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Sex Role Identity, Emotional Intelligence and Satisfaction at Work

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February 2015

The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

DECLARATION

A research project submitted in partial fulfillment of the requirements for the degree of MA by coursework and Research Report in the field of Organisational Psychology in the Faculty of Humanities, University of the Witwatersrand, Johannesburg, February 2015.

I declare that this research report is my own, unaided work. It has not been submitted before for any other degree or examination at this or any other university.

Signature: _____ Date: _____

Word Count: 42 638

Abstract

A South African study, based on a sample of 595 employees working across a wide range of industries, was conducted in order to determine the emotional intelligence and job satisfaction scores of different sex role identities. Three self-report questionnaires were completed by the participants, namely the Extended Personal Attributes Questionnaire – Revised edition (EPAQ-R), the Schutte's Self Report Emotional Intelligence Test (SSREIT) and the Job Satisfaction Survey (JSS), which measured sex role identity, emotional intelligence and job satisfaction respectively.

Biological sex has been shown to be a poor proxy for measuring differences in emotional intelligence and job satisfaction; therefore support for the analysis of sex role identity, instead of biological sex, was provided due to the development and existence of 'between sex' differences and 'within sex' differences.

The results of the study suggested that there were significant differences between the positive and negative sex role identities on emotional intelligence and job satisfaction scores. The findings generally followed the proposed hypotheses with androgynous individuals presenting with the most amount of significant differences, illustrating that such individuals are associated with positive psychological and workplace outcomes when compared to the negative identities. Negative masculinity proved to be an exception to the proposed hypotheses, as negatively masculine individuals did not score differently from the positive identities on utilisation of emotion, optimism and total job satisfaction.

Acknowledgements

I owe my greatest thank you to my supervisor and mentor for the past two years, Dr Colleen Bernstein, who has pushed me to be the best I possibly can be. You have motivated me beyond what I thought I was capable of and you have taught me invaluable lessons that I will carry with me for the rest of my life.

To my family, thank you for your love and support, and for investing in me and my education, to become the first person in our family to obtain an Undergraduate, Honours and Masters degree.

I would also like to thank some people who were influential and important in my academic career:

Nicky Israel, thank you for being such a patient and helpful person, beyond what is expected from any human being. You always go above and beyond to assist students with anything they struggle to understand. You treated me in this way and for that I thank you.

Kay Moss, thank you for being an open ear and a friend for the past five years. Your support will never be forgotten.

Thank you to all of the organisational representatives and individual participants who were involved in the completion of this project.

Again, the financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

To all of the academic and administrative staff at the University of the Witwatersrand, I owe you my gratitude for all your help and support. Thank you.

Lastly, to Corey, thank you for grounding me and for being patient with me and for supporting me during a time when I was absolutely impossible to be around. Thank you for helping me with the editing.

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A. Introduction

The relationship between biological sex and various life, as well as workplace, outcomes have been investigated through multiple research endeavours, including the exploration of the relationship between biological sex and emotional intelligence (EI) and the relationship between biological sex and job satisfaction (JS) (Austin, Farrelly, Black & Moore, 2007; Brackett, Mayer and Warner, 2004; Ciarrochi, Chan & Bajgar, 2001; Ciarrochi, Chan & Caputi, 2000; Goldenberg, Matheson & Mantler, 2006; Guastello & Guastello, 2003; Hunt & Evans, 2004; Petrides & Furnham 2000; Petrides, Furnham & Martin, 2004; Petrides & Furnham, 2006; Schulte, Ree & Carretta, 2004; Schutte, Malouff, Lena, Hall, Donald, Haggerty, Joan, Cooper, Charles, Golden & Dornheim, 1998).

However, by focussing on biological sex, one subsequently investigates differences between males and females only, ignoring the complexity of gender, as not all males display masculine traits and not all females display feminine traits (Bhana, 2005; Cock, 2003; Hooberman, 1979; Langa, 2012; McCreary, 1994; Park, 1997; Ratele, 2008; Smiler, 2006; Twenge, 1997).

Therefore, previous research that has investigated biological sex in relation to emotional intelligence is plagued with incongruencies, which has thus compelled researchers to investigate sex role identity (SRI), referring to one's gender instead of biological sex (Austin *et al*., 2007; Brackett *et al*., 2004; Ciarrochi *et al.*, 2001; Ciarrochi *et al.*, 2000; Goldenberg *et al.*, 2006; Guastello & Guastello, 2003; Hunt & Evans, 2004; Petrides & Furnham 2000; Petrides *et al.*, 2004; Petrides & Furnham, 2006; Schulte *et al.*, 2004; Schutte *et al*., 1998).

By analysing sex role identity, instead of biological sex, one is able to investigate the differences 'within the sexes' regarding one's emotional intelligence scores. The 'within sex' differences are examinable, as sex role identity allows for a particular sex to not only exhibit sex-based traits, which are congruent (prescriptive), but also those that are not necessarily congruent (proscriptive), with one's biological sex (Bhana, 2005; Cock, 2003; Hooberman, 1979; Langa, 2012; McCreary, 1994; Park, 1997; Ratele, 2008; Smiler, 2006; Twenge, 1997). By adopting this view, it is acknowledged that not all males exhibit masculine traits and not all females exhibit feminine traits, therefore suggesting that 'within sex' differences exist within the male and female populations respectively (Berdahl, 2007; Moss-Racusin *et al*.,

2010; Niehaus, 2005; Park, 1997; Ratele, 2008; Roehling, Koelbel, & Rutgers, 1996; Tellegen & Lubinski, 1983; Vinnicombe & Singh, 2002; Woodhill & Samuels, 2003). By identifying 'within sex' differences, it allows one to focus on sex role identity in relation to other constructs, instead of biological sex, in order to prevent further fixation on the differences between males and females, also preventing further dichotomous studies that ignore the multitude of differences that go beyond the range of only two sets of differences.

By acknowledging the existence of 'within sex' differences and 'between sex' differences, the relationships of different sex role identities can be studied in relation to one's emotional intelligence scores (Appelbaum, Audet, & Miller, 2003; Guastello & Guastello, 2003; Ramdeo, 2011). Therefore, through the present study one aims to explore the relationships proposed above, in order to determine the possible differences between various sex role identities and their respective emotional intelligence scores.

A similar argument can be established by proposing the potential relationship between sex role identity and job satisfaction; as extant research, has predominantly been based on biological sex, and again the results have been incongruent and lacked consistency (Bender, Donohue & Heywood, 2005; Clark & Oswald, 1996; Clark, 1997; Sloane & Williams, 2000; Sousa-Poza & Sousa-Poza, 2000). In a further attempt to explore and determine the existence of 'within sex' differences, within the present study, each sex role identity was examined in terms of its relation to respective job satisfaction scores.

Although the main focus of the study was to focus on the relationship of sex role identity with emotional intelligence and job satisfaction respectively, in order to investigate all of the constructs in the study, the direct relationship between job satisfaction and emotional intelligence also needed to be explored, as limited research exists within the South African context regarding this latter relationship (Beukes, 2010; Caruso; 1999; Cobb, 2004; Coetzee & Schreuder, 2011; Cooper, 1997; Day, Newsome & Catano, 2002; Dulewics & Higgs, 2000; Hayward, Amos & Baxter, 2008; Mehdi, Habib & Salah, 2012; Murphy & Janeke, 2009; Nel & De Villiers, 2004; Palmer; 2003; Salovey & Mayer, 1990. Therefore, the present study also examined the relationship between EI and JS in the hope of shedding further light on this relationship within the South African context.

Following the investigation into the relationships mentioned above, an interactional association between sex role identity, emotional intelligence and job satisfaction was also explored. Although EI has been correlated with JS previously, limited literature explored the potential interactional relationship between sex role identity, emotional intelligence and job satisfaction, especially in a South African context (Avsec & Kavcic, 2011; Fernandez-Berrocal & Extremera, 2006; Petrides & Furnham, 2000; Mayer, Caruso & Salovey, 2000; Ciarrochi *et al.*, 2000; Harms & Crede, 2010; Austin *et al.*, 2004; Palmer, Donaldson & Stough, 2002).

To conclude, the relationships proposed between: a) SRI and EI; b) SRI and JS; c) EI and JS, and d) the interactions between SRI, EI and JS, are far more complex than explained above and therefore require an in-depth exploration of these theoretical constructs. The rationale for the exploration of the relationships between these constructs is elaborated upon in the literature that follows in Chapter 1.

Chapter 1: Theoretical and Conceptual Background

1.1 Introduction

The definitions and research pertaining to sex role identity, emotional intelligence and job satisfaction, as well as the interactional relationship between these constructs, is explored below in order to provide a rationale for the present study's research questions and hypotheses. By making logical and rational links between the respective constructs this provides a thorough motivation as to why these relationships should be investigated. Below follows a definition and theoretical discussion of each of the constructs selected for the current study, after which the proposed relationships between the constructs are outlined.

1.2 Defining Sex Role Identity

1.2.1 Distinguishing between sex and gender.

Although there are obvious differences between the definitive biological aspects of one's sex and the cultural attributions of one's gender, these terms are used in an interchangeable manner throughout various pieces of research, despite the fact that these terms do not refer to the same concept (Shields, 2008).

An individual's biological sex refers to their genetic affiliation, based on the presence or absence of particular genitalia as well as an individual's chromosomal composition; both factors determining whether the individual's biological sex is classified as biologically male or female (Johnson, Greaves & Repta, 2007; Muss, 1996). However, one's gender and subsequent sex role identity is considered to be a psychological component, which develops as a construct that is created through the implementation of and conformation to societal and cultural gender norms (Johnson *et al.*, 2007; Krause & Roth, 2011; Morris, 1994; Shivey & DeCecco, 1977; Vinnicombe & Singh, 2002). The socially constructed behaviours and subsequent stereotypical behavioural expectations attributed to males and females, as masculine and feminine respectively, are the basis on which sex-typed and cross-typed behaviours have emerged.

1.2.2 Sex typing versus cross typing: the development of prescriptive and proscriptive behaviours.

The long standing battle of the sexes has created a divide between what is acceptable (prescribed) behavior by a male or by a female therefore determining which behaviours are fostered through socialisation from birth; propelling researchers of the past to focus on 'between sex' differences (Shields, 2008). However, due to increased research findings that show that males may also exhibit feminine traits and females may exhibit masculine traits, research has begun to focus on 'within gender differences' as well (within sex differences) (Berger & Krahé, 2013; Bhana, 2005; Cock, 2003; Cook & Simbayi, 1998; Hooberman, 1979; Johnson *et al*., 2007; Kark, 2004; Krause & Roth, 2011; Langa, 2012; McCreary, 1994; O'Neil *et al*., 1993; Park, 1997; Ratele, 2008; Smiler, 2006; Twenge, 1997; Vinnicombe & Singh, 2002; Whitley, 1984).

The behavioural traits which one identifies with, are based on prescriptive and proscriptive societal norms, stereotypes and expectations, which are associated with feminine traits, masculine traits or a combination of both sex role identities; which is known as androgyny (Cornwall, 1997; Ratele, 2008). Prescriptive behaviours are associated with the way in which society *recommends* one should behave and therefore these behaviours are *expected* and *stereotypical* of the respective sex (male or female) (Bem, 1974; Cook & Simbayi, 1998; Herek, 1990; Prentice & Carranza, 2002; Rudman & Glick, 2001; Vinnicombe & Singh, 2002). Therefore a male is expected to be masculine and a female is expected to be feminine.

Proscriptive behaviours are *norms that include behaviours that one should not exhibit* and therefore are retro-typical as the respective sex is prohibited from displaying such behaviours (Hall, *et al*., 2012; Herek, 1990; Shields, 2008). By this account, males should not exhibit feminine traits and females should not exhibit masculine traits. Yet Despite some behaviours being classified as prescriptive or proscriptive, individuals tend to adopt these to a lesser or greater degree depending on the socio-cultural context within which they develop, as well as the era in which individuals are socialised (Hager, Schmuck & Mecklenbraekr, 1996; Swazini, Waldherr & Maier, 2004; Troche & Rammsayer, 2011; Twenge, 1997).

Thus not all males and females adopt prescriptive traits as some individuals may adopt a combination of sex-based prescriptive and proscriptive traits, which is known as androgyny;

while others may adopt traits that are entirely proscriptive to one's biological sex (Niehaus, 2005; Woodhill & Samuels, 2003). Sex role identity therefore allows for the flexibility in behaviours by the respective sexes due to the notion that individuals are able to exhibit prescriptive and proscriptive traits (Berdahl, 2007; Moss-Racusin *et al*., 2010; Niehaus, 2005; Park, 1996; Ratele, 2008; Roehling *et al.*, 1996; Tellegen & Lubinski, 1983; Vinnicombe & Singh, 2002; Woodhill & Samuels, 2003).

Consequently, according to sex role identity theory, an individual can fall into one of seven possible categories namely positive masculinity, negative masculinity, positive femininity, negative femininity, positive androgyny, negative androgyny and undifferentiated identities, depending on which behavioural traits one exhibits; which will be explained under *The Description of SRI Traits* (Bernstein, 2013; O'Neil *et al*., 1993; Woodhill and Samuels, 2003).

Before elaborating on the different sex role identities, the development of gender stereotypes will be explored below.

1.2.3 The evolution of sex role identities.

Gender stereotypes, and subsequent gender roles, have evolved through the ages via evolutionary and social determinants. Researchers have thus attempted to explain how sex-based roles originated before industrialisation and military efforts and have subsequently shaped the ideas of what a man or a woman should be in contemporary society (Duehr & Bono, 2006; Wood & Eagly, 2002). The development of stereotypes may be explained by considering theories such as *Evolutionary Theory, Social Constructionism,* and *Biosocial Theory* (Wood & Eagly, 2002).

Evolutionary Theory refers to the identification of sex-based differences as reflecting early humans' attempts to maximize fitness through sexual selection processes, strength, physical size and biological indicators such as hormones (Buss, 1996; Geary, 1996). However, *The Social Constructionism Theory* suggests that sex-based differences are embedded in specific social constructs, as power and status determine how gender is enacted within society (Wood & Eagly, 2002).

The Biosocial Theory can be considered as an amalgamation between *Social Constructionism* and *Evolutionary Theory* as *The Biosocial Theory* focuses on the interaction between men and women's physical traits and biological antecedents (*Evolutionary Theory*) but also considers the contexts and times in which individuals resided, when attributing socially constructed gender roles to males and females respectively (*Social Constructionism*) (Eagly, 1987).

From a evolutionary perspective, in contributing to *The Biosocial Theory*, studies done on hunter-gatherer populations suggest that women not only participated in less work than men, but women were associated with activities such as gathering berries and roots, as well as rearing infants and participating in housework while men were responsible for hunting (Lee, 1979). Additional evolutionary aspects include biological mediators such as hormones, chromosomes, stature and genitalia, which would allow for the inference of one's particular sex and subsequent gender (Wood & Eagly, 2002). Examples would include the presence of respective genitalia in males and females, a broad skeletal frame for males compared to a petite skeletal frame for females and the release of cortisol in women after childbirth, which leads to nurturance, while an increase of testosterone in men leads to aggression and competition (Cohen, Nisbett, Bowdle, & Schwarz, 1996; Fleming, Ruble, Krieger, & Wong, 1997).

The activities observed in hunter-gatherer populations would provide evidence of the roles associated with males and females before warfare and industrialisation, illustrating how biological makeup and basic human functions would contribute to the distribution of roles. Women have been associated with domesticated roles, such as cooking and emotional support, therefore the associated skills, values and motives associated with those roles have become stereotypically associated with women, while men are associated with economic activities, such as resource acquisition and construction, of which the respective skills, values and motives are built toward defining the male gender role (Andersen, 2005; Bell & Nkomo, 2001; Cook, 1990; DeMatteo, 1994; McCall, 2005; Niehause, 2005; Purdie-Vaughns & Eibach, 2007; Reynolds & Pope, 1991; Shields, 2008; Wood & Eagly, 2002; Woodhill & Samuels, 2003). Schippers (2007) also suggests that the dominant role of males over females stems from the phallic sexual role of a male during sexual intercourse and would therefore suggest that the male is dominating the female, thus she can subsequently be seen as 'subservient' to him. Due to this theory as well as the ability for females to reproduce, it is

therefore suggested that women's reproductive activities constrain the time and energy women have to hunt, participate in warfare and other economic activities (Wood & Eagly, 2002).

The contribution to *The Biosocial Theory,* from a social constructivist view, suggests that gender roles have emerged from the productive work in which men and women were involved in and hence the characteristics required to carry out such tasks, became stereotypic of men and women respectively (Wood & Eagly, 2002). Following the hunter-gatherer interactions, but before the industrial revolution, the formation of the army led to the perception that men were associated with power and strength, while women were subordinates associated with care-giving and child bearing traits, as men were enlisted to fight and women were expected to stay home and look after the household and their children (Andersen, 2005; Bell and Nkomo, 2001; Cook, 1990; DeMatteo, 1994; McCall, 2005; Niehause, 2005; Purdie-Vaughns & Eibach, 2007; Reynolds & Pope, 1991; Shields, 2008; Wood & Eagly, 2002; Woodhill & Samuels, 2003). As industrialisation increased and organisations began to develop into global entities, men were expected to be providers as they were recruited to work and support a family, while women were expected to look after the family and bear children at home; much like the activities associated with the hunter-gatherers and the dynamics of warfare (Andersen, 2005; Bell and Nkomo, 2001; Cook, 1990; DeMatteo, 1994; McCall, 2005; Niehause, 2005; Purdie-Vaughns & Eibach, 2007; Reynolds & Pope, 1991; Shields, 2008; Wood & Eagly, 2002; Woodhill & Samuels, 2003). The basic sex associated traits such as 'providing' by men and 'caring' by women, has contributed to the establishment of gender associated behaviours, which are also known as gender or sex-based stereotypes (Roehling *et al*., 1996; Moss-Racusin *et al*., 2010). Therefore one can suggest that gender systems and gender structures have stemmed from power dynamics which developed through social constructions of traditional gender stereotypes which were established during the time of hunting and gathering, during warfare and through the rise of industrialisation (Berdahl, 2007; Cornwall, 1997; Park, 1996; Ratele, 2008; Roehling *et al.*, 1996; Vinnicombe & Singh, 2002).

The Biosocial Theory therefore suggests that patriarchy, and the power of men over women, has resulted from men being efficient at tasks that yield the most status and power, which was attributed to men due to their size, strength and competitive genetic composition which is suggested to be in conflict with women's nurturing nature revolving around reproductive

activities (Andersen, 2005; Bell and Nkomo, 2001; Cook, 1990; DeMatteo, 1994; McCall, 2005; Niehause, 2005; Purdie-Vaughns & Eibach, 2007; Reynolds & Pope, 1991; Shields, 2008; Wood & Eagly, 2002; Woodhill& Samuels, 2003). This has led to the division of labour as seen in contemporary, industrialised society, into instrumental work for men and expressive work for women.

Once the modern world was conquered, men appropriated the best roles for themselves while women were still confined to subservience (Duehr & Bono, 2006; Wood & Eagly, 2002). The domination and continued power of males and masculinity in the workplace is not solely attributed to biological determinants such as stature, hormones and genetics but as explained through *Social Constructivist Theory*, males have maintained and continued to fight for the maintenance of male hegemony within society in order for them to remain powerful (Wood & Eagly, 2002). For this reason *The Social Constructionist* or *Evolutionary Theory* cannot be appreciated individually without the consideration of the other. Considering that males have been in power since the days of the hunter gatherers, it must be noted that men have therefore been at liberty to designate the powerful and high status roles to themselves while giving the lesser, more subordinate status roles to women (Wood & Eagly, 2002). Therefore in order to maintain dominance within society, males have determined how males should behave and how females should behave, legitimising this through past roles, biological indicators and general functions of human fitness (Wood & Eagly, 2002). The traits attributed to males, are referred to as masculine traits, while the behaviours attributed to females are classified as feminine traits. Anything other than what males have described as stereotypical or prescriptive would therefore been seen as proscriptive and abnormal and thus open for marginalisation and punishment (Duehr & Bono, 2006; Wood & Eagly, 2002). That is why male traits are generally admired as having higher status than female traits, which are seen are less valuable, to prevent the dominance of femininity becoming idolised over masculinity in the workplace and broader society (Duehr & Bono, 2006; Rose & Montemayor, 1994; Wood & Eagly, 2002).

The Biosocial Model therefore reinforces the maintenance of power in the hands of males, and masculine behaviours, as it explains why people still adopt traditional roles and why masculine roles are more valued in society. However, through the rise and the opposing influence of feminism, as well as the adoption of masculine traits by women, has attempted to counteract the effects of male hegemony. This is evident through the adaptive development

of sex role identity instruments, according to pervasive modern worldviews. The historical development of sex-based traits and how the sex role identity instruments have been adapted is elaborated on below, in accordance with the era in which the instruments were established.

1.2.4 The history of sex role identity.

In alignment with *The Biosocial Theory* that led to certain roles being prescribed for men and certain roles being prescribed for women, the development of sex-based differences and subsequent sex role identities, have been reflected in and measured according to the era in which the research was being conducted.

In the 1930s, the first attempt to measure sex role identity was made by Terman and Miles (1936). Terman and Miles (1936) investigated the relationship between biological sex and personality, by examining their associations through two constructs namely masculinity (agency or instrumentality) and femininity (communion or expressiveness), which were viewed as unipolar opposites (Bakan, 1966). The research was framed by the time in which it was conducted, whereby social roles were influenced by the Great Depression of the 1920s and the aftermath of World War 1 (WW1). Men had been socialised to be the providers, as historically created through the hunter-gatherer dynamics and the formation of a male dominated army in WW1, while females were expected to be the caregivers responsible for the housework. Women were explicitly prevented from working outside of the house as they were seen as taking jobs away from those who were more 'needy' and 'capable'; such as able bodied men. Although women were involved in factory work to assist the war effort in WWI, the role of women working outside of the home was not considered as the norm, specifically outside of the constraints of wartime. Generally women were therefore expected to be submissive, nurturing and responsible for housework while men were seen as economically productive, dominant and capable of going to war to defend the nation and/or working outside of the house. The gender stereotypes of the 1930's resulted in the limitation of the research conducted. The problem with the research by Terman and Miles (1936), was the fact that one's identity was based on the same continuum with two major extremes at each pole; namely masculinity and femininity. This meant one could *only* be masculine or feminine, not both.

Due to the ability for an individual to belong to only one of the extremes, a fundamental flaw and limitation was created, as it suggested that an individual could not exhibit both masculine and feminine traits. The approach adopted by Terman and Miles (1936) was thus also said to be deterministic, as an individual could only be one of two sexes and was therefore forced into one of two gender categories; masculinity or femininity thus supporting *The Congruency Model* (Johnson *et al*., 2007). *The Congruency Model* suggested that an individual should only represent and exhibit those behaviours that are congruent with his or her biological sex and would therefore be socialised as such; males as masculine and females as feminine (Kagan, 1964; Mussen, 1969). *The Congruency Model* was also said to be cross-cultural in nature, meaning that all cultures would identify with the notion and therefore socialise their children accordingly, which may appear to be a gross overgeneralisation when applied across cultures in contemporary society; specifically in South Africa which has a multitude of diverse cultures (Kagan, 1964; Langa, 2012; Mussen, 1969; Whitley, 1984). This theory suggests that an individual's sex role identity should thus be consistent with an individual's biological sex in order for the individual to be mentally healthy and therefore, if they adopt a sex role that is not appropriate to their biological sex; this will have negative implications on the individual's wellbeing (Whitley, 1984; Garnet & Pleck, 1979; Kagan, 1964; Mussen, 1969). Garnet and Pleck (1979) went as far as to suggest that one was *disturbed* if one had an incongruent biological sex, when compared to one's sex role identity; illustrating the extreme notion of traditionalism and gender conformity from the 1930s to the 1960's as women were expected to care for their children while men were contracted to work.

However, from 1960 to 1970 there was a huge shift in perceptions of what sex roles should, or could, be adopted by the sexes. The 1960s through to the 1970's were characterised by feminist movements and the fight for gender equality as women began to exhibit less passive behaviours that may have allowed women to appear to be competent to participate in work outside of the household; therefore behaviours began to become less sex-typed to the detriment and competition of men (Duehr & Bono, 2006; Wood & Eagly, 2002). Therefore, the gender roles associated World War 2 (WW2) and the development of *The Congruency Model* during that era, did not assist the feminist groups in breaking females away from the constraints of stereotypical gender roles.

From the 1930's up until today, the views of males and females and their respective prescribed and proscribed behaviours have changed dramatically. Although it may be

important to understand how sex role identity or sex-based behaviours have developed and adapted through time, it is also important to understand the *'generic'* development of an individual's sex role identity, which is explored below.

In alignment with social changes occurring through the world, such as the rise of feminism and the modernisation of society after WW2 and the Baby Boom Era (early 1970's), the social roles of women and men, as well as the approach to sex role identity measurement, began to shift. In 1974, Bem developed *The Bem Sex Role Inventory* (BSRI), terming one's gender identification as sex role identity, suggesting that one could be masculine as well as feminine. A distinct difference between Bem's (1974) research and that of other researchers, such as Terman and Miles (1936), Kagan (1964), Mussen (1969) and Garnet and Pleck (1979), was the separation of masculinity and femininity, into two separate dimensions, as Bem (1974) suggested an individual could score higher or lower on one or both masculine and feminine traits, and in the event of scoring higher on both they would be termed androgynous (Bem, 1974). The approach to sex role identity therefore moved from a one-dimensional concept to a multi-dimensional construct which was mirrored by what was happening in the 1970's.

A major leap and development in sex role identity research, was the inclusion and introduction of androgyny into the SRI family; which was different to the view of *The Congruency Model* as *The Androgyny Model* suggested that an individual could possess high levels of both masculine and feminine traits; despite their biological sex (Bem, 1974). *The Androgyny Model* suggested that individuals who had high levels of both positive masculinity and positive femininity were the most astute due to the high levels of self-esteem associated with the ability to exhibit instrumental and expressive traits (Bem, 1974; Spence & Helmreich, 1978). Therefore, Bem (1974) developed *The Androgyny Model* by deviating from strict masculinity and femininity parameters, allowing an individual to score on both the masculinity and femininity scales.

At the same time that Bem (1974) had published work on the multi-dimensional characteristics of sex role identity, Spence and Helmreich (1978) began to develop *The Personal Attributes Questionnaire* (PAQ); a self-report scale that also focused on masculine, feminine and androgynous categories; specifically desirable traits. This was congruent with the times, as gender equality had been legitimised through legal frameworks, which allowed

women to work outside of the home; suggesting that behaviours, which were once proscriptive for women, were becoming acceptable to a certain degree but not necessarily prescriptive.

Although the PAQ and the BSRI measured masculinity and femininity as complimentary constructs, by also suggesting that males could exhibit feminine traits and females could exhibit masculine traits, the research and the instruments were criticised for only focusing on desirable or positive traits and neglecting the existence of negative or undesirable behavioural traits that may be present within an individual (Bem, 1974; Helmreich, Spence & Wilhelm, 1981).

The Extended Personal Attributes Questionnaire (EPAQ) was then developed as a necessary step toward expanding the stringent categories of the PAQ by adding negative sex role traits and identities to the existing PAQ scale; such as negative masculinity, negative femininity and negative androgyny (Helmreich *et al*., 1981; Spence *et al*., 1979). The expansion was necessary due to the fact that certain information was said to be lost through the limited and deterministic application of the PAQ, as only desirable traits were being identified through SRI research thus the categorisation of individuals as belonging to particular PAQ categories was somewhat inaccurate (Helmreich *et al*., 1981; Spence *et al*., 1979). The inconsistencies in research that analysed positive identities only resulted in the necessity to develop, explore and incorporate the negative identities into the femininity, masculinity and androgyny foundation, resulting in what has been termed *The Differentiated Model* (Woodhill & Samuels, 2003).

Despite the ability of the EPAQ to measure desirable and undesirable behavioural traits, the EPAQ was not without its flaws, as it was criticised for its poor psychometric properties as most of the literature that was available, which used the EPAQ as a measurement instrument, either had extremely low reliabilities or did not document the reliabilities at all; therefore suggesting the instrument to be questionable in terms of credibility, validity and reliability (Bernstein, 2013). This could have been due to the lack of cross-cultural validity of the EPAQ and hence a more specific or redefined scale was needed to measure gender roles in a particular context. Consequently in 2013, Bernstein measured the reliabilities of the EPAQ in the South African context and also found low Cronbach Alpha scores on pilot studies that were conducted. Bernstein (2013) then revised the EPAQ scale, by adding, rewording and re-

categorising some items of the scale. This was done in order to develop a scale with higher reliability scores, particularly in South Africa, which generated Cronbach Alpha scores above 0.80 for all four of the subscales; positive masculinity, negative masculinity, positive femininity and negative femininity. The refinement and re-engineering of the instrument by Bernstein (2013) resulted in the development of the Extended Personality Attributes Questionnaire – Revised (EPAQ-R), which has shown to be reliable and practical within a South African context. Bernstein's (2013) research was verified by the use of the EPAQ-R by other researchers who also found high Cronbach alpha's scores across the subscales in a South African context (Chemaly, 2012; Chemaly, 2013; de Freitas, 2013; Solomon, 2012).

The EPAQ-R is similar to the EPAQ in the fact that it is used to determine if participants are consistent with gender stereotypes by measuring their ideals in terms of how a male and/or female should behave, and at the same time measuring their perceived behavioural traits and subsequent SRI categories but in a South African context (Bernstein, 2013; Roehling *et al*., 1996). The models that have been mentioned above, throughout the literature, have been summarised below in the form of a diagram, relating to the current views of sex role identity in society. The three different models of SRI, as described above, are represented in the diagram below.

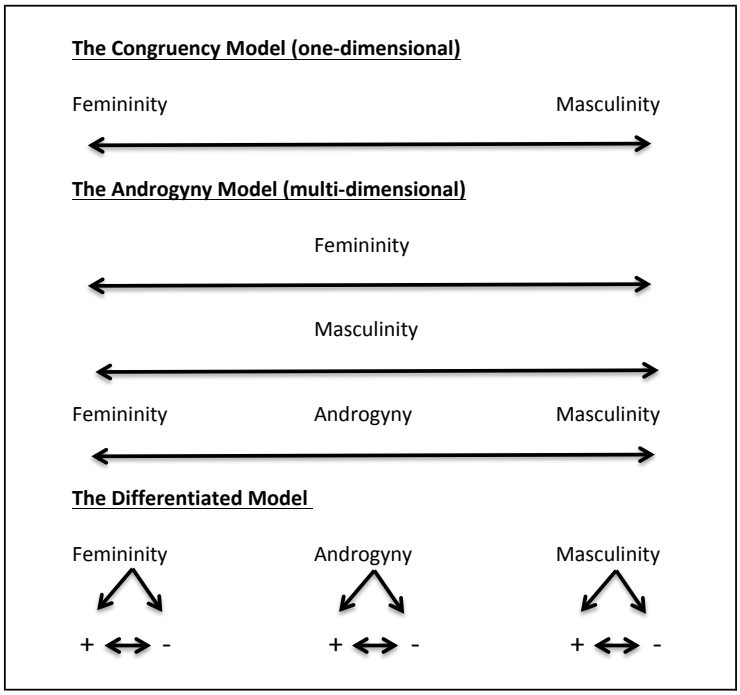

Figure 1: The Different Models Relating to the Perceptions of Sex Role Identity (Adapted from Chemaly, 2013)

As observed above in Figure 1, sex role identity researchers, and the subsequent measurements that have been developed, have moved from a one-dimensional model (*The Congruency Model*) to a multidimensional approach (*The Androgygny Model*) that considers the existence of positive and negative behavioural traits (*The Differentiated Model*).

Sex role identity has not only progressed from a unipolar and uni-dimensional construct to a bipolar, multidimensional construct, but it has also grown through extensive research as it does not only measure positive traits but also negative traits that may be exhibited by an individual. Therefore, the advancement of sex role identity theory, and the respective instruments, have developed through the ages according to the zeitgeist of the times as well as through the proposed existence of a biosocial framework as discussed above.

Due to the continuous progression of sex role identity, it therefore appears to be a relevant research topic that is necessary to explore, due to its potential importance in the workplace.

1.2.5 The importance of studying sex role identity.

Sex role identity has been linked predominantly to psychological constructs, such as psychological wellbeing and self-esteem (Bernstein, 2013; Chemaly, 2013; Hinrichsen, Follansbee, & Ganellen, 1981; Shimonaka, Nakazato, Kawaai, & Shinichi, 1997; Woodhill & Samuels, 2003). However, there is limited research in South Africa, which has linked SRI to workplace outcomes such as perceived insider status, perceived organisational support, conflict management styles, perceptions of work stress, organisational culture and work-family conflict (Berman, 2013; Bernstein, 2013; Chemaly, 2013; de Freitas, 2013; Soloman, 2012). To the knowledge of the researcher, there is little research that focussed on SRI in relation to EI and JS in a South African context, and therefore the exploration of SRI, EI and JS in a South African context may contribute to knowledge creation.

After exploring the history, ideologies and developing concepts of sex role identity, the seven sex role identities, as measured through the EPAQ-R, are described on the following page.

1.2.6 The description of sex role identity traits.

As discussed, the models and measurement of SRI has moved from a uni-dimensional to a multidimensional approach with the EPAQ and EPAQ-R being the main instruments used to measure the seven identities that have arisen from *The Differentiated Model*. Below is a description of the typical sex-based traits contained within each identity.

The EPAQ-R consists of seven sex role identity categories namely positive masculinity (M+); negative masculinity (M-); positive femininity (F+); negative femininity (F-); positive androgyny (A+); negative androgyny (A-) and undifferentiated (Au).

The positive sex based traits, as contained within the positive identities (M+, F+ and A+), are said to be socially desirable in both sexes, while the negative sex based traits, as contained within the negative identities (M-, F- and A-), are said to be socially undesirable, in both sexes (Spence & Helmreich, 1979). Stereotypical norms, as enacted through society, suggest that males are typically expected to exhibit positively masculine or negatively masculine traits (Bem, 1974; Cook, 1990; Roehling *et al*., 1996). Conversely, women are typically expected to be feminine, whether they exhibit positive or negative feminine traits (Bem, 1974; Cook, 1990; Roehling *et al*., 1996).

Positive masculinity (M+) is characterised by traits such as dominance, assertiveness, and independence, which are stereotypical of traditional men (Bem, 1974). Such traits are said to be desirable in both sexes but are more likely to be displayed by biological males than biological females (Roehling *et al*., 1996). These individuals are suggested to be extremely dominant; to the degree that this category is associated with leadership and task orientated behaviour (Helmreich, *et al*., 1981).

Negative masculinity (M-) is characterised by traits such as hostility, greediness, and aggressiveness; traits which are typically expected by men (Roehling *et al*., 1996). Although expected in men, these traits are said to be socially undesirable in both sexes (Roehling *et al*., 1996). Individuals who exhibit such traits are associated with selfishness, focusing only on themselves and their own wellbeing (Helmreich *et al*., 1981).

Positive femininity (F+) is characterised by traits such as sympathy, empathy, caring, and nurturing behaviours that are typical of a traditional woman (Bem, 1974; Cook, 1990). Such traits are said to be desirable in both sexes but are usually displayed by females (Roehling *et al*., 1996). Individuals who fall into this category are said to be relation orientated, focusing on the formation and maintenance of relationships and the wellbeing of themselves as well as others (Bardick, 1971; Helmreich *et al*., 1981).

Negative femininity (F-) is characterised by traits such as submissiveness, anxiousness, nervousness, complaint orientated and whiny behaviours (Roehling *et al*., 1996). Although these traits are typically expected in women, these traits are said to be socially undesirable in both sexes (Roehling *et al*., 1996). Individuals who exhibit such traits are said to focus too much on the wellbeing of others at the expense of their own wellbeing (Helmreich *et al*., 1981). While the EPAQ-R may appear to only suggest that negatively feminine individuals focus on others at the expense of their own welling, some of the items factor load on negative masculinity as well, and therefore an individual who is negatively feminine may exhibit traits which suggest a whiny, passive-aggressive individual (Bernstein, 2013).

Positive androgyny (A+) is characterised by a combination of positive masculine and positive feminine traits, resulting in an individual who is not restricted by gender norms in terms of what behaviours are stereotypical and retro-typical for his/her biological sex (Woodhill & Samuels, 2003). Such individuals are said to adapt better to change and show more flexibility due to their increased behavioural repertoire (Woodhill & Samuels, 2003). Thus, for example, one can be empathetic and assertive in a situation that requires both traits, as potentially needed by a manager when retrenching an employee.

Negative androgyny (A-) is characterised by a combination of negative masculine and negative feminine traits (Woodhill & Samuels, 2003). Although the individual who falls under this category may be flexible in terms of adaptation and the use of a larger behavioural repertoire, the individual possesses traits that are undesirable in both sexes and therefore displays deficits associated with both masculinity and femininity (Woodhill & Samuels, 2003). Individuals who identify with A- can therefore be seen to exhibit traits such as aggressiveness and whiny behaviour.

Undifferentiated individuals (Au) do not fit into any defined category as they are said to score low on all of the subscales (Woodhill & Samuels, 2003). These individuals are said to be somewhat unpredictable in terms of behavioural expectations, as past researchers were unable to link the respective identity to health outcomes; due to a low scores across the masculine and feminine traits (Woodhill & Samuels, 2003). Consequently, past literature has rarely made predictions for this identity in terms of outcome variables, as it is difficult to ascertain how such individuals are likely to behave (Woodhill & Samuels, 2003).

After thoroughly defining sex role identity, as well as the seven respective categories as defined by *The Differentiated Model*, the concept of emotional intelligence is explored below followed by the link between SRI and EI.

1.3 Defining Emotional Intelligence (EI)

Emotional intelligence (EI) is proposed as the link between emotion and intelligence that allows one to reason with emotions in order to enhance thought and one's interactions with society (Murphy, 2008; Salovey & Mayer, 1990). Researchers have not adequately defined EI as intelligence or personality and therefore the conceptual definition is still unclear as it differs according to the factor structure and the EI measuring instrument one administers (Murphy, 2008). Although EI research seems to be inconsistent in regards to defining what EI is and how it can be measured, it is generally considered to be the ability of individuals to accurately appraise emotions in oneself and others, appropriately express emotion, and the adaptive regulation of emotion in such a way as to enhance one's living through social interaction (Austin, Saklofske & Egan, 2004; George, 2000; Mayer, 2001; Murphy, 2008; Schutte *et al*., 1998).

Previous research has proposed two categorisations of EI, namely *Trait EI* and *Ability EI* (Harms & Crede, 2010; Mayer, Caruso & Salovey, 2000; Austin *et al.*, 2004). For the purpose of this study, *Trait EI* was measured and not *Ability EI*, for a number of reasons which are elaborated on below.

Trait EI refers to emotion-related self-perceptions relating to one's ability to recognise, express, understand, evaluate and manage one's own emotions and emotions of others, in order to assist one to successfully adapt to environmental demands and pressures (Palmer,

2003; Van Rooy & Viswesvaran, 2004). Although *Ability EI* measures are said to be more resistant to social response bias, self-report measures of *Trait EI* are still more popular due to certain advantages over ability tests (Austin *et al.*, 2004; Murphy, 2008). Self-report tests, such as those available for *Trait EI* testing, are less complicated to administer, are freely available, can be administered without supervision and seem to be less time consuming than *Ability EI* tests (Austin *et al.*, 2004; Murphy, 2008).

Thus for the purpose of this investigation, EI combines elements of personality theory such as empathy, impulsiveness and assertiveness, which is why Petrides and colleagues (2004) were able to argue that *Trait EI* measures behavioural tendencies and self-perceived abilities therefore looking more at personality than intelligence; which is consistent with the definition of EI (Murphy, 2008). *Trait EI*, defined by Petrides and Furnham (2000), refers to cross-situational consistencies in behavior that are part of personality and are assessed with self-report inventories. Self-report EI tests have correlated highly with standard personality constructs such as extraversion and neuroticism backing the argument by Pertrides & Furnham (2004), which suggested again that EI is associated predominantly with personality more than intelligence (Brackett & Mayer, 2003; Petrides, Pita & Kokkinaki, 2007).

Although researchers have attempted to differentiate EI as separate from intelligence, as measured by the Intelligence Quotient (IQ), critics suggest that self-report *Trait EI* measures are not sufficiently different from standard personality tests and are therefore yet to be completely warranted as a separate construct, lacking a certain degree of discriminant validity. However, Petrides & Colleagues (2007), as well as various other researchers, conversely showed, through empirical evidence, that EI is not a reworking, assortment or amalgamation of existing personality traits and measures, but can rather be seen as a separate personality construct; as it accounts for variance of individual's behaviour over and above the big five personality model (Furnham & Petrides, 2003; Murphy, 2008; Mikolajczak, Luminet & Menil, 2006; Petrides, Frederickson & Furnham, 2004; Petrides & Furnham, 2006; Saklofske *et al*., 2003; Van der Zee & Wabeke, 2004). Therefore, EI can be considered in a light of its own as a unique psychological construct, however, the factors making up EI have not been confirmed and thus require further examination.

According to research by Pertrides & Furnham (2000) and Murphy (2006, 2008), EI consists of four constructs, namely appraisal, utilisation, optimism and social skills.

1.3.1 Appraisal of emotion.

Appraisal of emotion refers to an individual's ability to identify and perceive emotions, feelings and thoughts in one and in others. This is necessary for adaptive social interaction and the ability to respond to social environmental cues as well as build supportive social networks (Ekman & Friesen, 1975; Murphy, 2008; Nowicki & Mitchell, 1998; Salovey *et al*., 2001; Scherer, Banse, &Wallbott, 2001). Increased appraisal abilities have been associated with an individual's potential to be empathetic and therefore may allow one to utilise emotions effectively (Coetzee & Schreuder, 2011; Dawis, 1984; Salovey & Mayer, 1989). However, individuals with low scores tend to overanalyse situations and make incorrect assumptions regarding the feelings of others therefore affecting the ability of such individuals to interact and communicate effectively (Brackett & Rivers, 2006).

1.3.2 Utilisation of emotion.

The utilisation of emotion refers to one's ability to understand the feelings of others in particular circumstances as well as to understand different points of view through reasoning, problem solving and interpersonal skills; therefore allowing such individuals to utilise emotions in a way which allows for effective communication with others (Isen, 1987; Palfai & Salovey, 1993; Salovey & Mayer, 1990; Schwarz, 1990; Schwarz & Clore, 1996). Individuals who do not possess this ability are said to lack empathy as well as creativity; which affects one's social interactions and relationships (Murphy, 2008).

1.3.3 Optimism.

Optimism, or mood regulation, refers to one's ability to reduce, enhance or modify emotional responses toward a positive or negative affective state in oneself and others as well as the ability to experience a range of emotions while making decisions about the usefulness or appropriateness of emotions in a particular situation (Bar-on, 2007b; Brackett & Rivers, 2006). High levels of optimism may result in an individual having a powerful social influence (Charisma), which is important in a leader when managing people (Wasielewski, 1985). Individuals who are vulnerable to stress and anxiety appear to have low levels of optimism or mood regulation, as such individuals are unable to successfully maintain a positive affective state in oneself and others (Brackett & Rivers, 2006).

1.3.4 Social Skills.

Lastly, social skills refer to the ability to build and maintain meaningful relationships and build rapport while inducing desirable responses in others (Goleman, 1998). Hallmark levels of social skills result in the ability to lead change, persuade others and lead teams effectively (Goleman, 1998). It has been suggested that the subscales of EI are hierarchical; therefore social skills would be the highest level of EI and may consist of components of the other three subscales (Murphy, 2008).

1.3.5 The importance of studying emotional intelligence.

Emotional intelligence has been correlated with a number of organisational constructs including the positive effects on career success, stronger personal relationships, effective leadership, job advancement, effective teamwork, employee commitment, development of talent, innovation, increased quality of service and increased customer loyalty to mention a few (Cooper, 1997; Dulewicz & Higgs, 2000; Zeidner, Matthews & Roberts, 2004). More recent research by Shiri, Pepukayi and Fields (2014) suggested that EI is positively correlated to employee performance, which is supported by previous research as well (Janovics & Christianson, 2001; Law, Song & Wong, 2004; Moyo & Theron, 2011;Van Rooy & Viswesvaran, 2004). Despite the vast amount of research available on EI linked to various other constructs in the South African context, to the researchers knowledge there is none that explores the direct relationship between SRI and EI in the manner and depth in which the current researcher proposes below (Coetzee & Bergh, 2009; Coetzee & Beukes, 2010; Coetzee & Harry, 2014; Coetzee & Schreuder, 2011; Potgieter & Coetzee, 2013).

1.3.6 Emotional intelligence and biological sex: the need to consider sex role identity

Before detailing the findings by various researchers on the relationships between biological sex and EI, it must be noted that a large majority of the researchers referred to biological sex as gender; which is incorrect (Shields, 2008). As mentioned when distinguishing between sex and gender, biological sex refers to one's genitalia, hormones and chromosomes while gender is typically based on socialisation and subsequent prescriptive and proscriptive behaviours that may be based on one's biological sex.

When utilising the respective factor structures proposed by the respective researchers, some 'gender' (biological sex) differences were observed while other researchers detected no 'gender' (biological sex) differences. Petrides & Furnham (2000), as well as Murphy (2008), found women to be better at social skills, appraisal factors and total EI, while Murphy (2006) and Bracket & Mayer (2003) found no differences between men and women in EI scores. The discrepancies above only illustrated a few studies that utilised the four-factor model, which represented inconsistent findings with regard to biological sex and emotional intelligence scores. Such discrepancies may be due to the suggestion by Palmer (2003) that EI may be learnt, and therefore results may differ according to various populations and their socialisation differences across cultures and genders. The proposition that EI can be taught and learnt, has huge implications for training and development which could be developed to enhance employee EI scores which may enrich employees' interactions with colleagues, customers and managers; making EI an important construct to investigate (Palmer, 2003). Another reason for the discrepancies may be, as mentioned earlier, due to the lack of analysing 'within sex' gender differences, as measuring 'between sex' differences is limited.

As discussed emotional intelligence, has predominantly been measured on the sexes in research that only distinguishes between males and females. Therefore the aim of this study was to examine EI in relation to SRI, utilising the most updated model of SRI, which is *The Differentiated Model*. This was proposed in order to ensure that all aspects of SRI, socially desirable, positive aspects and socially undesirable, negative aspects, were measured in order to determine if they bore a differential relationship to levels of total EI and the subscales of EI.

1.4 Linking Sex Role Identity and Emotional Intelligence

Most of the available literature has tended to focus predominantly on the relationship between biological sex and emotional intelligence, as mentioned above, and such research has yielded inconsistent findings. Some research suggests that there are significant differences between the sexes, while other research suggests that there are no differences in emotional intelligence between males and females (Austin *et al.*, 2007; Bissessar, 2011; Brackett *et al.*, 2004; Ciarrochi *et al.*, 2001; Ciarrochi *et al.*, 2000; Goldenberg *et al.*, 2006; Guastello & Guastello, 2003; Hunt & Evans, 2004; Kumar & Muniandy, 2012; Petrides & Furnham 2000; Petrides & Furnham 2004; Schulte *et al.*, 2004; Schutte *et al.*, 1998). It

therefore appears that biological sex (between sex difference) is not a sufficient proxy for evaluating differences in emotional intelligence between males and females, as there are also within sex differences that are not accounted for by investigating biological sex only.

Sex role identity theory allows for the flexibility of the sexes to exhibit not only sex-typed, stereotypical behavioural traits but also behavioural traits which are incongruent with one's biological sex; and therefore a different set of findings may unfold as compared to research which only focuses on sex-typed behaviours (Appelbaum *et al.*, 2003; Bem, 1974; Cornwall, 1997; Guastello & Guastello, 2003; Ramdeo, 2011; Ratele, 2008).

Despite the fact that each sex may be associated with particular proscriptive and prescriptive behaviours, males may exhibit feminine traits, females may exhibit masculine traits and a particular sex may even adopt a combination of masculine and feminine traits (that is, androgyny) regardless of one's biological sex (Appelbaum *et al.*, 2003; Bem, 1974;Cornwall, 1997; Guastello & Guastello, 2003; Ramdeo, 2011; Ratele, 2008). This concept of flexibility regarding behavioural exhibition, not only between the sexes but also within the sexes, thus suggests that levels of emotional intelligence may be more accurately predicted, not by investigating one's biological sex, but rather one's sex role identity. There are not only differences within the sexes, but there are also differences in terms of whether the traits displayed within sexes are socially desirable or undesirable. As discussed, socially desirable or socially undesirable traits are represented by a sex role identity being positive or negative, respectively. The positive and negative sex-based traits as well as differing masculine and feminine identities have various implications in relation to EI, which is discussed below.

The expressive traits and skills associated with positive androgyny, through positive femininity, are suggested to assist individual's in developing and maintaining stable, professional relationships with their colleagues, thus suggesting that positively androgynous, and furthermore positively feminine individuals, may have high levels of EI as the behaviours mentioned above are congruent with the definition of EI. The potential for an individual to successfully adapt to a situation is increased due to the individual's ability to correctly identify and assess environmental cues as they are better equipped to adapt to complicated environments and are therefore considered to be 'experts' at identifying and responding appropriately to emotions of colleagues, customers and managers (Mayer, Salovey & Caruso, 2000b; Murphy, 2008; Schutte *et al*., 2001). Therefore one could propose

that positively androgynous individuals may be high on appraisal of emotion. Additionally, the agentic traits attributed to positively masculine individuals may allow positively androgynous individuals to negotiate their environment toward a favourable working environment in which they are satisfied financially and contingently; thus possibly resulting in high levels of utilisation of emotion by positively androgynous individuals. High levels of optimism refer to the increased ability of an individual to maintain a positive affective state in oneself and others (Brackett & Rivers, 2006; Wasielewski, 1985). The communal skills and ability to maintain fulfilling relationships associated with positively feminine individuals and the ability to lead in a charismatic manner, linked to positively masculine individuals, altogether contribute to an individual who may have high optimism scores (Bardick, 1971; Bem, 1974; Cook, 1990; Helmreich, *et al*., 1981; Petrides, Pita & Kokkinaki, 2007; Roehling *et al*., 1996; Wasielewski, 1985). Therefore, the potential of positively androgynous individuals to possess the ability to maintain fulfilling relationships, using positive feminine traits, as well as the ability to be charismatic, using positively masculine traits, suggests that positively androgynous individuals may exhibit high levels of optimism. Researchers also propose increased EI for positively androgynous individuals, as they are perceived to be more self aware and more likely to monitor their emotions and reactions in society; therefore suggesting a high EI specifically on the social skill subscale*;* which refers to the highest level of EI functioning (Murphy, 2008; Schutte *et al*., 2001). This suggests that positively androgynous individuals might also score the highest on all of the EI subscales and total EI (Murphy, 2008; Schutte *et al*., 2001). Research by Guastello and Guastello (2003) suggests that individuals, who are positively androgynous, are likely to have the highest EI scores due to their ability to successfully adapt and regulate their behaviour and emotions according to specific situational contexts. Therefore, due to the repertoire of behaviours, typical of androgynous individuals, they may be better able to adapt to various situations due to the adaptive elements channelled from a high EI score and a desirable SRI (Fernandez-Berrocal & Extremera, 2006; Guastello & Guastello, 2003; Moon & Hur, 2011). The combined advantage of having positive feminine and positive masculine traits propel such individuals to possibly have the highest levels of emotional intelligence across all of the subscales including total emotional intelligence.

The elements and behaviours listed above, which promote the high levels of EI expected by androgynous individuals, can be further backed by the attributes and behaviours associated with positively feminine and positively masculine identities as also mentioned above. This

therefore suggests that positively androgynous individuals may exhibit the highest levels on all of the EI subscales as well as total EI due to such individuals having the 'combination advantage' associated with having both positively masculine and feminine traits.

Positively feminine individuals are also hypothesised to have high total EI scores due their social and communal skills, such as being aware of others' feelings, looking out for others and having an understanding of others, which assists one to succeed in social interactions, building rapport and the general communicative domain (Bem, 1974; Petrides & Furnham, 2000; Schutte *et al*., 1998). Empathy is one of the many behavioural traits that is considered to allow an individual to exhibit high levels of EI (Harms & Crede, 2010). Empathy is also considered to be a stereotypical trait attributed to positively feminine individuals, therefore one can infer that positively feminine individuals may exhibit high levels of EI; specifically referring to the appraisal of emotions and the utilisation of emotions (Ciarrochi, Chan & Caputi, 2000; Petrides, Pita & Kokkinaki, 2007). Social awareness and the ability to maintain fulfilling relationships are typical characteristics of positively feminine women, however these traits are also expected in someone who has high EI levels of optimism and social skills (Petrides, Pita & Kokkinaki, 2007). These behavioural traits and emotional intelligence links are consistent with most of the research attributed to feminine individuals, as they are stereotypically associated with increased relational and interpersonal skills and therefore one may infer that individuals with positive feminine identities may have high total levels of EI (Bem, 1974; Harms & Crede, 2010; Ciarrochi, Chan & Caputi, 2000; Murphy, 2008; Petrides, Pita & Kokkinaki, 2007).

Even though there appears to be a great deal of support for high levels EI by positively feminine individuals, such individuals are not hypothesised to score higher than positively androgynous individuals due to the added combination advantage of positively androgynous individuals through their access to positively feminine and positively masculine traits.

Although positively androgynous and positively feminine individuals may possess traits that capacitate them toward higher EI scores, positively masculine individuals also have the capacity to display high levels of EI due to their ability to negotiate their own environment through self-assertion and self-promotion as well as by being competitive and confident (Bem, 1974; Harms & Crede, 2010; Ciarrochi, Chan & Caputi, 2000). Self-confidence, self-motivation and assertiveness, in particular, are behavioural traits which not only contribute to

high levels of EI but they are associated with positively masculine individuals and therefore one could propose that individuals with high levels of self-confidence and assertiveness, whom are subsequently more positively masculine, may have high levels of appraisal, utilisation and optimism (Petrides, Pita & Kokkinaki, 2007). The ability to manipulate one's own and other's emotions is associated with high social skill EI levels and therefore individuals with a positive masculine identity may also exhibit high levels of social skill EI (Murphy, 2008).

Despite the high levels of EI expected by positively masculine individuals, they may not score as highly as positively androgynous individuals on all the subscales and overall EI, due to the positively feminine and positively masculine traits, which are available to positively androgynous individuals.

There are reasons and explanations as to why positive femininity or positive masculinity may score higher than each other, such as the fact that the positive feminine identity aligns more closely with the description and meaning of EI, while positively masculine individuals may have higher EI scores than positively feminine individuals due to the increased acceptance and tolerance of positively masculine individuals and behaviours in society; due to hegemonic systems and practices within society (Langa, 2012; Niehaus, 2005; Ramdeo, 2011; Ratele, 2008; Woodhill & Samuels, 2003). Therefore, one is not able to determine whether positively masculine individuals will score higher than positively feminine individuals, or visa versa, making this extension of the study exploratory.

With regard to the negative identities, a very different pattern emerges in relation to EI with all of the negative identities proposed to score poorly on EI. However, unlike the inability to determine the hierarchy of EI scores between F+ and M+ individuals, the hierarchy of the EI scores of each negative identity can be hypothesised to some degree. Negative masculinity is likely to have a poor to moderate level of total EI, while negative femininity is likely to have a very poor level of EI. Negative androgyny is also likely to have a low level of EI but possibly not as low as negative femininity. This is explained below.

Negatively masculine individuals would score more poorly than the positive identities, but is still hypothesised to have the highest score of the negative identities. By exhibiting aggressiveness, arrogance, dominance and by being dictatorial, the negatively masculine

individual may have the ability to *manipulate* others according to his/her own needs; thus exhibiting moderate, albeit lower, levels of EI as compared to the positive identities (Austin *et al.*, 2007). Murphy (2008) suggested that individuals that are able to manipulate others' emotions, as expected by negatively masculine individuals, present with high levels of EI. However, with regard to negatively masculine individuals, the manipulation that is carried out is usually in the interest of oneself and thus the aggressive and hostile behaviours exhibited by the negative masculine identity does not permit the negatively masculine individuals to take other's emotions into account. Even though individuals belonging to this identity may have the ability to appraise and utilise emotions effectively, they may lack the ability to engage socio-emotionally or empathetically with others, thereby inhibiting their social skill and total EI scores due to the lack of empathy and subsequent inability to promote levels of optimism in others. Thus, while the manipulation may work to the individual's advantage, in the short term, the other less desirable traits may detract from higher total levels of EI in the short- and long-term.

Traits such as neuroticism and anxiety, associated with negatively feminine individuals, have also been associated with low levels of EI, therefore it is logical to suggest that negatively feminine individuals may exhibit low levels of EI as they may be unable to effectively appraise and utilise emotions in oneself and others (Avsec & Kavcic, 2011; Ciarrochi *et al.*, 2000). Another behavioural trait which is negatively related to EI, is the presence of *rumination*, which refers to the fixation of an individual, on symptoms of distress such as anxiousness and nervousness, which are also characteristic of negatively feminine individuals (Petrides, Pita & Kokkinaki, 2007). Therefore a negatively feminine individual may exhibit low levels of optimism due to high levels of *rumination* expected, as well as the other undesirable behavioural traits described above (Nolen-Hoeksema, McBride, & Larson, 1997; Petrides, Pita & Kokkinaki, 2007). Individuals who adopt a negative feminine identity are expected to exhibit the lowest levels of EI due to their socially undesirable traits, such as the inability to control emotion and maintain social relationships, being whiny, complaining, passive, anxious and neurotic; rendering such an individual to be unable to engage with others in a socially desirable fashion; therefore suggesting that such individuals may be low on appraisal of emotions, utilisation of emotions, optimism, social skills and overall emotional intelligence (Bem, 1974; Bernstein, 2013).

An individual with a negatively androgynous sex role identity exhibits negative feminine and negative masculine traits and therefore the arguments created above, regarding negatively masculine and feminine individuals, may apply to negatively androgynous individuals as well. Although negatively androgynous individuals may display low levels of EI due to the negatively feminine traits, which they may possess, such individuals may still score slightly higher than negatively feminine individuals due to the ability of these individuals to exhibit negative masculine traits as well; which may bring up their EI scores slightly. Negatively masculine traits include the ability to manipulate others and be dictatorial, which may therefore enable negatively androgynous individuals, on occasion, to be somewhat socio-emotionally astute due to their manipulative nature, despite their motive of self-interest (Austin *et al.*, 2007).

As discussed, due to the non-definitive nature of undifferentiated individuals, one could not make predictions regarding EI scores, as noted by Woodhill and Samuals (2003), who suggested that such individuals are unpredictable as they exhibit low levels on every subscale of sex role identity.

The overall proposal is that positive identities are expected to be more emotionally intelligent than the negative identities. However, there are some hierarchical systems suggested above, but as also explained, the current study is exploratory due to the lack of research in this area especially in a South African context.

To conclude, from the discussion above, it becomes clear that different sex role identities, which can be manifested within and across both sexes, have implications for EI and therefore research that assesses these differences is likely to be better able to explain sex differences in EI by looking beyond the mere constraints of biological sex differences. As mentioned in the introduction, the aim of the study was to explore the potential existence of a relationship between SRI and EI, as well as a relationship between SRI and JS. After explaining the link between SRI and EI, below follows a definition of JS and then proposed link between SRI and JS.

1.5 Defining Job Satisfaction (JS)

Researchers propose that job satisfaction refers to the positive emotional state of an employee from the pleasure a worker derives from their current job, based on various aspects of work (Kalleberg, 1977; Locke, 1976; Mercer, 1997; Spector, 1997; Wright & Cropanzano, 1997; Wong *et al*., 1998). Job satisfaction has also been defined as the immediate emotional reaction to one's current job based on an employee's opinion or attitude regarding one's external working environment, which is composed of multiple organisational factors and influencers (Coetzee & Bergh, 2009; Ignat & Clipa, 2012; Tett & Meyer, 1993; Weiss & Cropanzano, 1996). The external factors mentioned in the definitions above include organisational factors such as those proposed by Spector (1997) namely pay, promotion, supervision, fringe benefits, contingency rewards, operating procedures, nature of work, communication and co-workers. These factors are said to contribute to a *composite total job satisfaction score*, which will be explained below.

There are two approaches that are adopted regarding the measurement of job satisfaction. *The Global Approach* refers to the general attitude of employees regarding total job satisfaction in their current job, while *The Composite Approach* refers to a pattern of attitudes of an employees satisfaction, towards various facets of one's job, also in one's current job (Bruck *et al.*, 2002). Through the definitions given above, one can infer that *The Composite Job Satisfaction Approach* will be adopted in the current study, as a number of facets will be combined in order to compute a general job satisfaction score due to the multifaceted instrument used to measure job satisfaction. Despite the position by researchers that suggests that job satisfaction is a difficult organisational variable to measure due to the perception that there are multiple contributing factors to job satisfaction scores, Clark and Oswald (1996) acknowledge that job satisfaction is subjective but still a comprehensive measure of an employee's opinion regarding their working environment. Spector (1997) has acknowledged that job satisfaction is made up of nine (9) facets of one's work experience and has thus developed a scale, which addresses the most prominent workplace contributors to job satisfaction. Due to the space constraints associated with this study, the nine facets were added together to compute a total job satisfaction score.

1.5.1 The importance of job satisfaction.

The purpose of measuring job satisfaction is relevant due to the implications associated with employees' job performance but also due to the behavioural consequences associated with job satisfaction, such as employee tenure, longevity, physical health and mental health (Caldwell & O'Reilly, 1990; Dawis, 1984; Euske *et al*., 1980; Spector, 1997). It was important to assess the job satisfaction scores of South African employees as this construct has been linked to various other detrimental outcome variables such as a positive employee workplace relationships, attrition of staff, favourable worker behaviour and productivity as well as a negative relationship with absenteeism; all of which are crucial factors which affect organisations on a daily basis (Akerlaf *et al*., 1988; Clegg, 1983; Freeman, 1978; Mangione & Quinn, 1975; McEvoy & Cascio, 1988).

1.5.2 Job satisfaction as an internal or external constituency.

Despite the suggestion above, that the perception of one's job satisfaction is based on external organisational factors, it is important to note that the employees' appraisal of such external factors is what makes job satisfaction an interesting variable; as it has internal and external influences (Tett & Meyer, 1993). The internal factors that are specifically pertinent to this study, are personality and emotional intelligence, with the acknowledgement that there are other internal factors influencing job satisfaction as well (Liebenberg & Banes, 2004; Mousavi, Yarmohammadi, Nosrat & Tarasi, 2012; Penrod, 2010; Salovey & Sluyter, 1997).

Personality is said to be of great importance in contributing to job satisfaction, as certain jobs require specific personality types that relate to the requirements of the respective job (Jadhav & Mulla, 2010). Therefore, while it is acknowledged that organisational factors, as external influencers, may contribute to the variance between employee levels of job satisfaction, it is also acknowledged that the ability of employees to respond, perceive, react, interpret and engage with the organisational factors, may be affected by one's personality and emotional intelligence capabilities. By looking at sex role identity and emotional intelligence, as forms of personality and internal aspects of job satisfaction, it is possible that variations in sex role identity and emotional intelligence could be associated with variations in the degree to which an individual experiences, perceives and reacts to their working environment. Therefore the external factors affecting one's job satisfaction will be measured through total job satisfaction

(made up of 9 facets) as proposed by Spector (1997), while the internal factors pertinent to this study, which affect job satisfaction, will be explored through the examination of sex role identity and emotional intelligence.

Given the importance of JS to the productivity of organisations, it is therefore critical to determine what factors are unique to the individual that also play a role in determining the extent to which the individual perceives organisational factors as satisfactory; other than the actual organisational factors themselves. 'Gender' has been considered as a factor of importance relating to JS but as mentioned it has generally been looked at biologically and not from a personality or sex-based trait approach. Therefore the present study aims to build on previous research by looking at gender from a more complex point of view; using *The Differentiated Model* of sex role identity, which is a gender-based approach as opposed to the overly simplistic dichotomous biological sex based views.

1.5.3 Job satisfaction and biological sex: the need to consider sex role identity.

A similar disputation can be argued regarding the link between biological sex and job satisfaction, as was argued for biological sex and EI, as previous research has again focused on correlating and researching the relationship between job satisfaction and biological sex only, ignoring 'within sex' differences; which may once again account for the contradictory findings in past studies (Austin *et al.*, 2004; Avsec & Kavcic, 2011; Ciarrochi *et al.*, 2000; Fernandez-Berrocal & Extremera, 2006; Harms & Crede, 2010; Mayer et al., 2000; Palmer, Donaldson & Stough, 2002; Petrides & Furnham, 2000).

Just like EI, JS has been analysed from a biological sex perspective in previous studies, again being referred to as 'gender', which also resulted in incongruent findings. Some studies such as those done by Bender and Haywood (2006) as well as Cano and Miller (1992), suggested that there were no 'gender' differences between males and females when looking at job satisfaction. However, other researchers appeared to disagree as Clark (1997) as well as Souza-Poza and Souza-Poza (2000) proposed that females had higher job satisfaction scores than males, while Lui and Ramsey (2008) suggested that males had higher job satisfaction scores than females. All of the above studies have analysed biological sex in comparison to job satisfaction, which may explain the inconsistencies, as these analyses have simplistically looked at 'between sex' differences and therefore ignored the existence of 'within sex'

differences which could be explored through sex role identity. Therefore the link between sex role identity and job satisfaction is explored below.

1.6 Linking Sex Role Identity and Job Satisfaction

Due to the focus of past research on biological sex, along with its inconsistent findings, it has led the current study to explore the link between sex role identity, as explained through *The Differentiated Model*, and its link to job satisfaction. Despite the lack of research between SRI and JS, some research has been gathered to explain some of the relationships however most of the links between SRI and job satisfaction explained below is exploratory and may contribute to new research.

Positively androgynous individuals are expected to have the highest total job satisfaction scores due to their ability to adapt to different contexts, negotiate their environment (a function of M+) and maintain social relationships (a function of F+), therefore attaining what they want and need within a working environment; possibly resulting in higher job satisfaction (Avsec & Kavcic, 2011; Bender *et al.*, 2005). The expressive traits and skills associated with positive femininity are suggested to assist the individual to develop and maintain stable, professional relationships with his/her colleagues thus suggesting that positively androgynous individuals may score highly on job satisfaction scales that are associated with one's interactions with colleagues such as satisfaction with supervisors, co-workers and communication; thus resulting in a higher overall job satisfaction score. However, the agentic traits that positively androgynous individuals may possess, attained from the positively masculine traits, may allow one to negotiate one's environment toward a favourable working environment in which one is satisfied financially and from a contingent point of view. The combined advantage of having positive feminine and positive masculine traits, suggest that such individuals may have the highest levels of total job satisfaction.

High levels of total job satisfaction are also expected from positively masculine individuals as their agentic behaviour such as assertiveness, confidence and leadership skills may enhance their ability in negotiating their environment (Avsec & Kavcic, 2011). The ability of these individuals to negotiate their environment suggests that they might score highly on specific facets of job satisfaction such as pay, promotion fringe benefits and contingency rewards thus contributing to a higher total job satisfaction score. Such individuals may score

lower on facets such as satisfaction with supervision, communication and co-workers due to the lack of interpersonal skills yielded by masculine individuals, which are observed in positively feminine individuals. Therefore the total job satisfaction scores of positively masculine individuals may be moderate to high, but lower than positively androgynous individuals.

Positively feminine individuals are also expected to exhibit high levels of total job satisfaction. The high job satisfaction scores might be attributed to the advancement of feminine individuals in job satisfaction facets such as satisfaction with co-workers, communication and relationships with supervisors. Positively feminine individuals may have lower scores on some facets of job satisfaction due to such individuals lacking skills which may allow them to negotiate their environment, in ensuring satisfactory pay, promotion, fringe benefits and contingency rewards due to their communal nature (Bem, 1974; Woodhill & Samuels, 2003). By positively feminine individuals focusing on others, being kind, empathetic and soft hearted, they may strive for harmony within the workplace by getting everyone's needs met thus resulting in the needs of positively feminine individuals being somewhat discounted. Such traits may result in an individual who is less able to negotiate his/her environment due to a lack of assertiveness and such individuals will therefore tend to *give in* or be overly accommodating in relation to having their own needs met (Bende *et al.*, 2005).

Some might suggest that positive femininity is associated with agreeableness, a factor that contributes to *The Five Factor Personality Model*, as these individuals enjoy getting along with others in stable, long-term relationships, which is typical of the positively feminine communal traits and individuals. This suggests that such individuals are motivated toward achieving interpersonal intimacy, even if it is in the workplace, which may result in a weak, positive relationship between positive femininity and total job satisfaction; as suggested in previous studies (Judge, Heller & Mount, 2002; McCrae & Costa, 1991; Organ & Lingl, 1995).

To summate, positively feminine individuals may score moderately to highly on total job satisfaction. The reason for suggesting moderate to high scores, instead of high total job satisfaction scores, is due to the subordinate stereotype associated with femininity as they

may be unable to negotiate their environment as observed with positively androgynous and positively masculine individuals (Bem, 1974; Gaed & Gallo, 2006; Wiggins, 1996).

Negatively masculine individuals were expected to score lower than any of the positive identities however, negatively masculine individuals were still expected to exhibit moderate levels of total job satisfaction for the reasons listed below. Moderate job satisfaction scores can be attributed to their manipulative and aggressive nature in controlling and dominating their environment by influencing other's behaviour, in an attempt to get their own needs met (Austin *et al.*, 2007). Their hostile and overly domineering behaviour, along with the behaviours above, may result in short term gratifications however it could lead them to alienate others in the long term. This could detract from their ability to attain higher levels of total job satisfaction, particularly in the facets relating to interpersonal relationships at work such as satisfaction with communication, co-workers and satisfaction with supervision. Such individuals are expected to score moderately on facets of job satisfaction such as pay, promotion, fringe benefits and contingency rewards thus resulting in a moderate total job satisfaction score. Despite some hierarchical connections being proposed, this part of the research is somewhat exploratory due to the limited literature available on the link between negatively masculine individuals and job satisfaction

Due to the neurotic nature of negatively feminine individuals, such as anxiousness and nervousness, their negative nature results in them experiencing far more negative life events than other individuals. This may extend into situations in the workplace, which may lead to diminished levels of total job satisfaction (Emmons, Diener, & Larsen, 1985; Judge *et al.*, 2002; Magnus, Diener, Fujita, & Pavot, 1993). Negatively feminine individuals are suggested to have the lowest job satisfaction scores due to their passiveness, that is, their general total submission to the needs of others (Helmreich *et al*., 1981). Their whiny and complaining nature also tends to alienate them from others, hence they holistically tend to either avoid or totally accommodate others needs and thus never get their own needs met in terms which may potentially affect their ability to attain life or job satisfaction for themselves (Woodhill & Samuels, 2003). One could therefore suggest that negatively feminine individuals may not score highly, and in fact may score poorly, on total job satisfaction due to the complaining nature of such individuals, their tendency to experience life in a pessimistic way and their inability to maintain meaningful social relationships due to their tendency to alienate others around them (Gaed & Gallo, 2006; Wiggins, 1996; Woodhill & Samuels, 2003).

Low job satisfaction scores can also be expected from negatively androgynous individuals, though possibly slightly higher than negative femininity, due to the incorporation of manipulative traits from the negative masculine identity, which may allow them to control and dominate their working environment (Austin *et al.*, 2007). Such individuals are expected to score the lowest on total job satisfaction, along with negatively androgynous individuals, due to the negative traits which have been internalised and subsequently acted out through their behaviour; resulting in an individual who is not only whiny and complaining but also manipulative and aggressive thus possibly alienating their co-workers.

Once again, due to the non-definitive nature of undifferentiated individuals, one cannot make predictions regarding possible job satisfaction scores (Woodhill & Samuels, 2003). Past researchers have unsuccessfully attempted to link such individuals to health outcomes as these individuals are said to be somewhat unpredictable in terms of societal behavioural expectations (Woodhill & Samuels, 2003).

The total proposal is that positive identities are expected to be more satisfied with total job satisfaction when compared to the negative identities. However, there are some hierarchical dynamics suggested above, but as explained, the current study is exploratory due to the lack of research in this area (SRI and JS) specifically in a South African context.

To conclude, from the discussion above, it is evident that one may be able to discover meaningful findings by looking beyond the mere constraints of biological sex differences; rather focussing on SRI (within sex differences) as proposed through *The Differentiated Model*. Due to the hypotheses proposed above, it may prove useful to determine which sex role identities exhibit higher or lower levels of total job satisfaction.

Following the exploration of the relationship between SRI and JS, the relationship between EI and JS is investigated below.

1.7 The Link Between Emotional Intelligence and Job Satisfaction

It appears that there is also a lack of clarity regarding the findings on the relationship between EI and JS. EI is proposed to be related to JS as individuals with higher EI are said to be more successful at communicating their ideas, goals and intentions in interesting and assertive

ways, therefore such individuals are said to be able to negotiate their working environment in order to get what they want, resulting in higher scores regarding one's satisfaction with work (Cooper, 1997).

Some researchers have proposed that EI and JS are related but only through stress management as Ismail and colleagues (2010) postulated that increased EI allows one to develop effective strategies to deal with external pressures such as stress. Therefore increased EI may lead to an increased ability to deal with stress, which may result in an increase in JS due to one being able to negotiate one's social environment and maintain a certain level of optimism.

Other researchers suggest that EI is directly related to JS, which includes studies that have been conducted in specific industries or job occupations such as those done by Cobb (2004), Mehdi, Habib and Salah (2012) as well as the study by Mousavi and colleagues (2012). EI has also been suggested to be a mediator and have a mediating function on life dimensions and workplace functioning such as life satisfaction and job satisfaction (Day, Newsome & Catano, 2002; Caruso, 1999; Palmer; 2003; Salovey & Mayer, 1990). Despite all of the acclamations stating that EI is related to various organisational outcomes, Dulewics and Higgs (2000) proposed that such research is simply anecdotal and requires more empirical evidence. Although several studies have been conducted in South Africa regarding the link between EI and various organisational constructs such as job performance, leadership success and individual employability, there appears to be a paucity of research, specifically in the South African context, regarding the link between EI and JS in particular (Beukes, 2010; Coetzee & Schreuder, 2011; Hayward, Amos & Baxter, 2008; Murphy & Janeke, 2009; Nel & De Villiers, 2004).

It is for this reason that the relationship between EI and JS has been investigated, in order to shed light on the lack of clarity regarding the relationship between JS and EI in a South African context, across a variety of occupational industries.

The relationship between EI and JS has been taken a step further by exploring the interactional relationship between EI, SRI and JS, which is elaborated on below.

1.8 The Interaction between Sex Role Identity, Emotional Intelligence and Job Satisfaction

There is also a lack of research on the interactional effects of emotional intelligence and sex role identity on job satisfaction*;* therefore it was proposed that an interactional relationship of EI and SRI on JS might exist.

Although the proposed relationship is purely exploratory, the suggested relationship is logical and rational if the proposed relationships between SRI and EI, as well as between SRI and JS, are significant. In terms of theory, the same arguments can be created for the interactional relationship between SRI and EI on JS scores, as observed when exploring the potential relationships between SRI and EI as well as SRI with JS respectively. As argued above, research suggests that androgynous individuals might have high levels of not only EI, but also JS, therefore if EI and JS scores fluctuate according to one's sex role identity then one's sex role identity with a subsequent significant high or low EI score could complimentarily contribute to a high or low JS Score.

Hypotheses and arguments have already been developed above, regarding the EI subscales and total job satisfaction, in relation to the different SRI categories. Therefore the proposed example pertaining to androgynous individuals could be applied across the sex role identities as can be observed below.

For example, if a positively androgynous individual is said to have a high EI and a high JS score, one could propose that there may be commonalities, between EI and SRI, that allow such individuals to experience affective attitudes to one's working environment. By testing SRI, EI and JS in an interactional relationship, one might been able to define stronger relationships than those proposed when exploring the relationship between SRI and JS alone. Therefore, cumulative effects of SRI and EI toward one's JS score may exist.

Consequently as a result of the interlinks and interrelationships explored above, the present research intends to explore the following research questions:

1.9 Research Questions

Research Question 1:

a) Do variations in sex role identity relate to variations in levels of emotional intelligence?

Research Question 2:

a) Do variations in sex role identity relate to variations in levels of job satisfaction?

Research Question 3:

a) Is there a relationship between total emotional intelligence and total job satisfaction?

Research Question 4:

a) Is there an interactional relationship between sex role identity, emotional intelligence and job satisfaction?

A graphical representation of the research questions above, can be viewed below.

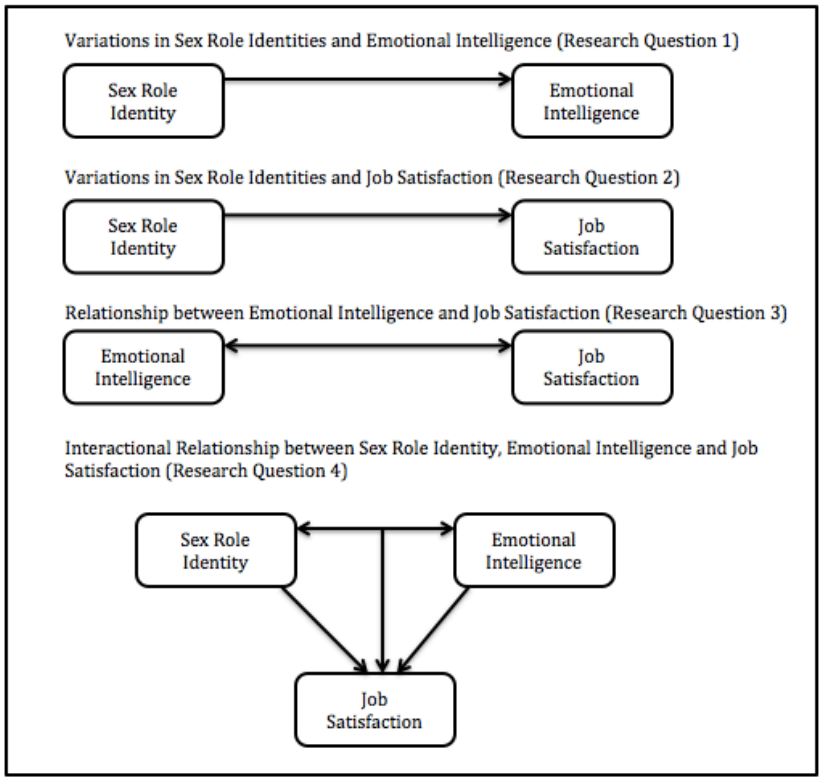

Figure 2: Graphical Representation of the Research Questions

Chapter 2: Methodology

2.1 Introduction

This section gives an overview of the research questions, research design and other methodological themes, which needed consideration in the current study. The sample of the study was explained in brief, and is further elaborated on in the results section. The procedure and ethical considerations are also covered in order to ensure adherence to ethical standards.

2.2 Aims and Rationale

The aim of the study was to determine whether individuals, who had variations in sex role identities, would present with different total and subscale scores of emotional intelligence. It was also important to determine if particular sex role identity categories were more or less satisfied with their work environment; which was tested by measuring a composite job satisfaction score. The relationship between emotional intelligence and job satisfaction was also explored, and furthermore the interactional relationship between SRI, EI and JS was examined.

It was necessary to investigate these proposed relationships due to the incongruent findings between the respective variables and biological sex in past research. Due to the inconsistent findings, based on biological sex only, the current study proposed that sex role identity which allowed for 'within sex' differences and 'between sex' differences to be evaluated might lead to a more accurate set of findings with regard to the respective relationships. As mentioned previously, according to sex role identity theory, males may exhibit feminine traits and females may exhibit masculine traits therefore suggesting that biological sex was too simplistic as it only measured 'between sex' differences. Sex role identity was therefore considered to be a more complex and comprehensive construct than biological sex, allowing one to analyse a greater set of possible sex-based relations, compared to other variables of importance. The research questions are elaborated on the following page.

2.3 Research Questions and Proposed Hypotheses

The research questions, which have been proposed, have been explained explicitly in the chapter above. Below is a brief summation of the proposed hypotheses.

Research Question 1:

a) Do variations in sex role identity relate to variations in levels of emotional intelligence?

It was therefore proposed that the positive identities would score higher than the negative identities. A tentative exploratory hierarchy in terms of EI scores was suggested, positively androgynous individuals were expected to yield the highest level of EI on all of the EI subscales and total EI, with negative androgyny and negative femininity expected to yield the lowest levels of EI. Predictions could not be made regarding undifferentiated individuals as past researchers struggled to link such individuals to health outcomes due to their low scores across the masculine and feminine traits (Woodhill & Samuels, 2003).

Research Question 2:

a) Do variations in sex role identity relate to variations in levels of job satisfaction?

Again, it was hypothesised that the positive identities would present with higher total job satisfaction scores. Positively androgynous individuals were expected to yield the highest level of total job satisfaction, with negatively androgynous and negatively feminine individuals expected to yield the lowest JS scores. Again predictions could not be made regarding undifferentiated individuals as explained above.

Research Question 3:

a) Is there a relationship between emotional intelligence and job satisfaction?

One expected to find a significant relationship between EI and JS, due to the fact that JS is made up of external and internal constituents, as explained earlier; and EI may be one of the internal components contributing to one's JS score. One constituent may be job industry, and therefore due to the fact that the sample consisted of South African employees from various industries, the variation due to this factor alone might decrease the appearance of the

relationship between EI and JS. Past research has illustrated a moderate relationship between EI and JS (Bar-On, 1997).

Research Question 4:

a) Is there an interactional relationship between sex role identity, emotional intelligence and job satisfaction?

This relationship was purely exploratory and relied on the relationships proposed above between SRI and EI as well as SRI and JS. One expected that if there were relationships observed between the relationships mentioned above, there might have been an interactional effect of SRI and EI on JS. The specifics pertaining to the research design of the study are explained below.

2.4 Research Design

The study was cross-sectional, as the questionnaire completed by the participants was only conducted at one point in time; measuring participant's responses at the time when they completed the questionnaire (Stangor, 2010). There was no need to conduct the study as a longitudinal study as one's sex role identity is suggested to be crystallised in adulthood and all participants were above the age of 18 years of age (Kohlberg, 1966; Martin & Ruble, 2004). The study was also non-experimental. Non-experimental designs are typically described as designs that do not allow manipulation of the variables in question, which was characteristic of the current study as the variables (SRI, EI & JS) were not manipulated in any way (Lammers & Badia, 2005). The design was ex-post facto, as participants were not assigned to specific groups before hand, but rather analysed and categorised after the collection of data. Between-subject analysis was conducted, as each participant was analysed in comparison to another and no measurements within the same individual were compared.

The research design of the current study was therefore classified as quantitative, cross-sectional, and non-experimental in nature. It was also considered to be ex post facto, exploratory, and between subjects (Huck, 2012; Stangor, 2012). The basic sample statistics are described below, with further elaboration in the *results* section.

2.5 Sample

The sample consisted of male and female employees across managerial levels within a number of organisations and industries in South Africa. The final sample size of 595 participants was obtained through organisational access, the Wits Plus sample and through snowball sampling, resulting in a non-probability convenience sample. The sample was also diverse as it consisted of individuals of differing sexes, races, languages and educational backgrounds.

The methodological procedure of the gained participants is elaborated on below.

2.6 Procedure

Organisational Sample

The complete questionnaire took approximately 30 minutes to complete and contained a *Participant Information Sheet* (Appendix B), as well as the *Demographic Questionnaire* (Appendix C), the EPAQ-R (Appendix D), SSREIT (Appendix E) and the JSS (Appendix F). The *Organisational Cover Letter* (Appendix A) was sent out to organisations to encourage their staff to participate in the research.

After permission was requested and granted by the respective individual within the organisation, participants were then advised of the opportunity to participate via an email sent by the individual within the organisation. The individuals who chose to participate received the encrypted link from a centralised individual within the organisation. The IP addresses of each participant within the organisation were deleted to prevent tracking results back to an individual who completed the survey, thus ensuring anonymity and confidentiality. This method of participant involvement was not utilised in its entirety as individuals who worked for particular organisations, passed the links on to other potential participants via snowball sampling, as has been elaborated on below.

Snowball Sample

The link to the questionnaire on Survey Monkey was also shared via social media platforms such as Facebook and LinkedIn. The link included *The Participant Information Sheet* (Appendix B) as well as the rest of the questionnaires (Appendix C to F) described in the

organisational sample description above. Individuals who chose to participate passed the link on to colleagues and other potential participants.

Wits Plus Sample

The Wits Plus participants were students who typically study part-time in the evening, in order to work full-time during the day and therefore these individuals were employed and thus met the requirements to participate in the study, as a sample of employees was needed.

The research on the Wits Plus sample was conducted with another Masters student, due to the administration of a similar questionnaire and therefore the instruments from the current research and the other Masters student was combined to form one questionnaire. Given that this questionnaire contained instruments from two studies, the questionnaire took approximately 45 minutes to complete and students were awarded 2% for participating in the study, and an additional 1 % for forwarding the questionnaire to colleagues. *The Wits Plus Participation Sheet* (Appendix H) allowed for students to record their student number and for a unique participant number to be allotted to each participant. To preserve their identity and their student number, the student had to fill in this participant number on their questionnaire.

After permission was requested and granted from the Course Coordinator, to contact the Wits Plus students (Appendix G), the researchers approached them in order to explain the nature of the study and to elaborate on their choice to participate. Students who chose to participate were able to do so via two different means.

The Wits Plus students had the option to respond via hardcopy or electronically.

Hard Copy Submission: Students who chose to participate via hard copy had the *Wits Plus Participant Information Sheet* (Appendix H) handed to them with the instructions regarding the participation process. Students were required to read page one and two of the *Wits Plus Participation Sheet*, and if the student still wished to participate, the student's student number and unique participant number was indicated on page three. Page three was then handed back to one of the researchers while the participant kept page one and page two. The participant was then handed a questionnaire and given approximately 45 minutes to complete it, after which the participant placed the questionnaire into a sealed box.

Electronic Submission: If the student chose to participate through Survey Monkey, the student was once again handed the *Wits Plus Participant Information Sheet* (Appendix H), which had the details pertaining to the electronic submission process, including the link whereby one could access the questionnaire online.

To earn an additional 1%, the participant was asked to forward the link to 10 colleagues outside of their Wits Plus class. The student was then asked to forward the link, leading to the questionnaire, in an e-mail with a message that was included in the *Wits Plus Participant Information Sheet* (Appendix H). The students were asked to also request that their colleagues quote their participant number in order to allocate the participation marks. The student was allocated the additional 1% when at least one completed questionnaire was received with their participant number on it. Student numbers and percentage allocations were handed to the course coordinator for course credit allocations only, with no results of any individual student.

No individual results were disclosed to any individual or organisation but the participants and participating organisations will have access to summarised results of the study, which will be available at www.witsresearch.blogspot.com.

2.7 Instruments

2.7.1 Demographic questionnaire.

The demographic questionnaire consisted of eight items (8) which requested the participants to provide information regarding their age, gender, race, language, marital status, level of education, job level and job industry (Appendix C). The questions relating to age and job industry required the participants to provide a short answer, while the remaining demographics required the participant to tick their preferred choice.

The only instance that involved the utilisation of identifying information was with regard to the *Wits Plus Sample*, as such individuals had to supply student numbers in order to assign them course credits for participation. In spite of the *Wits Plus sample* exception, where student numbers were requsted, no identifying information, such as identity numbers, personal names, or company information, was requested and therefore anonymity and

confidentiality was maintained. Confidentiality and anonymity was further maintained as only the researcher and supervisor had access to the raw data.

2.7.2 Revised extended personal attributes questionnaire (EPAQ-R).

The fifty-nine (59) item scale was utilised and contained a list of adjectives, constructed according to expected sex-typed behaviours, which were attributed to certain subscales; namely positive masculinity, negative masculinity, positive femininity, and negative femininity (Appendix D). Each item was measured on a scale from one (1) to five (5), where one typically indicated a smaller degree with which one associated themselves with a particular sex role identity trait and a score of five indicated that an individual felt that they exhibited the respective trait to a greater extent. There were twelve positive masculine items, twelve positive feminine items, fifteen negative masculine items, and twenty negative feminine items, resulting in fifty-nine (59) traits, as indicated in table 1 (page 46) (Bernstein, 2013). Each item consisted of a particular adjective, which was measured on a continuum with bipolar opposites, suggesting that one could not associate with a particular item at a low and a high level at the same time; forcing the participant to make a decision as to their identification on a scale from one to five. The EPAQ-R differs from the EPAQ, as some of the items from the EPAQ were adapted and re-categorised which resulted in the formation of the EPAQ-R (Bernstein, 2013). Items were also added to the EPAQ-R in order to ensure that the correct construct under study within each subscale was being fully explored (Bernstein, 2013). The EPAQ-R data was then transformed into z-scores, classifying the participants into one of seven different categories namely positive androgyny (A+), negative androgyny (A-), positive masculinity (M+), negative masculinity (M-), positive femininity (F+), negative femininity (F-), and undifferentiated (Au). Participant's z-scores that were above 1.0, positively or negatively, on either of the masculinity or the femininity scales, were categorised as M+, M-, F+, or F- based on which of their z-scores had the highest value. Participants who identified with all four z-scores above or below zero were considered to fall under an undifferentiated identity. Lastly, individuals were classified as positively and negatively androgynous if one obtained a set of z-scores above 1.0 for both M+ and F+ (positive androgyny) or M- and M- (negative androgyny) respectively .

The EPAQ-R has been tested on South African samples and previous research has yielded high reliability scores as recorded in the table on the following page (Table 2). Various

studies have been conducted, which all scored above the minimum acceptable level of 0.60 for a Cronbach Alpha Score, illustrating a good internal reliability of the EPAQ-R subscales (McKennel, 1970).

Table 1

Summary of the Items Distributed Across SRI Categories

EPAQ-R Subscale	***Items***
Positive Femininity	12, 16, 17, 22, 24, 27, 31, 36, 45*, 49, 52 & 58
Positive Masculinity	14, 18, 19*, 34, 35, 37, 39, 43, 44, 46, 47 & 57
Negative Femininity	2, 3*, 5, 6, 9, 10, 13, 15, 20, 23, 25, 28, 29, 30, 33, 41, 53,54, 55 & 56*
Negative Masculinity	1, 4, 7, 8, 11, 21, 26, 32, 38, 40, 42, 48, 50, 51 & 59

*Reverse Scored Items

The table above (Table 1) reflects the sex role identity items that belong to each particular EPAQ-R subscale.

The Cronbach Alpha scores of the respective variables is tabled below (Table 2)

Table 2

Cronbach Alpha Scores Previously Obtained for the EPAQ – R

Research Conducted	**EPAQ-R Subscale**	**Cronbach Alpha Score**
Bernstein (2013)	M+	0.83
	M-	0.85
	F+	0.85
	F-	0.81
Chemaly (2012)	M+	0.76
	M-	0.83
	F+	0.79

	F-	0.83
Chemaly (2013)	M+	0.83
	M-	0.88
	F+	0.88
	F-	0.90
De Freitas (2013)	M+	0.82
	M-	0.86
	F+	0.79
	F-	0.86
Soloman (2013)	M+	0.79
	M-	0.85
	F+	0.79
	F-	0.79

The Cronbach Alpha scores observed in the table on the previous page illustrate that all the scales had acceptable levels of internal consistency, within the social sciences, as all the Cronbach Alpha values are well above 0.60 (McKennel, 1970).

2.7.3 Schutte's self report emotional intelligence test (SSREIT).

The thirty-three (33) item scale was developed to measure the self-reporting of trait emotional intelligence in congruency with the definition of emotional intelligence as discussed when defining EI; the appraisal and expression, regulation and utilisation of emotion (Appendix E) (Schutte *et al*., 1998). An example of one of the items was, "I know when to speak about my personal problems to others" (Item 1), which ranges from one (1) (strongly disagree) to five (5) (strongly agree). The total emotional intelligence score ranged from thirty-three (33) to one-hundred-and-sixty-five (165). Items 5, 28 and 33 needed to be reverse scored when adding up the total emotional intelligence scores. Higher scores indicated a higher level of emotional intelligence, while lower scores indicated a lower score of EI.

The Schutte Self-Report Emotional Intelligence Test (SSREIT) is a self-report measure, commonly used for testing *Trait EI*, as it is the leading brief scale in use due to its freely available public access and relative shortness compared to other EI instruments such as the EQ-i and the Bar-on (Mayer *et al.*, 2000a). The developers of the SSREIT claim that the SSREIT's EI model is based on the EI fundamentals developed by Salovey and Mayer (1997), as the SSREIT taps into several central components of Salovey and Mayer's EI model (1997) as well as other EI models (Goleman, 1995; Bar-on, 1997). The difference between the SSREIT and the model proposed by Salovey and Mayer (1997) is the fact that the SSREIT measures self-report traits rather than objective abilities (Schutte & Malouff, 1999). Due to the lack of consistency in defining EI, and the subsequent inconsistency regarding the exact contributors to EI, the factor structure of the SSREIT EI scale has thus been questioned through various studies mentioned above. In the original study, Schutte and colleagues (1998) proposed that a single major factor (uni-dimensional measure) existed within the factor structure of the SSREIT, which represented general or total EI (1997) (Bracket & Mayer, 2003; Ng, Wang, Kim & Bodenhorn, 2010). Out of a total of sixty-two (62) items, in the original study, the thirty three (33) items that loaded the highest on the first factor were selected, in order to create the uni-dimensional scale measuring 'total EI' (Schutte *et al*., 1998). Other researchers that have investigated the factor structure of the SSREIT have suggested that three (3) factors exist within the scale, namely appraisal and expression of emotion in self and others, regulation of emotion in self and others and the utilisation of emotion in solving problems (Austin *et al.*, 2004; Chapman & Hayslip, 2005). However, most of the researchers have uncovered a four (4) factor model within the SSREIT, specifically referring to appraisal of emotion in self and others, utilisation of emotion in solving problems, optimism or mood regulation and social skills (Chan, 2003; Ciarochi *et al*., 2002; Palmer, 2003; Petrides & Furnham, 2000; Murphy, 2006; Saklofske *et al*., 2003). Gignac and Colleagues (2005) propose that inconsistencies encountered in the factor structure of the SSREIT exist due to the method of analyses which was run by Schutte and colleagues (1998) on the original sixty-two (62) item scale, as a principal component analysis was run using an orthogonal rotation instead of an oblique rotation, in attempting to determine the primary factor structure and the number of possible factors (Gignac, Palmer, Marocha & Stough, 2005; Petrides & Furnham 2000a). In retrospect, the researchers in the original study, which began with sixty-two (62) items, should have conducted an oblique factor rotation as proposed by various researchers (Gignac *et al.*, 2005; Petrides & Furnham 2000a). It is believed that if an oblique analysis were conducted in the original study, a more

prominent factor structure may have been identified and may have prevented the inconsistencies and instability of the current SSREIT factor structure observed today on the thirty-three (33) item scale. By testing the thirty-three (33) item scale on South African samples, Murphy (2008) and Ramsden (2013) conducted Oblique Rotations and established a similar four-factor model to that found by Petrides and Furnham (2000a) and Ciarrochi and colleagues (2002) who used an Orthogonal Rotation Method. The Oblique Rotation was suggested for the original 62-item study and not for the subsequent 33-item scale (Ciarrochi *et al.,* 2002; Petrides and Furnham, 2000a).

The factor structure of the SSREIT has varied, from a three (3) to a four (4) factor structure, in previous studies, and therefore an exploratory factor analysis of the SSREIT was conducted, using an Orthogonal Rotation method, in order to explore the factor structure of the SSREIT in the current study (Chan, 2003; Ciarrochi, Deane & Anderson, 2002; Gignac, Palmer, Manocha & Stough, 2005; Hakanen, 2004; Jonker & Vosloo, 2008; Murphy, 2006; Murphy, 2008; Ng, Wang, Kim & Bode horn, 2010; Palmer, 2003, as cited in Murphy, 2006; Petrides & Furnham, 2000; Saklofske, Austin & Minski, 2003).

After establishing the factor structure of the SSREIT scale in the current study, the total EI scores and subscale scores were used for statistical analysis purposes such as when conducting analyses in comparing EI scores and SRI. The factor structure of the SSREIT was therefore explored in order to contribute to EI research, and for the purposes of comparative analyses in this study, by identifying the best structure and possible fit of the items to determine which subscales made up the structure of the SSREIT.

The factor structure of the SSREIT, which has been explored on South African samples, appeared to follow the hierarchical four factor model in the following order of complexity; the appraisal of emotions, the utilisation of emotion, optimism and social skills, which are suggested to contribute to the total EI of an individual (Murphy, 2008; Ramsden, 2013). Therefore, although a four-factor model has been found when conducting the SSREIT on South African samples, the four-factor model has not yet been proposed as the official factor structure of the SSREIT in South Africa or abroad. Although not part of the research questions of the present study, the researcher aimed to determine if the four-factor structure proposed for the SSREIT, was indeed evident in the present study's sample. Therefore an exploratory factor analysis was conducted and a discussion of the statistical analysis, as well

as the results that were undertaken in this regard, are presented in the appendix (Appendix K).

Despite the problematic factor structure of the SSREIT, the instrument has yielded good Cronbach Alpha scores in studies conducted in South Africa, as well as other contexts, as can be observed in the table on the following page, and it is therefore said to be reliable for measuring *trait emotional intelligence* in adults and adolescents (Murphy, 2008; Petrides & Furnham, 2000; Ramsden, 2013; Schutte *et al*., 1998).

Table 3

Cronbach Alpha Scores Obtained for total emotional intelligence Scores

Research Conducted	Total EI Cronbach Alpha Score
Austin, Saklofske, Huang & McKenney (2004)	0.84
Murphy (2008)	0.89
Ng, Wang, Kim & Bodenhorn (2009)	0.84
Ramsden (2013)	0.90
Saklofske & Colleagues (2003)	0.90
Schutte & Colleagues (1998)	0.87 - 0.90
Stone (2004)	0.91

As can be observed above, all of the studies yielded extremely high Cronbach Alphas scores indicating a high level on internal consistency and reliability of the instrument.

The Cronbach Alpha's for the proposed EI subscales were recorded below, as per the study on two South African studies by Murphy (2008) and Ramsden (2013) respectively.

Table 4

Cronbach Alpha Score*s for the SSREIT Subscales for South African Samples*

EI Subscale	Cronbach Alpha Scores	
	Murphy (2008)	**Ramsden (2013)**
appraisal	0.72	0.65
utilisation	0.74	0.68
optimism	0.82	0.86
social skills	0.75	0.79

All of the Cronbach Alpha scores as displayed in the table above, appeared to meet the minimum cutoff of 0.60 and therefore present with moderate to high Cronbach Alpha scores and subsequent reliability (McKennel, 1970).

2.7.4 Job satisfaction survey (JSS).

The Job Satisfaction Survey Scale consists of thirty-six (36) items, attributed to nine subscales, which measured different facets of job satisfaction; specifically measuring employees' attitudes about aspects relating to their current job (Appendix F) (Spector, 1985). The nine (9) facets were Pay, Promotion, Supervision, Fringe Benefits, Contingency Rewards, Operating Procedures, Co-workers, Nature of Work, and Communication. The facet scores are combined to calculate a total job satisfaction score. Each item is scored from one (1) (Disagree very much) to six (6) (Agree very much) on a Likert type scale. Nineteen (19) of the items were reverse scored namely items 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21, 23, 24, 26, 29, 31, 32, 34, 36. Each subscale has four (4) items which contributed to the respective total subscale score, therefore scores for each subscale ranged from four (4) to twenty-four (24); while scores for total job satisfaction, could range from thirty-six (36) to two-hundred-and-sixteen (216) (Spector, 1985; Blood *et al*., 2002). The total scores of each subscale will be added to indicate a total level of job satisfaction for each participant.

The internal consistency reliabilities for each subscale and total job satisfaction for the original study are as follows: pay (0.75), promotion (0.73), supervision (0.82), fringe benefits

(0.73), contingency rewards (0.76), operating procedures (0.62), co-workers (0.60), nature of work (0.78) and communication (0.71), resulting in a total job satisfaction internal consistency of 0.91 (Spector, 1985). Only the total job satisfaction scores were analysed in the current study and the reason for this will be explained in the limitations of the research. Some studies relied on the internal consistency scores produced by Spector (1985; 1997) such as studies done by Blood and colleagues (2002) and research done by Côtè and Morgan (2002), while other researchers have calculated Cronbach Alpha scores for their respective studies as observed in the table on the following page.

Table 5

Previous Cronbach Alpha Scores Obtained for Total Job Satisfaction

Research Conducted	**Total Job Satisfaction Cronbach Alpha Scores**
Bruck, Allen & Spector, 2002	0.91
Kim, Murrmann & Lee, 2009	0.83
Spector, 1985	0.91
Spector, 1997	0.72

The JSS has been used across disciplines and therefore was applicable for use in this study due to the variety of industries from which the sample has been gathered (Blood, Ridenour, Thomas, Qualls & Hammer, 2002).

Following the descriptions of the respective instruments, the different statistical analyses will be explored on the following page.

2.8 Statistical Analysis

Various statistical analyses were conducted in order to answer the research questions proposed throughout the study.

The following techniques were used for the purposes of this study:

2.8.1 Exploratory Factor Analysis

2.8.2 Descriptive Statistics

2.8.3 Cronbach Alpha Coefficients

2.8.4 Pearson's Correlation Coefficient

2.8.5 Analysis of Variance (ANOVA)

2.8.5.1 One-way ANOVA

2.8.5.2 Two-way ANOVA

2.8.1 Exploratory factor analysis.

2.8.1.1 Introduction.

Research done in South Africa suggested that a four-factor EI model was best suited to the South African population, which has been confirmed by two studies by Murphy (2008) and Ramsden (2013). Both researchers used the Oblique Extraction method, however, due to the suggestion by other researchers to use an Orthogonal Varimax Rotation, an Orthogonal Varimax Rotation was explored (Ciarochi *et al.,* 2002; Murphy, 2008; Petrides & Furnham, 2000a; Ramsden, 2013). Due to the contested factor structure of the SSREIT, not only across the globe but also in South Africa, it was necessary to conduct an exploratory factor analysis to determine which factors make up total EI.

2.8.1.2 Sample size.

Comrey and Lee (1992), as well as MacCallum and colleagues (1999), proposed that a sample size of more than 500 participants is a good rule of thumb when conducting an exploratory factor analysis.

2.8.1.3 Extraction techniques.

When conducting an exploratory factor analysis, there are various techniques that may be used to extract factors. However, due to the extensive analyses carried out by Murphy (2008) in determining the factor structure on a South African context as well as the suggestion that a four-factor model exists, only the necessary techniques were utilised to extract factors from the analyses; namely the Kaiser (1960) Eigenvalue-greater-than-one rule, Cattell's (1966)

Scree Test and Proportion of Variance Explained. The rotated matrix was then used to determine which factors belong to the respective subscales.

2.8.1.3.1 The Kaiser (1960) eigenvalue-greater-than-one rule.

This technique involves analysing the Eigenvalues by counting the amount of Eigenvalues which are above 1, however this technique may lead to under-factoring due to the broad rule of thumb to exclude factors which are just below 1, even if the factor displays a score of 0.99 despite its closeness to 1 (Fabrigar, Wegener, MacCallum & Strahan, 1999). Therefore, this factor extraction technique should not be used alone to make factor extraction decisions. A larger Eigenvalue cutoff can be adopted, if there is supportive literary and statistical data.

2.8.1.3.2 Cattell's (1966) scree test.

In making decisions regarding extraction of factors, the Scree test has shown to assist with this (Cattell, 1966). The eigenvalues are plotted on a scree plot from largest to smallest. The researcher is then expected to assess the scree plot to determine where the last substantial drop in magnitude occurred. The number of plotted points before the last drop in magnitude, should then be counted, illustrating an indication of the number of factors (Cattell, 1966).

2.8.1.3.3 Proportion of variance explained.

The proportion of variance explained by the respective components assists in deciding on how many factors to extract. By assessing the variance explained for each component, the researcher is able to determine which factors significantly contribute to the differences in observations in the data and therefore make informed decisions regarding the possible number of factors to extract. The variance explained for each component can be added to determine the total variance explained by the respective set of chosen factors. The number of factors can be determined by assessing the magnitude of the variance explained by the respective components, as well as assessing where the variance scores start to level off.

2.8.1.3.4 The rotated matrix.

When using the Orthogonal Rotation method, one assesses the rotated matrix produced by the statistical program in order to determine which items load on the respective factors. One expects to find fairly low to moderate item communalities or factor loadings on the respective factors, which is expected in the social sciences realm (Costello & Osborne, 2005). However, factor loadings of below 0.32 are considered to be too low and therefore all factor loadings should be above 0.32 in order to be considered as loading on a respective factor (Costello & Osborne, 2005; Tabachnick & Fidell, 2001).

2.8.1.3.5 Conclusion.

When extracting factors, the statistical techniques above as well as the theoretical models proposed by previous research was considered. The exploratory factor analysis, as described above, was necessary; in order to establish the factor structure of the SSREIT on a South African sample. The results of the exploratory factor analysis, with an Orthogonal Varimax Rotation, are are reported on in the appendix (Appendix K)

2.8.2 Descriptive statistics.

Frequency counts were conducted in order to determine biographical information, which was used to describe the sample and comment on the patterns observed between particular categories in the discussion. The eight questions which were analysed using frequency counts included those which requested the participant to indicate their age, gender, language, race, marital status, level of education, job level and job industry. Some of the results, of the respective questions, were used to determine generalisability of the present study as well as to make comparisons to previous demographic analyses conducted in other studies; which is examined further in the discussion.

2.8.3 Cronbach alpha coefficients.

This technique is suggested to assess the degree of similarity between the test items, measuring the degree to which each item positively correlates with another in contributing to a particular scale or subscale. This approach is considered to be common practice and is

required when administering an instrument once off in a particular study, or when the items are not dichotomously scored. This technique was deemed appropriate for the current study as the administration of three instruments namely the EPAQ-R, the SSREIT and the JSS, were administered once in this study and therefore needed to be analysed not only for this study, but to compare to other similar studies. Although researchers such as Nunnaly and Bernstein (1994) suggest that a more stringent cut-off of 0.70 should be adopted for research purposes, McKennel (1970) suggested that 0.60 is an acceptable cut-off level for social science research. Due to the study focusing on constructs in the social sciences realm, an acceptable cut-off of 0.60 was adopted. Any Cronbach Alpha Coefficient scores lower than 0.60 were not deemed acceptable for further testing; and therefore further analysis was not conducted on scales or subscales that presented with Cronbach Alpha scores lower than 0.60. Whilst scores too low (below 0.60) are considered to be unacceptable for research purposes, it must also be noted that scores too close to 1.0 are suggested to be redundant as the items are then said to measure the same thing.

The Cronbach Alpha Coefficients were analysed for each subscale of the EPAQ-R and EI as well as for total EI and total JS.

2.8.4 Pearson's correlation coefficients.

Pearson's Correlation Coefficients were used to analyse the relationships between the SRIs, the relationships between the SRIs and the respective dependant variables (EI and JS) as well as to analyse the relationships between the variables as mentioned in research question three; measuring the relationship between total EI and total JS. The Pearson's Correlation Coefficient is defined as the degree of the "relationship between variables" and the coefficient of this indicates "a measure" of this relationship (Howell, 2008, p.171). This technique was thus used to determine whether or not there was a significant relationship between EI and JS.

Correlation coefficients are typically based on a statistical term called covariance, which can be defined as "any number that reflects the degree to which two variables vary together" (Howell, 2008, p 180). In Pearson's Product-Moment method, the covariance is divided by the standard deviations obtained to provide an estimated result of the correlation (Howell, 2008). The correlation coefficient obtained indicated a value on a scale that exists between -

1.00 and +1.00. When carrying out this technique, the closer the values to either of the above given limits, the stronger the relationship between the two variables was considered to be (Howell, 2008). Evans (1996) proposed that a value of 0.00 to 0.19 is considered to suggest a very weak relationship between the two variables, 0.20 to 0.39 suggests a weak relationships, 0.40 to 0.59 proposes a moderate relationship, 0.60 to 0.79 suggests a strong relationship while 0.80 to 1.00 illustrates a very strong relationship. Howell (2008), stated that one should not draw causal conclusions regarding the variables, because a correlation does not imply causation due to the fact that a correlation does not establish temporal precedence (i.e. that variable x preceded variable y) (Howell, 2008).

The Pearson's product-moment correlation coefficient was conducted based on the variables meeting the following assumptions (Howell, 2008):

(i) A linear relationship must exist between variables x and y;
(ii) Random independent sampling was required;
(iii) Variables must be continuous and randomly distributed;
(iv) Both variables must be normally distributed;
(v) Both variables must be at least interval in measure;
(vi) Variables x and y must be independent of each other;
(vii) Homogeneity of variance must be present.

Although the assumption of random sampling cannot be guaranteed completely, every individual in the target population, did in fact have access to a computer and the Internet and could therefore participate and subsequently had an equal chance of contributing to the study. Although randomness was not completely satisfied, one can assume that this assumption has been met in its best possible administration of the survey; due to the assumption's limitations in terms of practicality. Independence of observations can be assumed; as the all participants whom completed the surveys only have one set of scores and were therefore only sampled once. Some surveys may have been completed by individuals whom work for the same organisation, but this does not imply that the individuals, or their responses, are linked in any way therefore one could assume that the observations are independent. The dependant variable, EI, was recognised as interval data as each item demonstrates a numerical value, logical order when relating to another response and finally an equal distance between each observation.

This technique was used to analyse research question 3 and it must be noted that unlike the ANOVA, which utilises standardised z-scores in determining results, the correlation analyses used the unstandardised, "raw" scores. Once all the assumptions of the test were met, the Pearson's correlation was conducted.

2.8.5 Analysis of variance (ANOVA).

The ANOVA is a statistical technique which uses ratios of variances to determine whether or not the means of a variable differ from one group to another for reasons other than that pertaining to sampling error (Kerlinger, 1981; McCall, 1990). Techniques associated with the ANOVA determine this by partitioning the variability within the total sample into a portion that highlights the differences between the means of the sample groups and a portion that is not influenced by the differences in these means (Howell, 2008). This partitioning of variability is conducted in such a manner that the two estimates of the variance of the scores in the population are calculated (Howell, 2008). These estimates are referred to as "between group variance', which are determined from the deviation of the means from the grand or total mean, that is, the means of all the scores in the total analyses (Howell, 2008). "Within group variances" are also assessed, which describes the deviation of scores within each group from the sample means (McCall, 1990). The ANOVA is based on the concept of the sum of squares, which refers to the deviations from the mean, which are then squared and added together or summed (Howell, 2008). To determine variance estimates from between and within group sum of squares, one divides each by the appropriate number of degrees of freedom which is calculated by adding the number of cells and subtracting that number, by one, in order to work out the between group variance but the within group variance is determined by calculating the total number of the sample (N) minus the number of cells (Runyon & Haber, 1980). The F-ratio, as termed as Fischer's F-distribution, which is then calculated to determine whether the two variance estimates are drawn from the sample population (Runyon & Haber, 1980). The F-ratio compares the 'between group variance estimate' with the 'within group variance estimate' (Runyon & Haber, 1980). If the between group estimate is large then the F-ratio is considered to be large, suggesting a significant difference among the group means (Howell, 2008).

Conversely, if the between group estimate is small, then the F-ratio is small and a no significant difference among the group means is considered to exist (Howell, 2008). If the

obtained F-ratio is greater than or equal to the appropriate table entry, the difference between the means is considered to be statistically significant (Howell, 2008). In this case the null hypothesis, which suggests that there are no differences between the means, is rejected at the chosen significance level (typically 0.05, which was the level of significance utilised throughout the present study). While a significant F-value does demonstrate a significant difference among groups, it does not specify between which groups these differences occur. To investigate specific hypotheses concerning population parameters, one can use post hoc comparisons to give a more detailed account of the differences as used in this study (Runyon & Haber, 1980).

When conducting an ANOVA, as mentioned, one needed to look at the post hoc tests in order to analyse the data in a more complex way. In the present study post hoc comparisons were analysed but only focused on in the event that a significant result was obtained (a significant F-ratio). The Honestly Significant Difference (HSD) post hoc test was used to establish which group means differed across the groups, after a significant F-ratio was found. The one-way ANOVA is carried out when one is investigating the differences in means between a single categorical, independent variable, with two or more levels, and one, interval dependant variable.

A two-way ANOVA involved two independent variables. Each independent variable or factor was made up of two or more elements called levels (Huck, 2009). ANOVA's are used to establish if there are differences in levels of an independent variable when taking into consideration the effect of the dependant variable. In the current study, for the purposes of question one, and two, SRI will be an independent variable while EI and JS will be dependant variables. When answering question four, SRI and EI are considered independent variables and job satisfaction is considered to be the dependent variable.

As mentioned above, sex role identity originally consisted of seven categories namely; positive femininity, negative femininity, positive masculinity, negative masculinity, positive androgyny, negative androgyny and undifferentiated. For the purposes of this study, only six of the categories were used for analysis, i.e. positive femininity, negative femininity, positive masculinity and negative masculinity, positive androgyny and negative androgyny, due to the insufficient number of participants in the undifferentiated category; which would result in cell sizes being smaller than five observations per cell, which is an assumption which needed

to be met when dealing with one-way and two-way ANOVAs. When analysing question four, EI was converted into a categorical variable using the median split method thus changing the interval data into scores of high or low EI. The median for EI was one-hundred-and-twenty-nine (129) and therefore any scores below one-hundred-and-twenty-nine (129) were marked as low while scores above one-hundred-and-twenty-nine (129) were marked as high. The ANOVA was therefore said to be a 2 x 6 two-way ANOVA.

In summation, question 1 (SRI and EI) was answered using five (5) one-way ANOVAs while question 2 (SRI and JS) was answered using a single one-way ANOVA. Furthermore, question 4 (EI, JS and SRI) was answered using a two-way ANOVA. In order to use the ANOVA as a statistical technique, it was important to ensure that the assumptions of the ANOVA test had been met.

For both one-way and two-way ANOVAs, a number of underlying assumptions had to be met. The assumptions, as per McCall (1990), deemed applicable to both the one-way ANOVA and two-way ANOVAs include:

(i) Normal distribution of the data, that is, the assumption of normality;
(ii) Equality of variance between the groups, that is, the assumption of homogeneity of variance;
(iii) Random selection of the sample from the population, that is, random sampling;
(iv) Statistical independence of the groups of scores that are to be analysed, that is, independence of observations;
(v) The dependent variables are at least interval in measure.

In addition, for two-way ANOVA, it was important that there be at least five observations present within each cell, or intersection, of the two independent variables in order for the analysis to yield useful results (Huck, 2009).

Normality needed to be assessed and was done so by examining skewness coefficients and kurtosis values. Levene's test for Homogeneity of Variance was used to determine whether the variances were equal between the groups. The scores for each EI scale as well as total EI and total JS were interval in nature, except for question 4 where EI was converted to a categorical, dependant variable.

2.8.5.1 Skewness coefficients and kurtosis.

Skewness coefficients were calculated to determine if the data relating to sex role identity, emotional intelligence and job satisfaction were in fact normally distributed or not. According to Huck (2009), if skewness values lie between +1 and -1, this is indicative that the distribution is sufficiently normal for the purposes of parametric procedures, on condition that the other conditions for parametric testing are met, such as, random, independent sampling, the dependent variables being at least interval in measure, and that there is homogeneity of variance (Huck, 2009). The kurtosis values were also analysed, and were expected to lie between -1 and +1.

2.8.5.2 Levene's test for homogeneity of variance.

Levene's test for homogeneity of variance was used to assess the variances for each of the statistical analyses conducted. A non-significant result would be favourable in suggesting that the sample is normal and therefore parametric testing, such as the use of the ANOVA, would be conducted. If the Levene's tests were found to be significant, depending on the other normality data, either a robustness test would be conducted if this was the only criterion that did not meet the required assumptions of the statistical analyses proposed. However, if more than one assumption criterion was violated, a Kruskal-Wallis ANOVA would have been conducted to analyse the data, as it is a non-parametric equivalent to the traditional ANOVA.

2.8.5.3 Random sampling and independence of observations.

Although the assumption of random sampling cannot be guaranteed completely, every individual in the target population, being working individuals in South Africa, did in fact have access to a computer and the Internet and could therefore participate and subsequently had an equal chance of contributing to the study. Although randomness was not completely satisfied, one can assume that this assumption has been met in its best possible administration of the survey; due to the assumption's limitations in terms of practicality. Independence of observations can be assumed, as all the participants who completed the surveys only have one set of scores and were therefore only sampled once. Some surveys may have been completed by individuals whom work for the same organisation, but this does not imply that the individuals, or their responses, are linked in any way therefore one can assume that the

observations are independent. The dependant variables, emotional intelligence and job satisfaction, are recognised as interval variables and therefore meet one of the assumptions expected in order to conduct parametric testing.

Once the assumptions underlying ANOVA were met, the two-way ANOVA, as described above, was carried out. If significant findings were found, if there were significant differences between group means for the other variables on the basis of the sex role identity groups, then Cohen's D for effect size was inspected to determine the degree of effect size for such findings.

2.8.5.4 Cohen's d effect size statistic.

Effect sizes for significant parametric ANOVAs were calculated using the Cohen's d statistic (Huck, 2009). According to Cohen (1969; 1988) effect sizes of less than or equal to 0.20 are considered to be small, those that are greater than 0.50 are considered to be moderate, and greater than 0.80 are considered to be large. However, there are ranges to these typical cut-offs, meaning that if an effect size fell between 0.25 and 0.45, one could suggest a small to moderate effect size. Cohen's d is calculated by dividing the difference between two population (group) means by the standard deviation of either population (group) (Howell, 1999). Cohen's d values were only calculated for relationships, which were considered to be statistically significant.

2.8.4.5 Conclusion.

In the present study, a series of one-way ANOVAs and a two-way ANOVA was conducted.

Research question one was analysed using one-way ANOVAs in order to establish whether there were differing emotional intelligence scores between the different sex role identities as SRI was a categorical, independent variable with individuals identifying with one of seven possible SRI's, while emotional intelligence was an interval, dependent variable.

Research question two was also analysed using a one-way ANOVA in order to determine whether there were differences in the levels of total job satisfaction between the differing sex role identities. Again SRI was categorical and defined as the independent variable in this

analysis. Total job satisfaction scores were interval in nature; and noted as a dependent variable for the purpose of the proposed analyses.

Research question four was analysed using a two-way ANOVA due to the presence of two categorical, independent variables, sex role identity and emotional intelligence respectively, as well as the presence of an interval, dependent variable; total job satisfaction. The differing levels of emotional intelligence and job satisfaction in relation to alternative sex role identities, therefore suggesting the need to investigate the interactional relationship between SRI, EI and JS. Emotional intelligence was measured as an interval variable in research question one due to the numerical nature of emotional intelligence but for the purpose of question four, emotional intelligence was divided into levels of high, medium and low levels therefore transforming the interval data into categorical data using a percentile split method.

2.8.6 Conclusion.

A number of statistical techniques were used to analyse the data as question 1, 2 and 4 were analysed using ANOVAs and question 3 was analysed using a Pearson Correlation. Before the techniques were conducted, the assumptions of each of the tests was analysed in order to continue with the statistical test. The respective elements associated with each statistical technique was followed through as described for each of the techniques above; which was followed by the interpretation of the results.

2.9 Ethical Considerations

Ethical clearance was obtained through the Human Research Ethics Committee of the University of the Witwatersrand (Appendix I). Once clearance was obtained, the complete survey was available electronically, and distributed as explained in the methodological procedure of the current study, as explained above. The questionnaire was made available in hardcopy for Wits Plus students.

The purpose of the research, anonymity, and strict confidentiality is included in the cover page to ensure that the participants felt comfortable in participating in the research and to instill a sense of confidence in the anonymity and confidentiality of their responses.

Anonymity was ensured, as no identifying information was requested. Confidentiality was upheld as only the current researcher and the supervisor had access to the data, which was not shared or distributed under any circumstances. The Wits Plus data obtained was available to the Masters student mentioned under the *Wits Plus Sample*. Ethical clearance for her respective study was also granted. Participation was completely voluntary and there were no advantages or disadvantages for participating in the research for the organisational and snowball samples. The Wits Plus sample had the advantage of gaining a maximum of 3% toward their course credits; by completing the questionnaire (2%) and an additional percentage (1%) for forwarding the survey to 10 colleagues with at least one completed questionnaire with their participation received back by the researcher electronically or in hardcopy in a sealed box at the psychology department.

The surveys were available through hard copy and an encrypted link, generated via Survey Monkey, after uploading the survey onto the website. It must be noted that Survey Monkey is a secure site, which promotes anonymity of responses, but lacks one function that prevents the deletion of IP addresses; which may prove necessary to ensure anonymity. IP addresses were still available to the researcher and were therefore deleted by the researcher in order to ensure that the surveys could not be traced back to individual employees within an organisation.

No raw data or individual results were provided to any organisation or individual; to prevent a breach of anonymity. Companies may request access to the findings however only a summarised report will be available explaining general trends and not individual's responses. The student numbers obtained from Wits Plus were deleted after completion of the study. Again, the summarised information will be available via the blog mentioned above or through requesting the results from the researcher.

The submission of a completed survey by a participant constituted informed consent and to use the gathered data for statistical and research purposes, as per the cover page. Participation was voluntary and therefore individuals had the right to withdraw from participating at any stage prior to submission.

The data obtained by each participant was available, to the researcher and researcher's supervisor only as well as to the respective Masters student in respect to the Wits Plus

sample. The data was saved into an excel document, which was encrypted onto a computer with a password.

There were no foreseen benefits, losses or harm which may have resulted from the administration of the study or participating in the study, therefore there was no need for debriefing but participants will have access to the summarised findings of the current study via the blog or upon request.

Chapter 3: Results

3.1 Introduction

The results of the current study was based on a sample of 595 employees; employed in a South African working context, in a variety of industries. Various industries included participants from engineering, accounting, architecture, marketing, hospitality, banking, information technology, law as well as aviation sectors to name a few. The data obtained through the participants' responses was analysed through a statistical programme called SPSS (V21).

The results of the exploratory factor analysis supported the four-factor structure of the SSREIT as proposed by Murphy (2008) and Ramsden (2013), which can be viewed in the appendix (Appendix K). Therefore this structure was utilised for all of the remaining analyses that involved the subscales of emotional intelligence. The sample and descriptive statistics regarding the respective variables is provided below. This was followed by the internal consistencies of each and every variable. The Pearson's Correlations for the relationships between the SRIs and EI, as well as SRI and JS was also explored. The results chapter was concluded by illustrating the results of the proposed statistical analyses mentioned earlier such as the one-way ANOVA's, the Pearson's Correlation of EI and JS and the two-way ANOVA.

3.2 Sample Statistics

3.2.1 Biographical data descriptives.

Frequency counts were run on all of the demographic variables that were stated in the demographic questionnaire as can be observed on the following page.

Table 6

Age Descriptives of the Sample

Variable	Category	Frequency	Percentage	*M*	SD
Age of Participant				35.48	11.17
	18-20	12	2		
	21-30	235	39		
	31-40	170	29		
	41-50	105	18		
	51-60	70	12		
	Total	595	100		

The average age of the individuals was 35 (*M*=35.48; SD=11.17). The age of the participants varied from 18 to 60 years old. The majority of the sample, approximately 39%, fell into the 21 to 30 year old range, while only 2% were between 18 to 20 years of age. 29% of the sample was between the ages of 31 and 40 and the remaining 30% were between the ages of 41 and 60.

Table 7

Descriptive Statistics for Biographical Data

Variable	Category	Frequency	Percentage
Sex			
	Male	202	34
	Female	393	66
	Total	595	100
Race			
	Black African	116	20
	Coloured	35	6
	White	412	69

	Indian	28	4
	Asian	4	1
	Total	595	100
Language			
	English	427	72
	Afrikaans	87	15
	Other African language	81	13
		595	100
Marital Status			
	Single	239	40
	Cohabiting	87	15
	Married	207	35
	Divorced	42	7
	Separated	5	.7
	Widowed	2	.3
	Other	13	2
	Total	595	100
Level of Education			
	Less than Grade 10	1	.2
	Grade 10 – 11	4	.6
	Matric	111	19
	Diploma	120	20
	Undergraduate Degree	130	22
	Honours Degree	109	18
	Masters Degree	112	19
	Doctoral Degree	8	1.2
	Total	595	100
Job Level			
	Entry Level	75	13

	Intermediate	122	20
	Junior Management	89	15
	Middle Management	164	28
	Upper Management	73	12
	Executive	70	12
	Total	595	100

The total sample size was 595 participants with the sample consisting of 66% females (N=393) and 44% males (N=202).

The majority of the sample contained White participants (69%) followed by Black African (20%), Coloured (6%), Indian (4%) and Asian (1%) participants.

Most of the participants marked English as their home language (72%), while 15% declared Afrikaans and 13% declared an African language as their home languages.

The majority of the sample was not involved with a significant other, meaning that 40% of the sample was single. The percentage of individuals who were cohabiting was 15% and the percentage of the sample of individuals whom were married was 35%. The remaining 10% consisted of participants whom were divorced, separated, widowed or considered themselves as other.

Most of the sample appeared to be undergraduates (22%) or participants who held diplomas (20%). A fairly large amount of Honours graduates (18%) and Masters graduates (19%) contributed to the sample. Only 1.2% of the sample had obtained their Doctoral degrees. Approximately 20% of the sample had obtained their matric certificate, with only a small percentage of the sample consisting of individuals who did not matriculate (0.8%).

Only 13% of the sample consisted of entry-level employees, while 20% were intermediate employees. Management (junior, middle and upper) made up 55% of the sample while only 12% of the sample consisted of executive employees.

The sample therefore appears to be diverse in many aspects not only based on sex, race and language but also job level, educational level as well as marital status.

3.2.2 Descriptives of sex role identities.

Figure 3 below illustrates the spread of participants across the different sex role identity subscales, including the androgyny and undifferentiated categories.

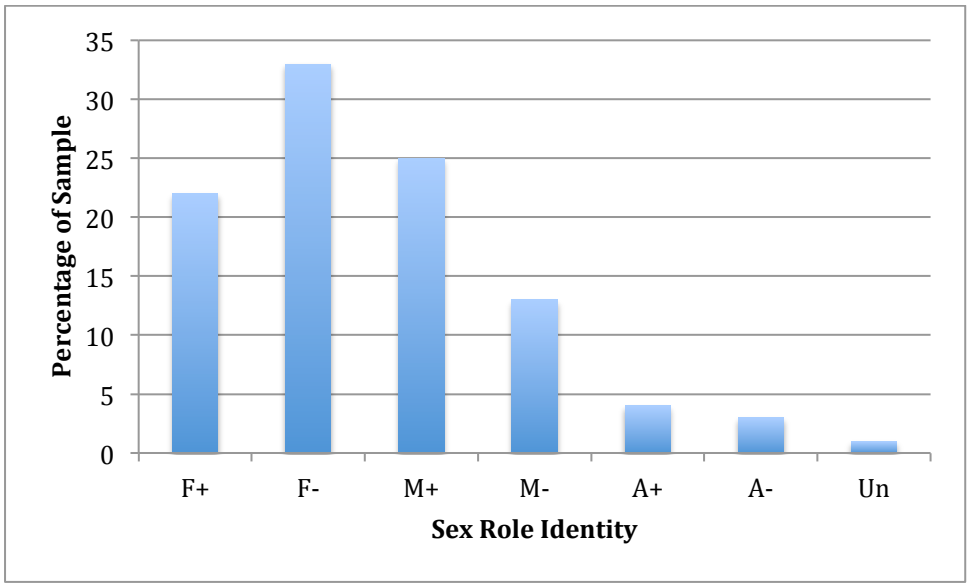

Figure 3: *SRI Descriptive Statistics*

Most of the sample appeared to consist of negatively feminine (F-) individuals (33%; N=198) followed by positively masculine individuals (25%; N=151) and then positively feminine participants (22%; N=128). The rest of the sample was made up of negatively masculine (M-) participants (13%; N=79), positively androgynous participants (4%; N=22) and negative androgynous participants (3%; N=16). There was one participant who was classified as undifferentiated (N=1) however, for the purposes of the study, due to the statistical analyses which were used, this participant was not used for the further analyses relating to the cell size assumption violations particularly referring to the ANOVA.

The following page explores the distribution of SRIs according to the participant's biological sex.

3.2.3 Exploring biological sex and sex role identity.

Biological sex has been divided into the respective sex role identities as can be observed in the diagram below.

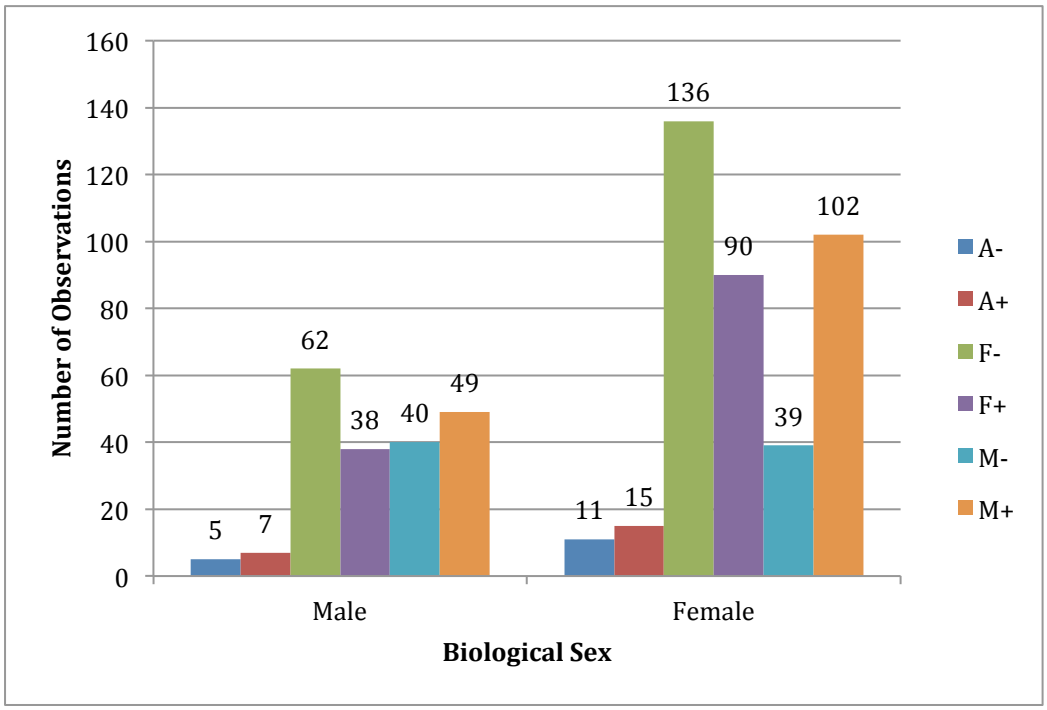

Figure 4: Distribution of SRIs according to sex

The figure above (Figure 4) illustrates the distribution of SRIs according to biological sex, concluding that one's biological sex alone has within sex differences. Referring to the males, 2% (n=5) were negatively androgynous, 4% (n=7) were positively androgynous, 31% (n=62) were negatively feminine, 19% (n=38) were positvely feminine, 20% (n=40) were negatively masculine and 24% (n=49) were positively masculine. Regarding the females, 3% (n=11) were negatively androgynous, 4% (n=15) were positively androgynous, 35% (n=136) were negatively feminine, 23% (n=90) were positively feminine, 10% (n=39) were negatively masculine and 26% (n=102) were positively masculine.

3.3 Internal Consistency

The internal consistency of a respective variable was computed by correlating all of the items which made up the scale, therefore producing a intercorrelated score of agreeability between the items. As mentioned, a score above 0.60 was acceptable for research purposes in Human and Social Sciences (McKennel, 1970). In the table below, the cronbach alpha scores have been presented, which represented the degree to which the repective variables had low, moderate or high levels of internal consistency.

Table 8

Internal Consistency for Dependent and Independent Variables

Variable	***Cronbach Alpha***
Sex Role Identity	
F+	.83
F-	.85
M+	.80
M-	.86
Emotional Intelligence	
Appraisal	.80
Utilisation	.71
Optimism	.81
Social Skills	.67
Total EI	.87
Job Satisfaction	
Total JS	.93

All of the sex role identity variables had high Cronbach Alpha coefficients, which varied between 0.86 (M-) and 0.80 (M+). F+ had a Cronbach Alpha score of 0.83 while F- had a Cronbach Alpha score of 0.85. It appears that all of the variables relating to sex role identity

consisted of items that 'agreed' with each other due to the high inter-correlations between the items, therefore making the variables appropriate for research purposes. The above results were consistent with previous sex role identity research done in South Africa (Bernstein, 2013; Chemaly, 2012; Chemaly, 2013; De Freitas & Bernstein, 2013; Soloman, 2013).

The emotional intelligence subscales and total emotional intelligence variable all had acceptable Cronbach Alpha scores. The scores ranged from 0.67 for social skills to 0.87 for total emotional intelligence, while appraisal (A=0.80), utilisation (A=0.71) and optimism (A=0.81) also had moderate to high internal consistency. High total emotional intelligence scores using the SSREIT seem to be similarly high in previous research (Austin, Saklofske, Huang & McKenney, 2004; Murphy, 2006; Ng, Wang, Kim & Bodenhorn, 2009; Saklofske *et al*., 2003; Schutte *et al*., 1998; Stone, 2004)

Total job satisfaction also appeared to have an acceptably high Cronbach Alpha Score (A=0.93).

Therefore all of the variables appeared to have moderate to high Cronbach Alpha scores, which illustrated an acceptable level of internal consistency to continue with the research by using the variables for statistical analysis purposes.

3.4 Assumptions of Statistical Techniques

Due to the need for certain assumptions to be met before conducting respective analyses, the assumptions were tested in order to ensure the correct statistical analyses have been conducted. The ANOVAs and Pearson's Correlations required that the variables were normally distributed, which was assessed by analysing the Skewness Co-efficients and Kurtosis. Random sampling and independence of observations were discussed in the *Methodology* section. Additionally the ANOVA required that the observations adhered to the assumption of homogeneity of variance, tested using Levene's Test, and that a/the dependant variable was at least interval in measure. The later assumptions mentioned, such as an interval dependant variable, random sampling and independence of observations, were discussed in the *Methodology* section, however the normality of the variables as well as the homogeneity of variance was tested and discussed on the following page.

Table 9

Descriptives of Independent and Dependant Variables

Variables	N	Mean	SD	Min	Max	Skewness	Kurtosis
						Statistic	Statistic
Sex Role Identity							
F+	595	44.09	6.266	14	55	-.573	.483
F-	595	44.72	9.969	20	77	.244	.077
M+	595	52.10	7.920	25	70	-.202	-.219
M-	595	37.97	9.216	18	71	.330	.021
Emotional Intelligence							
Appraisal	595	25.96	4.24	12	35	-.410	.076
Utilisation	595	19.25	2.66	7	25	-.433	1.163
Optimism	595	51.97	5.74	26	65	-.559	1.207
Social Skills	595	31.26	3.56	17	40	-.389	.556
Total EI	595	128.44	12.23	71	163	-.337	1.063
Job Satisfaction							
Total JS	595	130.29	27.7	52	192	-.134	-.320

From the results obtained, negative femininity had a mean of 44.72 with a standard deviation of 9.97 and minimum and maximum scores of 20 and 77 (across 17 items with a theoretical range of 17 and 90). Positive femininity had a mean of 44.09 with a standard deviation of 6.27 and minimum and maximum scores of 14 and 55 (across 11 items with a theoretical range of 11 and 55). Negative masculinity had a mean of 37.97 with a standard deviation of 9.22 and a minimum of 18 and a maximum of 71 (across 15 items with a theoretical range of 15 and 75). Positive masculinity had a mean of 52.10 and a standard deviation of 7.92 with a minimum score of 18 and a maximum score of 71 (across 14 items with a theoretical range of 14 and 70).

When looking at the emotional intelligence variables, appraisal of emotions had a mean of 25.96 and a standard deviation of 4.24, with a minimum and maximum of 12 and 35 respectively (across 7 items with a theoretical range of 7 and 35). Utilisation of emotion had a mean of 19.25 and a standard deviation of 2.66, with a minimum of 7 and a maximum of 25 (across 5 items with a theoretical range of 5 and 25). Optimism had a mean of 51.97 and a standard deviation of 5.74 together with a minimum score of 26 and a maximum score of 65 (across 13 items with a theoretical range of 13 and 65). Social skills had a mean of 31.26 and a standard deviation of 3.56, with a minimum and maximum of 17 and 40 respectively (across 8 items with a theoretical range of 8 and 40). The last emotional intelligence variable, referring to total emotional intelligence, obtained a mean of 128.44 and a standard deviation of 12.23, with a minimum score of 71 and a maximum score of 163 (across 33 items with a theoretical range of 33 and 165).

Total job satisfaction had a mean of 130.29 and a standard deviation 27.7 with a minimum of 52 and a maximum of 192 (across 32 items with a theoretical range of 32 and 192)

All the variables above appeared to display normal tendencies as their skewness coefficient values lay between -1 and 1. The skewness values for the respective variables was as follows; F+ (-.573; SE = .100); F- (.244; SE = .100); M+ (-.202; SE = .100) and M- (.330; SE =.100). The skewness coefficients for the emotional intelligence *Subscales* included appraisal, which had a skewness coefficient score of -.410 (SE =.100), utilisation (-.433; SE =.100), optimism (-.559; SE =.100), social skills (-.389; SE =.100) and total emotional intelligence (-.337; SE =.100).

Total job satisfaction appeared to be normally distributed as well, as the skewness coefficient was between -1 and 1(-.134; SE =.100).

Since normality had been established for each of the variables being tested, it was not repeated in the other techniques requiring normality requirements as this assumption has been met as illustrated above.

The kurtosis for F+ was .483 (SE = .200); for F- (.077; SE =.200); M+ (.491; SE =-.219) and M- (.021; SE = .200); all of which are said to follow normal peaks according to normality testing.

The kurtosis values for all the variables of emotional intelligence also appear to follow somewhat normal trends, such as appraisal (.076; SE =.200) and social skills (.556; SE =.200), however the kurtosis value for utilisation (1.162; SE =.200), optimism (1.207; SE =.200) and total emotional intelligence (1.063; SE =.200) appear to be slightly above 1.0. This does not suggest that these variables are not normally distributed as the slightly elevated kurtosis score simply suggests that the distribution of the sample, in relation to each respective variable, is slightly more peaked than a typical normal distribution, however the normal tendencies of the skewness coefficients, which determine the symmetrical nature of the graph, form the basis on which normality is primarily determined. By looking at the skewness coefficients and kurtosis scores for each variable, as well as an analysis of the histogram, they appeared to be normally distributed.

Total job satisfaction also exhibited an acceptable kurtosis score (-.320; SE =.200).

The above data illustrates that all the variables, as well as subscales met the assumption of normality in order to run the relevant statistical testing; in this case referring to the ANOVA.

The final assumption of the ANOVA referred to the need for the observations to display homogeneity of variance, which was tested via the Levene's test below. The Levene's tests were conducted before going through with the ANOVA in order to ensure that the all of the assumptions of the ANOVA had been met and to determine if robustness tests would need to be conducted should the respective variable fail this assumption.

3.4.1 Levene's testing.

The assumption regarding homogeneity of variance for the respective variables was tested on the following page to ensure the correct statistical analysis had been conducted (Table 10).
As observed above, the Levene's test for equality of variance illustrated that there was homogeneity of variance for the observations being measured when referring to appraisal ($F(5,588)=.928$, $p>.05$) and utilisation ($F(5,588)=.595$, $p>.05$, which suggested that the respective observations met this criteria contributing to the assumptions of the ANOVA. The traditional ANOVA was thus conducted for the respective variables and followed by Tukey's Post hoc testing if the respective ANOVA yielded significant results.

Table 10

Testing of Homogeneity of Varience

Variable	F	*df1*	*df2*	*p*
Appraisal	.928	5	588	.462
Utilisation	.595	5	588	.704
Optimism	2.289	5	588	.045*
Social Skills	2.892	5	588	.014*
Total EI	2.434	5	588	.034*
Total Job Satisfaction	3.712	5	588	.003*

**p* <.05 (95% significance)

In the table above, most of the variables did meet the assumption of homogeneity of variance whilst others did not.

However, as can also be observed above, some of the Levene's tests were significant which illustrated that some variables did not meet the homogeneity of variance criterion such as, optimism ($F(5,588)=2.289$, $p<.05$), social skills ($F(5,588)=2.892$, $p<.05$), total emotional intelligence ($F(5,588)=24.577$, $p<.05$), and total job satisfaction ($F(5,588)=3.712$, $p<.05$). The traditional one-way ANOVAs were still conducted, as the ANOVA is said to be robust against such violations if sample sizes are the same for the two variables being compared, however robustness tests were also conducted to ensure that the failure to meet the homogeneity of variance assumption did not affect the data to the degree that the results would be inaccurate (Browne & Forsythe, 1974). Therefore the Welch and Brown-Forsythe robustness tests were conducted and followed by the one-way ANOVA. However, an adjustment that was made, due to the violation of the homogeneity of variance assumption, included the use of Post hoc testing that did not rely heavily on this assumption and therefore the Games-Howell Post Hoc test was conducted instead of the HSD Post hoc testing for these respective variables.

All of the robustness testing conducted for optimism, social skills, total emotional intelligence and total job satisfaction were significant, which suggested that the ANOVAs for

each respective variable were robust against the failure to meet the homogeneity of variance assumption. All robustness testing has been included in the appendices for perusal (Appendix J).

3.5 Pearson's Correlations of Independent and Dependant Variables

Although the Pearson's correlations were not included in the research questions, it is good practice to conduct Pearson's Correlations on the respective independent and dependant variables in order to observe the general trend in terms of relationships between the respective variables, before running more complex statistical analyses. The relationships between SRIs are correlated on the next page

Table 11

Pearson's' Correlations of SRI Categories

	Variable	F+	F-	M+	M-
1	**F+**	1	.172**	.013	-.477*
2	**F-**	.172**	1	-.561**	.152**
3	**M+**	.013	-.561**	1	.168**
4	**M-**	-.477**	.152**	.168	1

**. Correlation is significant at the 0.01 level

*. Correlation is significant at the 0.05 level

A very weak positive relationship existed between F+ and M+ (r=0.013, p>.05). A significant, very weak, positive correlation existed between F+ and F- (r=.0.172, *p*<.01) as well as between M+ and M- (r=0.168, p<.05) and F- and M- (r=0.152, p<.01). There appeared to be a significant moderate, negative relationship between F+ and M- (r=-.477,

p<.01). A significant, moderate, negative relationship appeared to be evident between F- and M+ (r=-.561, p<.01).

The relationships between SRIs and EI are correlated below.

Table 12

Pearson's Correlations of SRI and EI

	Variable	appraisal	utilisation	optimism	social skills	Total EI
1	**F+**	.361**	.219**	.198**	.495**	.415**
2	**F-**	-.085**	-.409**	-.109**	.040	-.234**
3	**M+**	.170**	.501**	.248**	.173**	.399**
4	**M-**	-.076	-.134**	-.048	-.160**	-.146**

**. Correlation is significant at the 0.01 level

*. Correlation is significant at the 0.05 level

A very weak, positive relationship existed between F- and social skills (r=0.040, p>.05). A very weak, negative correlation existed between M- and appraisal (r=-0.076, *p*>.05) and between M- and optimism (r=-0.048, p>.05). A significant, very weak, negative correlation existed between F- and appraisal (r=-0.085, p<.01), between F- and optimism (r=-0.109, p<.01), between M- and utilisation (r=-0.134, p<.01), between M- and social skills (r=-0.160, p<.01) as well as between M- and total EI (r=-0.146, p<.01). There appeared to be a significant, very weak, positive relationship between F+ and optimism (r=0.198, p<.01), between M+ and appraisal (r=0.170, p<.01) as well as between M+ and social skills (r=0.173, p<.01). A significant, weak, negative relationship appeared to be evident between F- and total EI (r=-0.234, p<.01). A significant, weak, positive relationship appeared to be evident between F+ and appraisal (r=0.361, p<.01), between F+ and utilisation (r=0.219, p<.01) as well as between M+ and optimism (r=0.248, p<.01). There appeared to be a significant, weak to moderate, positive relationship between M+ and total EI (r=0.399, p<.01). The relationship

between F- and utilisation appeared to be significant, moderate and negative (r=-0.409, p<.01). There appeared to be a significant, moderate, positive correlation between F+ and social skills (r=0.495, p<.01), between F+ and total EI (r=0.415, p<.01) as well as between M+ and utilisation (r=0.501, p<.01).

Table 13

	Variable	Total JS
1	**F+**	.069
2	**F-**	-.217**
3	**M+**	.173**
4	**M-**	-.044

Pearson's Correlations of sex role identity *and* job satisfaction

**. Correlation is significant at the 0.01 level
*. Correlation is significant at the 0.05 level

A very weak, negative correlation was observed between M- and total job satisfaction (r=-0.044, p>.05). A very weak, positive relationship was observed between F+ and total job satisfaction (r=0.069, p>.05). A significant, weak, positive relationship appeared to exist between M+ and total job satisfaction (r=0.173, p<.01) while there was a significant, moderate negative relationship between F- and total job satisfaction (r=-0.217, p<.01).

3.5.1 Conclusion.

The relationships between the sex role identities are in line with what is expected as the cross loadings observed in previous studies can help to explain some of the relationships. A sting inverse relationship has been observed previously between F+ and M- and well as between M+ and F-, therefore the moderate, significant, inverse relationships observed in the current

study was not unexpected. The weak, positive relationships observed between the positive identities, and also through the comparison of the negative identities, was also expected as the respective categories that represent desirable traits were related and the same can be said for the categories associated with undesirable traits. A similar relationship was observed when comparing F+ to F- and M+ to M- as weak, positive relationships were expected due to the cross loadings observed in a previous study (Bernstein, 2013). Despite the observation of some cross loadings throughout the EPAQ-R, the scales were still able to stand alone as independent categories as they each represented a different set of behavioural traits.

When exploring the relationship between the sex role identities and emotional intelligence, it was observed that the positive identities generally yielded significant, positive relationships while the negative identities generally yielded significant, negative relationships. This is expected as the positive identities are expected to score higher on the EI scales compared to the negative identities.

Job satisfaction appeared to be positively related to the positive identities while being negatively related to the negative identities. Again, this was expected as the positive identities are expected to yield higher EI scores.

The results observed in the Pearson's Correlations above are subtle guidelines as to what one could expect to see in the more complex analyses such as the ANOVAs.

Having conducted the Pearson's correlations, which indicated the degree and direction of the relationships between the respective variables, some relationships were congruent with the proposed hypotheses while some were some not. The next step was to conduct the remaining statistical analyses proposed; such as the ANOVAs.

3.6 Emotional Intelligence and Sex Role Identity ANOVA's

3.6.1 Introduction.

Five ANOVA's were conducted, which included a one-way ANOVA for each of the four subscales of emotional intelligence (appraisal, utilisation, optimism and social skills), as

determined by the exploratory factor analysis, as well as a fifth ANOVA to explore the differences in sex role identities in their total emotional intelligence scores.

3.6.2 Appraisal of emotion.

The mean scores of each sex role identity and their respective appraisal of emotion scores were illustrated in the table below, which also included the standard deviations relating to the means of each sex role identity.

Table 14

Appraisal Scores for Various EPAQ-R Subscales

SRI	***N***	***Mean***	***Std. Dev.***
F+	128	27.27	4.125
F-	198	24.99	4.107
M+	151	26.11	3.889
M-	79	25.23	4.492
A+	22	29.14	3.629
A-	16	25.19	4.902
Total	594	25.96	4.237

From the table above, it appeared that A+ (*M*=29.14) had the highest level of appraisal followed by F+ (*M*=27.27), M+ (*M*=26.11), M- (*M*=25.23), A- (*M*=25.19); with F- (*M*=24.99) yielding the lowest score. The proposed differences in means have been statistically analysed using a one-way ANOVA.

Table 15

One-way ANOVA for SRI and Appraisal of Emotion

Variable		***SS***	***df***	***MS***	***F***	***Sig.***
Appraisal of	Between Groups	682.29	5	136.46	8.053	.00*

Emotion	Within Groups	9963.66	588	16.95
	Total	10645.66	593	

*p <.05 (95% significance)

In the one-way ANOVA conducted above, the results illustrated that there was a significant difference between the mean scores of different SRI categories, F(5,588)=8.053, p<.05, when relating each category to one's appraisal of emotion score obtained. This means that some sex role identities had higher appraisal of emotion scores than others. The Post hoc HSD (Tukey) test was tabled below; which allowed one to observe more detailed differences between the sex role identities and their respective appraisal scores.

Table 16

Significant HSD Post-hoc Testing for Appraisal of Emotion

Group Comparison	**Mean Diff.**	***SE***	**Sig.**	**95%CI**		**Cohen's *D***
				LCI	**UCI**	
A+ & F-	4.140	.925	.000*	1.50	6.79	1.07
A+ & M+	3.030	.939	.017*	0.34	5.72	0.805
A+ & M-	3.909	.992	.001*	1.07	6.75	0.957
A+ & A-	3.949	1.353	.042*	0.08	7.82	0.915
F+ & F-	2.280	.467	.000*	0.94	3.61	0.554
F+ & M-	2.050	.589	.007*	0.36	3.73	0.473

*p <.05 (95% significance)

In the Post hoc testing above, there appeared to be significant results (p<.05) pertaining to some of the different sex role identities and their subsequent appraisal of emotion scores, specifically referring to the significant differences between F+ and F-, F+ and M- and lastly between A+ and the other identities namely M+, M-, F- and A-. A+ also appeared to be

slightly higher on appraisal scores when compared with F+, however the results did not suggest that this relationship was significant.

By looking at the effect sizes (Cohen's d) of each of the significant relationships, it appeared that all of the relationships between A+ and other identities (F-, M+, M-, A-) yielded large effects sizes as they were all above 0.80; suggesting that the difference between the means of A+ and the other identities, excluding F+, was strongly significant. However, the effect sizes between F+ and F- as well as between F+ and M-, appeared to be moderate (0.554) and small to moderate (0.473) respectively.

3.6.3 Utilisation of emotion.

The mean scores of each sex role identity and their respective utilisation of emotion scores were illustrated in the table below, which also included the standard deviations relating to the means of each sex role identity.

Table 17

Utilisation Scores for Various EPAQ-R *Subscales*

SRI	***N***	***Mean***	***Std. Dev.***
F+	128	19.64	2.717
F-	198	18.56	2.491
M+	151	19.76	2.366
M-	79	18.97	2.819
A+	22	20.82	3.157
A-	16	19.00	3.077
Total	594	19.25	2.657

From the table above, it appeared that A+ (*M*=20.82) had the highest level of utilisation followed by M+ (*M*=19.76), F+ (*M*=19.64), A- (*M*=19.00), M- (*M*=18.97); with F- (*M*=18.56) yielding the lowest score. The proposed differences in means have been statistically analysed using a one-way ANOVA.

Table 18

One-way ANOVA for SRI and Utilisation of Emotion

Variable		*SS*	*df*	*MS*	*F*	*Sig.*
Utilisation of	Between Groups	215.62	5	43.13	6.386	.00*
Emotion	Within Groups	3971.00	588	6.75		
	Total	4186.62	593			

*p <.05 (95% significance)

In the one-way ANOVA conducted, the results above illustrated that there was a significant difference between the mean scores of different SRI categories, F(5,588)=6.386, p<.05, when relating each category to one's utilisation of emotion score obtained. This means that some sex role identities had higher utilisation of emotion scores than others. The post hoc HSD (Tukey) test was tabled on the following page; which allowed one to observe more detailed differences between the sex role identities and their respective utilisation scores.

Table 19

Significant HSD Post-hoc Test for Utilisation of Emotion

Group Comparison	Mean Diff.	*SE*	Sig.	95%CI		
				LCI	UCI	Cohen's *D*
A+ & F-	2.263	.584	.002*	0.59	3.93	0.795
A+ & M-	1.843	.626	.039*	0.05	3.63	0.618
M+ & F-	1.206	.281	.000*	0.40	2.01	0.494
F+ & F-	1.085	.295	.003*	0.24	1.93	0.414

Dependent variable Utilisation of Emotion

*p <.05 (95% significance)

In the HSD Post hoc testing above, there appeared to be significant results ($p<.05$) pertaining to some of the different sex role identities and their subsequent utilisation of emotion scores, specifically referring to the significant differences between F+ and F-, M- and A+. There also appeared to be significant differences between F- and M+ as well as between F- and A+. A+ yielded the highest level of utilisation of emotion and F- illustrated the lowest levels of utilisation.

By looking at the effect sizes (Cohen's d) of each of the significant relationships, it appeared that the relationship between F+ and F- (0.414) as well as the relationship between M+ and F- (0.494) yielded small to moderate effect sizes while the relationship between A+ and F- (0.795) as well as the relationship between A+ and M- (.618) yielded moderate to large effect sizes.

3.6.4 Optimism.

The mean scores of each sex role identity and their respective optimism scores were illustrated in the table below, which also included the standard deviations relating to the means of each sex role identity.

Table 20

Optimism Scores for Various EPAQ-R *Subscales*

SRI	***N***	***Mean***	***Std. Dev.***
F+	128	53.17	4.655
F-	198	48.86	5.541
M+	151	54.28	4.377
M-	79	52.34	5.611
A+	22	58.36	4.446
A-	16	47.63	7.365
Total	594	51.95	5.730

From the table above, it appeared that A+ (M=58.36) had the highest level of optimism followed by M+ (M=54.28), F+ (M=53.17), M- (M=52.34), F- (M=48.86); with A-

(*M*=47.63) yielding the lowest score. The proposed differences in means have been statistically analysed using a one-way ANOVA.

Table 21

One-way ANOVA for SRI and Optimism

Variable		***SS***	***df***	***MS***	***F***	***Sig.***
Optimism	Between Groups	4112.02	5	822.40	31.482	.00*
	Within Groups	15360.47	588	26.12		
	Total	19472.49	593			

*p <.05 (95% significance)

In the one-way ANOVA conducted, the results above illustrated that there was a significant difference between the mean scores of different SRI categories, F(5,588)=31.482, p<.05, when relating each category to one's optimism score obtained. This means that some sex role identities had higher optimism scores than others. As mentioned, robustness tests were conducted to ensure that the one-way ANOVA yielded accurate results despite the violation of the homogeneity of variance assumption, followed by Games-Howell Post hoc testing.

Table 22

Significant Games-Howell Post-hoc Test for Optimism

Group Comparison	**Mean Diff.**	***SE***	**Sig.**	**95%CI**		**Cohen's *D***
				LCI	**UCI**	
A+ & F+	5.192	1.033	.000*	2.05	8.34	1.140
A+ & F-	9.500	1.026	.000*	6.37	12.63	1.891
A+ & M+	4.085	1.013	.005*	0.99	7.19	0.924
A+ & M-	6.022	1.139	.000*	2.62	9.42	1.189

A+ & A-	10.74	2.071	.000*	4.31	17.17	1.764
M+ & F-	5.415	0.531	.000*	3.89	6.94	1.089
M+ & A-	6.653	1.876	.026*	0.62	12.69	1.098
F+ & F-	4.308	0.570	.000*	2.67	5.94	0.842
M- & F-	3.478	0.744	.000*	1.33	5.63	0.624

Dependent variable Optimism

*p <.05 (95% significance)

In the Games-Howell Post hoc testing above, there appeared to be many significant results (p<.05) pertaining to some of the different sex role identities and their subsequent optimism scores. There appeared to be significant differences between A+ and A-, A+ and M+, A+ and M-, A+ and F- as well as between A+ and F+; as observed in the table above. The mean differences between F+ and F-, F- and M+, F- and M-, and A- and M+ were also significant.

A+ appeared to have the highest level of optimism with significant, extremely large effect sizes when compared to A- (1.764), M+ (0.924), F+ (1.14), M- (1.189) and F- (1.891) observations. There were also significantly high differences between F+ and F-, F- and M+, and A- and M+ as they yield effect sizes of 0.842, 1.089 and 1.098 respectively. There was only a moderate to large effect size when the significant difference between F- and M- (0.624) was observed. Some of the findings were expected as per the hypotheses, with the positive identities yielding the highest levels of optimism while the negative identities exhibited the lowest levels of optimism.

3.6.5 Social skills.

The mean scores of each sex role identity and their respective social skills scores were illustrated in the table below, which also included the standard deviations relating to the means of each sex role identity.

Table 23

*Social Skill Scores for Various EPAQ-*R *Subscales*

SRI	***N***	***Mean***	***Std. Dev.***
F+	128	32.83	2.975
F-	198	30.28	3.582
M+	151	31.25	3.115
M-	79	30.49	3.566
A+	22	33.86	3.536
A-	16	30.81	5.357
Total	594	31.25	3.556

From the table above, it appeared that A+ (*M*=33.86) had the highest level of optimism followed by F+ (*M*=32.83), M+ (*M*=31.25), A- (*M*=30.81), M- (*M*=30.49); with F- (*M*=30.28) yielding the lowest score. The proposed differences in means have been statistically analysed using a one-way ANOVA.

Table 24

One-way ANOVA for SRI and Social Skills

Variable		***SS***	***df***	***MS***	***F***	***Sig.***
Social Skills	Between Groups	704.48	5	140.90	12.196	.00*
	Within Groups	6792.65	588	11.55		
	Total	7497.13	593			

*p <.05 (95% significance)

In the one-way ANOVA conducted, the results above illustrated that there was a significant difference between the mean scores of different SRI categories, $F(5,588)=12.196$, $p<.05$, when relating each category to one's social skills score obtained. This means that some sex role identities had higher social skill scores than others, which was more detailed when analysing the Post hoc testing. As mentioned, robustness tests were conducted to ensure that

the one-way ANOVA yielded accurate results despite the violation of the homogeneity of variance assumption, followed by Games-Howell Post hoc testing.

Table 25

Significant Games-Howell Post-hoc Test for Social Skills

Group Comparison	**Mean Diff.**	***SE***	**Sig.**	**95%CI**		**Cohen's *D***
				LCI	**UCI**	
A+ & F-	3.586	.796	.002*	1.14	6.03	1.005
A+ & M+	2.619	.795	.031*	0.17	5.06	0.783
A+ & M-	3.370	.854	.005*	0.79	5.95	0.949
F+ & F-	2.550	.366	.000*	1.50	3.60	0.774
F+ & M+	1.583	.365	.000*	0.53	2.63	0.519
F+ & M-	2.334	.480	.000*	0.95	3.72	0.713

*p <.05 (95% significance)

In the Games-Howell Post hoc testing above, there appeared to be many significant results ($p<.05$) pertaining to some of the different sex role identities and their subsequent social skill scores. There appeared to be significant differences between A+ and M+, A+ and M-, A+ and F-, F+ and F-, F+ and M-, as well as between F+ and M+; as observed in the table above. The highest scores were obtained by the positive identities while the lowest scores were obtained by the negative identities.

A+ appeared to have the highest level of social skills with large, significant effect sizes when compared to F- (1.005) and M- (.949) but A+ also illustrated a moderate to high effect size when compared to M+ (0.783). There were also moderate to large significant effect sizes between F+ and F-, F+ and M+, and F+ and M- as they yielded effect sizes of 0.774, 0.519, and .713 respectively.

3.6.6 Total emotional intelligence.

The mean scores of each sex role identity and their respective total emotional intelligence scores were illustrated in the table below, which also included the standard deviations relating to the means of each sex role identity.

Table 26

*Total EI Scores for Various EPAQ-*R *Subscales*

SRI	***N***	***Mean***	***Std. Dev.***
F+	128	132.91	10.984
F-	198	122.69	11.253
M+	151	131.39	9.723
M-	79	127.04	12.415
A+	22	142.18	9.261
A-	16	122.63	17.862
Total	594	128.40	12.205

From the table on the previous page, it appeared that A+ (*M*=142.18) had the highest total emotional intelligence score, followed by F+ (*M*=132.91), M+ (*M*=131.39), M- (*M*=127.04), F- (*M*=122.69); with A- (*M*=122.63) yielding the lowest score. The proposed differences in means have been statistically analysed using a one-way ANOVA.

Table 27

One-way ANOVA for SRI and Total EI

Variable		***SS***	***Df***	***MS***	***F***	***Sig.***
Total EI	Between Groups	15268.91	5	3053.78	24.577	.00*
	Within Groups	73062.12	588	124.26		
	Total	88331.03	593			

*p <.05 (95% significance), **p <.01 (99% significance)

As can be observed in the one-way ANOVA conducted above, the results illustrated that there was a significant difference between the mean scores of different SRI categories, $F(5,588)=24.577$, $p<.05$, when relating each category to one's total emotional intelligence score obtained. This means that some sex role identities had higher total emotional intelligence scores than others. As mentioned, robustness tests were conducted to ensure that the one-way ANOVA yielded accurate results despite the violation of the homogeneity of variance assumption, followed by Games-Howell Post hoc testing.

Table 28

Significant Games-Howell Post-hoc Test for Total EI

Group Comparison	**Mean Diff.**	***SE***	**Sig.**	**95%CI**		**Cohen's *D***
				LCI	**UCI**	
A+ & F-	19.49	2.130	.000*	12.99	25.99	1.891
A+ & M+	10.79	2.127	.000*	4.29	17.29	1.136
A+ & M-	15.14	2.419	.000*	7.94	22.35	1.382
A+ & A-	19.557	4.883	.007*	4.27	34.84	1.374
A+ & F+	9.268	2.200	.002*	2.60	15.93	0.912
F+ & M-	5.876	1.701	.009*	0.97	10.79	0.501
F+ & F-	10.22	1.258	.000*	6.61	13.83	0.919
M+ & F-	8.699	1.125	.000*	5.47	11.92	0.827

Dependent variable Total EI

In the Games-Howell Post hoc testing above, there appeared to be many significant results ($p<.05$) pertaining to some of the different sex role identities and their subsequent total emotional intelligence scores. There appeared to be significant differences between A+ and M+, A+ and M-, A+ and F+, A+ and F-, A+ and A-, F+ and F-, F- and M+ as well as between F+ and M-; as observed in the table above. The highest scores were obtained by the positive identities while the lowest scores were obtained by the negative identities.

Positively androgynous individuals (A+) appeared to have the highest total emotional intelligence Scores with extremely large, significant effect sizes when compared to F+ (0.912), M+ (1.163), F- (1.891), M- (1.382) and A- (1.374). There appeared to be a large significant effect size for the difference between F+ and F- (0.919) individuals as well as F- and M+ (0.827) participants while the effect size of the difference between F+ and M- (0.501) individuals was small to moderate.

3.6.7 Summary findings of sex role identity and emotional intelligence.

When looking at appraisal, it appears that A+ individuals had the highest appraisal scores, which were higher than those of the negative identities (F-, M- & A-) as well as M+. F+ also appeared to be higher than the negative identities (F- & A-) except for M-. However, there was no difference found between A+ and F+. With that said, F+ was not different from M+ either and M+ was not different from the negative identities. Therefore the pattern that emerges is that A+ had the highest level of appraisal, with F- and A- yielding the lowest appraisal scores; as can be confirmed by looking at the means of the sex role identities. F+ and M+ did not present with statistically different scores and furthermore M- was not lower than F+ and M+, which therefore suggests that M- individuals may be able to appraise emotion as well as a positively feminine or positively masculine individual but not as well as A+ individuals. Finally, M- did not appear to be different from the other negative identities (A- & F-).

Utilisation of emotion was characterised by all of the positive identities (A+, F+ & M+) scoring higher than F-. There were no differences between the positive identities (A+, F+ & M+). Also, there were no significant differences between M- and the positive identities (F+ and M+), with the exception of a difference noted between M- and A+; displaying a similar pattern as observed with appraisal as M- not only lacked to show differences with M+ and F+ but also with the other negative identities (A- & F-)

When exploring optimism, it appeared that A+ was higher than all of the positive and negative identities. Along with A+, M+ and F+ are also higher in optimism scores when compared to F-, suggesting that all of the positive identities are higher than F-. It also appeared that M- was higher than F-. Despite M- being a negative identity, it did not score

differently from F+ and M+. There were also no differences between F+ and M+, however M+ was higher than A-.

Regarding social skills, the negative identities did not appear to be different from each other however, A+ and F+ were higher than F- and M-. Furthermore, both A+ and F+ were higher than M+, with M+ and M- not being different from the negative identities.

When looking at the total EI of the participants in the sample, it appeared that A+ had the highest levels of total EI compared to all of the identities. All of the positive identities were above F-, while F+ and M+ did not have significantly different scores. F+ and A+ were significantly higher than M- and again M- was not different to M+ and the other negative identities.

3.6.7.1 Positive versus negative scoring.

The emotional intelligence subscale, appraisal, yielded that A+ individuals scored higher than all of the negative identities (M-, F- & A-), while F+ was only higher than F- and A- but not M-. When looking at utilisation, optimism and total EI, all of the positive identities (A+, F+ & M+) scored above F-. When analysing social skills A+ and F+ scored higher than F- and M-. A+ scored higher than all of the positive and negative identities when examining optimism and total EI.

3.6.7.2 Differences between positive identities.

There were no differences between A+ and F+ for appraisal but A+ was found to be higher then M+. There also appeared to be no differences between the positive identities for utilisation. A+ was higher than all the positive and negative identities for optimism and total EI. There were no differences between A+ and F+ for social skills but they both scored higher than M+.

3.6.7.3 Pattern between F+ and M+.

Although there appeared to be a clear pattern with A+ yielding the highest EI scores, there appeared to be less said for F+ and M+ and the differences between the positive identities. F+

and M+ were not different from each other when analysing appraisal, utilisation, optimism and total EI but F+ did appear to be higher than M+ in social skills.

3.6.7.4 Pattern of M+.

The interest in exploring the pattern of M+ lies in the observation that it was not different from the negative identities in appraisal, utilisation and social skills. M+ was only different from one of the three negative identities, namely A-, but were not different from F- and M- when comparing optimism scores. M+ appeared to be different from F- when looking at total emotional intelligence, but there was still no clear distinction between the M+, M- and A- total EI scores.

3.6.7.5 Differences between negative identities.

M- was not found to be different from the other negative identities when looking at appraisal, utilisation, social skills and total emotional intelligence however M- was significantly different from F- when analysing optimism scores.

3.6.7.6 The pattern of M-.

M- did not appear to be different from F+ and M+ but A+ was higher than M- for appraisal, utilisation, and optimism. However, A+ and F+ were higher than M- for social skills and total emotional intelligence.

3.6.8 Conclusion.

The general pattern of findings suggested that the positive identities had significantly higher emotional intelligence scores than the negative identities. It was observed that M- generally did not score significantly differently from the positive or negative identities. There were some non-significant findings such as those observed in the lack of differences between the positive identities. Some counterintuitive findings also emerged as M+ did not score differently from the negative identities, which will be explored in the discussion. Although A+ appeared to score highly in some instances, it was also observed appeared that F- and/or

A- were significantly different from the positive identities across the various EI subscales and total EI.

Therefore the results generally followed the differences proposed through the hypotheses as the positive identities, particularly A+, appeared to score significantly higher on appraisal, utilisation, optimism and total EI when compared to the negative identities, particularly referring to F-. There were a lack of findings regarding the differences between the positive identities as well as a lack of support to suggest that M- scored lower than the positive identities.

The results observed for SRI and EI will be explored in the discussion by assessing the significant, non-significant and counterintuitive findings. The results of the sex role identity and job satisfaction findings are below, which are the followed by summary findings for SRI and JS.

3.7 Job Satisfaction and Sex Role Identity ANOVA

3.7.1 Introduction.

A single one-way ANOVA was conducted to explore the differences in sex role identities in their total job satisfaction scores.

3.7.2 Total Job Satisfaction.

The mean scores of each sex role identity and their respective scores on total job satisfaction were illustrated in the table on the following page, which also included the standard deviations relating to the means of each sex role identity.

Table 29

Total Job Satisfaction Scores for Various EPAQ-R Subscales

SRI	***N***	***Mean***	***Std. Dev.***
F+	**128**	136.23	30.503
F-	**198**	122.44	24.616
M+	**151**	131.98	27.407
M-	**79**	137.35	22.070
A+	**22**	143.00	35.143
A-	**16**	109.38	23.977
Total	**594**	130.23	27.68

From the table above, it appeared that A+ (*M*=143) had the highest level of total job satisfaction followed by M- (*M*=137.35), F+ (*M*=136.23), M+ (*M*=131.98), F- (*M*=122.44); with A- (*M*=109.38) yielding the lowest score. The proposed differences in means have been statistically analysed using a one-way ANOVA.

Table 30

One-way ANOVA for SRI and Total Job Satisfaction

Variable		***SS***	***Df***	***MS***	***F***	***Sig.***
Total Job	Between Groups	31650.90	5	6330.18	8.804	.00*
Satisfaction	Within Groups	422760.51	588	718.98		
	Total	454411.40	593			

*p <.05 (95% significance)

In the one-way ANOVA conducted, the results above illustrated that there was a significant difference between the mean scores of different SRI categories, $F(5,588)=6330.18$, $p<.05$, when relating each category to one's total job satisfaction scores obtained. This means that some sex role identities had higher total job satisfaction scores than others. As mentioned, robustness tests were conducted to ensure that the one-way ANOVA yielded accurate results

despite the violation of the homogeneity of variance assumption, followed by Games-Howell Post hoc testing.

Table 31

Significant Games-Howell Post-hoc Test for Total Job Satisfaction

Group Comparison	**Mean Diff.**	***SE***	**Sig.**	**95%CI**		**Cohen's *D***
				LCI	**UCI**	
A+ & A-	33.63	9.5954	.015*	4.752	62.498	1.117
F+ & F-	13.80	3.2139	.000*	4.559	23.031	0.483
F+ & A-	26.86	6.5728	.006*	6.348	47.370	0.980
M+ & F-	-9.541	2.8346	.011*	1.411	17.670	0.368
M+ & A-	22.61	6.3959	.023*	2.440	42.770	0.900
M- & F-	-14.92	3.0375	.000*	6.153	23.677	0.607
M- & A-	27.98	6.4883	.004*	7.632	48.327	1.214

Dependent variable Total Job Satisfaction

In the Games-Howell Post hoc testing above, there appeared to be significant results ($p<.05$) pertaining to some of the different sex role identities and their subsequent total job satisfaction scores, specifically referring to the significant differences between M- and A-, F+ and F-, F+ and A-, M+ and A-, F- and M+, F- and M- as well as A- and A+.

By looking at the effect sizes (Cohen's d) of each of the significant relationships, it appeared that the differences between A- and the other sex role identities, such as A+ (1.117), M- (1.214), F+ (0.980) and M+ (0.900), yielded extremely large effect sizes. The effect size between F- and F+ (0.483) as well as F- and M+ (0.368), were small to moderate ,while the effect sizes for F- and M- (0.607) illustrated a moderate to large effect size.

3.7.3 Summary findings for sex role identity and job satisfaction.

The findings for total job satisfaction are explained below.

Total job satisfaction yielded that all of the positive identities scored above A- while only M+ and F+ scored above F-. M- scored higher than the other negative identities but did not present with a different score from any of the positive identities. There were no significant findings between the positive identities.

3.7.3.1 Positive identity versus negative identity scoring.

F+ and M+ were higher than F- for total job satisfaction while all of the positive identities were above A-.

3.7.3.2 Differences between positive identities.

There were no observed differences between the positive identities for total job satisfaction.

3.7.3.3 Differences between negative identities.

M- was found to be different from both of the remaining negative identities (F- & A-) on total job satisfaction.

3.7.3.4 The pattern of M-.

M- did not appear to be different from any of the positive identities (A+, F+ & M+) for total JS.

3.7.4 Conclusion.

It appeared that only F- and/or A- were significantly different from the positive identities while the last remaining negative identity, M-, was not significantly different from the positive identities when looking at total job satisfaction. There also appeared to be no

significant differences between the positive identities. There also appeared to be a lack of findings for A+ in some instances.

The results observed for SRI and JS will be explored in the discussion by assessing the significant, non-significant and counterintuitive findings. Below follows the results from the Pearson's Correlation between EI and JS.

3.8 Pearson's Correlation Coefficient for EI and JS

In order to address research question three (3), one conducted a Pearson's Correlation in order to determine the relationship between the two variables, namely EI and JS. The results are in the table below (Table 32).

Table 32

Correlation between EI and JS

	Variable	EI	JS
1	**EI**	1	.168**
2	**JS**	.168**	1

*p <.05 (95% significance), **p <.01 (99% significance)

A significant very weak, positive relationship existed between EI and JS (r= 0.168, p<.01).

3.8.1 Conclusion and summary of the pearson's correlation.

From the results above it appeared that EI and JS were somewhat related, but only to a small extent. When analysing the Pearson's Correlation, it appeared that a significant, very weak, positive relationship existed between total EI and total JS, which was congruent with past research and the hypothesis of research question three.

3.9 Two-Way ANOVA for Sex Role Identity and Emotional Intelligence on Job Satisfaction

The ability of the variables used, in meeting the assumptions required for a two-way ANOVA, were already verified previously when conducting the one-way ANOVAs. However, when looking at total JS, it was observed that this variable did not meet the assumption of equality of variance. Various researchers have suggested that should homogeneity be the only assumption not met when conducting a two-way ANOVA, the F-statistic is still robust enough to continue with a traditional two-way ANOVA (Brown & Forsythe, 1974; Wilcox, 1987). Therefore one continued with the traditional two-way ANOVA as the variables met the remaining assumptions including the assumption of normality, which was required for parametric tests to be conducted. The Low EI, A+ individuals were removed as the cell size was three (3), which did not meet the minimum cell size of five (5), needed in order to conduct the ANOVA. The results of the two-way ANOVA can be perused on the next page.

Table 33

Descriptive Statistics for EI, SRI and JS

SRI	EI	N	Mean	Std. Dev.
F+	**Low**	48	131.521	30.7702
	High	80	139.062	30.1802
	Total	128	136.234	30.5027
F-	**Low**	143	121.790	23.5312
	High	55	124.127	27.3943
	Total	198	122.439	24.6157
M+	**Low**	67	128.493	24.8184
	High	84	134.762	29.1563
	Total	151	131.980	27.4074
M-	**Low**	52	136.712	18.5264
	High	27	138.593	28.0292

	Total	79	137.354	22.0704
A+	**High**	19	143.579	36.7564
	Total	19	143.579	36.7564
A-	**Low**	10	106.400	27.6775
	High	6	114.333	17.2820
	Total	16	109.375	23.9774
Total	**Low**	320	126.597	25.1819
	High	271	134.421	29.8962
	Total	591	130.184	27.6966

Dependent Variable: Total Job Satisfaction

From the table above, it appeared that the highest level of total job satisfaction was attained by high EI, A+ (*M*=143.58) individuals illustrating A+ individuals scored higher on job satisfaction than any of the other sex role identities. The A+ scores were followed by high EI, F+ (*M*=139.06), High EI, M- (*M*=138.59), Low EI, M- (*M*=136.71), High EI, M+ (*M*=134.76), Low EI, F+ (*M*=131.52) and Low EI, M+ (*M*=128.49). The lowest scores were attained by High EI, F- (*M*=124.13), Low EI, F- (*M*=121.79), High EI, A- (*M*=114.33) with Low EI, A- (*M*=109.38) yielding the lowest score.

Table 34

Two-Way ANOVA for Sex Role Identity and Emotional Intelligence as a function of Job Satisfaction

Variable	***SS***	***Df***	***MS***	***F***	***Sig.***
EI	1650.98	1	1650.98	2.294	.130
SRI	23122.18	5	4624.44	6.425	.000*
EI*SRI	735.16	4	147.19	.255	.906
Error	417456.02	580	719.98		

***p <.05 (95% significance), **p <.01 (99% significance)**

The results from the two-way ANOVA, in the table above, illustrated that there were no significant interactions between EI and SRI on JS ($F(4,580)=0.255$, $p>0.5$). There were no

significant main effects between EI and JS ($F(1,580)=2.294$, $p>.05$), however there was a significant main effect between SRI and JS ($F(5,580)=6.425$, $p<.05$), as was confirmed by the one-way ANOVA conducted between SRI and total JS. The significant main effect between SRI and total JS was investigated and discussed when conducting the one-way ANOVA between SRI and total JS and therefore was not elaborated below to prevent repetition as the Post hoc test revealed similar findings.

3.9.1 Summary of result for two-way ANOVA.

The two-way ANOVA did not yield an interactional relationship between SRI, EI and JS as proposed through the hypotheses, however it did confirm the relationship as observed in the one-way ANOVA between SRI and total JS.

3.10 Conclusion

The results observed above have been summarised under their respective sections. The significant and non-significant findings from the results chapter will be discussed in the following chapter namely Chapter 4: Discussion.

Chapter 4: Discussion

4.1 Introduction

The significant, statistically non-significant as well as counterintuitive findings were discussed below for each of the research questions. The findings were also linked to the results of other studies in order to contribute to or challenge existing theory.

4.2 Support for the Differentiated Model

As mentioned in Chapter 1, SRI was measured according to *The Differentiated Model,* due to the inconsistent findings associated with using *The Congruency Model* and/or *The Androgyny Model* as foundations for measuring SRI (Woodhill & Samuels, 2003).

The findings of the current study suggested that *The Differentiated Model* of SRI is accurate in measuring the different SRIs of different individuals, male or female, as the study observed the existence of negative and positive masculine, feminine and androgynous individuals within the sample. If one had used a measurement tool developed to represent *The Congruency Model* or *The Androgyny Model* only, then crucial information may have been lost, resulting in the misclassification of SRI in the respective individuals. When looking at the frequencies of the positive identities compared to the ratio of negative identities, it is apparent that *The Differentiated Model* was appropriate to use for analysis as the negative identities accounted for 49% of the participants in the study; as is observed in the figure below.

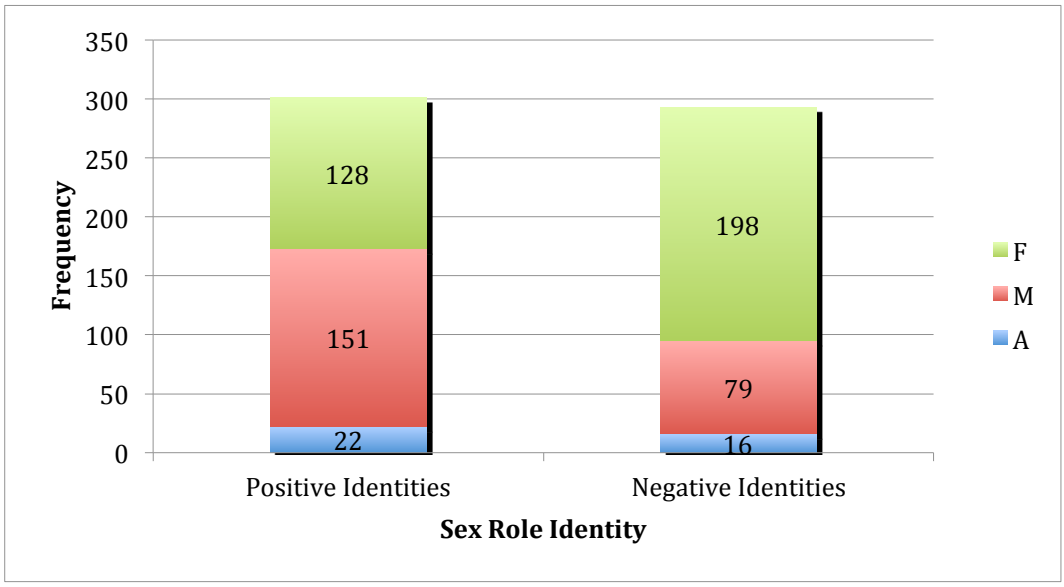

Figure 5: The Frequency of Positive and Negative Sex Role Identities

As can be observed in the figure above (Figure 5), the sample of the current study was more or less evenly split between the positive (51%) and negative identities (49%).

The findings of the current study are consistent with that of other South African based research, which suggests that *The Differentiated Model* is the most appropriate to use when measuring SRI due to the existence of negative and positive identities within the samples; illustrating the importance of distinguishing between socially desirable and undesirable traits (Bernstein, 2013; Chemaly, 2012; Chemaly, 2013; de Freitas, 2013; Solomon, 2012).

4.3 Exploring Biological Sex and Sex Role Identity

It was necessary to explore the assumptions on which the present study is grounded; which suggested that biological sex was simplistic when comparing scores of males and females to various psychological constructs (Austin *et al*., 2007; Brackett *et al*., 2004; Ciarrochi *et al*., 2001; Ciarrochi *et al*., 2000; Goldenberg *et al*., 2006; Guastello & Guastello, 2003; Hunt & Evans, 2004; Petrides & Furnham 2000; Petrides & Furnham, 2004; Petrides & Furnham, 2006; Schulte, Ree & Carretta, 2004; Schutte *et al*., 1998). Sex role identity has shown to be more complex, and as expected, the males making up the participant pool are not all masculine, therefore the masculine behaviours attributed to all males due to their biological sex, as per the traditional gender role view, is inaccurate.

Males did not only identify with the masculine sex role identity, but some were classified as feminine (50%) and androgynous (6%), which may affect the way in which they interact with their respective environments. Therefore 56% of the males in the study were not classified as masculine, with most of the males falling under the negative feminine category (31%); which suggests that behaviours that are not only undesirable in females, but those which are retro-typical for males, may be exhibited by more than half of the males in the sample. The same argument can be compiled for females, as the female category did not only consist of feminine individuals, but also other identities (36%) that would therefore not display behaviours typically associated with females. It is interesting that the majority of the females are negatively feminine (35%) meaning that the undesirable, negative traits are exhibited by the females in this sample; instead of the positive, nurturing nature expected of females

according to society (Cook, 1990). The study by Hall and colleagues (2012) is thus supported as they suggested that males are exhibiting more feminine traits and are becoming comfortable in doing so. Research by Appelbaum, Audet, & Miller (2003) was also supported by this study, as they suggested that females are taking on masculine traits in order to succeed in the workplace; as can be observed in the current study as 36% of the females adopted masculine sex role identities.

If the current sample focussed on biological sex as a proxy for analysing emotional intelligence or job satisfaction, inaccurate findings may have been reported and therefore inconsistent findings may have been found as per previous studies analysing biological sex in comparison to other constructs; due to neglecting the 'within sex' differences that exist and are not accounted for when doing analyses between males and females. The current study therefore not only supports the more complex analysis of males and females through sex role identity, but it also supports more modern views of gender stereotypes as males and females are moving away from their traditional, stereotypical sex-based behaviours. The distributions reported above can be viewed below.

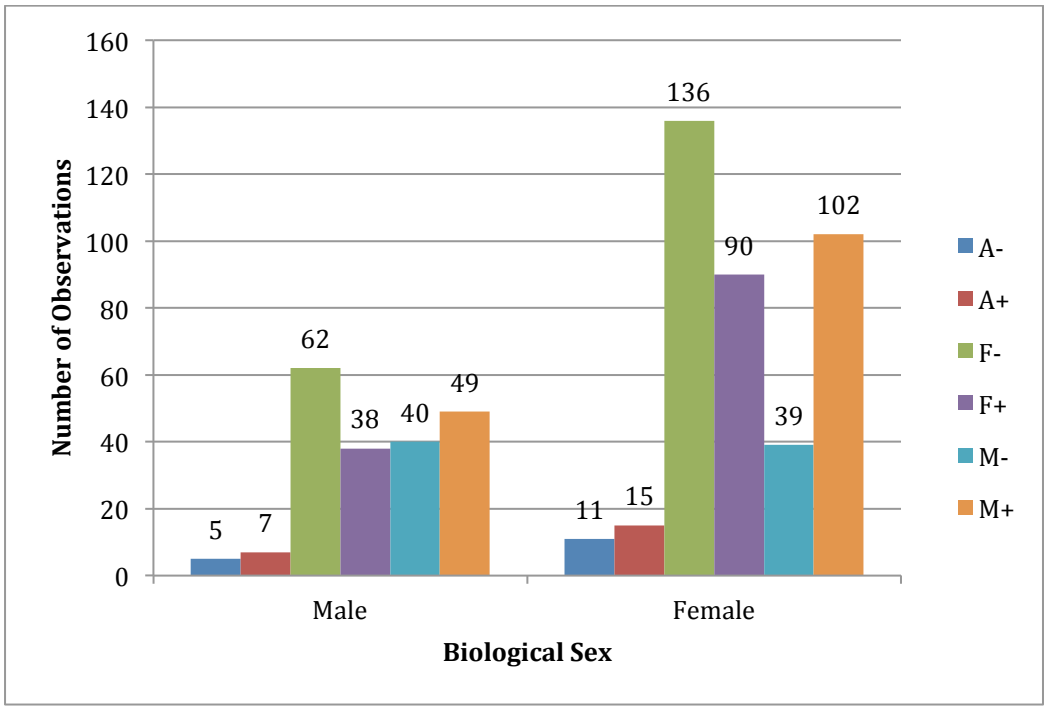

Figure 6: Distribution of SRIs according to sex

The figure above (Figure 6) illustrates the distribution of sex role identities according to biological sex, concluding that sex is too simplistic to measure in comparison to outcome variables due to within sex difference, which exist; which result in heterogeneous participants when a researcher believes they are working with a homogenous group.

4.4 Summary Findings Regarding Sex Role Identity and Emotional Intelligence

4.4.1 Statistically significant findings for the positive identities.

When analysing utilisation of emotion and total emotional intelligence, all of the positive identities were higher than negative femininity.

This finding is logical and expected as per the hypotheses, which proposed that the positive identities would yield higher emotional intelligence scores than the negative identities. When looking at utilisation of emotion, it was proposed that negatively feminine individuals would score lower than the positive identities for a number of potential reasons. As mentioned, negatively feminine individuals were said to be less able to use emotion for effective interactional purposes, due to their lack of control over emotion as attributed to their submissive, anxious and nervous behaviours, which affect interpersonal relationships and rapport building (Bem, 1974; Roehling *et al*., 1996; Schwarz & Clore, 1996). Therefore, negatively feminine individuals may be unable to use emotion in a competent manner due to their inability to perceive and utilise emotion and thus their inability to engage socially in a desirable manner (Bem, 1974; Helmreich *et al*., 1981). This may result in such individuals becoming more anxious and nervous due to the negative reaction of others in the presence of negatively feminine individuals, creating a vicious cycle of *Rumination* (Petrides, Pita & Kokkinaki, 2007). One can therefore suggest that individuals with desirable traits may be more competent at using emotions in social interactions when compared to individuals who are negatively feminine.

A similar disputation can be argued for the low scores of negatively feminine individuals on total emotional intelligence. If an individual lacks the ability to utilise emotions correctly, build and maintain relationships, build rapport and have insufficient interpersonal skills, it can be expected that such individuals may have a low total emotional intelligence score, as they cannot be expected to score highly on any of the increasingly complex total emotional

intelligence. Negatively feminine individuals may therefore be unable to engage with others in a socially desirable manner, which supports the low emotional intelligence findings of the current study (Bem, 1974; Bernstein, 2013). However, the positive identities can therefore be said to exhibit higher total emotional intelligence scores when compared to negatively feminine individuals.

4.4.2 Non-significant findings for the positive identities.

There were no differences between the positive identities when analysing appraisal of emotion, utilisation of emotion, optimism and total emotional intelligence, specifically referring to non- significant findings between positive femininity and positive masculinity.

Although it was generally proposed that the positive identities would score higher than the negative identities, there was still a subtle, yet exploratory, hierarchy associated with the positive and negative sex role identities. Positive femininity was generally expected to score higher than positive masculinity purely because the definition and meaning behind emotional intelligence is said to be so closely aligned with the behavioural traits associated with positively feminine individuals (Bardick, 1971; Bem, 1974; Cook, 1990). Positively feminine individuals are thought to be inherently relation-orientated and for this reason, it was expected that they would do better on all of the emotional intelligence subscales as well as total emotional intelligence. As observed through the results, this was not the case.

The result does not suggest that positively feminine and positively masculine individuals are low on the respective emotional intelligence facets and total emotional intelligence scores, however it does suggest that they may be equally competent in appraising and utilising emotion, maintaining a positive affective state in oneself and others, and total emotional intelligence by using their own means of communicating. Positive masculinity and positive femininity may be equally competent for their own respective reasons. Positively feminine individuals are thought to be socially adept due to their relation-orientated skills however the ability of positively masculine individuals to negotiate their environment, may be as effective as the relation-orientated skills adopted by positively feminine individuals (Bardick, 1971; Bem, 1974; Cook, 1990). Therefore, the non-significant findings between the positive identities may be due to the two respective communication strategies of each positive identity, which may be equally effective.

Another plausible reason for the lack of difference between positively masculine and positively feminine individuals may be due to the fact that masculine individuals may feel the need to increase their relation-orientated skills in order to succeed in the world of work (Hall *et al*., 2012). As mentioned, emotional intelligence may be learnt and therefore positively masculine individuals may have incorporated emotionally intelligent strategies and skills into their behavioural repertoire in order to maintain their status within a hegemonic society (Palmer, 2003). The researcher is not proposing that the positively masculine individuals are androgynous, one simply proposes that the positively masculine individuals may have learnt only the essential emotional intelligence skills needed to succeed. This is plausible as Bernstein (2013) showed that positive masculinity and positive femininity shared cross-loaded items and therefore positively masculine individuals may possess relation-orientated skills but not enough to make them positively androgynous (Hall *et al*., 2012). This concept will be explained further when discussing *The Circumplex Model* (Page 120).

When looking at the distribution of sex role identities according to biological sex, it appeared that 26% of the females were considered to be positively masculine, therefore making up 68% of the total individuals who identified as positively masculine. Furthermore, 70% of the positively feminine individuals were female. Therefore, the analysis between positive femininity and positive masculinity was predominantly between positively masculine females and positively feminine females, therefore the analysis conducted was mainly between females; adding an element of similarity in itself. This may explain why the results between positively feminine and positively masculine individuals were not significantly different as there were unequal constituents of males and females for each sex role identity. Therefore, the explanations proposed above regarding the non-significant differences may be supported further as females have been shown to adopt masculine traits in order to succeed within the working world (Appelbaum, Audet, & Miller, 2003). Thus the respective 26% of females in this sample may exhibit positively masculine behaviours at work while still intrinsically having access to relation-orientated skills, which have been said to be typically expected by females (Bardick, 1971; Bem, 1974; Helmreich *et al*., 1981; Roehling *et al*., 1996).

The explanations above illustrate to the researcher that one cannot rule out the possibility that positively feminine individuals may score higher than positively masculine individuals when looking at appraisal, utilisation, optimism and total emotional intelligence, as the sample does not have an equal distribution of males and females per sex role identity category. Sex role

identity is a complex construct in itself and therefore the additional complexity added to sex role identity when comparing the sexes, can be complicating. Even though feminine individuals may identify as being positively masculine, it does not rule out the possibility of them exhibiting feminine traits. The classification as masculine illustrates the most prominent sex role identity as scored by the respective individuals and therefore a larger sample with more evenly distributed sex role identity ratios with evenly distributed males and females may yield results that are more in line with the hypotheses in the current study.

There were non-significant findings between positive androgyny and positive femininity when looking at appraisal. The same can be said for the utilisation of emotion with the additional non-significant difference between positive androgyny and positive masculinity.

The lack of differences between positive femininity and positive androgyny on appraisal and utilisation of emotion may be due to the proposal that relation-orientated skills which both positively feminine and positively androgynous individuals possess, are crucial in the respective total emotional intelligence (Ciarroch *et al.*, 2000; Harms & Crede, 2010; Murphy, 2008; Petrides, Pita & Kokkinaki, 2007). It must be remembered that appraisal and utilisation are the more basic emotional intelligent subscales compared to optimism and social skills (Murphy, 2008). Therefore, it must also be remembered that the non-significant findings are between identities that are both associated with high levels of interpersonal skills and therefore may not differ in appraisal and utilisation as observed above, but may differ as emotional intelligence scales increase in complexity. However, when looking at the distribution of sex role identities, positive androgyny only makes up 4% of the distribution while positive femininity makes up 22% and therefore it is not unrealistic to hypothesise that a larger number of positively androgynous individuals in the sample might have allowed for significance to be established. This proposition is based on the fact that the positive androgynous individuals did attain significance on some emotional intelligence scores and when looking at the means of all of the subscales and total emotional intelligence, as positive androgyny always scored the highest.

When looking at the non-significant result between positive androgyny and positive masculinity, the same disputation can be argued regarding the small number of positive androgynous individuals within the sample; therefore the lack of positively androgynous

individuals may have limited findings and may have prevented positively androgynous individuals from appearing as significantly different from the positive identities.

4.4.3 Statistically significant findings for positive androgyny.

When looking at appraisal of emotion, positive androgyny had a higher score than all of the negative identities and positive masculinity.

Despite the small amount of positively androgynous individuals in the sample, a distinct difference was found between positive androgyny and all of the negative identities. This finding aligns with the proposed hypotheses as positive androgyny, as a positive identity, was expected to score above all of the other identities (including the negative identities), due to the ability of positively androgynous individuals to successfully identify and assess environmental cues, which can include emotional responses of others (Mayer, Salovey & Caruso, 2000b; Murphy, 2008; Schutte *et al*., 2001). The result therefore shows that positively androgynous individuals, who have an increased behavioural repertoire of socially desirable traits, are able to recognise emotions in themselves and others more effectively than negatively masculine, negatively feminine and negatively androgynous individuals.
The analysis of utilisation of emotion showed that positively androgynous individuals had higher utilisation scores than negatively feminine and negatively masculine individuals.

Again this finding is not unexpected and is in line with the hypotheses of the study as positively androgynous individuals are suggested to have high levels of empathy therefore allowing them to understand emotional responses of others and act upon them; resulting in high levels of utilisation of emotion (Harms & Crede, 2010). Negatively feminine individuals are said to lack empathy due to their inability to engage with others in a socially desirable way, which suggests that such individuals may be unable to use emotions in a favourable way to facilitate positive relationships with others (Avsec & Kavcic, 2011; Ciarrochi, Chan & Caputi). The low utilisation scores observed in negatively masculine individuals may also be due to the lack of empathy associated with such individuals, as they are said to be greedy and self-interested (Austin *et al*., 2007; Bem, 1974). Therefore, this significant finding suggests that positively androgynous individuals are better able to successfully appraise the emotions and understand the viewpoints of others, thus allowing such individuals to act in ways which are emotionally desirable, which are therefore positively accepted.

Optimism scores of positively androgynous individuals were higher than all of the negative identities.

The high optimism scores of positively androgynous individuals was expected, as they are said to encompass both the positive masculine and positive feminine traits which may facilitate higher optimism scores (Fernandez-Berrocal & Extremera, 2006; Guastello & Guastello, 2003; Moon & Hur, 2011). Remembering that optimism refers to the ability to maintain a positive affective state in oneself and others, the communal skills and ability to maintain fulfilling relationships of positive femininity and the ability to lead in a charismatic manner of positively masculine individuals, altogether contribute to an individual who has high optimism scores. This was observed in positively androgynous individuals, suggesting that they are better able to manage their own mood and motivate others toward positive affective states when compared to negative masculinity, negative femininity and negative androgyny.

Positive androgyny also yielded higher scores than both positive masculinity and positive femininity on the optimism EI subscale.

The reason for this finding has been explained above to a certain degree. Positively feminine individuals may only have the communal skills and the ability to maintain meaningful relationships while positively masculine individuals may be charismatic but lack the relation orientated skills, which the positively feminine individuals do possess. Therefore, it is clear that the combination of both sets of desirable traits may have contributed toward positively androgynous individuals scoring the highest when compared to the negative and positive identities; due to the combined advantage gained by having access to positively masculine and positively feminine behaviours.

The social skill scores of positively androgynous individuals were higher than positive masculinity, negative femininity and negative masculinity.

Social skills are said to be the highest order of emotional intelligence compared to the other subscales (Murphy, 2008). It is not unexpected that positively androgynous individuals scored higher than positive masculinity, negative femininity and negative masculinity. The negative and undesirable traits associated with the negative identities have been explained,

therefore the lower scoring of such individuals on social skills was expected. However, although a higher score was also expected when comparing positively masculine to positively androgynous individuals, it is proposed that the difference may be due to the increased emotional intelligence associated with social skills which are not consistent with the behavioural traits expected by positively masculine individuals. While positively androgynous individuals may have the communal skills associated with positively feminine individuals, positively masculine individuals may be more focussed on self-promotion over relationship building. The findings therefore suggest that positively androgynous individuals may be better able to build and maintain relationships, as well as rapport, while also inducing desirable responses in others (Goleman, 1998).

Positively androgynous individuals scored higher than all of the identities on total emotional intelligence.

Positively androgynous individuals not only scored the highest when looking at the means alone, but these individuals also yielded the most significant findings when compared to the other identities. Therefore, it was expected that these individuals would yield the highest total emotional intelligence scores, even above positively feminine and positively masculine individuals, due to the combined desirable traits available to positively androgynous individuals from the other positive identities.

4.4.4 Statistically significant findings for positive femininity.

Positively feminine individuals were higher than negatively feminine and negatively androgynous individuals on appraisal.

The result above is in line with the proposed hypotheses, not only on the level of positive identities scoring higher than negative identities but on the basis of the proposed hierarchy of findings as one expected negative femininity and negative androgyny to score lower than positively feminine individuals. This was expected due to the awareness of others' feelings, which is associated with positive femininity, and the lack of negatively feminine and negative androgynous individuals to possess these interpersonal skills that may assist positively feminine individuals attain higher emotional intelligence scores (Belle, 1982; Bem, 1974; Reevy & Maslach, 2001; Smith *et al*., 2009).

The utilisation and optimism scores of positively feminine individuals were higher than negatively feminine individuals.

Again, the findings above are consistent with the hypotheses proposed in the current study. Positively feminine individuals were expected to score higher than negatively feminine individuals on appraisal, utilisation of emotion and optimism. Positively feminine individuals may have scored higher on utilisation due to their ability to empathise with others, therefore understanding their point of view and thus reacting in the correct manner (Harms & Crede, 2010). This was not expected by negatively feminine individuals as they are said to be unable to not only control their own emotions but also unable to engage with other in a socially desirable manner which suggests that their emotional responses to others are not seen to be 'correct' (Petrides, Pita & Kokkinaki, 2007).

Positively feminine individuals were also expected to score higher on optimism as they are able to maintain meaningful relationships and build rapport with others therefore promoting a positive affective state not only in oneself but also in others (Ciarrochi, Chan & Caputi, 2000; Harms & Crede). This was not expected by negatively feminine individuals as they are known to be whiny and complaining, thus not only promoting negative affective states in others but they are also unable to promote positive affective states within themselves due to the level of *Rumination* associated with such individuals (Nolen-Hoeksema *et al.,* 1997; Petrides *et al.*, 2007).

Therefore the trends observed above are not unexpected, and suggest that positively feminine individuals can be said to possess the ability to not only utilise emotion in a successful manner but also promote positive affective states within oneself and others; to a greater degree than negatively feminine individuals.

The score for positively feminine individuals was higher than negative femininity and negative masculinity for social skills.

The higher score of positive femininity on social skills was expected and is in line with the proposed hypotheses. This is due to the proposition that positively feminine individuals are relation-orientated and therefore are considered to possess exceptional social awareness and social skills, as is confirmed through the results of this study. The negative identities were

expected to yield lower social skill scores. Negative femininity was not expected to obtain a high social skill score due to the inability of such individuals to obtain high levels on any of the other emotional intelligence subscales and therefore would not be expected to score highly on the most complex of the four subscales. Negative masculinity was expected to score lower than positive femininity due to the undesirable traits exhibited by such individuals, including the possible alienation of others due to the greedy, manipulative nature of negatively masculine individuals (Austin *et al*., 2007; Murphy, 2008).

It is therefore just, to suggest, that positively feminine individuals may be better at maintaining meaningful relationships and inducing desirable responses in others, when compared to negative femininity and negative masculinity.

Positively feminine individuals appeared to score higher total emotional intelligence scores than negatively feminine and negatively masculine individuals.

Due to the higher scores of positively feminine individuals on the subscales of emotional intelligence, when compared to negative femininity and negative masculinity, it could therefore be expected that these individuals would have a higher subscale or total emotional intelligence scores than the later identities. Looking at the means also supported this.

4.4.5 Statistically significant findings for positive masculinity.

Positive masculinity appeared to score higher than negative femininity for utilisation, optimism and total emotional intelligence.

The findings above were in line with the proposed hypotheses as positive masculinity was expected to score higher than negative femininity. Positively masculine individuals were expected to score highly compared to negatively feminine individuals on utilisation scores due the ability of positively masculine individuals in negotiating their environment, therefore being able to not only manipulate the emotions of others through self-assertion and assertiveness but also being able to correctly react to others emotions in the name of self-promotion (Bem, 1974; Bernstein, 2013; Harms & Crede, 2010; Ciarrochi *et al.*, 2000).

The higher scores of positively masculine individuals on optimism, when compared to negatively feminine individuals, could be attributed to the leadership skills of the former individuals in being able to modify the emotional state of oneself and others through charismatic behaviours (Murphy, 2008). Such skills are not associated with behaviours exhibited by negatively feminine individuals, therefore expecting the result observed above.

The higher total emotional intelligence score of positively masculine individuals, over negatively feminine individuals, was expected as positively masculine individuals not only had significantly higher differences on some emotional subscales as observed above but they also scored higher than negatively feminine individuals when looking at the means.

Therefore positively masculine individuals have been shown to be more competent at utilising emotion, promoting affective states within oneself and others as well as out performing negatively feminine individuals on total emotional intelligence.

It was also noticed that positively masculine individuals scored higher than negatively androgynous individuals on optimism.

Again, this finding was congruent with the hypotheses regarding the hierarchical pattern of the sex role identities as well as the proposal that positive identities would yield higher optimism scores when compared to negative identities. The reason for positively masculine individuals attaining a higher score is explained above when comparing the higher scores of positive masculinity over negative femininity however, the decreased scores of negatively androgynous individuals was not. Therefore negatively androgynous individuals may have struggled to attain high levels of optimism due to the combination of undesirable masculine and feminine traits that they possess. The masculine trait, which may have resulted in the decreased score, could be due to the lack in ability of negatively masculine individuals to lead others toward a positive affective state as seen in positively masculine individuals (Austin *et al*., 2007). Although this may be so, it is proposed that the negatively feminine traits may have caused the lack of optimism scores to a greater degree as negative masculinity was significantly higher than negative femininity on optimism, which may be due to the vulnerability of negatively feminine individuals to stress and anxiety, which prevents negatively feminine individuals from being able to maintain a positive affective state within themselves or in others (Brackett & Rivers, 2006). Therefore the negative traits

of both negative femininity and negative masculinity may have contributed to the inability of negatively androgynous individuals from attaining high optimism scores; due to the respective undesirable traits and behaviours mentioned above.

4.4.6 Non-significant findings for positive masculinity.

Positive masculinity was not significantly different from the negative identities when looking at appraisal of emotion and social skills.

This finding was not only a non-significant result but also a counterintuitive finding as it was proposed that the positive identities would score higher than the negative identities. However, due to the stereotypical preoccupation of positively masculine individuals being ambitious, assertive and independent in their way of thinking, this may have resulted in an individual who sees their way of doing things as the correct way; thus not acknowledging or identifying the behaviours or emotions of others as being warranted (Woodhill & Samuels, 2003).

If the positively masculine individual has not learnt the emotional responses or cues for a particular behaviour, then he or she may not agree with the emotion linked to the behaviour, therefore incorrectly appraising the emotion, resulting in a decreased ability to appreciate or appraise emotions in others (Palmer, 2003).

Therefore positively masculine individuals may not appraise emotion to an expected degree as they may have their own standards regarding the correct emotional behaviours, as well as their own judgement system as to what emotional behaviours are warranted by others. This may therefore lead to the *inability* of positively masculine males to appraise emotion in oneself and others to a greater degree than the negative identities.

Although higher social skill scores were also expected when comparing positively masculinity to the negative identities, it is proposed that the lack of difference may be due to the increased complexity of emotional intelligence associated with social skills, which are not consistent with the behavioural traits expected by positively masculine individuals (Murphy, 2008). While positively androgynous and positively feminine individuals may have the communal skills associated with attaining a high level on the social skill subscale, positively

masculine individuals may be more focussed on self-promotion and task orientation over relationship building.

Another plausible rival hypothesis stems from the consideration of *The Circumplex model* proposed by Wiggins (1996). This model considers 2 dimensions namely the Hostility-Friendliness dimension on the *x-axis* and the Dominance-Submissiveness dimension on the *y-axis* (as can be observed in the diagram on the following page). When considering the dimensions that make up *The Circumplex Model*, it is logical to superimpose the main sex role identity subscales onto *The Circumplex Model* as the polar ends of each dimension can be linked to one of the sex role identity categories. Positive masculinity can be associated with *Dominance* while positive femininity can be associated with *Friendliness* (Gaed & Colleagues, 2006). Furthermore, negative masculinity can be represented by *Hostility*, and negative femininity can be associated with *Submissiveness* (Gaed & Gallo, 2006). Due to the model being represented on a *Cartesian Plane*, it suggests that an individual may fall somewhere between the 2 dimensions thus encompassing some of the respective polar behaviours to some degree, and other behaviours to a lesser degree thus illustrating that an individual may be classified primarily into one main category but also belonging to another category to some extent. This can be linked to sex role identity theory, as an individual may be classified under one sex role identity as their main classification, however it does not suggest that such individuals may not exhibit some behaviours associated with the other sex role identities. Although statistical techniques require defined parameters in order to categorise participants into respective sex role identity groups, it can be shown through *The Circumplex Model*, as well as through the cross-loadings observed across the sex role identities in past research, that the sex role identities are not completely independent from each other (Bernstein, 2013; Wiggins, 1996). Therefore, this may explain why non-significant differences were observed between positive masculinity and the negative identities, as the negative identities may possess some positively masculine traits that make such individuals more similar to positively masculine individuals than previously expected. Conversely, the positively masculine individuals may possess some negative traits such as arrogance associated with negative masculinity, which may result in such individuals scoring lower emotional intelligence scores than previously expected; making them more similar to the negative identities than hypothesised. *The Circumplex Model* can be viewed on the following page, which will be followed by the statistically significant findings for negative masculinity.

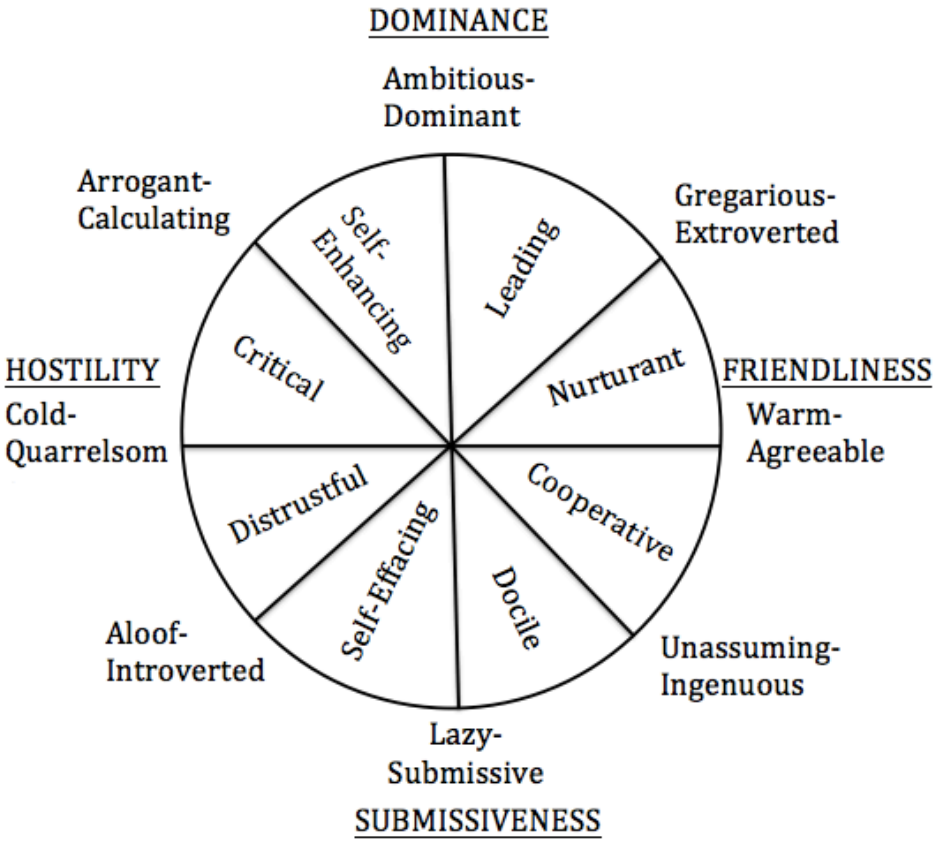

Figure 7: The Circumplex Model (Adapted from Wiggins, 1996)

4.4.7 Statistically significant findings for negative masculinity.

Negative masculinity was significantly higher than negative femininity on optimism scores.

This finding was in line with the predicted hypotheses. Negative masculine scores were significantly higher than negatively feminine scores, indicating that there was a difference between the optimism scores of individuals with negatively masculine traits compared to those with negatively feminine traits. Negative masculinity is not proposed to be as stress prone, nervous and anxious as negatively feminine individuals, allowing negatively masculine individuals to possibly attain positive affective states in oneself unlike F- as explained above. Negatively feminine individuals, as proposed, may be focussed on *Rumination*, thus preventing positive affective states by such individuals (Nolen-Hoeksema, Mcbride & Larson, 1997).

4.4.8 Non-significant findings for negative masculinity.

Negative masculinity was not significantly different from positive femininity and positive masculinity when analysing appraisal, utilisation and optimism scores.

The various reasons as to why positively masculine and positively feminine individuals may score higher than negative masculinity has been discussed, however, it was proposed in the hypotheses that the negatively masculine identity may attain moderate levels of appraisal, utilisation and optimism scores due to their manipulative and greedy nature (Austin *et al*., 2007). The manipulation suggested to be carried out by negatively masculine individuals may result in higher emotional intelligence scores as the ability to manipulate others has been associated with higher emotional intelligence (Murphy, 2008). Therefore it would be in their interest to appraise emotion correctly in order to react in the correct manner in order to get the most favourable results (Austin *et al*., 2007; Roehling *et al*., 1996). The ability of negatively masculine individuals to appraise and utilise emotion may be learnt and developed through manipulating others (Palmer, 2003). Therefore, negatively masculine individuals may score moderately on the appraisal and utilisation scales due to their ability to be manipulative; scoring close to that of positively feminine and positively masculine individuals. This suggests that negatively masculine individuals may be able to appraise and utilise emotion to the extent of positively feminine and positively masculine individuals.

Although the above was proposed to be true for negatively masculine individuals in the short term, the potential alienation of others involved with negatively masculine individuals may result in a decrease in their ability to successfully appraise, utilise and attain optimism levels, in the long term, due to the potential negative after effects associated with manipulating others. Therefore the cross-sectional nature of the study may be limiting in assessing the entire relationship cycle of negatively masculine individuals and thus will be discussed as a limitation of the study.

When looking at social skills and total emotional intelligence, negative masculinity was not significantly different from positive masculinity.

This finding was counterintuitive, however, it does make sense after analysing the data, as positively masculine individuals may lack the communal skills associated with social skill

intelligence when analysing the significant differences between positively masculine and positively feminine individuals. Therefore positively masculine individuals appear to score lower than expected when analysing social skill scores. When looking at the negatively masculine individuals, it was proposed that they might have moderate levels of social skills due to their increased ability to manipulate others and modify the emotional responses of others for purposes of self-interest but also their somewhat decreased ability due to their greediness and arrogance. Therefore the observation that positively masculine individuals did not score differently from negatively masculine individuals may be due to the lack of social skills associated with positively masculine individuals and not the increased manipulative nature of negatively masculine individuals, as the negative masculine identity did not score differently from the negative identities when looking at social skills and total emotional intelligence as will be explored below.

Again, when considering *The Circumplex Model* explained above, the cross-factor loadings of some items on positive masculinity and negative masculinity found by Bernstein (2013) and the degree of inter-correlation between positive masculinity and negative masculinity in the current study, it may be possible that positively masculine individuals and negatively masculine individuals share behavioural traits making them more similar on emotional intelligence than expected (Wiggins, 1996).

Negatively masculine individuals were not significantly different from the other negative identities on appraisal, utilisation, social skills and total emotional intelligence.

Although this finding was counterintuitive, as it was not entirely unexpected that negatively masculine individuals would score higher than the other negative identities due to their increased emotional intelligence attributed to their ability to manipulate others (Murphy, 2008). When looking at the distribution of sex role identities across biological sex, it was observed that there was a similar amount of negatively masculine males and negatively masculine females, making up 13% of the total sex role identity distribution. However, negative femininity contributed to 33% of the sex role identity distribution. Perhaps the lack of significant differences may be due to the need to obtain more negatively masculine individuals into the sample, which may then yield more significant differences as observed between negative femininity and the various significant findings, which were observed. On the other end of the scale, negatively androgynous individuals only made up 3% of the total

sex role identity distribution, and therefore the lack of significant findings between them and the other identities is not unusual as the sample size of negatively androgynous individuals was small and may have been too small to find significant differences. Therefore it is proposed that the increased ability of negatively masculine individuals to score higher than the negative identities, has not been explored to its fullest extend in this study due to the small sample size of negatively androgynous individuals and the large size of negatively feminine individuals when compared to the amount of negatively masculine individuals.

4.4.9 Conclusion for emotional intelligence.

4.4.9.1 Positive versus negative scoring.

As expected, positively androgynous individuals scored higher than all of the negative identities on appraisal, due to the successful adaptive nature of positively androgynous individuals, which is not expected from the negative identities. Positively feminine individuals only scored higher than negative femininity and negative androgyny. However, negatively masculine individuals yielded results, which were not significantly different from positively feminine individuals, which was explored above. When looking at utilisation, optimism and total emotional intelligence, all of the positive identities (A+, F+ & M+) scored above negative femininity. When analysing social skills, positively androgynous and positively feminine individuals scored higher than negative femininity and negative masculinity, which was explored in the discussion. Positive androgyny scored higher than all of the positive and negative identities when examining optimism and total emotional intelligence, as expected.

4.4.9.2 Differences between positive identities.

There were no differences between positively androgynous and positively feminine individuals for appraisal but positive androgyny was found to be higher then positive masculinity. There were also no differences between the positive identities for utilisation. Positive androgyny was higher than all the positive and negative identities for optimism and total emotional intelligence. There were no differences between positively androgynous and positively feminine individuals for social skills, but they both scored higher than positively masculine individuals.

4.4.9.3 Pattern between positive femininity and positive masculinity.

Although there appeared to be a clear pattern with positively androgynous individuals yielding the highest emotional intelligence scores, there appeared to be less said for positive femininity and positive masculinity and the differences between the positive identities. Positively feminine individuals and positively masculine individuals were not significantly different from each other when analysing appraisal, utilisation, optimism and total emotional intelligence but positively feminine individuals did appear to be higher than positively masculine individuals in social skills.

4.4.9.4 Pattern of positive masculinity.

The interest in exploring the pattern of positive masculinity lies in the observation that it was not significantly different from the negative identities in appraisal, utilisation and social skills. Positively masculine individuals were only different from one of the three negative identities, namely negative androgyny, but was not different from negative femininity and negative masculinity when comparing optimism scores. Positively masculine individuals appeared to be different from negatively feminine individuals when looking at total emotional intelligence, but there was still no clear distinction between the positively masculine, negatively masculine and negatively androgynous individuals on total emotional intelligence scores.

4.4.9.5 Differences between negative identities.

Negatively masculine individuals were not found to be different from the other negative identities when looking at appraisal, utilisation, social skills and total emotional intelligence, however, negatively masculine individuals were significantly different from negatively feminine individuals when analysing optimism scores.

4.4.9.6 The pattern of negative masculinity.

Negatively masculine individuals did not appear to be different from positively feminine and positively masculine individuals, however positively androgynous individuals scored higher

than negatively masculine individuals for appraisal, utilisation, and optimism. Positively androgynous and positively feminine individuals were higher than negative masculine individuals for social skills and total emotional intelligence.

Below follows the discussion of the differences between the sex role identities when analysing job satisfaction.

4.5 Summary Findings Regarding Sex Role Identity and Job Satisfaction

4.5.1 Significant findings for positive androgyny.

Positively androgynous individuals scored higher than negatively androgynous individuals on total job satisfaction.

Not only were positively androgynous individuals expected to score higher than negatively androgynous individuals on total job satisfaction, when looking at the means as well as the significant difference observed between them on total job satisfaction, it is not surprising that positively androgynous individuals scored higher than negatively androgynous individuals. These findings are consistent with the proposed hypotheses.

Due to the social ability and interpersonal skills of positively androgynous individuals, which stems from the positive feminine identity, one may be more able to maintain social relationships which may include those with that result in higher job satisfaction scores at work (Avsec & Kavcic, 2011; Bem, 1974; Bender *et al.*, 2005; Harms & Crede, 2010;). However, positively androgynous individuals may have also scored significantly higher than negatively androgynous individuals due to the positive masculine traits, such as self-promotion, ambitiousness and assertiveness which may thus still allow positively androgynous individuals to negotiate their environment; therefore creating a positive environment conducive to rapport building and favourable work dynamics (Avsec & Kavcic, 2011; Bem, 1974; Bender *et al.*, 2005; Harms & Crede, 2010;).

The opposite can be said for negatively androgynous individuals as they are said to have a pessimistic outlook on life, which is expected not only due to their whiny and complaining behaviours, thus affecting positive social relationships at work, but they are also expected to be manipulative and aggressive (Emmons, Diener, & Larsen, 1985; Judge *et al.*, 2002;

Magnus, Diener, Fujita, & Pavot, 1993). Therefore it makes sense that the negatively androgynous individuals scored significantly lower than positively androgynous individuals as the former are less able to maintain social relationships and attain what they want without being aggressive and manipulative (Austin *et al*., 2007). Such individuals may be unable to maintain meaningful relationships not only due to them being whiny and aggressive, thus alienating others, but also due to the inherent nervous and anxious traits which also affect their social functioning (Austin *et al*., 2007). Therefore, if the environmental changes or working conditions do not suit the negatively androgynous individual, the individual may not be satisfied and may even display passive aggressive behaviours.

4.5.2 Non-significant findings for positive androgyny

There were no significant findings for positively androgynous individuals, when analysing total job satisfaction, when compared to the other positive identities as well as negative masculinity and negative femininity.

The non-significant findings were not in line with the proposed hypotheses and are thus considered to be counterintuitive findings. It was at least expected that positively androgynous individuals would score higher than the negative identities, which was not shown to be the case. It must be remembered that the small number of positively androgynous participants making up the sample (4%) only represents a few positively androgynous individuals and therefore perhaps additional sample sizes for positively androgynous individuals may have yielded significant results as seen when analysing the emotional intelligence findings. Although some significant findings have emerged from the positive androgyny sample, despite its size, a larger sample of such individuals may have yielded results, which were significant due to the increased contribution of additional positively androgynous participants.

A plausible rival hypothesis to the non-significant findings of androgynous individuals, when compared to all of the other identities, may be the fact that positively androgynous individuals may be caught in an internal conflict regarding the prioritising of relation orientation, from positively feminine individuals, and the task orientated tendencies, from positively masculine individuals. Therefore, it may be difficult for such individuals to decide internally as to which external organisational factors at work are more important to them and

subsequently affect them. Remembering that the proportion of positive feminine and positive masculine traits in each positively androgynous individual may be different to some degree, some of these individuals may seek out satisfaction in the workplace in areas that appeal to the positive feminine or positive masculine identities to a lesser or greater degree respectively. Therefore positively androgynous individuals may not be as satisfied at work as previously expected due to the increased complex nature of such individuals.

4.5.3 Statistically significant findings for positive femininity.

Positively feminine individuals were more satisfied than negatively feminine individuals, when looking at total job satisfaction.

Generally, it was expected that the positive identities would score better than the negative identities when looking at total job satisfaction, however it was also proposed that positive femininity would score higher than negative femininity for the following reasons, some of which have been explained already.

Positively feminine individuals were expected to score highly on total job satisfaction due to the desirable communal and interpersonal skills that such individuals possess, which may allow them to manage people and relationships effectively, resulting in the increased ability of positively feminine individuals to maintain a workplace conducive to a positive working environment (Bem, 1974; Bender *et al.*, 2005; Gaed & Gallo, 2006; Judge *et al.*, 2002; McCrae & Costa, 1991; Organ & Lingl, 1995; Wiggins, 1996).

Therefore, their interpersonal skills can be advantageous in this respect as well. Furthermore, negatively feminine individuals may have scored lower than positively feminine individuals due to their general whiny, complaining and pessimistic outlook on life and therefore may be less satisfied at work (Emmons *et al.*, 1985; Judge *et al.*, 2002; Magnus *et al.*, 1993). The traits associated with negatively feminine individuals have been linked to negative psychological constructs such as depression and therefore negatively feminine individuals may exhibit traits that prevent a positive environment within the organisation and may perceive the organisation in this negative light (Petrides *et al.*, 2007).

Positively feminine individuals yielded higher total job satisfaction scores compared to negatively androgynous individuals.

As mentioned, positively feminine individuals are said to possess interpersonal skills and are considered to be adept at maintaining relationships, therefore their ability to maintain relationships might allow them to keep lines of communication open between management and colleagues thus possibly allowing positively feminine individuals to perceive a favourable working environment; one which they may be satisfied with. However, negatively androgynous individuals not only have the negative feminine whiny and complaining traits, which might prevent favourable social interactions, but they also have the aggressive and hostile traits of negative masculinity which may cause such individuals to destroy relationships; resulting in a working environment which may be perceived as intolerable. Therefore the combined inability to communicate effectively and the potential to destroy relationships through being aggressive and hostile may allow negatively androgynous individuals to have low total job satisfaction scores due to the perceived undesirable environment in which they operate (Emmon *et al.*, 1985; Judge *et al.*, 2002; Magnus *et al.*, 1993).

4.5.4 Statistically significant findings for positive masculinity.

Positively masculine individuals were shown to score higher on total job satisfaction when compared to negatively feminine individuals.

The above findings were in line with the proposed hypotheses regarding sex role identity and job satisfaction. The negative effects of the negative feminine individuals have been elaborated on when describing significant findings between positive femininity and negative femininity therefore such individuals have been suggested and shown to have lower job satisfaction scores as observed above. However, positively masculine individuals were proposed to attain high levels of job satisfaction due to their ability to negotiate their environment by being assertive, competitive and ambitious in getting what they want (Avsec & Kavcic, 2011).

It makes sense that positively masculine individuals have scored higher than negatively feminine individuals, as positively masculine individuals are said to display behaviours

associated with confidence, independence, self-promotion and competition (Bem, 1974; Cook, 1990). Therefore positively masculine individuals may exhibit high scores of total job satisfaction due to their perceived self-assurance in attaining goals and succeeding, as is expected by their tendency to be task orientated (Bem, 1974). Although it may be dependant on what job the individual occupies, positively masculine individuals are said to negotiate their environment and therefore they may adapt themselves and the environment to ensure satisfaction, which may include internal satisfaction with one's job and satisfaction with the nature of work associated with one's job, in order to be successful.

4.5.5 Non-significant findings between the positive identities.

There were no observed differences between the positive identities when comparing total job satisfaction scores.

This was a counterintuitive yet exploratory aspect of the study. Even though one expected that positively androgynous individuals would yield the highest level of total job satisfaction, it appeared that this was not true.

It seems that the positive identities, with socially desirable traits, were able to adapt or negotiate their environment in order to ensure that they were more satisfied than the negative identities with their current jobs. Positively feminine individuals are said to be able to maintain social relationships and empathise with others therefore attempting to get everyone's needs met including their own. However, such individuals may therefore be satisfied with their current job by having a positive outlook and communal, expressive nature in maintaining a harmonised workplace (Woodhill & Samuels, 2003).

Positively masculine individuals may be able to attain job satisfaction by being assertive, dominant and confident in negotiating their environment. Therefore positively masculine individuals may attempt to shape their environment to their satisfaction through assertiveness instead of through harmony (Woodhill & Samuels, 2003).

Positively androgynous individuals may then utilise one of the above strategies, or both, in attaining higher levels of job satisfaction, however through the findings it appears that neither

strategy is more effective than the other. Therefore the findings show that the positive identities are not differently equipped in attempting to attain higher levels of job satisfaction.

Despite the proposal that there may be no differences between the strategies adopted by the positive identities, it must be remembered that positive androgyny might have lacked significant differences due to only 4% of the participants being positively androgynous. Therefore, there may not have been enough data in the form of positively androgynous participants, in establishing significant findings. However, when findings associated with positive androgyny were significant, as observed in some of the relationships above, the difference between the respective identity and the small sample of positively androgynous individuals was so explicit that a significant relationship was unequivocally evident.

4.5.6 Significant findings for negative masculinity.

Negatively masculine individuals had higher job satisfaction scores than negatively feminine individuals

This finding was in line with the hypotheses proposed. The higher job satisfaction scores can be expected and were subsequently shown, as negatively masculine individuals are said to be greedy and manipulative therefore being more successful at getting what they want when compared to passive negatively feminine individuals (Austin *et al*., 2007; Gaed & Gallo, 2006). Negatively feminine individuals are said to not only perceive life and subsequently situations, in a more pessimistic manner, but they are also said to be submissive to the needs of others as they are not predisposed to possess qualities that may allow them to negotiate their environment (Emmons *et al.*, 1985; Judge *et al.*, 2002; Magnus *et al.*, 1993).

Negatively masculine individuals scored above negatively androgynous on total job satisfaction.

This finding was expected as negatively androgynous individuals may also portray the whiny and complaining traits of negatively feminine individuals and therefore may also score low when compared to negatively masculine individuals. Negatively masculine individuals may appear to be satisfied with the work they are involved in, as a manipulative façade to appear engaged with their work and increase their chances of advancement. Another possibility is

that negatively masculine individuals are satisfied with the work they are involved in as long as they have control and domination over the way in which it is done, as can be expected through their controlling and domineering behavioural traits (Austin, 2007; Cook, 1990).

4.5.7 Non-significant findings between negative masculinity and the positive identities.

Negative masculinity did not appear to score differently from any of the positive identities on total job satisfaction.

Negatively masculine individuals may be good at manipulation in ensuring that the job environment aligns with what they want. As explained with positive masculinity, positive femininity and positive androgyny, they too are said to be able to manipulate their environments however perhaps they do this using different strategies as explored above. The use of *desirable* traits by the positive identities, may result in job satisfaction that is attained and maintained over the long term. Although negatively masculine individuals may attain similar scores to the positive identities on job satisfaction, the 'positive' effects of manipulation may only be short term due to the alienation of their colleagues when they realise that they are being manipulated for self-interested purposes of the negatively masculine individual. As mentioned when discussing previously, this could not be clarified through a cross-sectional study and therefore this finding could be attributed to the potentially equal strategy adopted by negatively masculine individuals in adapting to their workplace and yielding similar job satisfaction scores.

Another rival hypothesis has been explored already. *The Circumplex Model*, with the superimposed sex role identities, illustrated the ability of an individual to be negatively masculine (hostility) but still exhibit elements of positive masculinity (dominance), thus being *arrogant-calculating* according to the model if the individual scored equally on positive masculinity and negative masculinity (Wiggins, 1996). This is further supported by the cross-loadings of some items on negative masculinity and positive masculinity as found by Bernstein (2013). Therefore, although one may expect positively masculine individuals to display socially desirable traits that may allow them to negotiate their environment, such individuals may also possess some negative masculine traits that may inhibit their ability to negotiate their environment thus resulting in lower job satisfaction scores. Similarly,

negatively masculine individuals may be thought to be less successful than positively masculine individuals when negotiating their environment, however, they may possess some positive masculine traits that allow them to be better at negotiating their environment; thus resulting in higher job satisfaction scores than expected.

4.5.8 Conclusion for job satisfaction.

4.5.8.1 Positive identity versus negative identity scoring.

Positively feminine and positively masculine individuals were higher than negatively feminine individuals for total job satisfaction, while all of the positive identities were above negative androgyny. Therefore one could generally suggest that the positive identities scored higher than the negative identities when analysing their differential exhibition of job satisfaction scores.

4.5.8.2 Differences between positive identities.

There were no observed differences between the positive identities (A+, F+ and M+) for total job satisfaction. Therefore all of the positive identities may be equally competent at negotiating their environment in order to meet their needs, but with different strategies as explained above.

4.5.8.3 Differences between negative identities.

Negatively masculine individuals were found to be different from both of the remaining negative identities (F- and A-) on total job satisfaction. This suggests that negatively masculine individuals are more capable of attaining job satisfaction when compared to the negative identities.

4.5.8.4 The pattern of negative masculinity.

Negatively masculine individuals did not appear to be different from any of the positive identities (A+, F+ & M+) for total job satisfaction. Negatively masculine individuals may be

as capable as the positive identities, at attaining high job satisfaction scores, however, this might not be maintained in the long term as explored in the discussion.

4.6 Summary Findings for Emotional Intelligence and Job Satisfaction

There appeared to be a weak, positive relationship between Emotional Intelligence and Job Satisfaction. This was not unexpected, as it was proposed that Emotional Intelligence may be one of many factors influencing an individual's Job Satisfaction scores. Factors such as work industry, the physical working environment and socio-economic factors may also affect one's Job Satisfaction scores.

The findings suggest that Emotional Intelligence does in fact to one's job satisfaction score, but only to a small degree.

4.7 Summary Findings for the Interactional Relationship between SRI, EI and JS

Remembering that this analysis was completely exploratory, the findings were as expected when suggesting that significant interactional relationships would depend on the findings between SRI and EI as well as between SRI and JS respectively. The main effect results suggested that there was a relationship between SRI and JS as was observed when conducting the one-way ANOVA for SRI and total JS, however there did not appear to be a significant relationship between SRI and EI when splitting EI into high and low levels.

Despite the result from the Pearson's Correlation between EI and JS, as well as the results from the one-way ANOVAs regarding significant relationships between SRI and EI as well as SRI and JS, the interactional relationship was non-significant; suggesting that there was no interactional relationship between SRI, EI and JS. Perhaps a larger sample is needed in order to find more significant results as some of the sex role identities had small cell sizes as observed with negative androgyny (3%) and positive androgyny (4%).

4.8 Theoretical and Practical Implications

The current study aimed to mainly explore the variations in sex role identity and emotional intelligence as well as the variations between sex role identity and job satisfaction. Along

with the exploration of the relationship between emotional intelligence and job satisfaction and the interactional relationship between sex role identity, emotional intelligence and job satisfaction; the factor structure of the SSREIT was also explored.

Theoretically, the exploratory factor analysis that was conducted added to emotional intelligence research not only in South Africa, but also abroad, as it investigated the factor structure of the SSREIT and found similar findings to studies done in South Africa and abroad. Therefore, a four-factor model may be confirmed as the prescribed structure through further research.

As mentioned in chapter 1, *The Differentiated Model* is suggested to be the most appropriate theoretical framework on which to measure sex role identity. The EPAQ-R (developed by Bernstein in 2013) takes into consideration the aspects of *The Differentiated Model* though measuring negative and positive traits as well as through the acknowledgement of an individual to be feminine, masculine or androgynous. The current study utilised the EPAQ-R and thus tested the relevance of *The Differentiated Model* in South African contemporary society, which has limited research in the area of sex role identity theory.

The study also yielded that sex role identity was a better proxy than biological sex, when analysing emotional intelligence and job satisfaction scores. This was illustrated through the 'within sex' differences observed in the descriptive statistics of the study as 50% of the males in this sample were not masculine, as typically expected by society, and 36% of the females identified themselves as masculine, remembering that this does not even consider the desirable and undesirable 'within sex' differences. Sex role identity can therefore be classified as being an in-depth and improved proxy for measuring 'between sex' and 'within sex' differences as it yields a more holistic and possibly an improved view of an individual's behavioural repertoire.

Furthermore, as observed in the descriptive statistics, it was evident that individuals in South Africa are not necessarily prescribing to traditional stereotypical behaviours as previous expected and can be said to be adopting untraditional and cross-typed behaviours; which again supports the use of *The Differentiated Model* as a theoretical foundation as measured through sex role identity.

From a more practical approach, the EPAQ-R measures desirable and undesirable behaviours and therefore may be used by organisations for various selection and developmental processes. Once the EPAQ-R is registered with the Health Professions Council of South Africa, it may be used to assist with selecting the correct individuals who not only match the behavioural requirements of a particular job role, but it may also assist in ensuring organisational culture fit through hiring individuals who predominantly present with desirable workplace behaviours. Although this may sound like a simple task, further research would need to be conducted to establish the correct ratios of each respective sex role identity that could allow for a team to be balanced and productive. From a developmental point of view, the EPAQ-R could be used to allow employees to identify their behavioural traits and this could be linked to behavioural pipeline requirements and identified behaviours that would need to be managed or developed. An increase in the use of valid and reliable selection and development tools, along with other techniques, may positively impact on organisational functioning (Bernstein, 2013; Chemaly, 2013; Hinrichsen, Follansbee, & Ganellen, 1981; Shimonaka, Nakazato, Kawaai, & Shinichi, 1997; Woodhill & Samuels, 2003).

Individuals who identified with the negative identities were generally suggested to display lower levels of emotional intelligence and job satisfaction, when compared to the positive identities. However, Palmer (2003) suggested that emotional intelligence can be learnt and therefore individuals who wish to increase their emotional intelligence behaviours may be able to learn positive behaviours through various organisational interventions or through self-help methods. From an organisational point of view, the implementation of training initiatives may be implemented in order to improve not only the emotional intelligent behaviours of individuals who adopt negative identities but also for all employees, in an attempt to improve the emotional intelligence abilities of the entire organisation. This has shown to increase organisational outcomes such as effective leadership, effective teamwork, improved employee commitment and increased quality of customer service (Cooper, 1997; Dulewicz & Higgs, 2000; Zeidner, Matthews & Roberts, 2004).

Through investigating the link between sex role identity and job satisfaction, the purpose of measuring job satisfaction was relevant due to the implications associated with employees' job performance but also due to the behavioural consequences associated with job satisfaction, such as employee tenure, longevity, physical health, positive employee workplace relationships, attrition of staff, favourable worker behaviour, productivity and

mental health (Caldwell & O'Reilly, 1990; Dawis, 1984; Euske *et al*., 1980; Spector, 1997). (Akerlaf *et al*., 1988; Clegg, 1983; Freeman, 1978; Mangione & Quinn, 1975; McEvoy & Cascio, 1988). Due to the increased job satisfaction scores of individuals with positive identities, it may again be useful to use the EPAQ-R to identify candidates, through the selection process, who may display with negative identities and subsequently lower job satisfaction scores; affecting the organisational constructs mentioned above.

Despite the contribution of the current study towards research and workplace practices, the current study also had limitations, which needed to be acknowledged and have been elaborated on below.

4.9 Limitations of the Study

4.9.1 Self-report bias.

Due to the fact that the EPAQ-R is a self-report instrument, it can be suggested that participants may not want to acknowledge the possession or exhibition of negative attributes as individuals strive for a positive self-image. Therefore, individuals may attribute positive gender attributes to themselves in order to help maintain a positive self-concept. This may have resulted in exaggerated positive identity scores and under emphasis on negative identities.

Critics of emotional intelligence theory question whether people are sufficiently aware of their own emotional abilities therefore people may report self-perception rather than actual level of emotional intelligence. Ciarrochi, Deane and Anderson (2002) as well as Dulewics and Higgs (1999) suggest that measuring self-awareness is difficult as most people are unaware of how they are presented to others. Self-reporting is therefore sensitive to response bias but the completion of the questionnaire electronically may have a neutralising effect on social response bias (Richman, Kiesler, Weisb & Drasgow, 1999). Other researchers suggest self-report measures are important as people act on their perceived abilities as opposed to actual abilities therefore individuals may modify their behaviour based on their beliefs about their abilities thus negating the proposed lack of credibility associated with self-report measures (Bandura, 1977; Thingujam, 2002).

4.9.2 Intersectionality

Sex role identity theory does not consider the knock-on effects of family oppression i.e. a gay son, unemployed mother, adopted black daughter on an individual's behavioural repertoire of traits (Purdie-Vaughns & Eibach, 2007). This includes, but may not be limited to, the potential role of an individual's sexual orientation, family oppression or upbringing. This consideration requires an in depth analysis, which was beyond the scope of this study, however it may allow for a better understanding of the differences observed within the male and female participant groups. It is also important to obtain larger samples that have higher ratios of the indigenous people of South Africa. The current study had a small number of Black African participants, compared to the White sample, therefore a larger sample of Black African individuals may have contributed toward different findings as the behavioural traits expected of males and females differs across cultures (Kagan, 1964; Langa, 2012; Mussen, 1969; Whitley, 1984).

4.9.3 Forced categorisation.

A limitation of sex role identity research is that the instrument forces individuals into specific dominant categories even if one possesses some traits associated with a less dominant sex role identity. Therefore one might be 'forced' into a specific category due to a slight difference in scores between two categories. This critique of sex role identity theory leads to the problem pertaining to the fact that sex role identity categories are not based on continuums. This leads to the notion of blended identities whereby an individual may exhibit traits associated with more than one sex role identity.

4.9.4 Organisational versus non-organisational contexts.

The sex roles may also be context specific and therefore one does not know to what degree the sex role identities can be linked to organisational contexts. Individuals may adopt different roles at home compared to those at work and therefore when one is completing the questionnaire, the researcher is unable to determine which context the individual may be relating to. Even though the questionnaire requested that the participant should consider the questions in relation to their organisation, this cannot be guaranteed due to extraneous

variables such as the participant's mood, exposure to trauma or the environment of the participant when he/she is completing the questionnaire

4.9.5 The analysis of total job satisfaction.

The Job Satisfaction Survey measures nine facets of job satisfaction. It would have been ideal to report on all 9 facets of job satisfaction as well as total job satisfaction however, due to the scope of the study and the word limit constraints; only total job satisfaction was explored. Statistical analyses were conducted on all of the 9 job satisfaction facets and therefore the data has been captured and interpreted however as explained above, the word limit of this research paper did not permit for further elaboration.

4.9.6 Cross-sectional restraints

By conducting a cross-sectional study, the long-term effects of negative masculine behaviours within the workplace were not measured. This may be a possible area for development as there is no research, to the knowledge of the researcher, that explores the long-term effects associated with relationships between negatively masculine individuals and their colleagues. As explained in the discussion, negatively masculine individuals did not score differently from the positive identities on some of the emotional intelligence subscales as well as on total job satisfaction. Therefore the findings in this study may only represent a snapshot of the negatively masculine individual's current relationship dynamics.

Conclusion

Although some identities may not have followed the expected trend, the general trend of the sex role identities followed the proposed hypotheses as the positive identities yielded the highest levels of emotional intelligence across the different emotional intelligence subscales, including total emotional intelligence. Therefore one could suggest that individuals with more desirable behavioural traits may be more capable of appraising and utilising emotions, attaining optimism, and displaying social skills when compared to individuals with less desirable traits such as those exhibited by the negative identities. Positively androgynous individuals were generally higher than the negative identities across all of the emotional intelligence subscales and total emotional intelligence therefore suggesting that such

individuals may be more emotionally intelligent due to their adaptive abilities attributed to their unique behavioural repertoire. Although positively androgynous individuals yielded the most amount of significant differences when compared to the other identities, positively feminine individuals were also generally above the negative identities on a number of the emotional intelligence subscales. Positive masculinity on the other hand, had the least amount of significant differences from the negative identities and therefore may suggest that such individuals do not exhibit different emotional intelligence scores when compared to individuals belonging to the negative identities. This may suggest that the interpersonal skills, which are exhibited by positively androgynous and positively feminine individuals, may propel them into a favourable position with the ability to be more emotionally intelligent when compared to positively masculine individuals and those with a negative sex role identity.

Job satisfaction scores did not appear to differ significantly across the positive identities, however the positive identities did generally yield higher job satisfaction scores when compared to the majority of the negative identities. Negatively masculine individuals yielded scores, which were not significantly different from individuals who were classified under a positive identity, therefore suggesting that all of the positive identities, as well as negatively masculine individuals, may have developed strategies which allow them to be more satisfied with their working environments. With the exception of negative masculinity, the positive identities scoring higher than the negative identities suggests that the identities who exhibit socially desirable traits, may be more able to negotiate their environment or adapt to the needs of the workplace environment while still meeting their own needs.

The weak relationship observed between emotional intelligence and job satisfaction, may be more comprehendible due to the results observed above, as an individual with a high emotional intelligence score may not necessarily exhibit significantly different job satisfaction scores when compared to other individuals; as observed with positively androgynous individuals. Furthermore, due to the limited strength of the relationship between emotional intelligence and job satisfaction, there also appeared to be no interactional relationship between emotional intelligence, sex role identity and job satisfaction.

Despite the discovery of some significant and useful findings, as well as some less important results, sex role identity appeared to be a better proxy to compare individuals on emotional intelligence and job satisfaction scores.

Perhaps future researchers may build on this study by considering the limitations described above. Despite the limitations, interesting findings have been unveiled, which will hopefully assist in the understanding of the relationships between sex role identity, emotional intelligence and job satisfaction.

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Appendices

Appendix A: Organisational Access Letter

Organisational Access Letter

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, Wits, 2050
Tel: 011 717 4500 Fax: 011 717 4559

Good day,

My name is Daniel de Freitas and I am doing my Masters degree in Organisational Psychology at the University of the Witwatersrand. In completing my degree, a large component of my Masters course is focused on a compulsory research project which has to be completed by myself, with the help of a qualified and skilled supervisor. My research is focused on exploring the relationship between one's gender role identity and one's emotional intelligence scores relating to the job satisfaction scores of South African employees. I would like to invite your organisation to participate in my research in order to gather results that could possibly reflect a wider context of views and thus increase the generalisability of my research in a South African context.

In participating, the individuals would be involved in completing a questionnaire which takes approximately 30 minutes to complete and is completely anonymous and confidential in terms of results and findings. The questionnaire will be sent out in the form of an encrypted link and predominantly consists of 'marking off a box' indicating where they fit in. The questionnaire **will not** ask for the participant's name or company that they work for. Feedback of the results will be supplied and presented in a summarized form, but no individual responses or information will be provided to the company or any other individuals. Only my supervisor and myself will have access to the responses. Participation is voluntary and unobtrusive. If the research is found to be interesting, it would be appreciated if the survey is circulated by providing the below to fellow colleagues or contacts, in order to generate a larger sample.

Participation in the study is voluntary, confidential and anonymous. I will not need the names of participants and all responses will be kept confidential. No information that could identify the company or its employees will be included in the research report. Employees will be assured that they will not be advantaged or disadvantaged in any way for choosing to participate or not participate in the study.

If your organisation does participate, a summary of the results will be made available to you in February 2015 on the blog below. No involvement would be required from you apart from allowing me access to your employees and allowing a centralised person within your organisation permission to send out the electronic link that I will send them. I will be in contact with the approached organisations to determine which organisations will be willing to participate.

Questionnaire Link: https://www.surveymonkey.com/s/WITSPLUS
Summarised findings: http://www.witsresearch.blogspot.com

The findings of this study would be of benefit for your organisation as it will provide you with information as to how gender roles may have implications for emotional intelligence and job satisfaction, all of which have implications for your organisation in terms of productivity, absenteeism, organisational commitment, and intention to stay within the organisation.

If you have any other questions please feel free to contact my supervisor, Dr Colleen Bernstein, or myself.

Thank you for your consideration in allowing me access to your organisation for my research, each and every individual's potential contribution by means of completing a survey and circulating it will be greatly appreciated.

King regards,

Student: Daniel de Freitas
Danroberto26@gmail.com

Supervisor: Dr Colleen Bernstein
Colleen.bernstein@wits.ac.za

Appendix B: Participant Information Sheet

Participant Information Sheet

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, Wits, 2050
Tel: 011 717 4500 Fax: 011 717 4559

Dear Participant,

My name is Daniel de Freitas and I am doing my Masters in Organisational Psychology at the University of the Witwatersrand. In completing my degree, a large component of my Masters course is focused on a compulsory research project which has to be completed by myself, with the help of a qualified and skilled supervisor. My research is focused on exploring the relationship between one's gender role identity, emotional intelligence and the job satisfaction scores of South African employees. I would like to invite you/your organisation to participate in my research in order to gather results which could possibly reflect a wider context of views and thus increase the generalisability of my research in a South African context.

In participating, you would be involved in completing a questionnaire, which is completely anonymous and confidential in terms of individual results and findings. The questionnaire will take about 30 minutes to complete and it will be sent out in the form of an encrypted link; predominantly consisting of 'marking off a box' indicating where you fit in. The questionnaire **will not** ask for your name or the company which you work for. Only myself and my supervisor will have access to the responses. Participation is voluntary and unobtrusive. If you find this research interesting or if you feel other people will enjoy filling it out, it would be appreciated if you would pass on the link provided to fellow colleagues or contacts, in order to generate a larger sample. There are no risks or benefits associated with participating in the research.

A summary of the findings and results will be available via www.witsresearch.blogspot.com after the research has been completed, alternatively, the summarised results can be requested from the researcher. This summary will identify general trends thus in no way will any individual's set of responses be identifiable; ensuring complete anonymity in terms of each individual response.

Please note that you are allowed to withdraw from the study at any time, except after submission of a completed survey as we will be unable to find your particular survey; as responses are anonymous. It is also important to note that by completing and submitting the survey, you are giving consent for myself and my supervisor, to use the data for statistical analysis and research purposes only.

Thank you for your consideration in taking part in my research, each and every individual's potential contribution by means of completing a survey and circulating it will be greatly appreciated.

Questionnaire Link: https://www.surveymonkey.com/s/WITSPLUS

If you have any other questions please feel free to contact my supervisor, Dr. Colleen Bernstein, or myself.

King regards,

Student: Daniel de Freitas
Danroberto26@gmail.com

Supervisor: Dr Colleen Bernstein
Colleen.bernstein@wits.ac.za

Appendix C: Demographic Questionnaire

Demographic Questionnaire

Please indicate your response by providing a cross (x) where necessary or providing a written response where required. Please note that any information which is provided in the demographic questionnaire is for research and statistical purposes only, and no information of any kind will be supplied to anyone regarding singular questionnaires.

1. Age: ____

2. Please indicate your gender:

	Male		Female

3. Please indicate your race:

Black		Asian	
Coloured		White	
Other			

4. Please indicate your home language:

English		Afrikaans	
Other African Language			

5. Please indicate your marital status:

Single		Married	
Cohabiting		Widowed	
Divorce		Other	
Seperated			

6. Please indicate your level of education:

Less than Grade 10		Undergraduate Degree	
Grade 10		Honours Degree	
Matric		Masters Degree	
Diploma		Doctoral Degree	

7. Please indicate your job level:

Entry Level		Upper Management	
Intermediate		Executive	
Junior Management		Other	
Middle Management			

8. Please indicate your job industry i.e. marketing, insurance, engineering, banking….

Appendix D: Revised Extended Personal Attributes Questionnaire (EPAQ-R)

Revised Extended Personal Attributes Questionnaire (EPAQ-R)

The items below inquire about what kind of person you think you are. Each item consists of a pair of characteristics, with the number 1-5 in between. For example:

Not at all artistic	**1**	**2**	**3**	**4**	**5**	Very Artistic

Each pair describes a pair of contradictory characteristics. This means that you cannot be both characteristics at the same time, such as being very artistic and not artistic at all. The letters form a scale between the two extremes. You are to choose a letter which describes where you fall on the scale. For example if you have no artistic ability you would choose 1. If you think you are quite good you may choose 4 and if you are only medium you may choose 3, and so forth.

Please be open and honest in your responses, remembering that your responses are anonymous and confidential. Your answers will be used for research, meaning that your individual responses will not be disclosed to anyone.

		1	**2**	**3**	**4**	**5**	
1.	Not at all aggressive						Very aggressive
2.	Not at all whiny						Very whiny
3.	Not at all independent						Very independent
4.	Not at all arrogant						Very arrogant
5.	Not at all emotional						Very emotional
6.	Not at all submissive						Very submissive
7.	Not at all dominant						Very dominant
8.	Not at all boastful						Very boastful
9.	Not at all panicked in a crisis						Very panicked in major crisis
10.	Not at all passive						Very passive
11.	Not at all egotistical						Very egotistical
12.	Not at all able to devote oneself completely to others						Very able to devote oneself completely to others
13.	Not at all spineless						Very spineless
14.	Not at all tough						Very tough
15.	Not at all complaining						Very complaining
16.	Not at all helpful to others						Very helpful to others
17.	Not at all considerate						Very considerate
18.	Not at all competitive						Very competitive
19.	Not shy at all						Very shy
20.	Subordinate oneself to others						Never subordinate oneself to others
21.	Not at all greedy						Very greedy
22.	Not at all kind						Very kind
23.	Not at all anxious						Very anxious
24.	Not at all forgiving						Very forgiving

25.	Indifferent to the approval of others						Very needful of the approval of others
26.	Not at all dictatorial						Very dictatorial
27.	Not at all eager to soothe hurt feelings of others						Very eager to soothe hurt feelings of others
28.	Not at all nervous						Very nervous
29.	Feelings are not easily hurt						Feelings are very easily hurt
30.	Does not nag at all						Tends to nag a lot
31.	Not at all aware of the feelings of others						Very aware of the feelings of others
32.	Not at all hard headed						Very hard headed
33.	Does not worry at all						Tends to worry a lot
34.	Not at all adventurous						Very adventurous
35.	Has difficulty making decisions						Can make decisions easily
36	Not at all soft hearted						Very soft hearted
37.	Not at all willing to take risks						Very willing to take risks
38.	Not at all fussy						Very fussy
39.	Gives up very easily						Never gives up easily
40.	Not at all cynical						Very cynical
41.	Never cries						Cries very easily
42.	Not at all selfish						Very selfish
43.	Not at all daring						Very daring
44.	Not all self-confident						Very self-confident
45.	Looks out for oneself only – Unprincipled						Does not only look out for oneself- Principled
46.	Not at all outspoken						Very outspoken
47.	Tends to feel very inferior						Never tends to feel inferior
48.	Not at all hostile						Very hostile
49.	Not at all understanding of others						Very understanding of others
50.	Never feels superior						Feels very superior
51.	Not at all bossy						Very bossy
52.	Very cold in relations with others						Very warm in relations with others
53.	Not at all subservient						Very subservient
54.	Very little need for security						Very high need for security
55.	Not at all gullible						Very gullible
56.	Goes to pieces under pressure						Stands up well under pressure
57.	Not at all active						Very active

58.	Not at all gentle						Very gentle
59.	Not at all abrupt						Very abrupt

Appendix E: Schutte Self-Report Emotional Intelligence Test (SSREIT)

Schutte Self-Report Emotional Intelligence Test (SSREIT)

Please follow these instructions when answering the questionnaire:

In the following table you will find a set of statements which possibly describe you.

Please work through the questionnaire and indicate the extent to which each item applies to you.

Please answer honestly.

		1	2	3	4	5
1	I know when to speak about my personal problems to others.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
2	When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
3	I expect that I will do well on most things I try.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
4	Other people find it easy to confide in me.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
5	I find it hard to understand the non-verbal messages of other people.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
6	Some of the major events of my life have led me to re-evaluate what is important and not important.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
7	When my mood changes, I see new possibilities.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
8	Emotions are some of the things that make my life worth living.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

9	I am aware of my emotions as I experience them.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
10	I expect good things to happen.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
11	I like to share my emotions with others.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
12	When I experience a positive emotion, I know how to make it last.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
13	I arrange events others enjoy.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
14	I seek out activities that make me happy.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
15	I am aware of the non-verbal messages I send to others.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
16	I present myself in a way that makes a good impression on others.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
17	When I am in a positive mood, solving problems is easy for me.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
18	By looking at their facial expressions, I recognize the emotions people are experiencing.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
19	I know why my emotions change.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

20	When I am in a positive mood, I am able to come up with new ideas.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
21	I have control over my emotions.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
22	I easily recognise my emotions as I experience them.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
23	I motivate myself by imagining a good outcome to tasks I take on.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
24	I compliment others when they have done something well.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
25	I am aware of the non-verbal messages other people send.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
26	When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
27	When I feel a change in emotions, I tend to come up with new ideas.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
28	When I am faced with a challenge, I give up because I believe I will fail.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
29	I know what other people are feeling just by looking at them.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
30	I help other people feel better when they are down.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

31	I use good moods to help myself keep trying in the face of obstacles.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
32	I can tell how people are feeling by listening to the tone of their voice.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
33	It is difficult for me to understand why people feel the way they do.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Appendix F: Job Satisfaction Survey (JSS)

Job Satisfaction Survey (JSS)

PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.

		Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
1	I feel I am being paid a fair amount for the work I do.	1	2	3	4	5	6
2	There is really too little chance for promotion on my job.	1	2	3	4	5	6
3	My supervisor is quite competent in doing his/her job.	1	2	3	4	5	6
4	I am not satisfied with the benefits I receive.	1	2	3	4	5	6
5	When I do a good job, I receive the recognition for it that I should receive.	1	2	3	4	5	6
6	Many of our rules and procedures make doing a good job difficult.	1	2	3	4	5	6
7	I like the people I work with.	1	2	3	4	5	6
8	I sometimes feel my job is meaningless.	1	2	3	4	5	6
9	Communications seem good within this organization.	1	2	3	4	5	6
10	Raises are too few and far between.	1	2	3	4	5	6
11	Those who do well on the job stand a fair chance of being promoted.	1	2	3	4	5	6
12	My supervisor is unfair to me.	1	2	3	4	5	6
13	The benefits we receive are as good as most other organizations offer.	1	2	3	4	5	6
14	I do not feel that the work I do is appreciated.	1	2	3	4	5	6
15	My efforts to do a good job are seldom blocked by red tape.	1	2	3	4	5	6
16	I find I have to work harder at my job because of the incompetence of people I work with.	1	2	3	4	5	6
17	I like doing the things I do at work.	1	2	3	4	5	6

18	The goals of this organization are not clear to me.	1	2	3	4	5	6
19	I feel unappreciated by the organization when I think about what they pay me.	1	2	3	4	5	6
20	People get ahead as fast here as they do in other places.	1	2	3	4	5	6
21	My supervisor shows too little interest in the feelings of subordinates.	1	2	3	4	5	6
22	The benefit package we have is equitable.	1	2	3	4	5	6
23	There are few rewards for those who work here.	1	2	3	4	5	6
24	I have too much to do at work.	1	2	3	4	5	6
25	I enjoy my coworkers.	1	2	3	4	5	6
26	I often feel that I do not know what is going on with the organization.	1	2	3	4	5	6
27	I feel a sense of pride in doing my job.	1	2	3	4	5	6
28	I feel satisfied with my chances for salary increases.	1	2	3	4	5	6
29	There are benefits we do not have which we should have.	1	2	3	4	5	6
30	I like my supervisor.	1	2	3	4	5	6
31	I have too much paperwork.	1	2	3	4	5	6
32	I don't feel my efforts are rewarded the way they should be.	1	2	3	4	5	6
33	I am satisfied with my chances for promotion.	1	2	3	4	5	6
34	There is too much bickering and fighting at work.	1	2	3	4	5	6
35	My job is enjoyable.	1	2	3	4	5	6
36	Work assignments are not fully explained.	1	2	3	4	5	6

Appendix G: Wits Plus Access Letter

Wits Plus Access Letter

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, Wits, 2050
Tel: 011 717 4500 Fax: 011 717 4559

Good day Course Coordinator of Wits Plus,

Our names are Daniel de Freitas and Sara Jacobs and we are doing our Masters degrees in Organisational Psychology at the University of the Witwatersrand. In completing our degree, a large component of the Masters course is focused on a compulsory research project which has to be completed by each of us, with the help of a qualified and skilled supervisor. Our research is focused on exploring the relationship between one's gender role identity and various organisational constructs, particularly focusing on South African employees.

In participating, the individuals would be involved in completing a questionnaire which takes approximately 45 minutes and is completely anonymous and confidential in terms of individual results and findings. The questionnaire will be sent out in the form of an encrypted link and predominantly consists of 'marking off a box' indicating where they fit in. The questionnaire **will not** ask for the participant's name or company that they work for. Feedback of the results will be supplied and presented in a summarised form, but no individual responses or information will be provided to the company or any other individuals. Only our supervisor and ourselves will have access to the responses. Participation is voluntary and unobtrusive. If the research is found to be interesting, it would be appreciated if the survey is circulated by providing the link below to fellow colleagues or contacts, in order to generate a larger sample.

Participation in the study is voluntary, confidential and anonymous. Students will be assured that they will not be disadvantaged in any way for choosing to participate or not participate in the study. The only gain associated in the study will be the 2% course credit which students can achieve if they participate in the study, and a further 1% if the students snowball the sample as explained in the *Wits Plus Participation Sheet* (c.f Appendix E).Student numbers will be requested and linked to unique participation numbers to assign participation course credits, which will be deleted after completion of the study.

If your organisation does participate, a summary of the results will be made available to you in February 2015 on the blog below. No involvement would be required from your apart from allowing me to distribute questionnaires to your students.

Questionnaire Link: https://www.surveymonkey.com/s/WITSPLUS
Summarised findings: http://www.witsresearch.blogspot.com

The findings of this study would be benefititial for organisations and academic institutions as it may provide one with information as to how gender roles may have implications for positive organisational outcomes including productivity, work engagement, organisational commitment, and reduction in absenteeism.

If you have any other questions please feel free to contact my supervisor, Dr Colleen Bernstein, or either of us.

Thank you for your consideration in allowing us access to your WITS Plus students for our research, each and every individual's potential contribution by means of completing a survey and circulating it will be greatly appreciated.

King regards,

Student: Daniel de Freitas
Danroberto26@gmail.com

Student: Sara Jacobs
Sarajacobs88@gmail.com

Supervisor: Dr Colleen Bernstein
Colleen.bernstein@wits.ac.za

Appendix H: Wits Plus Participant Information Sheet

PARTICIPANT INFORMATION SHEET

Dear Wits Plus student,

Our names are Sara Jacobs and Daniel de Freitas and we are currently completing our Masters in Organisational Psychology at the University of the Witwatersrand. In the fulfillment of this degree our research is designed to investigate the relationship between gender role identities and organisational constructs such as self efficacy and job satisfaction, to name a few.

We would really appreciate if you would consider participating in this study by completing this questionnaire. It should take approximately 45 minutes. **For participating you will receive 2% towards your course mark and for forwarding the questionnaire you will receive an additional 1%.** Participation is totally voluntary and there are no negative consequences for choosing not to participate.

As part of this study, to protect your identity and student number, every participant will be assigned a random participant number. This participant number must be written on your completed questionnaire and any other questionnaires you choose to forward to others. To allow the researchers to match the participant number and student number and therefore award participation marks, we request that you write your student number next to the randomly assigned participant number on the third page of this handout. You will be asked to detach the third page and return it to the researchers. Once all questionnaires are collected and participation marks assigned, your student number will then be deleted from the data set. **No one other than the researchers and our supervisor will have access to the data. The course coordinator will NOT have access to the data. Anonymity and confidentiality of all responses can be assured.**

Other than the participation marks, **a maximum of 3% in course credits**, there will be no other positive or negative impact from participating in this study. Responses will ONLY be used for research purposes. The summarised results will be available at www.witsresearch.blogspot.com and will indicate group trends only. Informed consent is assumed by the completion and submission of the questionnaires.

This research is an independent study, which will be conducted with guidance from our supervisor. Please contact either of us or our supervisor (details below) if you have any further questions.

Thank you for considering participation in this study,

Sara Jacobs	Daniel de Freitas	Supervisor
Masters Student	Masters Student	Dr Colleen Bernstein
University of the Witwatersrand	University of the Witwatersrand	University of the Witwatersrand
Sarajacobs88@gmail.com	Danroberto26@gmail.com	Colleen.Bernstein@wits.ac.za

Participant number to be used: SD

INSTRUCTIONS FOR PARTICIPATION

To participate in this study and receive participation marks, please follow the instructions below. You can choose to fill in the questionnaire as a hard copy, or online using the link. Prior to participating, please fill in your student number on the third page and hand it to the researchers.

Hard copy participation:

1. Complete the questionnaire, writing the participant number from this form, beginning with an "SD" on the top of the questionnaire and hand the completed questionnaire to the researchers
2. *For additional 1% participation mark*, please e-mail the link and message below, along with your unique participant number to 10 other people. Once the respondents fill in the questionnaire a*nd* your participant number at the top, the additional percentage will be awarded
3. Please fill in the form and if would like to forward it to others, within 2 weeks.

Electronic participation:

1. Using the link below, please access the questionnaire on Survey Monkey. In the allocated space, please type in your participant number beginning with an "SD" on the top and complete the questionnaire.

   Questionnaire Link: https://www.surveymonkey.com/s/WITSPLUS
2. Please fill in the questionnaire and if would like to forward it to others, within 2 weeks.
3. *For additional 1% participation mark,* please e-mail the link and message below, along with your unique participant number to 10 other people. Once the respondents fill in the questionnaire *and* your participant number at the top, the additional percentage will be awarded

TO PASS ON THIS QUESTIONNAIRE TO OTHERS FOR ADDITIONAL PARTICIPATION MARKS

Please include the following message if you choose to forward this questionnaire to others. Please note the other participants must be working full or part-time.

Subject: Wits masters research| request for participation

"Dear participant. Our names are Sara Jacobs and Daniel de Freitas and we are completing our Masters in Organisational Psychology at the University of the Witwatersrand. This e-mail will have been forwarded to you from a current Wits student, who is assisting with this research. We would appreciate if you would take the time to fill in this questionnaire. To allow the student who forwarded you this link to receive additional participation marks, please type **their participant number** (STUDENT TO FILL IN THEIR PARTIIPANT NUMBER HERE) starting with "SD" at the top of the questionnaire. Your participation is totally voluntary. Informed consent is assumed by the completion and submission of the questionnaires. This research is for academic purposes only. There are no benefits or risks for participation. Please e-mail us if you have any questions.

Please click → Questionnaire Link: https://www.surveymonkey.com/s/WITSPLUSREFERRAL

We appreciate your help,

Daniel de Freitas
Danroberto26@gmail.com

Sara Jacobs
Sarajacobs88@gmail.com

PLEASE TEAR OFF AND KEEP THE FIRST 2 PAGES AND HAND THIS PAGE TO THE RESEARCHERS ATTACHED TO YOUR QUESTIONNAIRE

REQUEST TO ACCESS STUDENT NUMBER

If you choose to participate in the study, **please fill in your student number below.** This is to enable the researchers to match your participant number with your student number and award participation marks. Please keep the participation information sheet (first two pages), which provide instructions.

Write your unique participation number shown below on the questionnaire you fill out, and if you choose to forward this questionnaire, please forward your participation number to those participants so they can also write **your** participant number, and marks can be awarded to you. When participation marks have been awarded, your student number will be deleted. At no point will your name be linked to your student number

Wits student number (please fill in): _____

Participant number (use for this research): SD

Appendix I: Ethics Clearance Certificate

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: MORG/14/007 IH**
PROJECT TITLE:	Sex Role Identity, Emotional Intelligence and Satisfaction at Work.
INVESTIGATORS	de Freitas Daniel
DEPARTMENT	Psychology
DATE CONSIDERED	05/05/13
DECISION OF COMMITTEE*	Approved

This ethical clearance is valid for 2 years and may be renewed upon application

DATE: 19 June 2014

CHAIRPERSON _____
(Professor M. Nduna)

cc Supervisor: Dr. C Bernstein
Psychology

DECLARATION OF INVESTIGATOR (S)

To be completed in duplicate and **one copy** returned to the Secretary, Room 100015, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure be contemplated from the research procedure, as approved, I/we undertake to submit a revised protocol to the Committee.

This ethical clearance will expire on 31 December 2016

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix J: Robustness Tests

As mentioned, robustness testing was required and therefore conducted for those variables that failed to meet the homogeneity of variance assumption. The results of the Robustness testing is below.

Table 35

Robustness Testing for Variables that failed to meet the Homogeneity of Varience Assumption

Variable	**Test**	***F-Statistic***	***df 1***	***df 2***	***Sig.***
Optimism	Welch	30.726	5	90.49	.000*
	Brown-Forsythe	27.253	5	104.27	.000*
Social skills	Welch	12.676	5	89.683	.000*
	Brown-Forsythe	9.555	5	88.320	.000*
Total EI	Welch	26.454	5	90.422	.000*
	Brown-Forsythe	19.669	5	84.645	.000*
Total JS	Welch	9.382	5	91.00	.000*
	Brown-Forsythe	8.189	5	153.03	.000*

*$p<.05$ (95% significance)

As mentioned above, due to assumption of homogeneity of variance not being met, there was a need to run Welch and Brown-Forsythe tests, which were both significant ($p<0.05$) for all of the robustness tests conducted, which therefore illustrated that the one-way ANOVA was still accurate despite the assumption violation.

Appendix K: Exploratory Factor Analysis for SSREIT

1. Introduction

In order to determine the factor structure of the SSREIT, an exploratory principal components analysis was conducted with the Orthogonal Varimax rotation extraction method, which formed the first part of the analysis of the study. The factor analysis was conducted in order to assess how closely the factor structure of the current study aligned with two existing factor structures for the scale in a South African context, namely the studies by Murphy (2008) and Ramsden (2013), which proposed four factors or subscales for the SSREIT; which align with the literature that exists on EI suggesting that EI consists of four dimensions (Schutte *et al*., 1998). The factor analysis was also conducted to ensure that the analysis of the current study did not assume the factor structure of previous studies, in order to run the analyses on the correct subscales, as the SSREIT factor structure has been contested.

Several considerations were taken into account to determine the number of factors for extraction, specifically referring to the Kaiser Eigenvalue-greater-than-one rule, Cattell's Scree Test and the proportion of variance explained by each factor; which allowed one to extract the factors and analyse the rotated factor pattern for the SSREIT.

1.1 Kaiser (1960) Eigenvalue-greater-than-one rule

The Eigenvalues obtained are presented in table 36 below. According to the Eigenvalues greater-than-one rule, eight (8) factors were indicated which is similar to the number of factors found by Ramsden (2013), but this was contradictory to the results of the Scree Test. An Eigenvalue of above 1.5 was adopted as the cutoff for extracting factors, in order to fit the four-factor model found by Murphy (2008) and Ramsden (2013).

Table 36

Eigenvalues and Variance Explained for the SSREIT

Component	*Eigenvalue*	*Proportion of Variance Explained*
1	6.950	21.061
2	2.586	7.838
3	1.943	5.887
4	1.500	4.547
5	1.270	3.848
6	1.245	3.772
7	1.146	3.474
8	1.044	3.164
9	.979	2.967
10	.907	2.750
11	.881	2.669
12	.840	2.547
13	.794	2.407
14	.761	2.306
15	.740	2.242
16	.716	2.169
17	.695	2.105
18	.660	2.000
19	.645	1.955
20	.624	1.891
21	.608	1.841
22	.595	1.802
23	.579	1.754
24	.522	1.582
25	.506	1.534
26	.501	1.518

27	.494	1.498
28	.437	1.325
29	.413	1.250
30	.387	1.172
31	.373	1.131
32	.340	1.030
33	.318	.964

As can be observed above, there are eight factors according to the Eigenvalue-greater-than-one rule, however only four factors were extracted as the Eigenvalue cutoff was raised to 1.5. As mentioned, this technique should not be used alone when making decisions regarding factor extractions.

1.2 Cattell's (1966) Scree Test

The scree plot suggested 4 to 5 factors, which was consistent with research done by Ramsden (2013) and Murphy (2008), which was also on a South African sample. The interpretation of this extraction method is subjective yet effective according to past research.

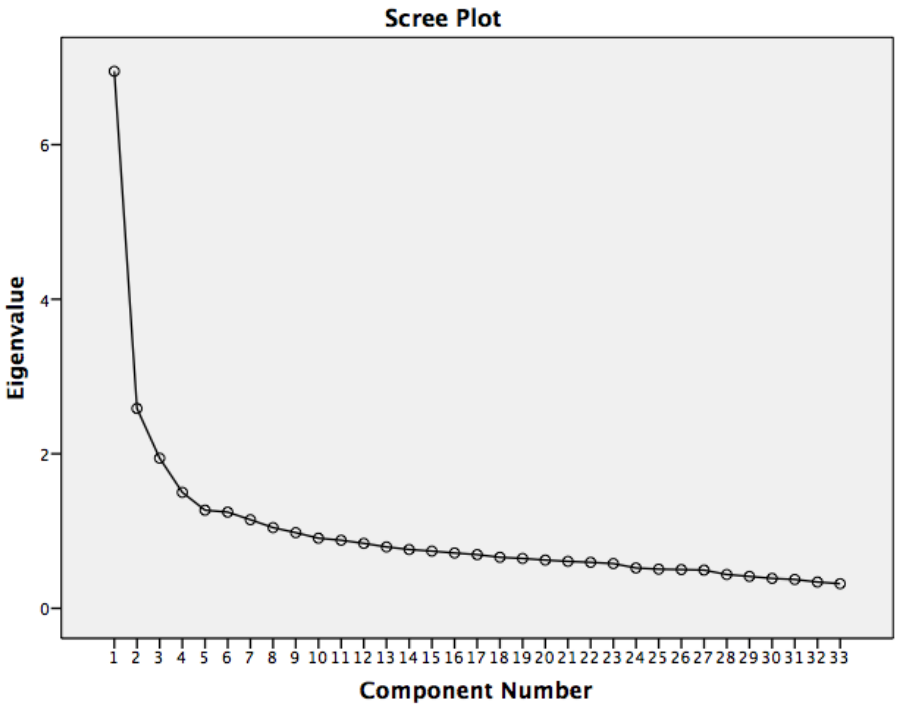


Figure 8: *Scree Plot for SSREIT*

1.3 Proportion of Variance Explained

In addition, as can be observed above in table 36, factor 1 (appraisal) accounts for approximately 21% of the variance in EI scores which supports past research which suggests that EI is hierarchical and therefore increases in complexity moving from appraisal to utilisation (variance explained was approximately 8%), optimism (variance explained was approximately 6%) and social skills (variance explained was approximately 5%). Therefore the factors accounted for approximately 39% of the variance found in the sample across the observations.

Based on the abovementioned theory and results relating to the Eigenvalues, the scree plot and the proportion of variance explained, four factors were extracted; which allowed for the interpretation of the rotated matrix.

1.4 Rotated Matrix for the SSREIT

Based on past theory, the data was fitted to a four-factor model, which illustrated similar findings to that of Murphy (2008) and Ramsden (2013). The items appeared to load similarly on the respective factors, namely appraisal, utilisation, optimism and social skills.

The rotated matrix illustrated the items, which loaded on their respective factors. Factor loadings were considered to be high if it was above 0.60 and moderately high if above 0.30 (Kline, 1994). According to Tabachnick and Fidell (2001) 0.32 is an acceptable factor loading cut-off but 0.40 is preferable (Costello & Osborne, 2005). The table below (Table 13) illustrates the extracted factors as well as the respective items, which are included in each factor, which has been compared to the factor analyses produced by Ramsden (2013) and Murphy (2006) in the *Methodology* section. None of the items loaded less than 0.32 on the respective factor, which can be observed in the full-rotated matrix results on the following page.

Table 37

Rotated Component Matrix for the SSREIT

Rotated Component Matrix				
	Component			
	1	2	3	4
SSREIT_1	.142	.417	-.263	.364
SSREIT_2	.059	.554	-.052	.149
SSREIT_3	.043	.546	.196	.010
SSREIT_4	.317	.126	-.133	.497
SSREIT_5R	.644	.101	-.092	.094
SSREIT_6	.012	.134	.151	.344
SSREIT_7	.084	-.078	.576	.051
SSREIT_8	.147	.115	.336	.346
SSREIT_9	.300	.334	.184	.332
SSREIT_10	-.040	.459	.368	.150
SSREIT_11	.019	-.033	.172	.562
SSREIT_12	.099	.554	.222	.303
SSREIT_13	.065	.154	.065	.391
SSREIT_14	-.021	.425	.304	.220
SSREIT_15	.570	.241	.094	.117
SSREIT_16	.212	.354	.196	.286
SSREIT_17	.153	.305	.558	.117
SSREIT_18	.743	.095	.151	.057
SSREIT_19	.349	.393	.233	.062
SSREIT_20	.183	.223	.672	.063
SSREIT_21	.172	.655	-.001	-.130
SSREIT_22	.339	.531	.088	.116
SSREIT_23	-.091	.507	.304	.128
SSREIT_24	.085	.204	.063	.583
SSREIT_25	.752	.138	.025	.115
SSREIT_26	.110	-.148	.404	.440

SSREIT_27	.041	.083	.666	.101
SSREIT_28R	.043	.569	-.051	.064
SSREIT_29	.684	-.121	.132	.069
SSREIT_30	.274	.012	.082	.623
SSREIT_31	.050	.354	.549	.209
SSREIT_32	.663	.028	.218	.127
SSREIT_33R	.450	.062	.005	.296

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalisation.

Factor 1 is Appraisal; Factor 2 is Optimism; Factor 3 is Utilisation and Factor 4 is Social Skills.

Table 38

Summary Table of Extracted Factors and Respective Items

	Factor 1 (Appraisal)	**Factor 2 (Utilisation)**	**Factor 3 (Optimism)**	**Factor 4 (Social Skills)**
Items	5*, 15, 18, 25, 29, 32 & 33*	7, 17, 20, 27 & 31	1, 2, 3, 9, 10, 12, 14, 16, 19, 21, 22, 23 & 28*	4, 6, 8, 11, 13 24, 26 & 30

* Reverse Scored

1.5 Conclusion

As can be observed above, the results of the exploratory factor analysis has yielded a 4 factor model which is similar to previous findings on research which was conducted in the South African context. The four factors are appraisal, utilisation, optimism and social skills. These factors were used to conduct the remaining analyses as they are considered subscales of total EI.

As mentioned, the factor structure of the SSREIT has been contested across researchers and therefore it was important to contribute to knowledge by testing the factor structure on the

current sample. The four (4) factor structure was expected to be observed in the current sample due to previous research in the South African context, and abroad, which yielded a four (4) factor model of the SSREIT, as can be observed below (Table 10).

Table 39

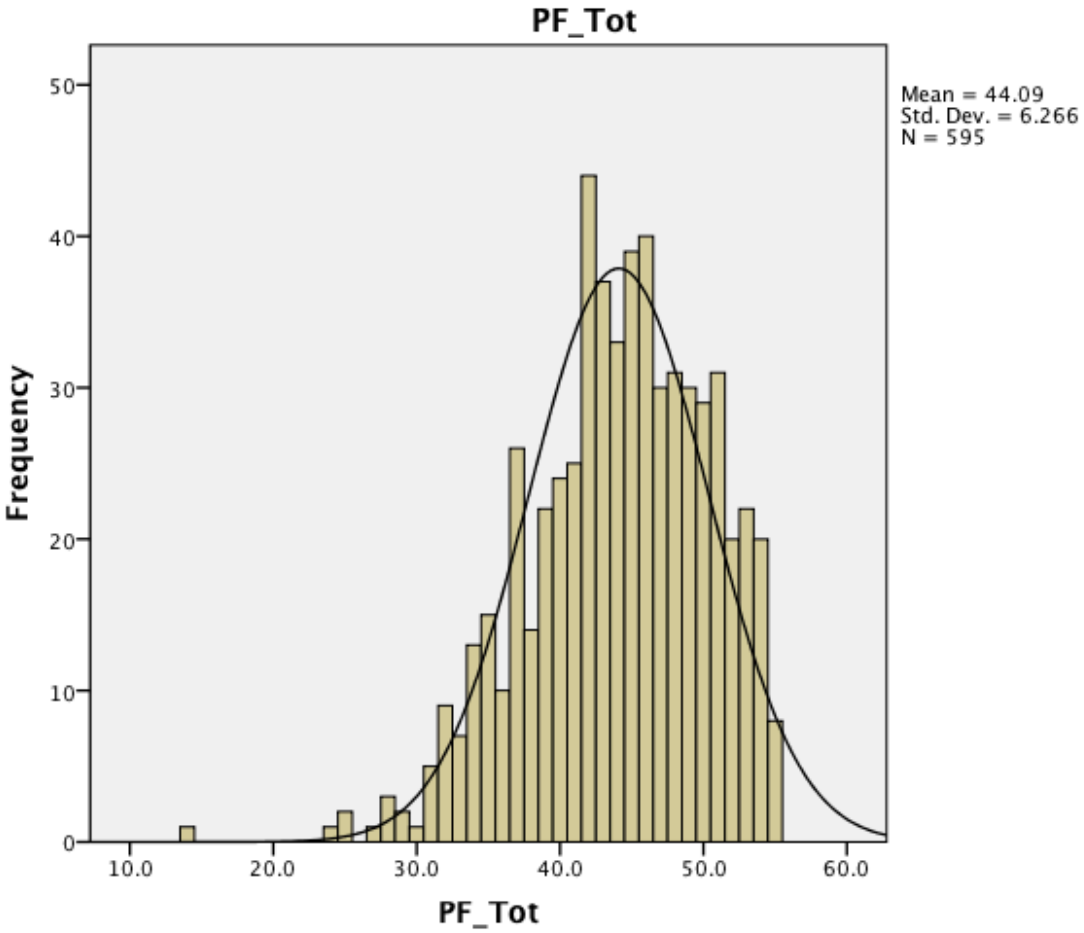
The Item Distribution across the Four Factors of the SSREIT in Previous Studies and the Current Study

	Factor 1 Items (appraisal)	Factor 2 Items (utilisation)	Factor 3 Items (optimism)	Factor 4 Items (social skills)
Petrides & Furnham, (2000)	5, 9, 15, 18, 19, 22, 25, 29, 32	6, 7, 17, 20, 27, 31	2, 3, 10, 12, 14, 16, 17, 20, 21, 22, 23, 28, 31	1, 4, 6, 8, 11, 12, 13, 16, 24, 26, 30, 31, 33
Murphy (2008)	5, 15, 18, 25, 29, 32	7, 17, 20, 27, 31, 33	1, 2, 3, 9, 10, 12, 14, 16, 19, 21, 23, 24, 28	4, 6, 8, 11, 13, 26, 30
Ramsden (2013)	5, 15, 18, 25, 29, 32, 33	7, 17, 20, 27, 31	1, 2, 3, 9, 10, 12, 14, 16, 19, 21, 22, 23, 24, 28	4, 6, 8, 11, 13, 26, 30
Current Study	5*, 15, 18, 25, 29, 32 & 33*	7, 17, 20, 27 & 31	1, 2, 3, 9, 10, 12, 14, 16, 19, 21, 22, 23 & 28*	4, 6, 8, 11, 13 24, 26 & 30

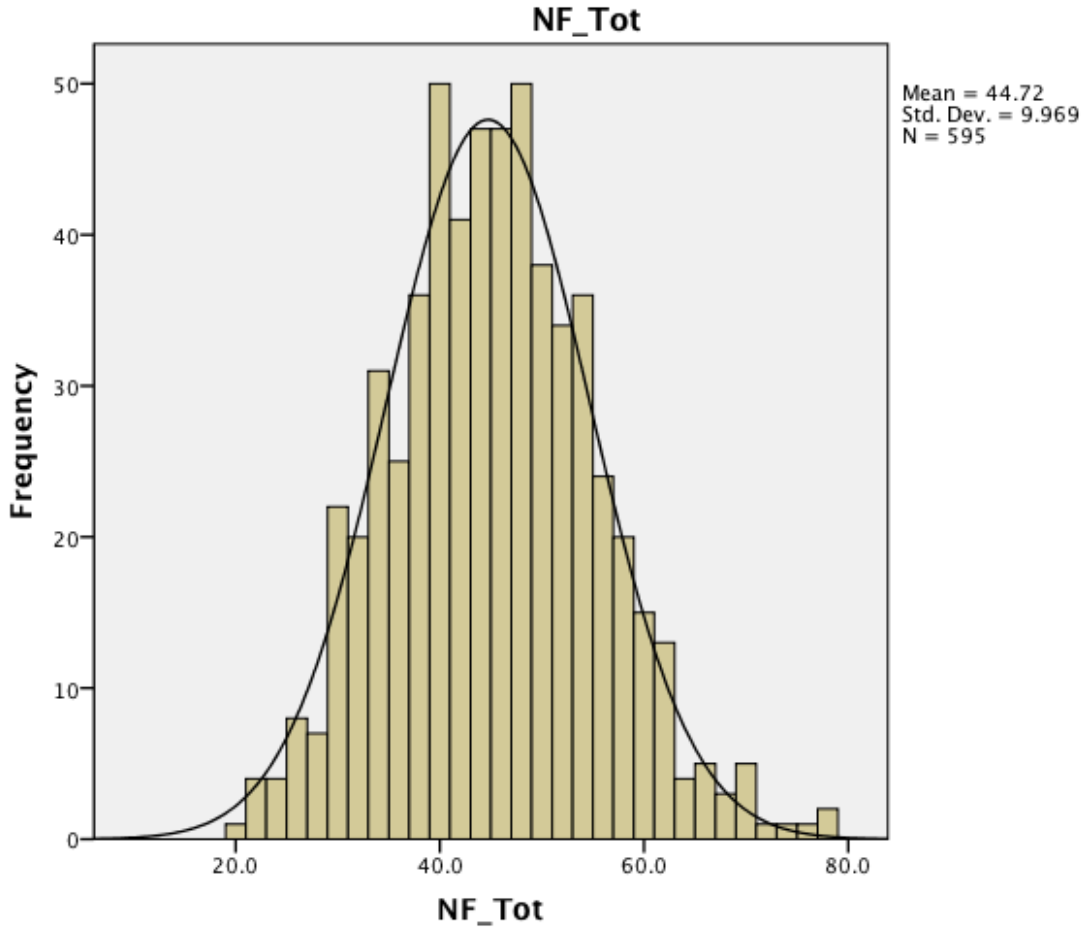
* Reverse Scored

Appendix L: Normality Histograms

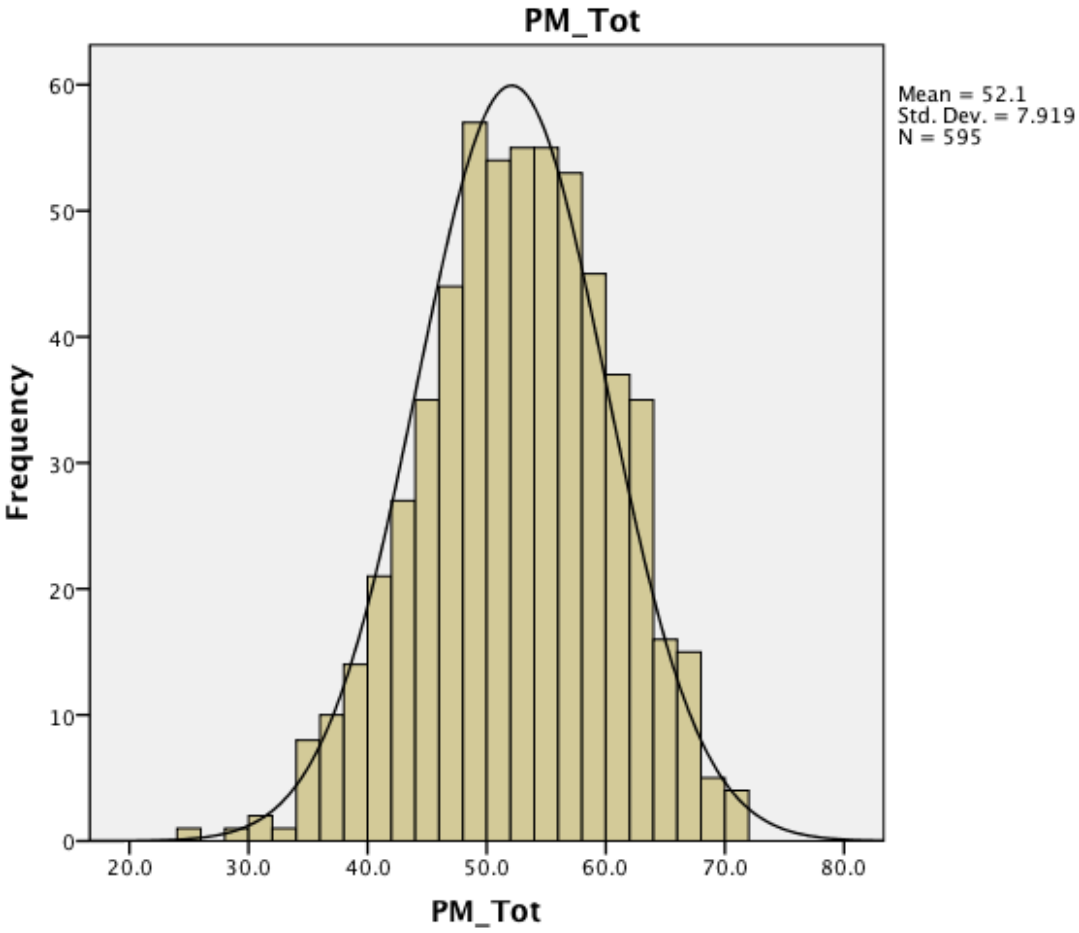
Normality Histogram for Positive Femininity



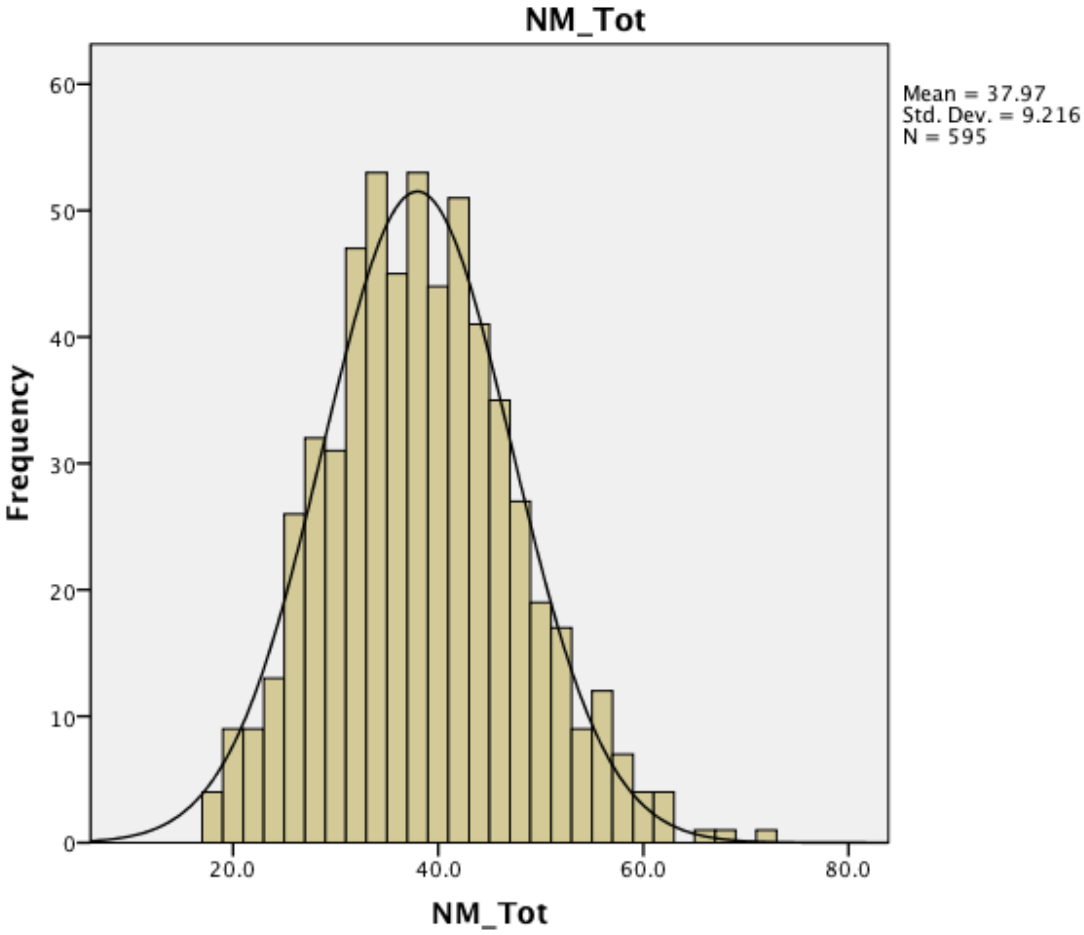
Normality Histogram for Negative Femininity



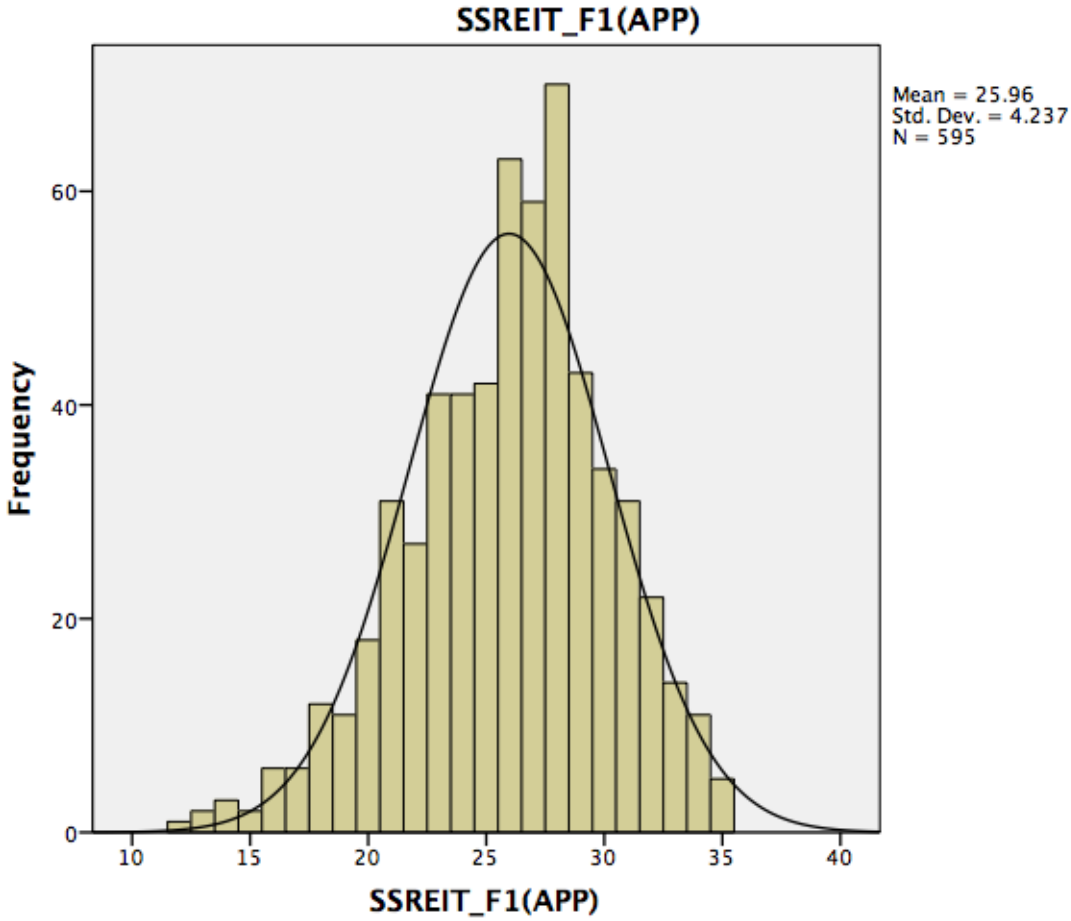
Normality Histogram for Positive Masculinity



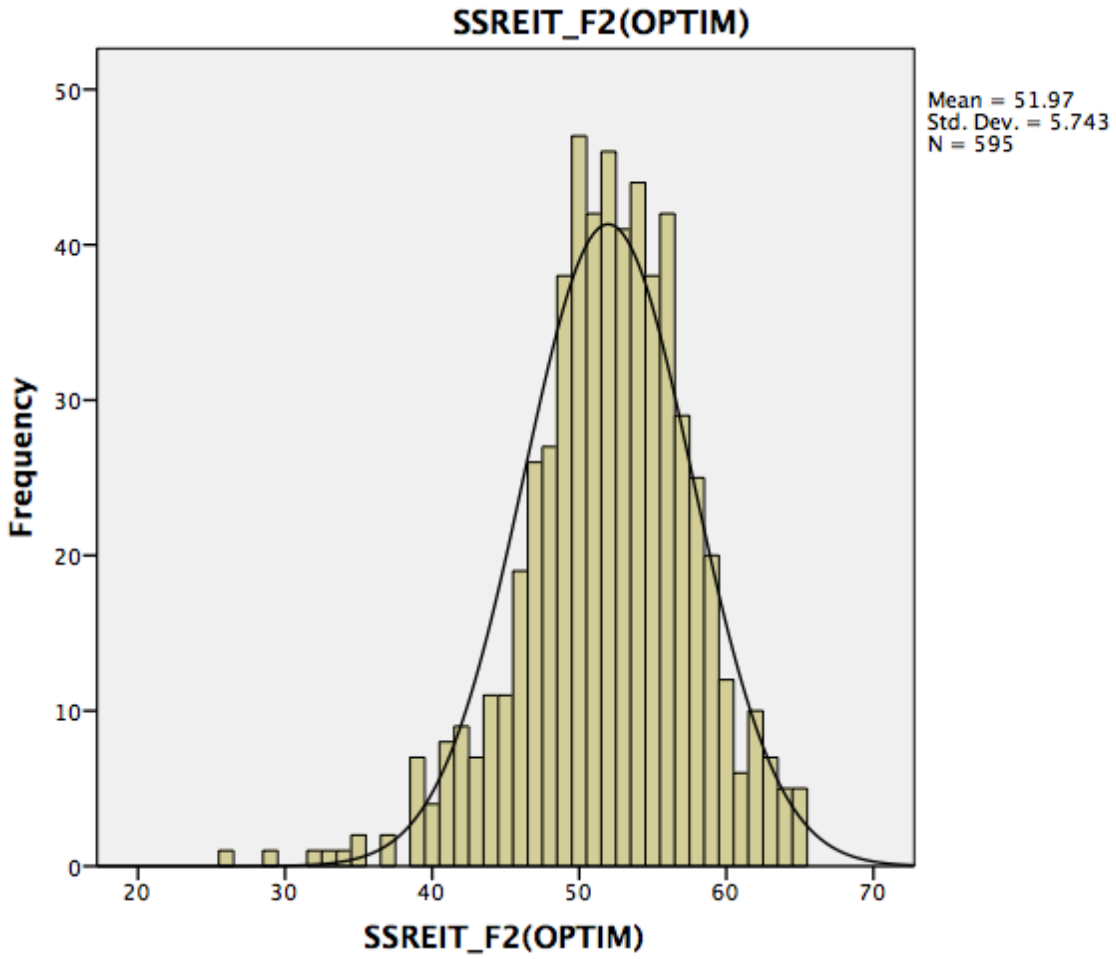
Normality Histogram for Negative Masculinity



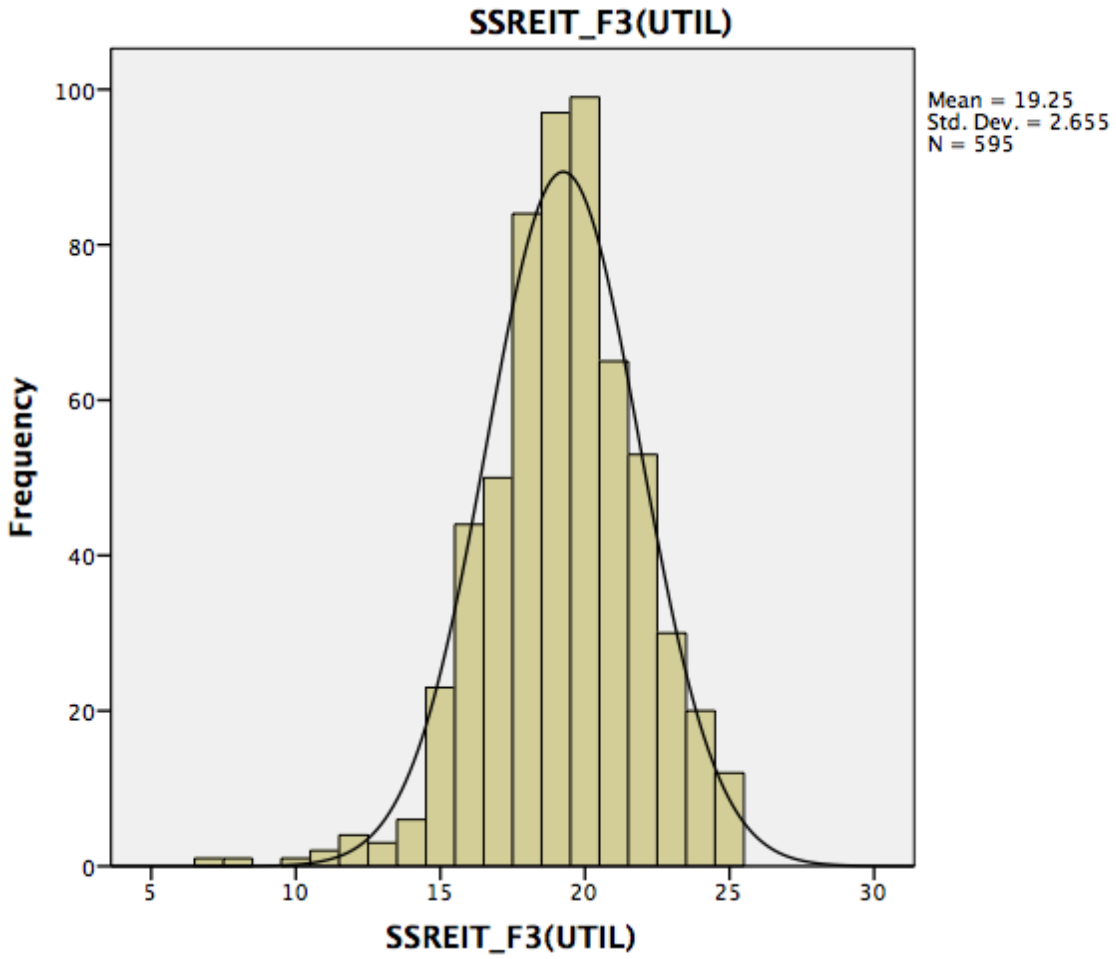
Normality Histogram for Appraisal



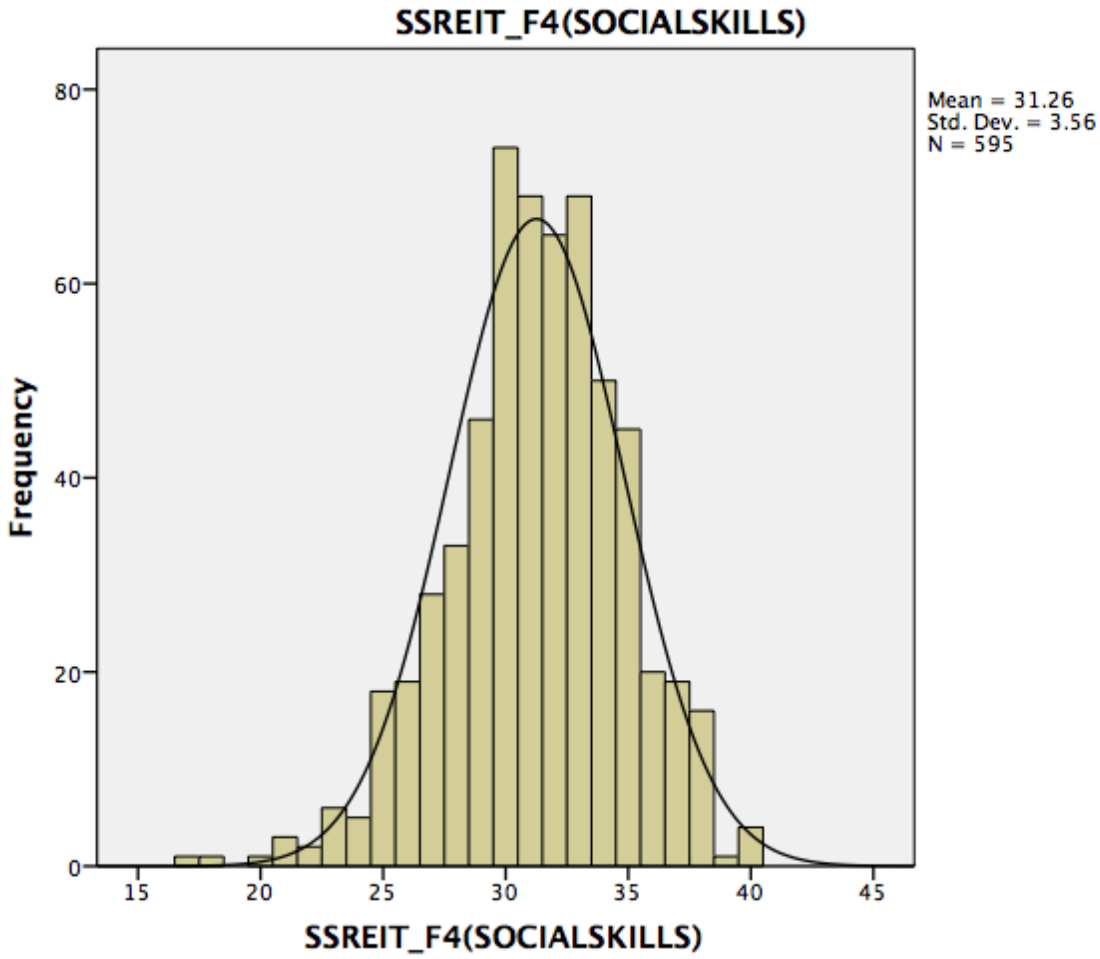
Normality Histogram for Optimism



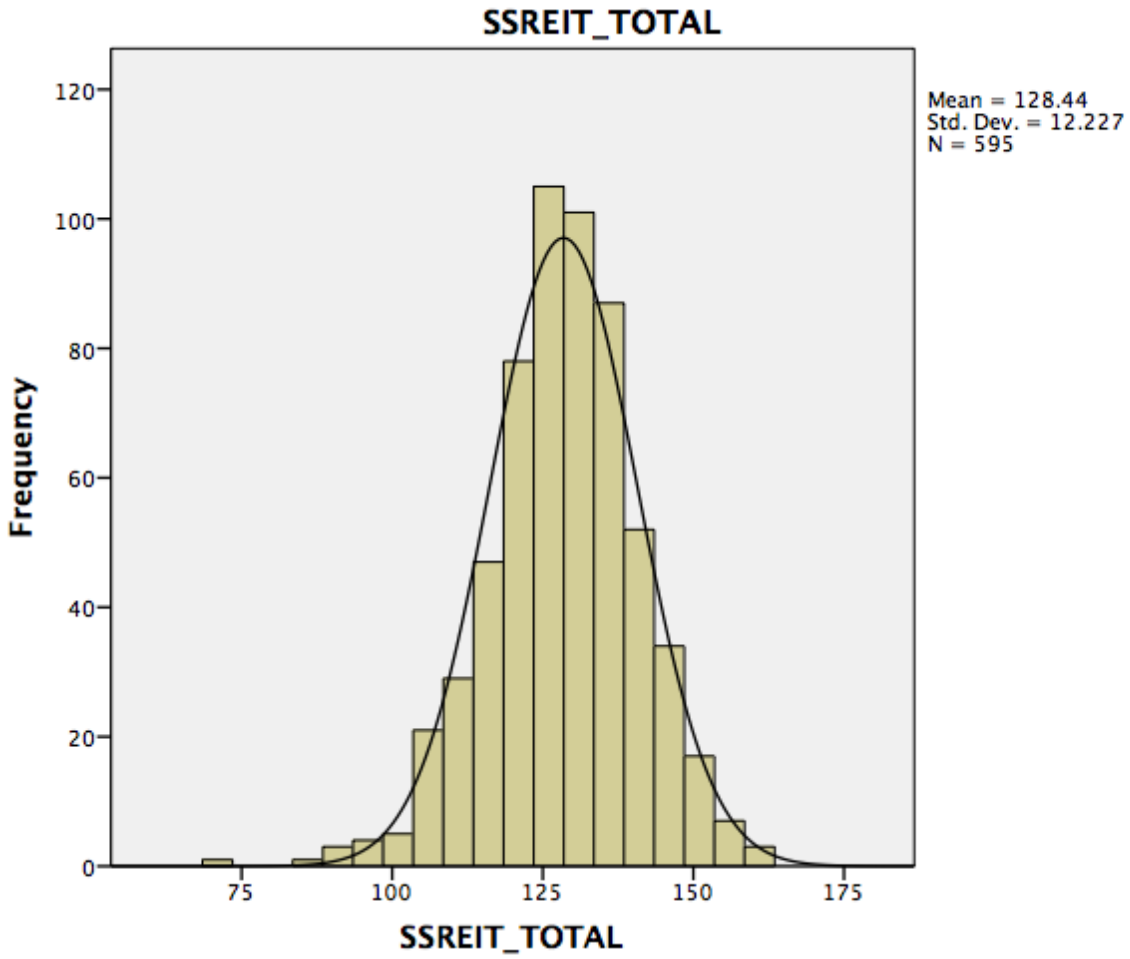
Normality Histogram for Utilisation



Normality Histogram for Social Skills



Normality Histogram for Total Emotional Intelligence



Normality Histogram for Total Job Satisfaction

