	Servant leadership (Wisdom)	Servant leadership (Persuasive Mapping)	Servant leadership (Organisational Stewardship)
Emotional intelligence TOTAL	Pearson Correlation	1	.054	.830(**)	.847(**)	.890(**)	.895(**)	.856(**)	.926(**)	.957(**)	-.014	.112	.763(**)	.728(**)	.798(**)	.734(*)	.739(**)
	Sig. (2-tailed)		.507	.000	.000	.000	.000	.000	.000	.000	.861	.167	.000	.000	.000	.000	.000
Meaning composite score	Pearson Correlation	.054	1	.109	.089	.049	.029	.112	.049	.017	.930(**)	.956(**)	.072	.020	.121	.096	**.179 (*)**
	Sig. (2-tailed)	.507		.178	.273	.549	.725	.167	.548	.839	.000	.000	.373	.806	.136	.237	.026
Servant leadership TOTAL	Pearson Correlation	.830(**)	.109	1	.847(**)	.698(**)	.692(**)	.795(**)	.812(**)	.768(**)	.059	.145	.905(**)	.887(**)	.929(**)	.912(**)	.899(**)
	Sig. (2-tailed)	.000	.178		.000	.000	.000	.000	.000	.000	.465	.073	.000	.000	.000	.000	.000
Trust Composite Score	Pearson Correlation	.847(**)	.089	.847(**)	1	.699(**)	.741(**)	.778(**)	.816(**)	.802(**)	.031	.135	.789(**)	.726(**)	.800(**)	.755(*)	.772(**)
	Sig. (2-tailed)	.000	.273	.000		.000	.000	.000	.000	.000	.699	.095	.000	.000	.000	.000	.000
Emotional intelligence (Self-Awareness)	Pearson Correlation	.890(**)	.049	.698(**)	.699(**)	1	.737(**)	.678(**)	.826(**)	.798(**)	-.023	.108	.641(**)	.657(**)	.677(**)	.623(*)	.569(**)
	Sig. (2-tailed)	.000	.549	.000	.000		.000	.000	.000	.000	.781	.182	.000	.000	.000	.000	.000
Emotional intelligence (Self-regulation)	Pearson Correlation	.895(**)	.029	.692(**)	.741(**)	.737(**)	1	.656(**)	.744(**)	.888(**)	-.072	.112	.640(**)	.606(**)	.644(**)	.624(*)	.623(**)
	Sig. (2-tailed)	.000	.725	.000	.000	.000		.000	.000	.000	.374	.166	.000	.000	.000	.000	.000
Emotional intelligence (Motivation)	Pearson Correlation	.856(**)	.112	.795(**)	.778(**)	.678(**)	.656(**)	1	.781(**)	.788(**)	.095	.126	.694(**)	.622(**)	.805(**)	.723(*)	.754(**)
	Sig. (2-tailed)	.000	.167	.000	.000	.000	.000		.000	.000	.243	.121	.000	.000	.000	.000	.000
Emotional intelligence (Empathy)	Pearson Correlation	.926(**)	.049	.812(**)	.816(**)	.826(**)	.744(**)	.781(**)	1	.843(**)	.011	.086	.758(**)	.729(**)	.786(**)	.689(*)	.723(**)
	Sig. (2-tailed)	.000	.548	.000	.000	.000	.000	.000		.000	.896	.289	.000	.000	.000	.000	.000
Emotional intelligence (Social Skills)	Pearson Correlation	.957(**)	.017	.768(**)	.802(**)	.798(**)	.888(**)	.788(**)	.843(**)	1	-.058	.081	.724(**)	.681(**)	.717(**)	.675(*)	.687(**)
	Sig. (2-tailed)	.000	.839	.000	.000	.000	.000	.000	.000		.473	.320	.000	.000	.000	.000	.000
Meaning Framework	Pearson Correlation	-.014	.930(**)	.059	.031	-.023	-.072	.095	.011	-.058	1	.785(**)	.017	-.029	.098	.035	.140
	Sig. (2-tailed)	.861	.000	.465	.699	.781	.374	.243	.896	.473		.000	.837	.718	.226	.664	.083
Meaning Fulfillment	Pearson Correlation	.112	.956(**)	.145	.135	.108	.112	.126	.086	.081	.785(**)	1	.116	.064	.137	.141	.194(*)
	Sig. (2-tailed)	.167	.000	.073	.095	.182	.166	.121	.289	.320	.000		.153	.430	.090	.080	.016
Servant leadership (Altruistic Calling)	Pearson Correlation	.763(**)	.072	.905(**)	.789(**)	.641(**)	.640(**)	.694(**)	.758(**)	.724(**)	.017	.116	1	.781(**)	.796(**)	.788(*)	.764(**)

		Emotional intelligence TOTAL	Meaning composite score	Servant leadership TOTAL	Trust Composite Score	Emotional intelligence (Self-Awareness)	Emotional intelligence (Self-regulation)	Emotional intelligence (Motivation)	Emotional intelligence (Empathy)	Emotional intelligence (Social Skills)	Meaning Framework	Meaning Fulfilment	Servant leadership (Altruistic Calling)	Servant leadership (emotional Healing)	Servant leadership (Wisdom)	Servant leadership (Persuasive Mapping)	Servant leadership (Organisational Stewardship)
	Sig. (2-tailed)	.000	.373	.000	.000	.000	.000	.000	.000	.000	.837	.153		.000	.000	.000	.000
Servant leadership (emotional Healing)	Pearson Correlation	.728(**)	.020	.887(**)	.726(**)	.657(*)	.606(**)	.622(*)	.729(**)	.681(**)	-.029	.064	.781(**)	1	.769(**)	.752(*)	.720(**)
	Sig. (2-tailed)	.000	.806	.000	.000	.000	.000	.000	.000	.000	.718	.430	.000		.000	.000	.000
Servant leadership (Wisdom)	Pearson Correlation	.798(**)	.121	.929(**)	.800(**)	.677(*)	.644(**)	.805(*)	.786(**)	.717(**)	.098	.137	.796(**)	.769(**)	1	.821(*)	.816(**)
	Sig. (2-tailed)	.000	.136	.000	.000	.000	.000	.000	.000	.000	.226	.090	.000	.000		.000	.000
Servant leadership (Persuasive Mapping)	Pearson Correlation	.734(**)	.096	.912(**)	.755(**)	.623(*)	.624(**)	.723(*)	.689(**)	.675(**)	.035	.141	.788(**)	.752(**)	.821(**)	1	.764(**)
	Sig. (2-tailed)	.000	.237	.000	.000	.000	.000	.000	.000	.000	.664	.080	.000	.000	.000		.000
Servant leadership (Organisational Stewardship)	Pearson Correlation	.739(**)	.179(*)	.899(**)	.772(**)	.569(*)	.623(**)	.754(*)	.723(**)	.687(**)	.140	.194(*)	.764(**)	.720(**)	.816(**)	.764(*)	1
	Sig. (2-tailed)	.000	.026	.000	.000	.000	.000	.000	.000	.000	.083	.016	.000	.000	.000	.000	

In Table 4.21 it is interesting to observe one specific correlation between the servant leadership dimension organisational stewardship and meaning dimension fulfilment. This correlation will be explored in Chapter 5.

In this section, it was determined that the strength of relationships between emotional intelligence, servant leadership and trust in the immediate supervisor is strong, according to the Guilford informal interpretation guidelines of the magnitude of r (r=0.7 to 0.9). The relationship between each of the constructs and the meaning construct, however, shows almost no relationship (r>0.2).

In the following section, the results of analyses done to determine if any of the constructs are significant predictors of another are presented.

4.4 Results of multiple regression

The results of the multiple regression analysis will assist in predicting the sequential nature of the manifestation of the respective constructs. The results of the simultaneous multiple regression analysis, which answers research proposition 12, is presented in this section.

The regression model includes servant leadership, emotional intelligence, and trust as the predictors (independent variables), and meaning as the criterion (dependent variable). The results of the multiple regression analysis are explicated in Tables 4.22, 4.23, and 4.24.

Table 4.22: Model summary for the total sample (meaning as dependent variable)

Model	R	R square	Adjusted R square	Std. error of the estimate	Change statistics				
					R square change	F change	df1	df2	Sig. F change
1	.132(a)	.017	-.002	25.08656	.017	.887	3	150	.449

a Predictors: (Constant), trust composite score, servant leadership TOTAL, emotional intelligence TOTAL
b Dependent variable: meaning COMPOSITE

Table 4.23: ANOVA results for the total sample (meaning as dependent variable)

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	1674.786	3	558.262	.887	.449(a)
	Residual	94400.329	150	629.336		
	Total	96075.115	153			

Table 4.24: Beta coefficients for the total sample (meaning as dependent variable)

Model		Unstandardised coefficients		Standardised coefficients		
		B	Std. error	Beta	t	Sig.
1	(Constant)	146.059	8.956		16.308	.000
	emotional intelligence TOTAL	-.100	.113	-.147	-.884	.378
	servant leadership TOTAL	.133	.125	.177	1.064	.289
	trust composite score	.101	.267	.066	.380	.704

a Dependent variable: meaning COMPOSITE

According to Tables 4.22, 4.23, and 4.24, it is evident that emotional intelligence, servant leadership, and trust in the immediate supervisor are not significant predictors of meaning. The predictors (in this case) only account for 1% of the variance in meaning.

In the second regression model, servant leadership was entered as the dependent variable and emotional intelligence and trust as independent variables. The results of the multiple regression analysis is explicated in Tables 4.25, 4.26, and 4.27.

Table 4.25: Model summary for the total sample (servant leadership as dependent variable)

Model	R	R square	Adjusted R square	Std. error of the estimate	Change Statistics				
					R square change	F change	df1	df2	Sig. F change
1	.873(a)	.762	.759	16.32465	.762	241.798	2	151	.000

a Predictors: (Constant), trust composite score, emotional intelligence TOTAL
b Dependent variable: servant leadership TOTAL

Table 4.26: ANOVA results for the total sample (servant leadership as dependent variable)

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	128875.700	2	64437.850	241.798	.000(a)
	Residual	40240.627	151	266.494		
	Total	169116.327	153			

Table 4.27: Beta coefficients for the total sample (servant leadership as dependent variable)

Model		Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	-15.103	5.697		-2.651	.009
	Emotional intelligence TOTAL	.358	.067	.397	5.314	.000
	Trust composite score	1.036	.152	.511	6.834	.000

a Dependent variable: servant leadership TOTAL

According to Tables 4.25, 4.26, and 4.27, it is evident that emotional intelligence and trust in the immediate supervisor are significant predictors of servant leadership. The predictors (in this case) account for 76% of the variance in servant leadership.

It is important to note that due to the research design of the study, it was not possible to obtain any additional information from the respondents, for instance information that might shed light on the slight relationship of the construct meaning with the constructs emotional intelligence, servant leadership and trust. The possible reasons for these results will be discussed in Chapter 5.

In the following section, the goodness-of-fit indexes of the measurement model to be used in the evaluation of the structural model. (Only if the measurement model provides acceptable levels of fit, then the study can proceed in determining the validity of the structural model.)

4.5 Results of structural and measurement models

A summary of the fit statistics for the measurement model to be used in determining the validity of the structural model is shown in Table 4.28. This analysis answers research proposition 13.

Table 4.28: Summary of goodness-of-fit statistics for the measurement model (total group)

X^2	226.95
df	146
RMSEA	0.060
SRMR	0.029
GFI	0.84
CFI	0.97

Table 4.28 shows acceptable levels of fit for the measurement model for the total group, as evident from the values of RMSEA, SRMR, GFI, and CFI. Also, all paths between the latent variables of the measurement model are significant.

On the basis of acceptable fit statistics for the measurement model, the structural model for the total group can be evaluated. Table 4.29 provides a summary of the fit statistics for the structural model for the total group.

Table 4.29: Summary of goodness-of-fit statistics for the structural model

X^2	226.95
df	146
RMSEA	0.060
SRMR	0.029
GFI	0.84
CFI	0.97

Table 4.29 shows acceptable levels of fit for the structural model for the total group, as evident from the values of RMSEA, SRMR, GFI, and CFI.

Table 4.30 shows a comparison of the goodness-of-fit statistics across the measurement and the structural model.

Table 4.30: Comparison of goodness-of-fit statistics across the measurement model and the structural model

	Measurement model	Structural model
χ^2	226.95	226.95
df	146	146
RMSEA	0.06	0.06
SRMR	0.029	0.029
CFI	0.97	0.97
NFI	0.99	0.99
GFI	0.84	0.84

Table 4.30 shows a comparison of the fit statistics of the measurement and the structural model. As can be seen, the fit statistics are similar for both models. It is argued that this because a similar number of parameters to be estimated and fitted was used for both the measurement and the structural model.

The final research question was whether a structured equation model of the studied variables representing a good fit with the data could be built. The original model that was built from the literature is shown in Figure 4.5 below. In this figure, the gamma and beta coefficients needed to interpret the various path coefficients are indicated. The t-values are indicated in brackets. A t-value of 1.96 and above is indicative of a significant path coefficient.

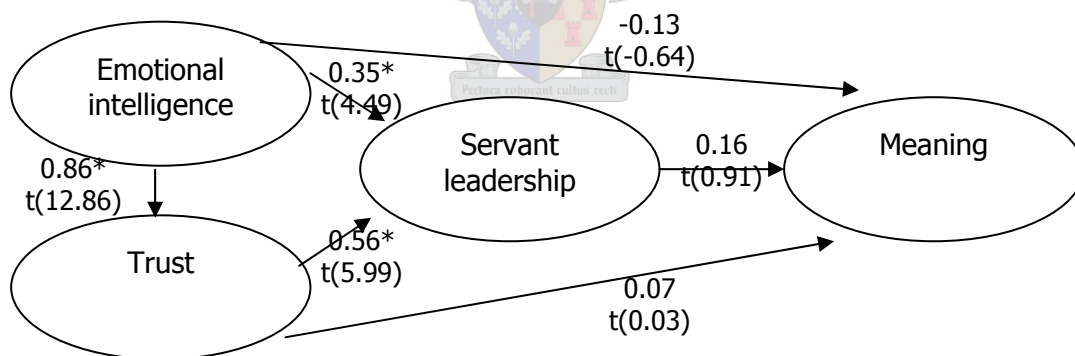**Figure 4.5: Path coefficients of structural model for the total sample**

Figure 4.5 indicates that all paths in the structural model is significant, except those between emotional intelligence and meaning; trust and meaning; and servant leadership and meaning. The significant paths include:

EI and trust: γ 0.86 t(12.86)

EI and SL: γ 0.35 t(4.49)

Trust and SL: β 0.56 (6.34)

Information presented in Table 4.30 and Figure 4.5 indicates that the structural model depicting the sequential order of the constructs provide acceptable levels of fit, as evident from the values of RMSEA, SRMR, GFI, and CFI. All the paths were significant, except those between emotional intelligence and meaning; trust and meaning; and servant leadership and meaning. Due to the absence of correlations between the POB variables and the meaning scores it was not realistic to build the theory-based model depicted in Figure 4.5. A proposed measurement model to be used in further studies will be discussed in Chapter 5.

4.6 Summary

All the results obtained from the sample described in the previous chapter 3 were presented in this chapter. The results reported focussed on different analyses, namely: (a) exploratory factor analysis, (b) confirmatory factor analysis, (c) correlation analysis, and (d) multiple regression analysis. Of importance is that a uni-dimensional factor structure was found for each of the four constructs. Each construct's uni-dimensional factor structure showed acceptable levels of fit. In addition, significant relationships between the constructs and significant path coefficients between all the constructs in the sequential model were found, except for the relationship of the respective coefficients with the meaning coefficient. The predictive value of the constructs to predict meaning and servant leadership was also discussed. Of importance was that emotional intelligence and trust was significant predictors of servant leadership.

The implications of these findings will be interpreted and discussed in Chapter 5, together with recommendations to improve future research in the field of positive organisational behaviour.

CHAPTER 5: DISCUSSION OF RESEARCH RESULTS AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1. Introduction

In this final chapter, the research results, as presented in Chapter 4, are discussed and interpreted. The chapter commences with a discussion of the factor structures of the constructs in light of the existing literature, followed by a discussion of the correlation analysis and an interpretation of the measurement and structural models. The multiple regression results are also discussed. The chapter concludes with a discussion of the limitations of this study and recommendations for further research.

5.2. Conclusions regarding the factor structure results on the data

For each of the constructs, exploratory and confirmatory factor analysis were completed. This was done with the specific reason to determine whether the original structure of the constructs would be the same in a South African context – and also whether the construct has sound factorial validity to be portable to the South African context. A discussion of the results of the factor analysis results for each construct follows.

5.2.1 Servant leadership

Exploratory factor analysis was performed on the 23-item rater version of the Servant Leadership Questionnaire (SLQ), developed by Barbuto and Wheeler (2006). The authors suggested a five-factor structure and therefore the first round of exploratory factor analysis allowed for this possibility. However, the analysis suggested a possible two-factor structure, with factor one and two explaining 62.604% and 4.119% of the total variance respectively. From the factor matrix it can be seen that neither of the items had its highest loading on the second or third factor. In contrast, all items loaded >.5 on the first factor (with 0.511 being the lowest loading and .874 being the highest).

However, in the original structure of the SLQ the five factors showed significant correlations, raising the question of the independence of the factors. This provided the motive for the researcher's decision to extract only one factor, by means of principal axis factoring (with oblique rotation). According to the scree plot, a one-factor solution could be the most suitable solution. The KMO statistic was 0.959, showing that factor analysis on the data would be feasible.

In computing a one-factor solution, all items clearly loaded >.735 on the one factor that had been extracted. This one factor explained 62.428% of the total variance. The obtained Cronbach Alpha coefficient for this solution was 0.973.

Confirmatory factor analysis was carried out on the one-factor solution in order to determine how well this factor structure fitted the data. The indices seem to indicate an acceptable fit with the data. The SRMR had a value of .0019 and the RMSEA a value of .16. The incremental fit indices were CFI=.97. and NFI=.96, while the goodness-of-fit index was measured at 0.87.

When the values of the indices of the new factor structure and the original factor structure are compared, the one-factor structure found in the present study seems to represent a somewhat better fit with the data than the five-factor solution accepted by the authors of the SLQ. The values of SRMR are lower in the one-factor solution, and the incremental fit indices very similar to that of the five-factor solution.

As referred to in 2.2.3, the SLQ was used in a South African sample (n=417) in a recent study by Dannhauser (2007). The analysis resulted in a uni-dimensional factor structure that explained 71.67% of total variance in the data. The selection of items was based upon the criteria of factor loading (>.5), eigenvalue (>1.00) and the scree plot test.

5.2.2 Emotional intelligence

Exploratory factor analysis was performed on leader emotional intelligence as measured by the 30-item Emotional Intelligence Index (EQI) developed by Rahim and Minors (2003). At first, the exploratory factor analysis suggested a possible three-factor structure, with one factor explaining 56.047% of the total variance, followed by 5.457% and 4.374%. From the factor matrix it can be seen that none of the items had its highest loading on the second or third factor. In contrast all items loaded >.65 on the first factor (with 0.654 being the lowest loading and .846 being the highest).

This motivated the researcher's decision to extract only one factor, by means of principal axis factoring (specifying an oblique rotation). Inspection of the accompanying scree plot indicated that a one-factor solution could possibly be the most acceptable solution. The KMO statistic was 0.942, showing that factor analysis was feasible.

In specifying a one-factor solution, it was clear that all items loaded >.6 on the one factor that had been extracted. This one factor explained 55.736% of the total variance. The obtained Cronbach alpha coefficient for this solution was 0.974.

Confirmatory factor analysis was carried out on the one-factor solution in order to determine how well this factor structure fitted the data. The indices seem to indicate an acceptable fit with the data. The SRMR had a value of .0028, numerically well below the level of .05, which is generally accepted as the level indicating a good fit (Hair et al., 2006). The value of RMSEA was .099, which is lower than the level of .10 that would usually be taken as indicating an acceptable fit (Hair et al., 2006). The incremental fit indices were .97, and the goodness-of-fit index was measured at 0.84.

When the values of the indices of the new, one-factor structure and the original five-factor structure are compared, the one-factor structure found in the present study seems to represent a somewhat better fit with the data than the five-factor solution accepted by the authors of the EQI. The value of SRMR is lower in the one-factor solution, and the incremental fit indices are very similar to that of the five-factor solution.

With regard to the obtained uni-dimensional factor structure that was found in the present study, an investigation was undertaken on previous research results using the EQI. Rahim (2003) performed research and analysis done on an American sample (n=837), using exploratory factor analysis on the items with a principal-component analysis, and the terminal solution was reached by varimax rotation. The analysis resulted in five significant factors that explained 68% of variance in the data. The selection of items was based upon the criteria of factor loading (>.5), eigenvalue (>1.00) and the scree plot test.

As referred to in 2.3.1, the 40-item Rahim and Minors Emotional Intelligence Index was used in a South African study (n=496) by Schlechter, Boshoff and Engelbrecht (2005). This study yielded a three-factor structure of the instrument, proposing the factors self-awareness, motivation, and self-regulation.

5.2.3 Trust in the immediate supervisor

Exploratory factor analysis was performed on the 12-item trust in the immediate supervisor scale of the Workplace Trust Survey (Ferres, 2001). The author suggested a one-factor structure for this specific scale, with a reliability coefficient of .96. In order to determine whether this was structurally equivalent to the current sample, exploratory factor analysis was

performed. However, the analysis suggested a possible two-factor structure, with factors one and two explaining 60.307% and 6.865% of the total variance respectively. From the factor matrix it can be seen that items T10, T11 and T12 had a higher loading on the second factor. In contrast, the other nine items all items loaded >.5 on the first factor.

This motivated the researcher to extract only one factor, by means of principal axis factoring (with oblique rotation). A scree plot signified that a one-factor solution could be the most suitable solution. The KMO statistic was 0.928, showing that factor analysis on the data would be feasible.

In pursuing a one-factor solution, all items clearly loaded >.570 on the one factor that had been extracted. This one factor explained 59.795% of the total variance. The obtained Cronbach alpha coefficient for this solution was 0.943.

Confirmatory factor analysis was carried out on the one-factor solution in order to determine how well this factor structure fitted the data. The SRMR had a value of .070 and the RMSEA a value of .125. The incremental fit indices were CFI=.94. and NFI=.93, while the goodness-of-fit index was measured at 0.75.

It is noted that the trust in the immediate supervisor construct is the only construct utilised in this study where the original factor structure stayed intact.
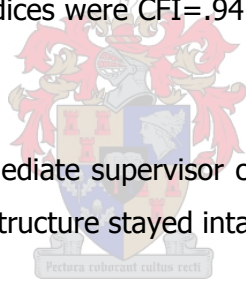
As referred to in 2.4.1, the trust in the immediate supervisor scale was also used in a study by Dannhauser (2007) conducted on a South African sample (n=417). An exploratory factor analysis was conducted on the items and one factor was extracted by means of principal factor analysis. The analysis resulted in a uni-dimensional factor structure with a reliability coefficient of 0.975.

A study by Schlechter et al., (2005) (as referred to in 2.4.1) utilised the three-dimensional WTS and found a replicated factor structure in a South African sample (n=492). The emergence of the same three factors in a South African sample was also found by Ferres and Travaglione (2003). It can therefore be concluded that the trust in the immediate supervisor subscale is robust and portable to different cultures (Schlechter et al., 2005).

5.2.4. Meaning

Exploratory factor analysis was performed on the individuals' experienced meaning as measured by the 28-item Life Regard Index (LRI) developed by Battista and Almond (1973). The first round of exploratory factor analysis suggested a possible two-factor structure, with factor one and two respectively explaining 31.804% and 9.579% of the total variance. From the item analysis it was determined that several of the items (namely ME5, ME7, ME8, ME9, ME12, ME16, ME17, ME19, ME21, ME23, ME24, ME26 and ME28) loaded stronger on the second factor than on the first factor. Item ME16 also showed a loading of -0.20 on the first factor and was therefore omitted. In pursuing the possible two-factor structure, the researcher related the possible 'new' two-factor structure to the original two-factor structure. However, the items categorised in the original two- factor structure were not at all similar to the obtained categorisation of items for the new factor structure. The two-factor structure was therefore not interpretable and a one-factor solution was proposed.

This led the researcher to extract only one factor, by means of principal axis factoring (with oblique rotation). The scree plot indicated that a one-factor solution is possibly the most acceptable solution. The KMO statistic was 0.876, showing that factor analysis was feasible.

In specifying a one-factor solution, it was evident that all items loaded >.250 on the one factor that had been extracted. This one factor explained 32.446% of the total variance. The obtained Cronbach alpha coefficient for this solution was 0.923.

Confirmatory factor analysis was carried out on the one-factor solution in order to determine how well this factor structure fitted the data. The indices obtained seem to indicate an acceptable fit with the data. The SRMR had a value of .0046, the RMSEA a value of .081 and the incremental fit indices were higher than that of the original two-factor structure, namely CFI=0.97 and NFI=0.96. The goodness-of-fit index was measured at 0.89.

When the values of the indices of the new factor structure and the original factor structure are compared, the one-factor structure found in the present study seems to represent a somewhat better fit with the data than the two-factor solution accepted by the authors of the LRI. The values of RMSEA and SRMR are lower in the one-factor solution, and the incremental fit indices are higher than that of the two-factor solution.

Debats, Van der Lubbe and Wezeman (1993) conducted a study on the psychometric properties of the LRI (n=460), using the questionnaire in a Dutch setting. In this study, the hypothetical

factor structure matched the original structure of the instrument, and all except five items were found to be distributed in the expected way across the two theoretical dimensions, namely the framework and fulfilment subscales. It was found, however, that the constructed subscales correlated moderately (ranging from r=0.54 to r=0.68), suggesting that the two dimensions underlying positive life regard are not independent but interrelated (Debats et al., 1993).

As referred to in 2.5.1, a study by De Klerk et al. (2001) (n=458) was conducted in a South African setting in which the factor analysis results on the Life Regard Index failed to yield a satisfactory two-factor solution. Of the 28 items, only 22 items loaded positively >0.25. Of these 22 items, 20 items loaded strongly on one factor (a=0.27). When a one-factor solution was pursued, 26 of the 28 items loaded satisfactorily, yielding a Cronbach alpha coefficient of 0.9266. De Klerk et al. (2001) concluded that the LRI is portable to a South African sample, but that it should be used as a uni-dimensional instrument.

The study by Schlechter et al. (2005) (as referred to in 2.5.1.) had a different finding as both of the original two factors of the LRI emerged in that study. However, almost a third of the items did not meet the inclusion criteria and had to be rejected. The authors posit that this severely limited the way in which the dimension was assessed.

5.2.5 Conclusion of factor analysis

After conducting exploratory factor analysis on each construct, the factor structures for each were determined within the South African sample used. All of the constructs, except trust in the immediate supervisor, showed a different factor structure than was suggested and found by the original authors.

Therefore, the factor analysis results provide an answer to the first research question of this study, namely:

Do the manifestations of the constructs each exist in the same form within a South African sample as was identified by the original author(s) of the scales for:

   a)   servant leadership;

   b)   emotional intelligence;

   c)   trust in the immediate supervisor; and

   d)   meaning?

For this specific study and sample, the answer to this question is that the instruments which were originally developed for another culture, except for the trust measurement, are not

portable to the South African sample in their original factor structures. This provides an answer to research propositions 1 to 5, in saying that the Servant Leadership Questionnaire (proposition 1), Emotional Intelligence Index (proposition 2) and Life Regard Index (proposition 4) is not portable to a South African context for the sample utilised in this study. Trust in the immediate supervisor (proposition 3), however, is portable to a South African context for this specific study's sample.

The practical implication of this result is that the sample at hand did not view emotional intelligence, servant leadership and meaning as constructs that were made up of differentiable aspects. It is therefore advised, as practical implication for future research, that factor analysis be performed on these constructs when used in a South African context, as the factor structure may be unique to the culture of South Africa.

However, all of the constructs showed interpretable and understandable factor structures, which illustrated acceptable fit indices. The data can therefore be utilised for statistical exploration, as long as the new factor structure is utilised. This therefore confirms proposition 5, namely that there will be interpretable and understandable factor structures for each of the identified construct measures.

5.3 Conclusions regarding correlation results on the data

In this section, the results of the Pearson product-moment correlation analysis is interpreted for each construct and will be discussed against the backdrop of existing literature, where it exists for the respective constructs. The correlation analysis was performed on the uni-dimensional factor structures of the constructs, as was found during the exploratory and confirmatory factor analyses.

The relationship between emotional intelligence and servant leadership has not been extensively studied. The existing wealth of literature, however, does suggest a significant relationship between emotional intelligence and leadership (mostly transformational leadership) (Cooper, & Sawaf, 1997; Gardner, & Stough, 2002; Goleman, 1998; Leban, & Zulauf, 2004; Ryback, 1998). These sources conclude that supervisors/managers with a high level of emotional intelligence are seen by subordinates as better leaders.

The results of the correlation analysis (r=.830; p<.01) suggest that there is proof for this statement for emotional intelligence and servant leadership as well. Respondents who rated their manager as having a high level of emotional intelligence also rated their manager as

exhibiting a high level of servant leadership. This confirms proposition 6, namely that there is a significant positive relationship between emotional intelligence and servant leadership.

The relationship between emotional intelligence and trust in the immediate supervisor is also significant (r=.847; p<.01). This confirms the conceptual link between emotional intelligence and trust in the immediate supervisor, and also presents a confirmatory answer to proposition 9, namely that there is a significant positive relationship between emotional intelligence and trust in the immediate supervisor.

The relationship between emotional intelligence and trust in the immediate supervisor has been studied in a South African context (n=496) by Schlechter et al. (2005. This study showed a 0.786 (p>0.01) correlation between total emotional intelligence and trust in the supervisor.

This confirms the conceptual link between emotional intelligence and trust in the immediate supervisor.

A significant relationship was found between servant leadership and trust in the immediate supervisor (r=.847, p<.01). This confirms the conceptual relationship between servant leadership and trust in the immediate supervisor as suggested in the literature (Farling et al., 1999; McGee-Cooper, 2002; Russell, & Stone, 2002). It also provides confirmation for proposition 7, namely that there is a significant positive relationship between servant leadership and trust in the immediate supervisor.

Meaning was found to have no significant relationship with the constructs employed in this study. The relations shown with emotional intelligence (r=.054), servant leadership (r=.109) and trust (r=.089) reveal no significant relationships. This refutes propositions 8, 10 and 11, stating respectively that: there is a significant positive relationship between servant leadership and meaning in life; there is a significant positive relationship between emotional intelligence and trust in the immediate supervisor; and there is a significant positive relationship between emotional intelligence and meaning.

Possible explanations for the lack of significant relationships between meaning and the other constructs could possibly be ascribed to individuals that could not make the link between the general organisational variables and the more personal meaning in life. It is also possible that the instrument used, namely the Life Regard Index, was not the best suited instrument for this study, as the questions are phrased to apply to a personal life setting, without necessarily

linking meaningfulness found through one's work/career/organisation. As there is limited quantitative information and instruments available on meaning in life, this is a useful avenue to explore in future studies.

One observation worth noting is the specific correlation between the servant leadership dimension organisational stewardship and the meaning dimension fulfilment, when using the original factor structure of the constructs in a correlation analysis. This could be an indication that the extent to which leaders prepare an organisation to make a positive contribution to society through community development, development programmes, outreach and corporate social responsibility may have an effect on individuals' experience of fulfilment, and therefore their experience of meaningfulness It is therefore proposed that further research be done to explore the aspect of organisation stewardship, or social responsibility programmes as it is called in South African organisations, and meaning as experienced by employees.

5.4 Conclusions regarding multiple regression analysis results

In this section the results of the simultaneous multiple regression analysis are discussed. A regression model was tested in keeping with the proposed dependent variable, namely meaning.

The first regression model presents R^2=.132, and the adjusted R^2=-.02. If one interprets the adjusted R^2 value of -.02, it means that less than 1% of the variance in the criterion (meaning) is explained by variance in the combination of predictors (i.e. emotional intelligence, servant leadership and trust). In other words, 99% of the variance in the criterion remains unexplained by the variance in the predictors. Therefore, the regression model is not statistically significant (p<.05). Therefore proposition 12, namely that each of the identified constructs will contribute separately to a significant proportion of variance in meaning in individuals, is rejected.

This confirms the lack of relationships found between emotional intelligence, servant leadership and trust in the correlation analysis. The researcher wishes to suggest the same explanation as provided in 5.3, and advise that further research is needed to confirm or disconfirm whether emotional intelligence, servant leadership and trust can explain variance in individuals' experience of meaning.

A second round of multiple regression analysis was performed, excluding the construct meaning, and establishing servant leadership as the proposed dependent variable.

This regression model presents R^2=.873, and the adjusted R^2=.759. If one interprets the adjusted R^2 value of .759, it means less than 75% of the variance in the criterion (servant leadership) is explained by variance in the combination of predictors (i.e. emotional intelligence, and trust); in other words, 25% of the variance in the criterion remains unexplained by the variance in the predictors. Therefore, the regression model is statistically significant (p<.05).

5.5 Conclusions regarding structural equation modelling

In this section the results of the measurement and structural models are interpreted. Throughout the discussion reference to the previously presented quantitative results (i.e. Pearson correlation and multiple regressions results) are made where warranted.

The research results (as presented in 4.5) show acceptable levels of fit for the measurement model for the total group, as evident from the values of RMSEA, SRMR, GFI, and CFI. Also, all paths between the latent variables of the measurement model are significant.

On the basis of acceptable fit statistics for the measurement model, the structural model for the total group can be evaluated. The research results also show acceptable levels of fit for the structural model for the total group, as evident from the values of RMSEA, SRMR, GFI, and CFI.

On comparison of the fit statistics for the measurement model and structural model, the fit statistics were found to be similar for both models. It is argued that this occurred because a similar number of parameters were used for both the measurement and the structural model (Hair et al., 2006).

Regarding the theoretical model proposed for the study (see 2.9) the beta matrix assesses the significance of its estimated path coefficients (β) and expresses the strength (i.e. size) of the influence of eta (η) on eta (η). In a similar fashion, the gamma matrix assesses the significance of its estimated path coefficients (γ) and expresses the magnitude of the influence of ksi (ξ) on eta (η).

Inspection into the proposed causal relationships between the latent variables reveal that only three of the six propositions (presented in Chapter 2) have significant t-values, namely propositions 6, 7 and 9.

More specifically, it is established that emotional intelligence is causally related to servant leadership (proposition 6, t=4.49). The size of the γ-coefficient (γ=0.35) is fairly substantial, indicating that the influence of emotional intelligence on servant leadership is rather strong.

In addition, it is established that emotional intelligence is causally related to trust (proposition 7, t=12.86). The magnitude of the β-coefficient (β=0.86) is exceptionally large, indicating a substantial influence of emotional intelligence on trust.

It was also found that trust is causally related to servant leadership (proposition 9, t=5.99). The size of the γ-coefficient (γ=0.56) is substantial, indicating that the influence of trust on servant leadership is rather strong.

The beta and gamma matrices fail to provide support for the remaining propositions. Thus, it follows that: (a) emotional intelligence is not causally related to meaning (proposition 10, γ=-0.13; t=-0.64); (b) trust is not causally related to meaning (proposition 11: γ=0.07; t=0.03); and (c) servant leadership is not causally related to meaning (proposition 8: γ=0.16; t=0.03).

These results confirm the correlation analysis and multiple regression results that the constructs emotional intelligence, servant leadership and trust in the immediate supervisor are not related (as well as not causally related) to meaning for this specific sample.

Therefore a valid model of the relationships between the respective constructs can not be built, and therefore proposition 13, namely that a model of the relationship between emotional intelligence, servant leadership, trust and meaning can be constructed and tested, is rejected.

From the experimental work reported in this chapter, it is clear that no strong relationship exists between meaning and the other constructs, namely emotional intelligence, servant leadership and trust in the immediate supervisor. Major shortcomings were revealed, i.e. socially desirable responses and response sets possibly caused major skewness of the data. Under these circumstances it was decided to build a truncated model of only the relationships between the POB variables. Inspection of the results yielded the possibility that two models could fit the data. This model includes emotional intelligence, servant leadership and trust in the immediate supervisor, but excludes meaning. The second proposed empirically built structural model is shown in Figure 5.1.
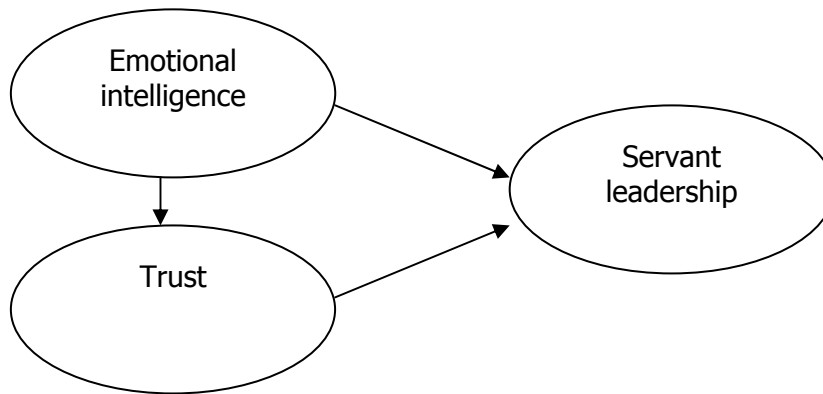
Figure 5.1: Proposed measurement model of the respective constructs

It is suggested that future studies use the truncated model as presented in Figure 5.1. The structural models should firstly be tested to determine whether they could be seen as acceptable from a measurement perspective. The model should then be assessed as a structural model. Should the obtained indices indicate that the truncated model fit the data to a satisfactory degree, the research question could be answered in the affirmative, and the proposition that satisfactory models could be built, accepted. It should be kept in mind, however, that the truncated model that could be utilised is considerably less complex than the model that was originally derived from the theory with regard to the relationships among the variables included in the study.
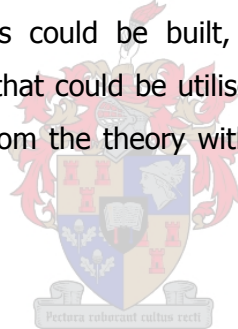
5.6 Conclusion

The central conclusion with regard to the contents of the four POB constructs (servant leadership, emotional intelligence, trust in the immediate supervisor, and meaning) is that three of the constructs contained in the four measuring instruments used in this study manifest themselves in a different form in a South African sample. These constructs are servant leadership (P1), emotional intelligence (P2), and meaning (P4). The factor analysis confirmed portability of the construct trust in the immediate supervisor (P3) to a South African setting.

Thus, the findings in this study demonstrated that servant leadership can be measured in a workplace setting, is perceived differently by employees in the organisation, and correlates differently but positively with two other organisational constructs, namely emotional intelligence and trust. However, servant leadership showed no significant correlation with meaning.

The relationship between servant leadership, emotional intelligence and trust in the immediate supervisor was found to be significant, however. In light of this fact, the following possible interpretations can be made: (a) that explicit leader emotional intelligence and the trust that

subordinates have in their leader has a significant impact on how they view their supervisor/manager's level of servant leadership; (b) that the respondents did not discern the finer nuances in supervisor behaviour and therefore showed either a constant high or low response bias. These possible deductions are consistent with the fact that these constructs are seen as uni-dimensional factors for this sample.

The present study served as a baseline/first-level study that provides a foundation for future research and provides additional data-based research on servant leadership and its relationship to other variables.

5.7 Limitations and recommendations

This section of this research study aims to provide guidance for future researchers interested in the study of the relationship between positive organisational scholarship variables, with specific focus on the constructs of emotional intelligence, servant leadership, trust in the immediate supervisor and meaning. Firstly, the limitations of this study are discussed. This is followed by recommendations for future research and some thoughts on how interventions could be approached.

5.7.1 Limitations of the present research study

Future research studies should aim to increase the sample size to the recommended n=200, as this is the recommended sample size for the purpose of structural equation modelling (Baldwin, 1989; Lomax, 1989; both cited in Thompson, 2000).

With regard to the measurement of meaning, the Life Regard Index instrument should be subjected to refinement in order to increase its applicability to an organisational setting. Alternatively, another instrument should be designed or sourced.

Future research studies utilising the survey method should aim to implement measures to prevent mono-method and possible response bias. Since the data in this study was gathered at a single point in time, and not as continued measurement over a period of time, it may have aggravated common method biases.

It is also advised that all studies, but specifically studies similar to this one, include a measurement of social desirability. That could give an indication as to whether a consistently high response bias when evaluating one's leader is explainable by a need for social desirability on the respondent's part.

The skewed distribution of the data could be due to the possibility of a response set in the reactions to the items, which may have been intensified by social desirability responses. It seems that, instead of choosing a response that reflect central tendency, respondents rather gave higher scores.

An ethnically diverse sample would be useful to explore whether emotional intelligence, servant leadership, trust in the immediate supervisor and meaning are seen and evaluated differently by different cultural groups.

Thus, it is evident that opportunities exist for future studies to further explore the relationships between emotional intelligence, servant leadership, trust and meaning. Also note that 25% of the total variance in servant leadership is not explained by emotional intelligence and trust, and therefore there is opportunity to explore a number of other constructs and their relationship to the constructs utilised in this study.

5.7.2. Recommendations for future research

With regard to servant leadership, Barbuto and Wheeler (2006) argue that a service-oriented philosophy of, and approach to, leadership are more likely to be manifested once certain antecedents are in place. These antecedents could include variables such as emotional intelligence, sources of motivation, flexibility, and openness to experience, or situational variables such as education, basis of social power, early childhood experiences, organisational culture, and exposure to and mentorship of other servant leaders. Future research could include more of these antecedents in order to assist in scientifically creating the servant leadership construct and measure.

As suggested previously, the construct of meaning also offers an opportunity for further research. This includes the formulation of an instrument that effectively encompasses how meaning in life can be influenced and increased in the working environment.

Further confirmatory studies on the factor structures of the instruments used in this study, namely the Servant Leadership Questionnaire (SLQ), Emotional Intelligence Questionnaire (EIQ), Workplace Trust Survey (WTS) - trust in the immediate supervisor subscale and Life Regard Index, is needed.

5.7.3 Intervention: implications for practice

The value of this study lies in the understanding that there are necessary antecedents to the effective practice of servant leadership. This also implies that the development of servant leaders should tale place over a period of time.

Therefore it can be concluded from this study that emotional intelligence training should be a necessary step in the development of servant leaders. Sufficient time should also be given to aspirant leaders to build relationships, to coach and mentor their subordinates in order to build trust. This will lay the necessary foundation for becoming a servant leader.

5.8 Final conclusion

In previous decades, the notion and presence of well-being in organisations was completely disregarded: Emotions and meaning were conceived of as irrational factors to be excluded from the work environment. The present research study forms part of a novel movement in organisational research that attempts to shift the focus from problems and deficiencies to a proactive model focussing on how to make organisations and individuals thrive. In fact, organisations all over the globe are beginning to realise the importance of approaching the individual as a holistic being, acknowledging the role that leadership and emotions play in psychological and physical well-being, as well as in job performance. In response to this realisation, organisations need valid and workable interventions in order to assist their employees in functioning optimally in the work environment.
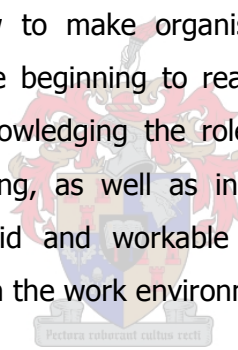
It also requires a move from the traditional forms of leadership training which are only focussed on attainment of task outcomes. As the positive organisation scholarship movement is gaining ground, the previously 'fuzzy' outcomes of attitudes, leadership, emotional intelligence, and meaning are being transformed to measurable and achievable outcomes.

It can be inferred from this study, however, that the POB constructs are most likely context dependent, as well as context sensitive, implying that the constructs are very specific to the context of the situation. Consequently, it does not always conform to the rational, orthogonal, linear organisational world one would like to believe exists and reflects reality. Sound conceptual and careful empirical research (both qualitative and quantitative) is needed to clarify the constructs. This is specifically relevant for the construct meaning. With the present study, the researcher attempted to advance the level of understanding of the POB constructs utilised in this study, and proposed future directions for research.

REFERENCES

Autry, J.A. (2001). *The Servant Leader: How to Build a Creative Team, Develop Great Morale, and Improve Bottom-line Performance*. Roseville, CA: Prima.

Babbie, E. (1998). *The practice of social research* (8th ed.). Belmont, CA: Wadsworth.

Babbie, E., & Mouton, J. (2001). *The practice of social research.* Cape Town: Oxford.

Baggett, B. (1997). *Power Serve: 236 Inspiring Ideas on Servant Leadership.* Germantown, TN: Saltillo Press.

Banutu-Gomez, M.B. (2004). Great leaders teach exemplary followership and serve as servant leaders. *Journal of American Academy of Business, Cambridge, 4*(1/2), 143.

Barbuto, J.E. Jr., & Wheeler, D.W. (2006). Scale Development and Construct Clarification of Servant Leadership. *Group & Organization Management, 31*(3), 300–326.

Barling, J., Slater, E., & Kelloway, E.K. (2000). Transformational leadership and emotional intelligence: an exploratory study. *Leadership & Organization Development Journal, 21*(3), 157–161.

Bar-On, R. (1997). *Bar-On Emotional Quotient Inventory: Technical Manual.* Toronto: Multi Health Systems.

Bar-On, R. (2000). Emotional and social intelligence: insights from the Emotional Quotient Inventory. In R. Bar-On, & J. Parker (Eds.), *Handbook of Emotional Intelligence*. (p. 385). San Francisco: Jossey-Bass.

Bass, B.M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.

Bass, B.M. (1990a). *Bass and Stogdill's Handbook of Leadership: Theory, Research, and Managerial Applications* (3rd ed.). New York: The Free Press.

Bass, B.M. (1990b). From transactional to transformational leadership: learning to share the vision. *Organizational Dynamics, 18*(3), 19–31.

Batten, J. (1997). Servant-leadership: A passion to serve. In L.C. Spears (Ed.), *Insights on Leadership: Service, Stewardship, Spirit, and Servant-leadership* (pp. 38–53). New York: John Wiley.

Battista, J., & Almond, R. (1973). The development of meaning in life. *Psychiatry, 36*, 409–427.

Bentler, P.M., & Bonett, D.G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*, 588–806.

Bierly, P.E., Kessler, E.H., & Christensen, E.W. (2000). Organisational learning, knowledge and wisdom. *Journal of Organisational Change Management, 13*, 595–618.

Bless, C., & Higson-Smith, C. (2000). *Fundamentals of social research methods: An African perspective* (3rd ed.). Cape Town: Juta.

Block, P. (1993). *Stewardship: Choosing Service over Self-Interest*. San Francisco: Berrett-Koehler.

Bollen, K.A. (1989). Structural equations with latent variables. New York: Wiley.

Briner, B., & Pritchard, R. (1998). *More Leadership Lessons of Jesus: A Timeless Model for Today's Leaders*. Nashville, TN: Broadman & Holman.

Buchen, I.H. (1998). Servant leadership: A model for future faculty and future institutions. *Journal of Leadership Studies, 5*(1), 125–134.

Burns, J.M. (1978). *Leadership.* New York: Harper & Row.

Butler, J.K. (1991). Toward understanding and measuring conditions of trust: Evolution of a conditions of trust inventory. *Journal of Management, 17*(3), 643–663.

Byrne, B.M. (1998). *Structural equation modelling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah: Lawrence Erlbaum.

Cameron, K.S., Dutton, J.E., & Quinn, R.E. (2003). Foundation of Positive Organisation Scholarship. In K.S. Cameron., J.E. Dutton, & R.E. Quinn (Eds), *Positive Organisational Scholarship: foundations of a new discipline* (pp. 3–13). San Francisco: Berett-Koehler.

Campbell, A., Converse, P.E., & Rodgers, W.L. (1976). *The quality of American life*. New York: Russell Sage Foundation.

Caza, B. B., & Caza, A. (2005). Positive organizational scholarship: A critical theory approach. *Journal of Management Inquiry*.

Cherniss, C. (2000, April). *Emotional intelligence: what is it and why it matters*. Paper presented at the Annual Meeting of the Society for Industrial and Organizational Psychology, New Orleans.

Ciarrochi, J.V., Chan, A.Y.C., & Caputi, P. (2001). A critical evaluation of the emotional intelligence construct. *Personality and Individual Differences, 28*(3), 539–61.

Coetzee, S., & Cilliers, F. (2001). Psychofortology: Explaining coping behavior in organizations. *The Industrial-Organizational Psychologist, 38*, 62–68.

Cooper, R.K., & Sawaf, A. (1997). *Executive EQ: Emotional Intelligence in Leadership and Organisations*. New York: Grosset/Putnum.

Covey, S.R. (1990). *Principle-Centered Leadership*. New York: Simon & Schuster.

Cufaude, J. (1999). Creating organizational trust. *Association Management*, *51*(7), 26-35.

Daft, R.L. (2005). *The Leadership Experience* (3rd ed.). Fort Worth: Thomson South Western.

Dannhauser, Z. (2007). *The relationship between servant leadership, trust, team commitment and unit effectiveness*. Unpublished doctoral dissertation, University of Stellenbosch.

Debats, D.L., Van der Lubbe, P.M., & Wezeman, F.R.A. (1993). On the psychometric properties of the Life Regard Index (LRI): A measure of meaningful life. An evaluation in three independent samples based on the Dutch version. *Personality and Individual Differences*, *14*, 337–345.

De Klerk, J.J., Boshoff, A.B., & Van Wyk, R. (2001). *Motivation to work, work commitment and man's will to meaning*. Unpublished doctoral dissertation, University of Pretoria.

Dennis, R.S., & Bocarnea, M. (2005). The development of the servant leadership assessment instrument. *The Leadership and Organisation Development Journal*, *26*(8), 600–615.

Dirks, K., & Ferrin, D. (2001). The role of trust in organizational settings. *Organization Science*, *12*, 450–467.

Dulewicz, V., & Higgs, M. (1999). Can emotional intelligence be measured and developed? *Leadership & Organization Development Journal*, *20*(5), 242–52.

Eicher-Catt, D. (2005). The myth of servant-leadership: A feminist perspective. *Women and Language*, *28*(1), 17–25.

Emmerling, R., & Goleman, D. (2003). Emotional intelligence: Issues and common misunderstandings. *Issues in Emotional Intelligence*, *1*(1), 1–32.

Fagan, L., & Little, L. (1984). *The forsaken families*. Harmondsworth: Penguin.

Fairholm, G.W. (1997). *Capturing the Heart of Leadership: Spirituality and Community in the New American Workplace.* Westport: Praeger.

Farling, M.L., Stone, A.G., & Winston, B. (1999). Servant leadership: setting the stage for empirical research. *Journal of Leadership Studies*, *6*(1/2), 49–72.

Fenigstein, A., Scheier, M.F., & Buss, A.H. (1975). Public and private self-consciousness: assessment and theory. *Journal of Consulting and Clinical Psychology*, *43*, 522–537.

Ferres, N. (2001). *The Development and Validation of the Workplace Trust Survey (WTS): Combining Qualitative and Quantitative Methodologies*. Unpublished master's dissertation, University of Newcastle.

Ferres, N., & Travaglione, T. (2003, December). *The development and validation of the workplace trust survey (WTS): Combining qualitative and quantitative methodologies*. Paper presented at the APROS, Mexico.

Field, A. (2005). *Discovering statistics using SPSS* (2nd ed.). Thousand Oaks, CA: Sage.

Firth, R. (1972). Anthropological background to work. In C.D. Bryant (Ed.), *The social dimensions of work*. Englewood Cliffs, NJ: Prentice Hall.

Fitness, J. (2000). Anger in the workplace: an emotion script approach to anger episodes between workers and their superiors, co-workers and subordinates. *Journal of Organisational Behavior*, 21, 147–162.

Frankl, V.E. (1984). *Man's search for meaning: Revised and Updated*. New York: Washington Square Press.

Friedman, E.A., & Havighurst, R.J. (1954). *The meaning of work and retirement*. Chicago: University of Chicago Press.

Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Organization Development Journal*, *23*(2), pp. 68–78.

Gaston, G.H. (1987). A model for leadership: servant stewardship ministry. *Southwestern Journal of Theology*, *29*(2), 35–43.

George, J.M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations*, *53*, 1027-1041.

Gill, F. (1999). The meaning of work: Lessons form sociology, psychology and political theory. *The Journal of Socio-Economics*, *28*, 725–743.

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York: Bantam.

Goleman, D. (1998). *Working with Emotional Intelligence*. London: Bloomsbury.

Goleman, D. (2000, March/April). Leadership that gets results. *Harvard Business Review*, pp. 79–90.

Goleman, D., Boyatzis, R., & McKee, A. (2002). *Primal Leadership: Realizing the Power of Emotional Intelligence*. Boston: Harvard Business School Press.

Graham, J. (1991). Servant-leadership in organizations: Inspirational and moral. *Leadership Quarterly*, *2*(2), 105–119.

Greenleaf, R.K. (1970). *The servant as leader*. Indianapolis: The Robert Greenleaf Center.

Greenleaf, R.K. (1977). *Servant Leadership: A Journey into the Nature of Legitimate Power and Greatness*. New York: Paulist Press.

Gregersen, N.H. (2003). Risk and religion: Toward a theology of risk taking. *Zygon*, *38*(2), 344–374.

Grimm, L.G., & Yarnold, P.R. (1995). *Reading and Understanding Multivariate Statistics*. Washington, DC: American Psychological Association.

Hair, J.F., Black, B., Babin, B., Anderson, R.E., & Tatham, R.L. (2006). *Multivariate Data Analysis* (6th ed.). Tatham: Prentice Hall.

Harding, S.H., & Hikspoors, F.J. (1995). New work values: In theory and in practice. *International Social Science Journal*, *27*, 441–455.

Harpaz, I. (1999). Work values in Israel: Stability and change over time. *Monthly Labour Review*, *122*, 46–50.

Harpaz, I. (2002). Expressing a wish to continue or stop working as related to the meaning of work. *European Journal of Work And Organizational Psychology*, *11*(2), 177–198.

Harris, A.H., & Standard, S. (2001). Psychometric properties of the Life Regard Index – Revised: A validation study of a measure of personal meaning. *Psychological Reports*, *89*(3), 759–773.

Higgs, M. (2003). How can we make sense of leadership in the 21st century? *Leadership & Organization Development Journal*, *24*(5), 273–284.

Hogan, R., Curphy, G., & Hogan, J. (1994). What we know about leadership effectiveness and personality. *American Psychologist*, *49*, 493–504.

Hosmer, L.T. (1995). Trust: the connecting link between organizational theory and philosophic ethics. *Academy of Management Review*, *20*(2), 379–403.

Irving, J.A., & Logbotham, G.J. (2006). Team effectiveness and six essential servant leadership themes. *Servant Leadership Round Table August 2006*, Regent University, Virginia Beach.

Jacobson, S. (1995). Spirituality and transformation leadership in secular settings: a Delphi study. *Dissertation Abstracts International.* Seattle University.

Johada, M. (1982). *Employment and unemployment: A social-psychological analysis*. Cambridge: University of Cambridge Press.

Jöreskog, K.G., & Sörbom, D. (2006). *LISREL for Windows* [Computer Software]. Lincolnwood, IL: Scientific Software International, Inc.

Joseph, E.E., & Winston, B.E. (2005). A correlation of servant leadership, leader trust, and organizational trust. *Leadership & Organization Development Journal*, *26*(1), 6–22.

Kant, I. (1978). *Anthropology from a pragmatic point of view* (translated by V. L. Dowdell). Carbondale, IL: Southern Illinois University Press.

Kanungo, R.N. (1982). *Work alienation: An integration approach*. New York: Praeger.

Kaplan, H.R., & Tausky, C. (1974). The meaning of work among the hard-core unemployed. *Pacific Sociological Review*, *17*, 185–198.

Kelloway, E.K. (1998). Using Lisrel for Structural Equation Modeling: A Researcher's Guide. Thousand Oaks: Sage.

Kerlinger, F.N. (1992). Foundations of behavioral research (3rd ed.). Orlando: Harcourt Brace.

Kerlinger, F.N., & Lee, H.B. (2000). *Foundations of Behavioral Research* (4th ed.). Fort Worth: Harcourt College Publishers.

Kiechel, W., & Rosenthal, W. (1992). The leader as servant. *Fortune*, *125*(9), 121.

Klem, L. (2000). Structural Equation Modeling. In L.G. Grimm, & P.R. Yarnold (Eds.), *Reading and Understanding More Multivariate Statistics* (pp. 227–260). Washington, DC: American Psychological Association.

Kouzes J.M., & Posner, B.Z. (1993). *Credibility: How Leaders Gain and Lose it, Why People Demand It*. San Francisco: Jossey-Bass.

Laub, J.A. (1999). *Assessing the servant organisation: development of the organisational leadership assessment (OLA) instrument*. Boca Raton: Florida Atlantic University.

Laub, J.A. (2005). From paternalism to the servant organization: Expanding the Organizational Leadership Assessment (OLA) model. *The International Journal of Servant-Leadership*, *1*(1), 155–186.

Leban, W., & Zulauf, C. (2004). Linking emotional intelligence abilities and transformational leadership style. *Leadership & Organisation Development Journal*, *25*(7), 554–564.

Lester, S.W., & Brower, H.H. (2003). In the eyes of the beholder: The relationship between subordinates' felt trustworthiness and their work attitudes and behaviors. *Journal of Leadership & Organizational Studies*, *10*(2), 17–34.

Levin, S.L. (1999). Development of an instrument to measure organizational trust. *Dissertation Abstracts International*, UMI No. 9920326.

Lewis, K.M. (2000). When leaders display emotion: how followers respond to negative emotional expression of male and female leaders. *Journal of Organisational Behavior*, *21*, 221–234.

Linley, P.A., Joseph, S., & Wood, A.M. (2006). Positive psychology: Past, present, and future. *Journal of Positive Psychology*, *1*, 3–16.

Luthans, F. 2001. The case for positive organizational behavior (POB). *Current Issues in Management*, *1*(1), 10–21.

Luthans, F. (2002a). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Executive*, *16*, 57–75.

Luthans, F. (2002b). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, *23*, 695–706.

Luthans, F., & Jensen, S.M. (2002). Hope: A new positive strength for human resource development. *Human Resource Development Review*, *1*, 304–22.

Luthans, F., Luthans, K., Hodgetts, R.M., & Luthans, B.C. (2002). Positive approach to leadership (PAL). *Journal of Leadership Studies*, *8*, 3–20.

MacKenzie, S.B., Podsakoff, P.M., & Jarvis, C.B. (2005). The problem of measurement model misspecification in behavioural and organizational research and some recommended solutions. *Journal of Applied Psychology*, *90*, 710–730.

Manz, C.C. (1998). *The Leadership Wisdom of Jesus: Practical Lessons for Today*. San Francisco: Berrett-Koehler.

Matteson, J.A., & Irving, J.A. (2006). Exploring servant and self-sacrificial leadership: A research proposal for assessing the commonalities and distinctions of two follower oriented leadership theories. *Proceedings of the American Society of Business and Behavioral Sciences*, *13*(1), 1305–1319.

Mayer, J.D., & Salovey, P. (1997). What is emotional intelligence? Implications for educators. In P. Salovey, & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (2nd ed.) (pp. 3–31). New York: Basic Books.

Mayer, J.D., Salovey, P., & Caruso, D.R. (2000). Competing models of emotional intelligence. In R. Stenberg (Ed.), *Handbook of Human Intelligence* (pp. 396–420). New York: Cambridge University Press.

Mayer, R.C., Davis, J.H., & Schoorman, F.D. (1995). An integrative model of organizational trust. *Academy of Management Review*, *20*(3), 709–734.

McGee-Cooper, A. (2003). *Servant leadership: How Southwest Airlines and TD Industries stay on top*. Dallas: Ann McGee-Cooper & Associates Inc.

McGee-Cooper, A., & Trammell, D. (2002). From hero-as-leader to servant-as-leader. In L.C. Spears (Ed.), *Focus on Leadership: Servant-Leadership for the 21st Century* (pp. 141–51). New York: Wiley.

Melrose, K. (1998). Putting servant-leadership into practice. In L.C. Spears (Ed.), *Insights on Leadership: Service, Stewardship, Spirit, and Servant-Leadership* (pp. 279–296). New York: Wiley.

Mishra, A.K. (1996). Organizational responses to crisis: the centrality of trust. In R. Kramer, & T. Tyler (Eds.), *Trust in Organizations: Frontiers of Theory and Research* (pp. 261–287). Thousand Oaks, CA: Sage.

Mishra, A.K., & Spreitzer, G.M. (1998). Explaining how survivors respond to downsizing: The role of trust, empowerment, justice and work design. A*cademy of Management Review*, *23*(3), 567–588.

Mouton, J. (2001). *How to succeed in your master's and doctoral studies: A South African guide and resource book*. Hatfield, Pretoria: Van Schaik.

Morse, N.C., & Weiss, R.S. (1955). The function of work and the job. *American Sociological Review*, *20*, 191–198.

MOW International Research Team (1987). *The meaning of working*. London: Academic Press.

Newman, W.L. (1997). *Social Research Methods: Quantitative and Qualitative Approaches* (3rd ed.). Needham Heights, MA: Allyn & Bacon.

Northouse, P.G. (1997). *Leadership: Theory and Practice*. Thousand Oaks, CA: Sage.

Oster, M.J. (1991). *Vision-driven Leadership*. San Bernardino, CA: Here's Life.

Page, D., & Wong, T.P. (2000). A conceptual framework for measuring servant leadership. In S. Adjibolosoo (Ed.), *The Human Factor in Shaping the Course of History and Development*. Lanham: University Press of America.

Palmer, B., & Stough, C. (2001), *Workplace SUEIT: Swinburne University Emotional Intelligence Test – Manual*. Organizational Psychology Research Unit, Swinburne University.

Park, N., Peterson, C., & Seligman, M.P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, *23*, 603–619.

Parolini, J.L. (2005). Investigating the relationship among emotional intelligence, servant leadership behaviours and servant leadership culture. *Servant Leadership Research Roundtable – August 2005.* Regent University, Virginia Beach.

Patterson, K.A. (2003). *Servant Leadership: A theoretical model*. Unpublished doctoral dissertation, Regent University, Virginia Beach.

Peterson, C., & Steen, T.A. (2005). Optimistic explanatory style. In C.R. Snyder and S.J. Lopez (Eds.), *Handbook of positive psychology* (pp. 244–256). New York: Oxford University Press.

Plato. (1945). *The republic of Plato* (translated by F. M. Cornford). New York: Oxford University Press.

Pollard, C.W. (1996). *The Soul of the Firm*. Grand Rapids: HarperBusiness & Zondervan.

Pratt, M.G., & Ashforth, B.E. (2003). Fostering Meaningfulness in working and at work. In K. S. Cameron., J.E. Dutton, & R.E. Quinn (Eds.), *Positive Organisational Scholarship: foundations of a new discipline* (pp. 3–13). San Francisco: Berett-Koehler.

Quinn, R.P., & Staines, G.L. (1979). *The 1977 quality of employment survey*. Ann Arbor, MI:

Institute for Social Research, University of Michigan.

Rahim, M.A., & Minors, P. (2003). Effects of emotional intelligence for quality and problem solving. *Managerial Auditing Journal*, *18*(2), 150–155.

Reinke, S. (2004). Service before self: Towards a theory of servant leadership. *Global Virtue Ethics Review*, *5*(3–4), 30–58.

Rinehart, S.T. (1998). *Upside Down: The Paradox of Servant Leadership*. Colorado Springs, CO: NavPress.

Robinson, S.L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, *41*, 574–599.

Russell, R.F., & Stone, A.G. (2002). A review of servant leadership attributes: developing a practical model. *The Leadership & Organisation Development Journal*, *23*(3), 145–157.

Ryback, D. (1998). *Putting Emotional Intelligence to Work: Successful Leadership Is More Than IQ.* Woburn: Butterworth-Heinemann.

Salovey, P., & Mayer, J.D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, *9*, 185–211.

Salovey, P., & Sluyter, D.J. (1997). *Emotional Development and Emotional Intelligence: Educational Implications*. New York: Basic Books.

Sarkus, D.J. (1996). Servant-leadership in safety: advancing the cause of and practice. *Professional Safety*, *41*(6), 26–32.

Schlechter, A.F., Boshoff, A.B., & Engelbrecht, A.S. (2005). *The influence of Transformational Leadership, Emotional Intelligence, Trust, Meaning and Intention to Quit on Organisational Citizenship Behaviour*. Unpublished doctoral dissertation, Stellenbosch University.

Seligman, M.E.P. (1990). *Learned Optimism*. New York: Pocket Books.

Seligman, M.E.P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*, 5–14.

Sendjaya, S., & Sarros, J.C. (2002). Servant leadership, its origin, development and application in organisations. *Journal of Leadership and Organisation Studies*, *9*(2), 67–84.

Senge, P.M. (1995). Robert Greenleaf's legacy: a new foundation for twenty-first century institutions. In L.C. Spears (Ed.), *Reflections on Leadership: How Robert K. Greenleaf's Theory of Servant-leadership Influenced Today's Top Management Thinkers* (pp. 217–240). New York: John Wiley.

Simons, T.L. (1999). Behavioral integrity as a critical ingredient for transformational leadership. *Journal of Organizational Change Management*, *12*(2), 89–104.

Snyder, N.H., Dowd, J.J. Jr., & Houghton, D.M. (1994). *Vision, Values, and Courage: Leadership for Quality Management*. New York: The Free Press.

Spears, L.C. (Ed.) (1995). *Reflections on Leadership: How Robert K. Greenleaf's Theory of Servant-Leadership Influenced Today's Management Thinkers*. New York: John Wiley.

Spears, L.C. (Ed.) (1998). *Insights on Leadership: Service, Stewardship, Spirit, and Servant-Leadership*. New York: John Wiley.

Spears, L.C. (2002). *Focus on Leadership: Servant-Leadership for the 21st Century*. New York: John Wiley.

Sprinthall, R.C. (1987). *Basic Statistical Analysis* (2nd ed.). Reading, Mass: Addison-Wesley.

Steers, R.M., & Porter, L.W. (1979). *Motivation and work behaviour* (2nd ed.). New York: McGraw-Hill.

Stone, A.G., Russell, R.F., & Patterson, K. (2004). Transformational versus servant leadership: a difference in leader focus. *Leadership & Organisation Development Journal*, *25*(4), 349–361.

Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn & Bacon.

Tausky, C. (1969). Meaning of work among blue collar men. *Pacific Sociological Review*, *12*, 49–55.

Terkel, S. (1985). *Working.* New York: Ballantine.

Thompson, B. (2000). Ten Commandments of Structural Equation Modelling. In L.G. Grimm, & P.R. Yarnold (Eds.), *Reading and Understanding More Multivariate Statistics* (pp. 261–278). Washington, DC: American Psychological Association.

Tredoux, C., & Durrheim, K. (2002). *Numbers, Hypotheses and Conclusions: A Course in Statistics for the Social Sciences*. Lansdowne: UCT Press.

Turner, W.B. (2000). *The Learning of Love: A Journey toward Servant Leadership.* Macon, GA: Smyth & Helwys.

Tyler, T.R., & Degoey, P. (1996). Trust in organizational authorities: the influence of motive attributions on willingness to accept decisions. In R.M. Kramer, & T.R. Tyler (Eds.), *Trust in Organizations: Frontiers of Theory and Research* (pp. 331–356). Thousand Oaks, CA: Sage.

Vaillant, G.E. (2003). Mental health. *American Journal of Psychiatry*, *160*(8), 1373–1384.

Vecchio, R.P. (1980). The function and meaning of work and the job: Morse and Weiss (1955) revisited. *Academy of Management Journal*, *23*, 361–367.

Weisinger, H. (1998). *Emotional Intelligence at Work*. San Francisco: Jossey-Bass.

Wilkes, C.G. (1996). *Jesus on Leadership: Becoming a Servant Leader*. Nashville, TN: LifeWay Press.

Winston, B.E. (2003). Extending Patterson's Servant Leadership Model: Coming full circle. *Servant Leadership Roundtable – October, 2003.* Regent University, Virginia Beach.

Winston, B.E., & Hartsfield, M. (2004). Similarities between Emotional Intelligence and Servant Leadership. *Servant Leadership Roundtable – August, 2004.* Regent University, Virginia Beach.

Winston, B.E., & Patterson, K. (2006). An integrative definition of leadership. *International Journal of Leadership Studies*, *1*(2), 6–66.

Yukl, G. (1998). *Leadership in Organizations* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Zolin, R. (2002). Trust in cross-functional, global teams: Developing and validating a model of inter-personal trust in cross-functional global teams. *Dissertation Abstracts International*, UMI No. 3048641.