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Sex-Role Identity, Workplace Stress and Thriving in South African Employees

Kayla Meryl Helfer

670135

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DECLARATION

A research project submitted in partial fulfilment 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, March 2017.

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: _____

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1. INTRODUCTION

Recent exploration into the factors that may influence capacity to deal with stress and performance in the workplace has begun to examine the effects of gender-based personality traits on work stress perception and specific work outcomes. However, the large majority of this research has focused solely on the positive traits that each gender orientation possesses (Berger & Krahé, 2013; Woodhill & Samuels, 2003). Humans are complex and multifaceted with strengths and weaknesses and subsequently, cannot be identified according to positive and desirable characteristics alone (Berger & Krahé, 2013). Many gender stereotypes are based on socially unfavourable traits, and these can often dominate behaviour (Woodhill & Samuels, 2003). Therefore it is necessary to examine sex-role identities in terms of both the positive and negative traits and characteristics, whether masculine or feminine, that a person may possess.

Furthermore, research has begun to delve into the factors that affect employee wellbeing, both positively in the form of resilience, work engagement and self-actualisation and negatively in the form of stress induced strain and burnout (Bakker & Demerouti, 2007). However, once again, the majority of this research has focused on the work characteristics that determine an individual's adaptations to and subsequent success in their work environment, rather than exploring the role that employees' negative personality resources may play (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007). This research therefore intends to add to this gap in literature by investigating the relationships that exist between sex-role identity (which consist of sex-based positive and negative personality traits), perceived stress and workplace thriving in South African workers. Furthermore, it aims to highlight the importance of examining both positive and negative sex-role identities in the work context, through an analysis of its effects on levels of stress as well as levels of workplace thriving.

2. THEORETICAL OVERVIEW

2.1 Sex-Role Identity

2.1.1. Overview of Sex-Role Identity

From childhood, individuals learn the socially desired qualities for men and women, and these beliefs are often incorporated into one's self-concept. These endorsed masculine and feminine personality traits that remain as relatively stable attributes represent one's sex-role or gender identity (Berger & Krahé, 2013; Palan, Areni & Kiecker, 1999). The terms gender role identity and sex-role identity are acceptably used interchangeably throughout the literature (Berger & Krahé, 2013), although on their own, sex and gender cannot be used in the same synonymous manner. While during the process of socialisation it is often assumed that men have masculine sex-role identities and women have feminine sex-role identities, these gender role traits do not always manifest consistently with an individual's biological sex and thus one can possess primarily male or feminine characteristics regardless of whether one is biologically classified as male or female (Palan et al., 1999). However, it is important to note that the notion of sex-role identity does not exist as a bipolar construct with an individual being either masculine or feminine (Chusmir & Koberg, 1990; Thompson, 1989). Rather, it has been postulated that both masculine and feminine traits can exist in the same individual, leading to the conceptualisation of androgyny as another facet of sex role identity (Marsh, Antill & Cunningham, 1987). Thus four possible gender role orientations emerge from this view of masculinity and femininity as two single dimensions, depending on the combination of these dimensions - individuals high in femininity or high in masculinity would be characterised as feminine or masculine respectively, individuals high in both are characterised as androgynous, whereas those who are low in both dimensions would be characterised as undifferentiated (Chusmir & Koberg, 1990; Vonk & Ashmore, 1993).

2.1.2. Development of SRI: Gender-schema Theory

The development of one's sex-role identity has been highlighted within two major psychological schools of thought. Social learning theory maintains that children conform to sex-role stereotypes and obtain a sex-role identity because they imitate consistent behaviours which are reinforced (Halpern, 2013). Ultimately, sex-roles are learned by observing and modelling through interaction with others (Sperling, 1999). On the other hand, cognitive development theory, posited by Kohlberg in 1966, suggests a more active role in the development of sex-role identities (McGillicuddy-De Lisi & De Lisi, 2002). This theory

begins with the notion that children's perceptions of the world change throughout different stages of development, and they only begin to value sex appropriate behaviours once they understand that being male or female is a permanent part of their identity (Halpern, 2013). The central argument of Kohlberg's theory is the idea that a child's gender development is structured around their understanding of gender categories. Children observe the behaviour of others once they are conceptually able to understand the differences between males and females, in order to seek out information as to what is appropriate for their sex, in an attempt to form a sex-role identity (McGillicuddy-De Lisi & De Lisi, 2002; Sperling, 1999). Such behaviour is often rewarded, allowing the sex-role identity to form a part of their self-concept (Halpern, 2013; McGillicuddy-De Lisi & De Lisi, 2002). Although the theory of cognitive development is not specific about the types of gender cognitions that influence development, it has remained central to the understanding of gender-role development and subsequently produced several other approaches which are cognitively oriented (McGillicuddy-De Lisi & De Lisi, 2002).

Bem's gender schema theory emerged as an approach that combines aspects of both social learning theory and Kohlberg's theory of cognitive development. This approach proposes that people use categories based on what they consider to be masculine or feminine to help establish their sex-role identity and understand their lives and the lives of others (Carducci, 2009). Gender schemas are a set of ideas that define the particular skills, personalities, preferences and self-concepts that are appropriate for men and women and act as filters that shape individuals' perceptions and interpretations of events (Halpern, 2013). They manifest as an individual's cluster of beliefs and expectancies with regards to being male or female, and therefore influence the type of information that the individual elaborates, recalls and attends to (Carducci, 2009).

Schemas bare a conceptual similarity to stereotypes, and according to Bem's theory, are an integral form of mental processing in the analysis of one's environment as schematic content not only includes cognitive information, but also behavioural, affective and physiological components. Ultimately, the underlying premise of gender schema theory provides a strong indication of the reciprocal influences of social, environmental, cognitive and cultural factors on the development and maintenance of gender role stereotypes (Woodington, 2010). In modern societal culture, gender is an important and functional aspect, and therefore Bem argues that because of the pervasiveness of gender messages in the culture and the extensive nature of the schemas that form around gender, individuals quickly learn to use gender as a

method of categorising and judging people (McGillicuddy-De Lisi & De Lisi, 2002). Gender schemas are strengthened within children through the motivation to pay attention to and remember gender-linked information; about same-sex, self-relevant activities such as paying attention to what other boys do on the playground and what toys other boys play with or vice versa for girls. This increases the likelihood of a child's ability to perform behaviours that are consistent with the gender norms and cultural norms of their gender classification (Carducci, 2009). Ultimately, knowing and remembering what a boy or girl is supposed to do will make it easier to engage in that behaviour, which in turn strengthens the knowledge and memory of what to do in the future. It is this process which facilitates and strengthens the formation of gender schemas in children (Carducci, 2009).

Although gender-schema theory has predominantly focused on how sex-role identities develop within children, the notions it presents have had effects for adults as well. Carducci (2009) argues that although the process of gender formation begins in childhood, it continues throughout an individual's life. Children form masculine or feminine schemata based on societal and cultural norms which allow them to evaluate what behaviour is appropriate for themselves and others and throughout their lifespan, they will recall information that is consistent with their gender schema and disregard what is not (Carducci, 2009). Bem's Sex-Role Inventory (BSRI), aims to evaluate the degree to which adult subjects sort self-relevant information into distinct masculine and feminine categories. Individuals who organise and process information along gender lines are classified as sex-typed or gender schematic; whereas individuals who are gender-aschematic, or do not cluster traits into purely masculine or feminine groups, are classified as androgynous or undefined (Robinson, Shaver & Wrightsman, 2013).

The degree to which an individual is gender schematic or aschematic can be shaped by a number of different factors – including cultural and social norms, the family and community in which one was raised, school and educator influence and religious affiliation (Ashmore & Sewell, 1998; Bernstein & Osman, 2016). The extent to which biological males and biological females ascribe to a set of behaviours and traits that are particularised for their sex as opposed to adopting traits that are designated for the opposite sex is highly dependent on the place, time, culture and environment in which the individual is raised and resides. Thus, the development of traditional or non-traditional sex-role identities, as well as the extent to which an individual would accept, reject or integrate these identities into their personality,

can be predominantly predetermined by one's socio-cultural environment, and these may not be entirely stereotypic of one's biological sex (Bernstein & Osman, 2016).

2.1.3. SRI and Wellbeing and Models of SRI

Subsequent to the formation of the different sex-role identities that an individual may possess, research has delved into the relationship between these gender role orientations and one's psychological well-being. Three models have been identified in this regard, namely the androgyny model, the congruency model and the masculinity model (Van Ede, Louw & Louw, 1998). The congruency model relies on the assumption that conforming to societal norms results in mental wellbeing. The underlying premise of this model is that psychological wellbeing is a function of the interaction between one's biological sex and their gender orientation. Thus, sex typed individuals; high masculinity and low femininity in males and high femininity with low masculinity in females, is said to contribute most positively to mental health (Van Ede et al., 1998). Similarly, individuals who possess traits opposite to one's sex are likely to have negative experiences surrounding their wellbeing, as these traits are not socially accepted and prescribed.

However, this model was challenged by the androgyny model, which proposes that psychological wellbeing is accounted for by the possession of a combination of both complementary and desirable masculine and feminine traits (Lee, 2005). Ultimately this model argues that sex-typed individuals; males who are high in masculinity and females who are high in femininity, as well as undifferentiated individuals, have proven to be less adaptable and flexible than their androgynous counterparts (Mills & Bohannon, 1983; Thompson, 1989, Van Ede et al., 1998). This is as a result of the androgynous person possessing both masculine and feminine traits, thus being able to manifest both of these types of behaviours depending on the needs of the situation (Chusmir & Koberg, 1990; Vonk & Ashmore, 1993). The androgyny model achieved support across a number of different settings including management, sales performance and marketing, education and psychotherapy, while exhibiting significant correlations with increased creativity, emotional intelligence, self-esteem, life satisfaction, marital satisfaction, achievement motivation, pro-social helping behaviour and subjective feelings of wellbeing (Bernstein & Osman, 2016). Thus, adherents to the androgyny model maintain that this developmental ideal is the result of the balance of both masculine and feminine traits, irrespective of biological sex, rather than a match to sex-congruent traits that are deemed as socially appropriate (Bernstein & Volpe,

2016). However, this would only be plausible if androgynous individuals contained a balanced combination of both masculine and feminine virtues that allowed the individual to integrate and utilise the desirable traits of both genders from situation to situation (Vonk & Ashmore, 1993; Woodhill & Samuels, 2003).

A contrasting model that emerged to combat the notion of androgyny as the primary predictor of mental wellbeing was that of the masculinity model (Lee, 2005). The masculinity model proposes that psychological wellbeing is a function of the extent to which an individual possesses a masculine sex-role identity (Van Ede et al., 1998). Ultimately, this model posits that the empirical supports for the positive outcomes of androgyny are as a result of the masculine aspect of the construct, with the feminine composition being negligible. It argues that it is not the combination of masculine and feminine traits that have resulted in a wealth of positive outcomes for androgynous individuals, but rather, it is because of the presence of socially-desired masculine oriented traits and behaviours (Bernstein & Osman, 2016). This model emerged from the cultural value placed upon and high social desirability of instrumental masculine characteristics rather than expressive feminine characteristics (Lee, 2005). A high degree of masculinity has been found to correlate strongly with work performance, resilience, achievement, personal flexibility and improved psychological wellbeing, providing strong empirical evidence supporting the idea that the masculinity model is the most predictive indicator of psychological health, directly opposing the androgyny model as being the most adaptable SRI (Bernstein & Osman, 2016).

However, despite findings of the positive mental health outcomes of androgyny and masculinity as predictive identities, these models have not always presented consistent findings. This may be as a result of SRI research historically focusing on and examining positive socially desirable sex based traits (Bernstein & Osman, 2016). Humans are complex and multifaceted with strengths and weaknesses and subsequently, cannot be identified according to positive and desirable characteristics alone (Berger & Krahé, 2013). Many gender stereotypes are based on socially unfavourable traits, and these can often dominate behaviour (Woodhill & Samuels, 2003). Therefore it is necessary to examine SRI in terms of both the positive and negative traits and characteristics, whether masculine or feminine, that a person may possess. Accordingly, an androgynous SRI may not necessarily be limited to a combination of appealing masculine and feminine traits, but rather may be a blend of the failings and defects of each gender (Woodhill & Samuels, 2003). Similarly, an individual who adopts predominantly positively masculine traits would be classified as positively

masculine, whereas a high degree of negatively masculine traits would be indicative of a negatively masculine SRI (Bernstein & Osman, 2016).

The adoption of a differentiated model has been proposed, that takes into account both the positive and negative aspects of human behaviour (Bernstein & Volpe, 2016; Woodhill & Samuels, 2003). This has resulted in the conclusion that seven identities exist, namely positive masculine (M+), negative masculine (M-), positive feminine (F+), negative feminine (F-), positive androgynous (A+), negative androgynous (A-) and undifferentiated (U), each one characterised by certain traits and behaviours that will be explored in the following section. The disregard of negative gendered attributes in research has likely confounded a number of results in the SRI literature to date, highlighting the importance of considering traits on both sides of the spectrum. Research has begun to explore the relationships between positive and negative SRIs and variables of emotional intelligence, work engagement, job satisfaction, perceived social support, work-family conflict, conflict resolution strategies and work culture preferences (Bernstein & Volpe, 2016). Therefore, this study will aim to contribute to the increasing knowledge existing within the differentiated paradigm.

2.1.4. Description of Sex-Role Identities

It is postulated that a range of behaviours can be predicted dependent on one's identity (Chusmir & Koberg, 1990). Traditionally, a masculine SRI is seen to be oriented towards goals external to the interaction process and thus involves proactive influence and the tendency to act on or affect one's environment (Palan et al., 1999; Street, 1985). Thus a person scoring high on M+ would encompass traits such as being analytical, independent, self-reliant, confident, ambitious as well as willing to take a stand and take risks (Berger & Krahé, 2013; Street, 1985). On the other hand, a person that is identified as M- could be classified as overly forceful, authoritarian, selfish, arrogant and/or aggressive among others (Berger & Krahé, 2013). Contrastingly, a feminine SRI focuses on relational personality qualities that includes an awareness of others and interdependence (Palan et al., 1999). Therefore, F+ individuals would possess qualities such as understanding, compassion, responsibility, considerateness and sensitivity, whereas F- individuals display characteristics such as gullible, yielding, temperamental, dependent, overly anxious, submissive and/or easy to influence (Palan et al., 1999; Street, 1985). Undifferentiated individuals are likely to behave in a manner that is non-specific in terms of gender related traits, whereas androgynous individuals possess a high level of both masculinity and femininity and may

adapt to masculine or feminine behaviours depending on the situation (Chusmir & Koberg, 1990). Woodhill and Samuels (2003) suggest that "androgynous people are sensitive to both masculine and feminine cues and as such may respond to a wider range of positive or negative stimuli than traditional people" (p. 556). Consequently, individuals who are classified as positively androgynous (A+) will demonstrate high levels of both positive masculinity M+ and positive femininity (F+) qualities whereas A- individuals are likely to respond to situations with the undesirable behaviours characterised by both sex-types (Woodhill & Samuels, 2003).

2.1.5. Measurement of SRI

A number of scales have been developed to assess masculinity, femininity and their combinations. The most commonly cited scales throughout the literature are Bem's Sex Role Inventory (BSRI) and the Personality Attributes Questionnaire (PAQ), both developed in 1974, by Sandra Bem and Spence and colleagues respectively (Bem, 1974; Spence, Helmreich & Stapp, 1974). The BSRI is a 60-item self-report measure that aims to identify both sex-typed individuals and androgynous individuals. The scale presents 60 attributes that respondents need to rate on a 7-point scale the degree to which the attribute describes them. Twenty attributes reflect culturally accepted masculine traits; twenty represent culturally accepted feminine traits, and the last twenty act as filler items (Karsten, 2006; O'Leary & Hansen, 1984). Each respondent receives a masculinity and a femininity score. Thus individuals can be identified as sex-typed if they score above the median for the sex-congruent scale and below the median for the sex-incongruent scale. An opposite pattern of scoring would classify an individual as cross sex-typed, whereas individuals who score above the median on both scales are classified as androgynous (Karsten, 2006; O'Leary & Hansen, 1984). The original PAQ measure is a 24 item scale made up of three subscales, each comprising of 8 items. The first subscale aims to measure socially desirable masculine traits. The second subscale evaluates socially desirable traits, while the final subscale measures traits that can be socially desirable for either masculine or feminine, however not simultaneously (Curran & Warber, 2011). At the time of their conception, these scales were novel to the field as they were the first measure that did not view masculinity and femininity as bipolar constructs, but rather allowed for the concept of androgyny to be measured (Gaa & Liberman, 1981).

Both measures of SRI have undergone revisions over the years, including the shortening of the scale and subsequent removal of items. However, a core critique of both the BSRI and the PAQ surround the idea that these scales focus solely on the positive attributes individuals may possess, resulting in a core limitation for SRI research. The adoption of a differentiated model to studying sex-role identities has been problematic with regard to measurement instruments, as there appears to be limited scales that assess both positive and negative attributes, while the scales that do exist have been found to exhibit poor psychometric properties (Bernstein & Osman, 2016). In order to attempt to address this theoretical limitation, an extended measure of the PAQ was developed, that aimed to distinguish and include both socially desirable and undesirable traits. The resultant extended personality attributes questionnaire (EPAQ) addressed the failure of previous scales to measure both positive and negative traits, and has therefore been increasingly used in recent years in the field of sex-role and gender research (Bernstein, 2013). However, the EPAQ reported poor psychometric properties (for example, internal consistencies of 0.73 for positive masculinity, 0.76 for positive femininity, 0.59 for negative masculinity and 0.46 for negative femininity) and was therefore revised by Bernstein (2013) into the EPAQ-R. The revised version reported acceptable psychometric properties, and is therefore a more appropriate measure (Bernstein & Osman, 2016). Thus, the EPAQ-R was used as the measurement instrument for both positive and negative SRI in the current study.

2.2. Workplace Stress

As mentioned one's sex role identity can affect the degree to which one perceives stress within the work environment. Workplace stress has been found to elicit a number of adverse outcomes, including depression, anxiety, burnout and physical illness in individuals as well as the adoption of destructive or harmful behaviours, such as increased smoking and substance abuse (Schaufeli & Bakker, 2004; Spector & Jex, 1998). In turn, this can have a negative impact upon the organisation as these various negative personal outcomes often lead to high absenteeism, turnover and diminished organisational commitment (Schaufeli & Bakker, 2004). Therefore, understanding the aspects of the self that may assist individuals in coping with or perceiving less stress is paramount. Below follows a definition and discussion of workplace stress, and its proposed relationship with SRI.

2.2.1. Defining workplace stress

In order to evaluate stress in the workplace, it is necessary to note the relationship between two aspects of stress, namely *stressors*, that is, the demanding aspects of jobs and *strain*, which is the negative results of exposure to stressors (Spector & Jex, 1998). These job demands consist of the psychological, physical, social or organisational aspects of the job that require sustained effort and thus results in certain physiological or psychological costs (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Schaufeli & Bakker, 2004). All jobs involve something that needs to be done and therefore, job demands are ever present in the work environment, however they do not necessarily need to be negative. Job demands may turn into stressors when high effort that is associated with high costs is exerted, that results in negative responses (Schaufeli & Bakker, 2004).

Cox and Griffiths (2010) provide a definition of stress as "an emotional state triggered by the person's appraisal of their situation at work" (p.49), highlighting that it is an unpleasant experience that arises when individuals realise that they cannot cope with the important demands they are faced with or when they are not adequately rewarded for the efforts they have exerted. It is further postulated that this experience of stress will be more likely if an employee feels that they have insufficient control over their situation (Cox & Griffiths, 2010).

2.2.2. Models of workplace stress - Transactional Models of Stress

The experience of stress can be viewed from a number of different models. Transactional models of stress emphasise the imbalance between coping capacity and the environment in the development of a stress definition (DiClemente, Crosby, & Kegler, 2009). These models are cognitively based, and thus emphasise perceptions, appraisals and coping mechanisms values when defining stress, rather than environmental possibilities. This allows for individual difference factors (Cooper, 2016; DiClemente et al., 2009). Ultimately, transactional models view stress as an ongoing process that involves individuals transacting with environments, making appraisals of these encounters and attempting to cope with any issues that arise (Cooper, Dewe & O'Driscoll, 2001). Although this model acknowledges the role of physical stressors, it is argued that stress only occurs when the individual makes an appraisal in which the demands exceed his or her resources (Lewis & Zibarras, 2013). Two types of cognitive appraisals that individuals may experience have been identified in the literature, primary and secondary appraisals (Cooper et al., 2001; Lewis & Zibarras, 2013).

- *Primary appraisal* involves the individual's realisation that something is at stake, and therefore the individual gives meaning to the encounter (Cooper et al., 2001). Most commonly, an individual can consider the situation as stressful/challenging, controllable/uncontrollable, positive/negative, or alternatively, irrelevant (Lewis & Zibarras, 2013). If the event is seen as stressful, then it is evaluated as either harm or loss, threat or a challenge (Cooper et al., 2001; Lewis & Zibarras, 2013). A harm or loss is perceived as damage that has already taken place, where as a threat is something that has the potential to produce harm or loss. On the other hand, a challenge is considered as the potential for personal growth, mastery or gain in some form (Lewis & Zibarras, 2013).
- *Secondary appraisal* occurs once an event has been classified as either harmful, a threat or a challenge (Cooper et al., 2001; Lewis & Zibarras, 2013). It involves the individual assessing what they can do about the situation, through addressing his or her coping resources, options and strategies (Lewis & Zibarras, 2013).

Ultimately, the way in which an individual perceives, and subsequently appraises an event, plays an important role in not only the magnitude of the stress response, but also the way in which the individual will cope and deal with the stress (Lewis & Zibarras, 2013). Thus, from the transactional perspective, stress is viewed as the overall process between stressors, strain and coping responses, rather than as a description of specific elements of the transaction between an individual and his or her environment (Cooper et al., 2001). This approach raises an important consideration in the research of work-related stress as it allows for individual differences through its emphasis on appraisals and coping strategies. No two individuals will likely evaluate and handle the external stimuli they are exposed to in the same way, and thus other factors that may influence this transactional process should be considered.

This perspective also highlights the importance of considering individual personality factors as a determinant of stress. Although all employees are exposed to stressors, the manner in which they are able to cope, or the extent to which they believe they are in control of the situation, may determine the degree of strain that they experience. A large portion of the literature surrounding workplace stress has focused on the external and organisational resources that assist employees in alleviating stress induced strain. Furthermore, research has also started to focus on employee's personal resources, such as the aspects of the self that are linked to resilience, self-efficacy, self-esteem, optimism and the ability to successfully control and impact upon one's environment that may be a antecedent in employees' ability to

cope and adapt (Xanthopoulou et al., 2007). However, there appears to be very little research that has explored this notion from the viewpoint of sex-role identities, and more specifically, little has explored the impact that positive and negative SRIs may have (Jones, Mendenhall & Myers, 2016). This study therefore aims to explore this gap in research, by considering the relationship that exists between a differentiated model of SRI and workplace stress.

2.3. SRI and Stress

Transactional models of stress highlight the objectivity of an individual's experience. A situation is not likely to be perceived as stress if it is not appraised as taxing or exceeding one's capacity to cope (Lewis & Zibarras, 2013). Personality is one of the factors cited as an aspect affecting appraisal and coping. It has been postulated that personality traits not only influence the appraisals made, but also the type of stressors experienced and the perception of frequency of exposure to stressors (Lewis & Zibarras, 2013). For example, individuals who are highly neurotic are likely to perceive greater interpersonal stress exposure, are likely to have lower coping resources and the tendency to perceive events as highly threatening. On the other hand, highly conscientious as well as extroverted individuals have been found to appraise so called stressor events as challenging and view their coping abilities more positively (Lewis & Zibarras, 2013).

Studies have begun to look into the personal attributes that contribute to both adaptive and maladaptive coping techniques in employees, including exploration of the effects of sex and gender roles on individuals' perceptions and experiences of stress (Gianakos, 2002). Ultimately, an individual's SRI influences the behaviours they may partake in to cope with a situation, which can subsequently affect one's level of perceived stress (Jones et al., 2016). Traditionally, a masculine SRI is seen to be oriented towards goals external to the interaction process and thus involves proactive influence and the tendency to act on or affect one's environment (Palan et al., 1999). Thus a person scoring high on M+ would encompass traits such as being analytical, independent, self-reliant, confident, ambitious as well as willing to take a stand and take risks (Berger & Krahé, 2013). This results in lower levels of strain as M+ individuals are well equipped in using adaptive coping methods in reducing the effects of work induced stress (Gianakos, 2000). On the other hand, a person that is identified as M- could be classified as forceful, authoritative, selfish and aggressive among others (Berger & Krahé, 2013). Thus, it is expected that individuals possessing negative masculine traits are likely to experience higher levels of strain as their innate traits are not conducive with co-

operating effectively with others (Gianakos, 2000). In the event that coping with stress requires co-operation and support from others, they are likely to fare more poorly as a result of their less than adequate interpersonal skills.

Contrastingly, a feminine SRI focuses on relational personality qualities that includes an awareness of others and interdependence (Palan et al., 1999). Therefore, F+ individuals would possess qualities such as understanding, compassion, responsibility, considerateness and sensitivity, whereas F- individuals display characteristics such as being gullible, passive or even passive aggressive at times (therefore temperamental), anxious, whiny, dependent and easy to influence (Palan et al., 1999). Thus, F+ individuals are likely to perceive less strain as their positive attributes allow them to draw in the social support of others in order to adapt (Gianakos, 2002).On the other hand, the negative qualities of F- individuals results in them alienating the support of others, which ultimately leads to heightened levels of work-induced stress and strain as they lack the emotional support or alternatively the problem solving assistance that comes from good relations and interactions with others (Gianakos, 2000).

However, Jones et al. (2016), promoting an argument for androgyny suggest that the inflexibility in displaying one gender-determined coping strategy increases perceived stress levels, as sex-typed males may perceive more stress when a situation requires them to, for example, display emotional vulnerability, whereas a sex-typed female would experience increased stress in a situation that requires an assertive response to a problem. Furthermore, by having a sex-typed SRI, individuals could have limited coping strategies at their disposal (Jones et al., 2016). Since androgynous individuals possess behaviours displayed by both masculine and feminine individuals, they are likely to manifest both sets of behaviours, depending on what the context/situation requires. Thus, it has been found that A+ individuals are more adaptable and flexible than sex-typed individuals; as well as undifferentiated individuals (Mills & Bohannon, 1983; Thompson, 1989), and have been found to report the lowest levels of stress as they are able to cope adaptively, as well as rely on the social support of others (Gianakos, 2002). On the other hand, A- individuals are likely to respond to situations with the undesirable behaviours characterised by both sex-types (Woodhill & Samuels, 2003), and are therefore likely to experience significantly higher levels of strain.

Undifferentiated individuals are likely to behave in a manner that is non-gender related and thus it is difficult to make predictions regarding their experienced outcomes (Chusmir &

Koberg, 1990; Woodhill & Samuels, 2003). Some research, such as Gianakos (2002) has suggested that U individuals have been found to exhibit low self-esteem and confidence in career decision making skills, with subsequent low levels of involvement in career exploration and job mastery factors. As a result of this, undifferentiated individuals displayed low levels of stress as they maintain low expectations for their performance. It has thus been argued that U individuals may exhibit lower perceptions of stress than their counterparts with negative identities. However, since undifferentiated individuals show no specific preferences in behaviour; it is difficult to fully predict their perceptions of stress (Woodhill & Samuels, 2003).

2.4. Workplace Thriving

While there has been a huge body of research that has examined the implications of work stress on the individual and work place outcomes as well as the personality factors affecting stress perception and appraisal – much of this research has adopted a pathology model, meaning that it focuses on illnesses and weaknesses rather than strengths, health and vitality (Luthans, Luthans & Luthans, 2004).

Very little research has looked at positive psychological constructs, their implications for individuals and organisations and how they are related to SRI (Bernstein & Volpe, 2016). Ultimately, positive psychology focuses on building positive qualities within individuals that assists them in leading more fulfilling lives (Marshall, 2016). Park (2015) defines positive psychology as "using psychological theory, research, and intervention techniques to understand the positive, adaptive, creative, and emotionally fulfilling aspects of human behaviour" (p. 1645). Therefore, the focus is in direct contrast to areas of psychological study that emphasise identifying and treating psychopathologies and mental disorders. Rather, positive psychology aims to balance a focus on pathology with a strong emphasis on human strengths and prevention, through studying the strengths and virtues of individuals that enable optimal human functioning and allow them to flourish and succeed (Marshall, 2016; Park, 2015).

Marshall (2016) reported relationships between positive personality traits and numerous increased well-being indicators such as coping better with stress, quicker recovery from illnesses, healthy aging, and improving quality of life. Therefore, positive psychology within the organisational context would not only focus on aspects of work and employees that result in stress and strain, or additionally alleviate it's negative consequences, but would rather

focus on the aspects that would allow employees to experience meaning, happiness, achievement, and engagement in their work lives (Parks, 2015). Thus, positive organisational behaviour has been defined as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement" (Luthans, Avolio, Avey & Norman, 2007, p. 542).

More specifically, a number of criteria were defined in order to establish which positive constructs would be included in this field of positive organisational behaviour (Avey, Luthans, Smith & Palmer, 2010; Luthans et al., 2007). These inclusion criteria are outlined as follows: the construct must be grounded in theory and research and based on valid measurement. Furthermore, it should be relatively unique to the field of organisational behaviour. The construct must have a positive impact on work-related individual-level performance and satisfaction. Finally, the construct must be state-like rather than a fixed trait, highlighting that the construct is open to development and change and thus is something that all employees can strive to achieve (Avey et al., 2010; Luthans et al., 2007). The aforementioned inclusion criteria emphasise the focus of positive psychology within the workplace on positively impacting upon performance and wellbeing through the development of psychological capacities and human resource strengths that can be effectively measured and managed (Luthans et al., 2007).

Four such positive psychological capacities that are measurable, open to development, and can be managed for more effective work performance are self-efficacy, optimism, hope and resilience (Luthans et al., 2004). These four dimensions have an integrative, common thread running through them of a motivational inclination to accomplish goals and succeed (Avey et al., 2010). This is as a result of an individual with a positive psychological state having confidence to put effort in to succeeding at challenging tasks (self-efficacy), making positive attributions about succeeding now and in the future (optimism), persevering towards goals in order to achieve (hope) and bouncing back from adversity in order to attain success (resilience) (Luthans et al., 2004; Luthans et al., 2007).

One particular positive psychology variable in line with the inclusion criteria of positive organisational behaviour, with similar outcomes and propensities towards success is that of workplace thriving. Previous research conducted by Bernstein and Volpe (2016) within a South African sample found statistically significant differences between positive and negative

SRIs on levels of positive psychological capital, thus this research aims to extend these findings through examining the relationship between positive and negative SRIs and levels of workplace thriving within South African employees. The following sections aim to define workplace thriving, its proposed relationship to SRI and the implications of both in the face of experienced work demands.

2.4.1. Defining Workplace Thriving

Spreitzer, Sutcliffe, Dutton, Sonenshein and Grant (2005) define thriving at work as "the psychological state in which individuals experience both a sense of vitality and a sense of learning at work" (p.538). This notion of thriving as a joint experience of the affective component, vitality, and the cognitive component, learning, is widely agreed upon throughout the literature (Carmeli & Spreitzer, 2009; Niessen, Sonnentag & Sach, 2012; Paterson, Luthans & Jeung, 2014; Porath, Spreitzer, Gibson & Garnett, 2012). In this case, vitality indicates an individual's subjective experience of energy and liveliness whereas learning refers to the acquisition and application of new knowledge and skills to one's work (Niessen et al., 2012; Paterson et al., 2014). Ultimately, thriving occurs when employees experience momentum and progress in their work and although both vitality and learning as individual dimensions can result in growth and personal development in one's job, it is the combination of both psychological states simultaneously that enhances both their effects and results in the experience of thriving (Carmeli & Spreitzer, 2009; Paterson et al., 2014; Porath et al., 2012).

Vitality and learning have been found to predict affect and behaviour in the workplace, with both being correlated with positive wellbeing and job performance (Niessen et al., 2012). Subsequently, outcomes of thriving have proved to be in abundance for both individuals and organisations, with results showing that it is able to increase short-term individual functioning and long-term adaptability at work, general health and improved career development initiative at the individual level (Carmeli & Spreitzer, 2009; Porath et al., 2012), while organisations benefit through increased performance and lowered health care costs, as well as a taskforce that is better able to generate creative and innovative ideas, and exhibits higher levels of job satisfaction and organisational commitment (Paterson et al., 2014; Porath et al., 2012). Although the evident positive outcomes highlight the importance of thriving in the workforce, a better understanding of the factors that promote thriving at work is needed (Paterson et al., 2014).

Spreitzer et al. (2005) present a "socially embedded model of thriving at work" that among other intentions, aims to theorise the factors that enable thriving in the workplace. Importantly they note that it is not merely elements that are opposite to those that exacerbate stress that will enhance thriving, but rather, it is an increase in the presence of certain psychological states, resources, behaviours and unit contextual features that will result in increased thriving (Spreitzer et al., 2005). Furthermore, they maintain that the underlying engine of thriving is agentic behaviours – when people are active and purposeful at work (Spreitzer et al., 2005). Ultimately, this intentional, self-controlled behaviour will result in higher levels of vitality and the experience of learning as compared to reactive, prescribed behaviours as these individuals opt to find new ways of doing tasks, rather than merely obeying instructions or relying on others on how to do things (Paterson et al., 2014). Spreitzer et al. (2005) present three forms of agentic behaviour that contribute to thriving at work – task focus, exploration and heedful relating:

- Task Focus – this refers to getting one's work done in a satisfactory manner and is described by the degree to which an employee focuses their behaviour on meeting their assigned work responsibilities (Spreitzer et al., 2005). Thus, it is characterised by an individual being fully engaged, alert and attentive during the performance of work related tasks, as they voluntarily and intentionally direct their personal energy into the required task (Paterson et al., 2014). Although it may seem that the expenditure of such energy may actually deplete vitality, it is argued that task focus rather increases thriving due to the positive affect that is associated with accomplishment (Niessen et al., 2012; Paterson et al., 2014). Furthermore, the attention and engagement involved with task focus may result in heightened learning as individuals are able to discover where something can be achieved more efficiently, as well as where new knowledge needs to be acquired and applied (Niessen et al., 2012; Paterson et al., 2014).
- Exploration – this behaviour involves "experimentation, risk taking, discovery and innovation behaviours that help people to stretch and grow in new directions" (Spreitzer et al., 2005, p. 540). Ultimately, it influences thriving in that vitality is likely to be increased when employees explore new ways of working and subsequently discover novel strategies, ideas and information that can restore energy. Similarly, learning is improved through exploration as individuals discover and utilise fresh and new techniques, concepts and approaches (Spreitzer et al., 2005).

- Heedful relating – this refers to the degree to which individuals operate attentively with those around them (Spreitzer et al., 2005). As work is increasingly carried out in groups and teams, the ability to work effectively with other members towards the achievement of goals is likely to result in heightened levels of vitality, especially when people are able to develop high-quality work relationships (Paterson et al., 2014). Similarly, when working with others, individuals are exposed to different thoughts, ideas and opinions that subsequently lead to gaining information and opportunities for learning (Niessen et al., 2012; Paterson et al., 2014).

2.5. SRI and Thriving

Although task focus, exploration and heedful relating are understood to be determinants of workplace thriving, little research has explored the types of personality traits that will effectively be able to involve themselves in agentic behaviours. Porath et al. (2012) hypothesised that positive and negative affect, which are relatively stable personality characteristics, would be related to thriving as individuals with a negative affect will be less likely to view their growth and progression positively and subsequently experience reduced vitality. A significant correlation was found, suggesting that different personality traits, and more specifically, positive and negative traits, may influence the extent to which an individual will be able to behave agentically. These findings highlight the potential in exploring the personality traits and SRIs that could result in workplace thriving.

Following the theory of agentic behaviours presented by Spreitzer et al. (2005), it can be hypothesised that positive SRIs will result in higher levels of workplace thriving whereas negative SRIs will display an inverse pattern. Ultimately, the description of agentic behaviours fits with the character traits presented for positive SRI individuals, and thus it is posited that if agentic behaviours are an antecedent to thriving, then an individual's SRI is likely to influence their experience of workplace thriving as well. Positively masculine individuals, who are characterised as being willing to take a stand and take risks, are likely to thrive as a result of their desire to explore and ultimately find innovative ways of managing problems and taking action on how things should be done (Gianakos, 2002). Similarly, a positively feminine individual, for example, would be likely to have a high degree of heedful relating, as a result of possessing traits such as being cheerful, warm and affectionate, that allows them to create a strong social network and work effectively with those around them (Berger & Krahé, 2013; Niessen et al., 2012; Paterson et al., 2014). Since A+ individuals

demonstrate high levels of both M+ and F+ qualities (Woodhill & Samuels, 2003), it would be expected that they would display the highest levels of workplace thriving. This is as a result of being able to manifest a wider range of all the aforementioned agentic behaviours depending on the situation, owing to the larger range of positive masculine and feminine characteristics that they possess (Chusmir & Koberg, 1990; Vonk & Ashmore, 1993).

With regard to negative identities, it would be expected that individuals with negative identities would exhibit lower levels of workplace thriving, as a result of their traits not allowing them to behave agentically. For example, M- individuals are not likely to experience heedful relating as a result of their being aggressive and selfish, thus alienating the social support provided from others. Likewise, an F- individual, who is characterised by behaviours that negatively impact upon receiving social support of others, is unlikely to develop high quality work relationships, and subsequently unlikely to experience heightened levels of vitality and learning. Moreover, F- individuals, as a result of being submissive, easy to influence and yielding to others, are less likely to independently explore new and innovative ideas and strategies, reducing their ability to act agentically and experience workplace thriving. Negatively androgynous individuals, as a result of the combinations of both M- and F- traits that they display (Woodhill & Samuels, 2003), are expected to be the least likely to experience vitality and learning in the workplace. This research aims to further explore this relationship between SRI and thriving in a sample of South African employees.

2.6. Stress and Thriving

As mentioned, considerable research has focused its attention on the probable negative outcomes of occupational stressors on the wellbeing of employees in modern day work environments, as well as the nature of these stressors, which have been found to include role problems, job content demands, work organisation, professional perspectives and the physical environment (Arsenault, Dolan & Van Ameringen, 1991). The negative effect of these stressors needs to be combatted in order to assist an employee in experiencing a number of positive work outcomes and enhanced physical and emotional wellbeing, with work engagement being one of the most commonly explored occupational outcomes in the literature (Bakker & Demerouti, 2007; Demerouti et al., 2001; Xanthopoulou et al., 2007). However, it is important to note that stressors not only hinder one's ability to accomplish work related goals when the effects of job demands exceeds an individual's ability to cope and thus results in subsequent damaging costs, but it also acts as a major inhibitor to the

stimulation of an employee's growth and development (Xanthopoulou et al., 2007). This directly relates to the notion of thriving, which is conceptualised as a positive experience that allows employees to measure whether what they are doing and how they are doing it is helping them to develop in a positive direction (Spreitzer et al., 2005). Thus it is logical to suggest that a relationship between stress and thriving could exist, however it appears to be under researched in the literature. Niessen et al. (2012) hint towards an association between these two variables as they suggest that the work environment can be considered both a cause of stress and a contributor to personal growth and wellbeing, dependent on the individuals exposure and response to demands and resources. Therefore it would seem that increased stress reduces an individual's likelihood of thriving and similarly, an individual who is thriving is likely to perceive less stress. This study will aim to further explore this relationship.

2.7. Research Questions

Based on the literature outlined above it seems likely that individuals with positive identities will have higher levels of thriving and lower levels of work stress perception whereas individuals with negative identities will have lower levels of thriving and higher levels of work stress perception. The research questions that arise out of this are as follows:

1a) Do individuals with positive identities have higher levels of workplace thriving?

1b) Do individuals with positive identities have lower perceptions of work stress?

2a) Do individuals with negative identities have lower levels of workplace thriving?

2b) Do individuals with negative identities have higher perceptions of work stress?

3) What is the nature of the relationship between stress and thriving?

Furthermore, based on the above literature an additional research question would be could SRI moderate the relationship between work stress and thriving? This study thus aims to answer the following additional research question, that is:

4) Does SRI moderate the relationship between work stress and thriving?

3. METHODS

3.1. *Research Design*

The study made use of a cross-sectional, correlational research design, with quantitative methods employed to investigate the research questions. This was an appropriate research design as cross sectional studies aim to capture aspects of social life, including demographic characteristics, attitudes, values, beliefs and behaviours (Blaikie, 2009). Furthermore, cross-sectional research involves the collection of data on more than one case, at a single point in time, in order to collect a body of quantifiable information surrounding two or more variables, which can then be examined to determine patterns of association (Bryman, 2012). In addition a correlational research design aims to establish whether a relationship exists between two or more variables and subsequently describe the nature of this relationship (Gravetter & Forzano, 2015). This design makes no attempt to manipulate or control the variables under observation; rather, it intends to investigate the relations or correlations between existing variables, and thus this study was non-experimental as it is not possible for the researcher to manipulate participants SRI, job stress or workplace thriving (Gravetter & Forzano, 2015). The advantages of such a research design are that it is easier to generalise results to other natural situations as the situations are often similar. Moreover, this method is less ethically problematic owing to the fact that there is no manipulation of the variables, a feature that is normally associated with experimental research. Within the present study utilising the cross-sectional design, data was collected through the use of survey-questionnaires.

3.2. *General Procedure*

After obtaining ethical clearance to conduct the study, HR managers within various organisations were approached for access to a sample of approximately 300 – 500 employees (Please refer to Appendix A for the access request letter to the organisation). The purpose of the study and the possible benefits of the findings were explained to the HR managers. Of the organisations approached one agreed to participate, a non-profit organisation that works with South African youth. Employees were invited to take part in the study through a survey that was made available electronically via Lime Survey. This invitation to participate was distributed by the HR manager, however participants were informed that the manager was not

able to track whether or not employees chose to participate or not. Thus there were no negative work consequences for non-participation.

As a result of only one organisation agreeing to participate, in order to increase sample size Wits Plus students were used. Wits Plus is the centre for part-time studies at the University of the Witwatersrand. The majority of the students studying through Wits Plus have full-time jobs and therefore study through the university during the evening. Therefore these students were used in the present study as they are a part of the South African workforce. The course co-ordinator and course lecturer of the Wits Plus first year psychology students were approached and asked for permission to access the students. After permission was granted, students who were employed within the South African workforce were asked to complete the survey, and were offered 1% towards their final year course mark if the survey was completed in full. The survey link was posted on the student portal website.

In addition to this, the survey was distributed via social media in order to obtain a larger sample size. The survey link was posted on Facebook and Linkedin, with a request to respondents to further distribute the survey to individuals working in South Africa.

The survey consisted of a participant information sheet (Appendix B for organisations; Appendix C for first-year students), demographic questionnaire, EPAQ-R, JRTI and thriving scale (Appendix D). Submitting the survey was considered informed consent, and participants were able to withdraw at any point up until they chose to submit the survey.

3.3. *Sample and Sampling*

The study made use of non-probability purposive and convenience sampling as well as snowball sampling in order to obtain a sample of 485 voluntary participants from organisations in South Africa. Purposive sampling conforms to certain criteria that the researcher wishes to study, thus the goal of using this sampling strategy is to sample participants in a strategic way, so that those sampled are relevant to the research questions being asked (Bryman, 2012). The inclusion criterion for this study was that participants were above 18 years of age and employed fulltime in South Africa. Furthermore, they needed to be white collar workers with access to a computer and internet in order to be able to partake in the study. Additionally, snowball sampling was used as participants were asked to circulate the survey to other South African employees and assist the researcher in accumulating other participants. The sample consisted of 384 females (79.2%) and 101 males (20.8%) who

ranged from 18 to 70 years of age. The majority of participants indicated English as their home language (59.4%). Following this, 33.4% spoke an African language and 5.8% spoke Afrikaans. Of the 485 participants, 209 were White (43.1%), 179 were Black (36.9%), 51 were Indian (10.5%) and 41 were Coloured (8.5%). Five participants identified their race as "other". Most of the participants were single (65.2%), followed by 27.4% who were married. The level of education of the participants ranged from Grade 10 to Doctoral degrees, with most of the sample having received their matric certificates (51.5%), followed by 98 of the participants having an undergraduate degree (20.2%). A full breakdown of the characteristics of the sample can be seen in Table 1 below.

Table 1: Characteristics of the sample

		Frequency	**Percent**
Gender	Male	101	20.8
	Female	384	79.2
Age Category	18 – 20	172	35.5
	21-30	135	27.8
	31 - 40	75	15.5
	41 – 50	60	12.4
	51 – 60	32	6.6
	61 – 70	11	2.3
Race	White	209	43.1
	Black	179	36.9
	Indian	51	10.5
	Coloured	41	8.5
	Other	5	1.0
Marital Status	Single	316	65.2
	Married	133	27.4
	Co-habiting	17	3.5
	Divorced	14	2.9
	Widowed	4	.8
	Separated	1	.2

Level of Education	Grade 10	1	.2
	Matric	250	51.5
	Diploma	70	14.4
	Undergraduate Degree	98	20.2
	Honours Degree	42	8.7
	Master's Degree	19	3.9
	Doctoral Degree	5	1.0
Language	English	288	59.4
	African Language	162	33.4
	Afrikaans	28	5.8
	Other	7	1.4

3.4. *Measurement Instruments*

A survey (Appendix D) was compiled consisting of a biographical questionnaire and three subscales. The biographical questionnaire aimed to gather details including the participants' age, gender, first language, race, level of education and occupation. Thereafter, three scales were included in order to gather information surrounding their sex-role identity, levels of job stress and levels of workplace thriving:

- Sex-role Identity:

The Revised Extended Personal Attributes Questionnaire (EPAQ-R), adapted by Bernstein (2013) was used to measure participants' SRI. This 59 item scale aims to establish whether an individual is M+, M-, F+, F-, A+, A- or U, through participants answering on a 5-point Likert type scale the extent to which the characteristics apply to them. The EPAQ-R contains four subscales, namely positive masculine, positive feminine, negative masculine and negative feminine, which yielded reliability coefficients of 0.83, 0.85, 0.85 and 0.81 respectively. This scale was piloted on a sample of South African employees (Bernstein, 2013), thus it was an appropriate scale to use in this study.

- Work Stress:

The Job Related Tension Index (JRTI), developed by Kahn, Wolfe, Quinn and Snoek (1964), was used to measure the work stress experienced by participants. This 15 item scale aims to establish how often an individual experiences potentially stressful situations in the workplace.

Participants respond how often they are bothered by the situation described in each item on a 5-point Likert type scale, ranging from 1 = never to 5 = nearly all of the time. The original study yielded a Cronbach Alpha of 0.87 on a sample of 725 employees (Kahn et al., 1964).

- Workplace Thriving:

Porath et al. (2012) presented a 10-item thriving scale that aims to assess both the vitality and learning components of thriving. Sample items include "I have energy and spirit" and "I see myself continually improving" as well as reverse scored items such as "I am not learning" and "I do not feel very energetic". Items are answered on a seven point scale ranging from 1 = strongly disagree to 7 = strongly agree. The scale consists of two subscales, namely the "learning" factor or thriving and the "vitality" factor. The subscales yielded reliability coefficients of 0.87 and 0.81 respectively from the pilot study (Porath et al., 2012).

3.5. *Data Analysis*

Data obtained from the sample was analysed using descriptive statistics, correlations, one-way ANOVAs and two-way ANOVAs using Statistical Package for Social Scientists (SPSS) version 23.

Before running statistical analyses to answer the research questions offered in chapter 2, the internal consistency reliability of the measures was assessed. This is done in order to address the degree of uniformity and coherence among the principal parts of the tests, whether it is between the subscales of the test or the overall items. Ultimately, tests that are more uniform tend to be a more reliable measure of psychological constructs (Weiner, 2003). Therefore, testing internal consistency reliability allows the researcher to evaluate the extent to which the questions relating to a particular dimension in the measurement scale tap only this dimension and no other (Bowling & Ebrahim, 2005). While this was done for all three scales utilised in this study, it was a particularly important analysis for the EPAQ-R, which was developed specifically to address poor reliability properties of previous sex-role scales (Bernstein, 2013). The most commonly used method for calculating internal consistency reliability is Cronbach's alpha coefficient, which is based on the average correlation among the items and the number of items in the instrument (Bowling & Ebrahim, 2005; Davey, Sterling & Field, 2014; Rubin & Babbie, 2012). A reliability coefficient of 0.70, for example, implies that 70 percent of the measured variance is reliable whereas the remaining 30 percent is owing to random error (Bowling & Ebrahim, 2005). Rubin and Babbie (2012) suggest that

Cronbach alphas of 0.90 or above indicate excellent internal consistency reliability, with coefficients between 0.80 and 0.89 are considered good. The generally considered acceptable standard of internal consistency reliability is said to be a cut off coefficient of 0.70 for social sciences research (Bowling & Ebrahim, 2005; Loewenthal & Lewis, 2015), meaning that Cronbach alpha scores of 0.7 and above represent reliable instruments. The present research will utilise this cut-off score for adequate reliability.

Statistical tests of difference are either parametric or non-parametric. Parametric tests, such as ANOVAs, are based on certain assumptions about the distribution of the population. In order to describe the sample in this study, means and standards deviations were obtained. However, these sample statistics also allowed the researcher to estimate differences between population parameters (Carter & Lubinsky, 2015). Furthermore, the assumptions underlying parametric correlations and ANOVAs were tested in order to ensure that they were the appropriate analyses to be run on the data. Davey and colleagues (2014) outline the parametric assumptions that need to be met as follows:

1) The data should be measured at least at the interval level
2) The behaviour of one participant should not influence the behaviour of another participant, resulting in independence of scores
3) The data must be obtained from one or more normally distributed populations
4) The variances should be the same throughout the data, and should therefore be equal or homogenous

The first two assumptions cannot be tested statistically. The need for an interval or ratio scale arises as parametric tests require data from which means and variances can be calculated and interval and ratio clearly meet this need, whereas it is not necessarily possible to calculate this with nominal and categorical data (Carter & Lubinsky, 2015). In the present research, the scales and the subsequent scoring used to measure the dependent variables were interval in nature. Additionally, the nature of the research design could not result in the behaviour of one participant influencing the behaviour of another. This assumption is usually violated in studies utilising repeated measures designs (Davey et al., 2014). However, the present study made use of anonymous surveys, in which participants answers would not be influenced by any other participant. Furthermore, the variables under examination are not overt behaviours that can necessarily be altered based on the behaviours of others. Rather, the surveys were

aiming to capture aspects of participants' covert perceptions and pre-existing personality traits.

The remaining two assumptions need to be tested statistically before parametric analyses can be utilised. This study made use of skewness and kurtosis coefficients in order to examine the assumption of normality, and homogeneity of variance was assessed using Levene's test (Leech, Barrett & Morgan, 2014). The results of testing these assumptions are presented in the following chapter.

The following section discusses the statistical techniques employed to address the research questions of the study. The decision to employ these specific analyses was made with the understanding that the aforementioned assumptions needed to be tested and met. In the event that one or more of these assumptions were violated, the data would be transformed or non-parametric equivalents, such as Spearman's correlation test or Kruskall Wallis test, would be utilised. In order to establish whether a relationship existed between SRI, workplace thriving and stress, Pearson's correlation coefficients were employed to evaluate whether a linear association occurs (Le Blanc, 2004). Research questions 1 and 2 were answered using a one-way ANOVA, as it allows the researcher to look at the relationship among three or more groups at once (Mitchell & Jolley, 2012), and thus determine whether positive or negative SRIs will result in differing levels of workplace stress and thriving. In order to determine whether a relationship exists between SRI, stress and thriving, a two-way ANOVA will be used in order to assess the result that occurs when several variables act simultaneously (Gravetter & Forzano, 2015). In order to accommodate the requirements for the two-way ANOVA, the work stress variable will be converted to categorical data.

Significant ANOVA results will be further explored through post-hoc testing in order to examine which sex-role identities differ on their levels of stress or thriving. The Tukeys HSD (honestly significantly difference) test is a commonly used post-hoc procedure in psychological research that allows researchers to compare each pair of conditions to see if their difference is significant (Gravetter & Forzano, 2015; Hinton, 2014). The use of this specific post-hoc test is appropriate as it is a conservative pair-wise test that is preferred when the number of groups is large (De Muth, 2014), as is the case within the present research, that will have seven categories for the independent factor (namely the seven SRIs). The results of the aforementioned statistical procedures will be presented in the following chapter.

3.6. *Ethical Considerations*

A number of ethical considerations were taken into account throughout the duration of the study, namely: anonymity, confidentiality, informed consent, voluntary participation, and the right to withdraw. Before conducting the study, ethical clearance and permission was obtained from the University of the Witwatersrand Human Research Ethics Committee.

With regard to the participating organisations, anonymity of participants was ensured as no identifying information, such as name or ID number, was taken from the participant. Once the surveys had been collected, any information that could possibly identify an individual, such as an IP address, was deleted in order to further ensure anonymity. For the Wits-Plus student, they were asked for their student numbers so as to ensure that they were given 1% towards their course mark. However, this information was captured solely for this purpose and then removed from their responses, so as to ensure that all responses remain anonymous. Students were informed of this in the participant information sheet (Appendix C). The surveys collected were only available to the researcher and her supervisor, and all data was kept on a secure, password protected computer, in order to ensure that all information remains confidential.

Participants were informed that should they wish to receive feedback about the study; a summary of the results would be made available upon request. No specific individual would be referred to, rather overall descriptives, relationships and patterns would be given, in order to ensure anonymity and confidentiality of participants. Informed consent was obtained before participants completed the survey. Participants were given an information sheet explaining the purpose of the study and they were provided with contact details of the researchers, should they have any questions related to the nature and matters of the research. Participation in the study was voluntary, therefore there was no use of coercion and participants were not obliged to fill out or hand in the survey. Furthermore, there were no foreseeable risks related to participating in the study. All participants were made aware that they have the right to withdraw, without penalty; at any point however once the survey had been submitted it was considered as informed consent.

4. RESULTS

As mentioned in Chapter 2, numerous statistical techniques were run in order to address the research questions posed by this study. The results of the current study are based on a sample of 485 employees, in a number of different industries and sectors within the South African working environment. The following chapter includes information relating to the assumptions tests performed for each statistical analysis, as well as the findings for each analysis in relation to the research questions posed in Chapter 1.

4.1. *Reliability – Cronbach's Alpha*

In order to assess whether the measures used in this study were reliable, Cronbach's alpha coefficients were assessed in order to determine the reliability of the subscales. The EPAQ-R consists of four subscales, namely M+, M-, F+ and F-, and the reliability of each subscale was computed as illustrated in Table 2. Additionally, the total scores for each scale used to measure the dependent variables; work stress and thriving were also used to assess the reliability of the scales.

Table 2: Subscale reliability coefficients

	No. of items	**Cronbach's Alpha**
M+	12	0.744
M-	15	0.835
F+	12	0.792
F-	18	0.795
Work Stress	15	0.858
Thriving	10	0.913

In order to assess the independent variable of the research, this study made used of the revised version of the EPAQ (EPAQ-R), as the original version yielded inadequate reliability coefficients. A number of studies that have made use of the EPAQ-R found satisfactory reliability coefficients (e.g. Bernstein & Osman, 2016; Chemaly, 2014; De Freitas, 2015; Solomon, 2012). The results of this study supports these findings, as the Cronbach alphas for M+, M-, F+ and F- were 0.744, 0.835, 0.792 and 0.795 respectively. The scores for all four subscales are above the satisfactory 0.7 required for research within the Social Sciences (Loewenthal & Lewis, 2015). Thus, this study further supports the use of the EPAQ-R within a South African sample. The scales used to examine the dependent variables, namely workplace stress and thriving, yielded excellent reliability scores of 0.858 and 0.913 respectively, validating their use in this study.

4.2. *SRI descriptive statistics*

The following tables illustrate the spread of the participants across the seven different sex-role identities (Table 3).

Table 3: Distribution of sex-role identities

	Frequency	Percent
A-	93	19.2
A+	124	25.6
F-	83	17.1
F+	54	11.1
M-	50	10.3
M+	43	8.9
U	38	7.8
Total	485	100.0

Figure 1: Histogram of sex-role identities

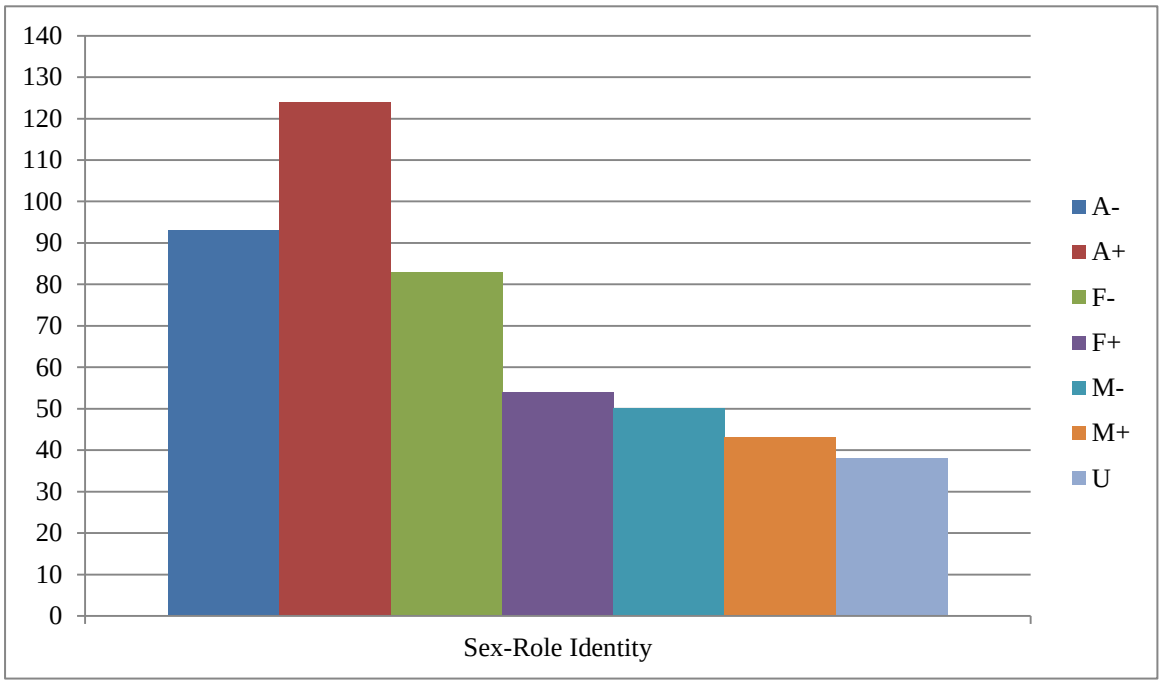
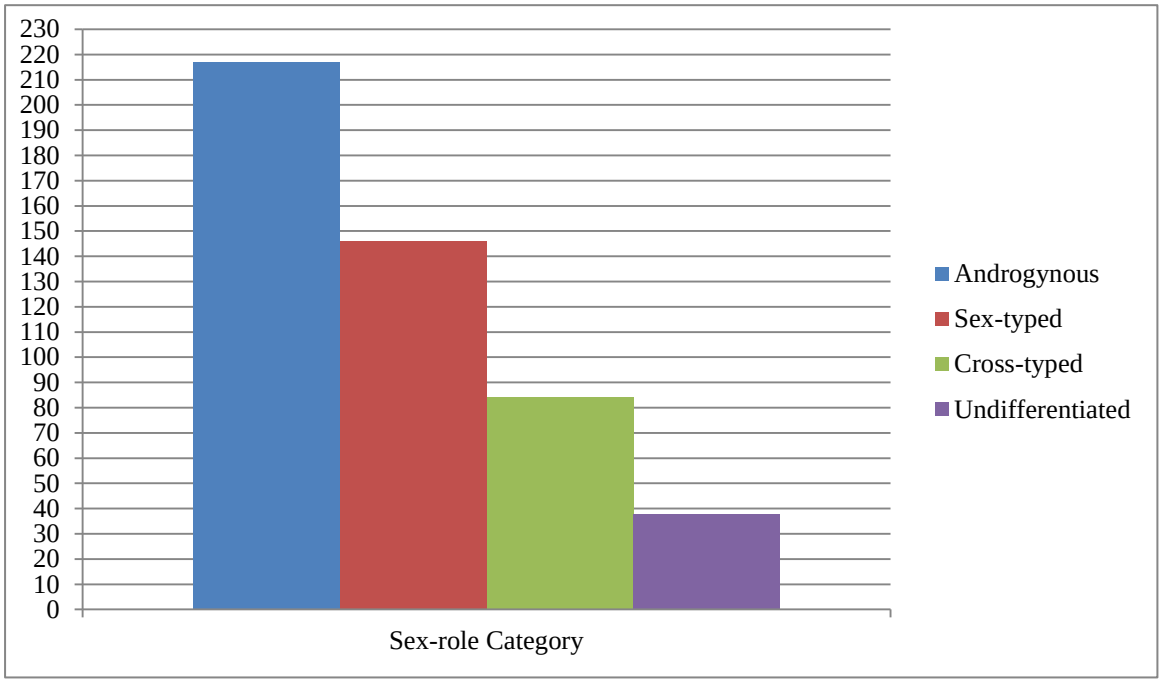


Table 4 captures how the participants were spread in terms of their biological sex, and the congruency of their SRI to this. As discussed in Chapter 2, androgynous individuals exhibit both masculine and feminine traits whereas undifferentiated individuals are low in both masculinity and femininity. Sex-typed individuals display traits congruent to that which is stereotypically appropriate for their biological sex whereas cross-typed individuals display traits of the opposite gender-role.

Table 4: Distribution of sex-role categories

	Frequency	Percent
Androgynous	217	44.7
Cross-typed	84	17.3
Sex-typed	146	30.1
Undifferentiated	38	7.8
Total	485	100.0

Figure 2: Histogram of sex-role categories



In order to further explore the spread of participants across the seven sex-role identities, as well as the four sex-role categories, Table 5 and Table 6 aim to capture the dispersion with relation to the participants' biological sex. The sample was made up of 384 female participants and 101 male participants and the following tables and diagrams examine more closely the way in which the participants were classified.

Table 5: Distribution of sex-role identities based on gender

		Frequency	Percent
Females	**A-**	77	20.1
	A+	92	24.0
	F-	68	17.7
	F+	48	12.5
	M-	34	8.9
	M+	29	7.6

	UA	36	9.4
	Total	384	100.0
Males	**A-**	16	15.8
	A+	32	31.7
	F-	15	14.9
	F+	6	5.9
	M-	16	15.8
	M+	14	13.9
	UA	2	2.0
	Total	101	100.0

Figure 3: Histogram of sex-role identities based on gender

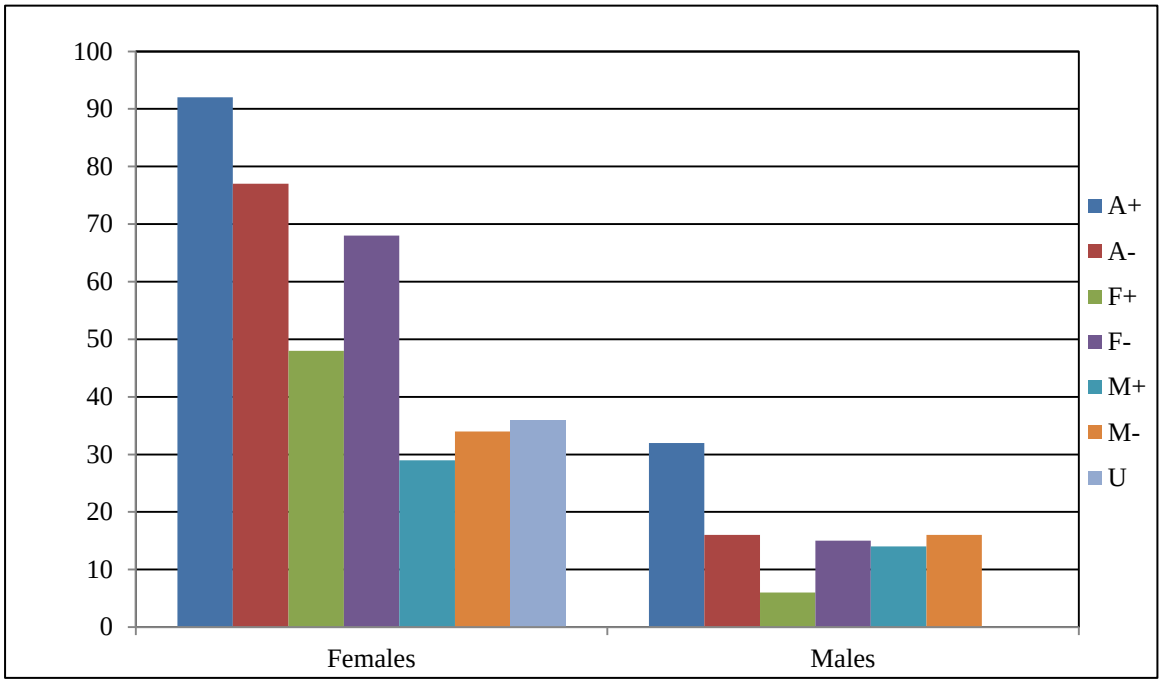
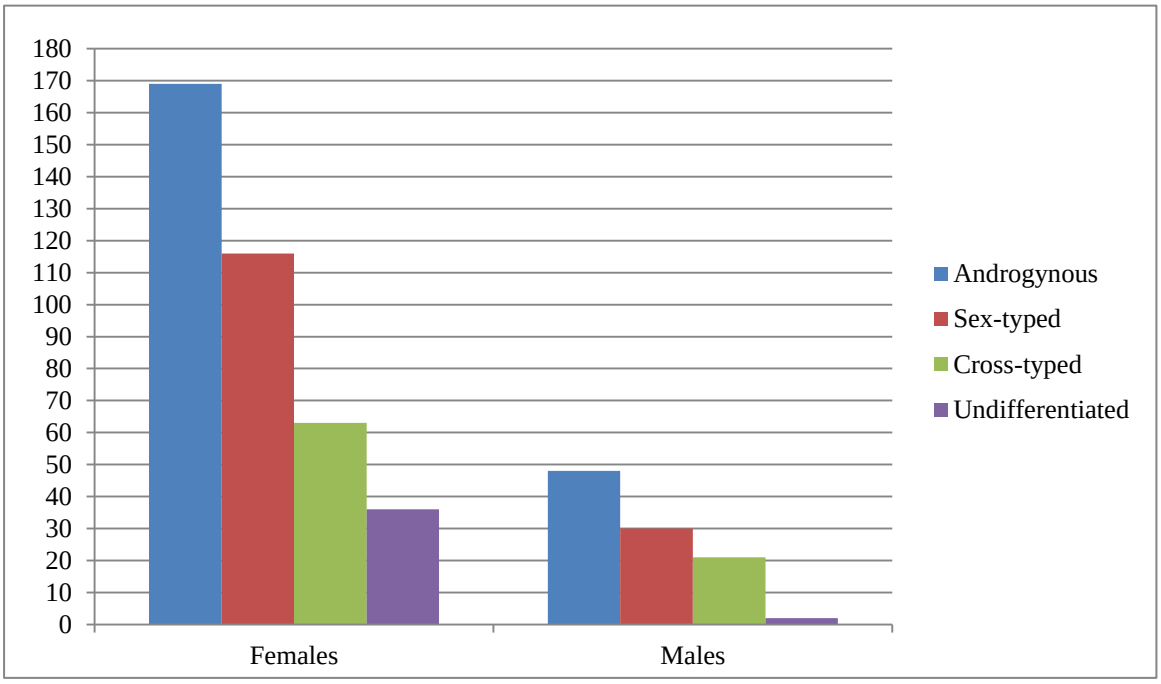


Table 6: Distribution of sex-role categories based on gender

		Frequency	**Percentage**
Females	**Androgynous**	169	44.0
	Sex-typed	116	30.2
	Cross-typed	63	16.4
	Undifferentiated	36	9.4
Males	**Androgynous**	48	47.5
	Sex-typed	30	29.7
	Cross-typed	21	20.8

	Undifferentiated	2	2.0

Figure 4: Histogram of sex-role categories based on gender



4.3. *Results of assumption testing*

In order to run parametric statistical analyses, certain assumptions need to be met. As mentioned in chapter 3, these assumptions include interval measurement, independence of score, normal distribution and homogeneity of variance. The ways in which the first two assumptions have been met were outlined in Chapter 3, as these two assumptions cannot be statistically tested. The following section aims to test the remaining two assumptions, namely normal distribution (needed for a correlation) and the additional requirement of equal variances between groups (needed for an ANOVA). Skewness and kurtosis coefficients (as seen in Table 7) were used to assess normality, and Levene's test of homogeneity was employed to assess equality of variance (as seen in Table 8).

Table 7: Skewness and Kurtosis coefficients

Subscale	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**
M+	17.0	57.0	40.94	6.759	-.243	.085
M-	15.0	61.0	36.235	8.2659	.071	-.174
F+	29.0	58.0	46.720	6.2947	-.512	-.372
F-	26.0	77.0	50.210	8.9913	.199	-.269
Work Stress	15.0	71.0	42.122	9.7641	.014	-.263
Workplace Thriving	12.0	70.0	52.831	10.7554	.-892	.753

Data is said to be normally distributed if the skewness and kurtosis coefficients lie between -1 and +1. Table 7 shows that all the data is normally distributed, therefore parametric correlations can be run. This is also a requirement to meet for an ANOVA as well; however, a Levene's test of homogeneity needs to be run as well. This assumption was addressed in Table 8.

Table 8: Levene's Test of Homogeneity

Dependent Variable	**F**	**df_1**	**df_2**	**Sig.**
TOTAL WS	.335	6	478	.918
TOTAL WT	.877	6	478	.512

The results obtained in the above table showed that there was homogeneity of variance for work stress ($F(6,478)=.335$, $p>.05$) and thriving ($F(6,478)=.877$, $p > .05$). Since all the assumptions for parametric analyses were met, a traditional ANOVA was conducted, with Tukey's post-hoc analyses run for significant outputs. It is recommended that if data meets the assumption of homogeneity of variance, Tukey's post-hoc test is most appropriate (Salkind, 2010). Therefore the results of the above table further justify the use of this specific post-hoc procedure.

4.4. *Correlations*

Table 9: Subscale correlations

	M+	**M-**	**F+**	**F-**	**TOTAL WS**	**TOTAL WT**
M+	1	.168**	.210**	-.323**	-.105*	.244**
M-		1	-.371**	.177**	.100*	-.094*
F+			1	.193**	.038	.262**
F-				1	.395**	-.141**
TOTALWS					1	-.178**
TOTALWT						1

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

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

Table 9 displays the Pearson's correlation coefficients for the subscales used. The results of this table indicate statistically significant correlations between the four EPAQ-R subscales, indicating that relationships exist between masculinity and femininity, in both its positive and negative forms. The results indicated weak, positive correlations between M+ and M- ($r = .168$, $p < 0.01$), M+ and F+ ($r = .210$, $p< 0.01$), M- and F- ($r = .177$, $p < 0.01$) and F+ and F-

(r = .193, p< 0.01). Moderate inverse relationships were found between M+ and F- (r = -.323, p<0.01) and M- and F+ (r = -.371, p < 0.01).

Additionally, significant correlations were found between three of the EPAQ-R subscales and the dependent variables. A weak inverse relationship was found between M+ and work stress (r= -.105, p < 0.05) and a weak positive relationship was established between M- and work stress (r = .100, p < 0.05). A moderate positive relationship was reported between F- and work stress (r = .395, p < 0.01), whereas the correlation between F+ and work stress was insignificant. On the other hand, workplace thriving yielded significant correlations with all four subscales. These correlations varied slightly in strength, F+ and M+ reporting the strongest (although still moderate) correlations (r = .262, p < 0.01; r = .244, p < 0.01 respectively). Weak inverse correlations were reported between M- and thriving (r = -.094, p < 0.05) and F- and thriving (r = -.141, p < 0.01). Finally, a weak negative correlation was found between the two dependent variables; workplace stress and thriving (r = -.178, p < 0.01).

4.5. *One-way ANOVA*

After having met the assumptions to run a parametric one-way ANOVA, this statistical technique was used to assess the relationship between SRI and workplace stress, as well as between SRI and thriving. The results of the ANOVAs are presented in the tables below.

Table 10: One-way ANOVA for SRI and stress

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	3435.907	6	572.651	6.409	.000
Within Groups	42707.916	478	89.347		
Total	46143.823	484			

In the one-way ANOVA conducted above, the results showed that there is a statistically significant difference between certain SRIs and the mean scores of work stress (F(6,478)=6.409, p<.05). This means that some sex-role identities had significantly higher levels of perceived stress than others. Additionally, the eta square value obtained from this data was 0.07, indicating that 7% of the variability of stress scores can be explained by the different SRIs. This corresponds to a small effect size (Privitera, 2013). A post-hoc analysis was run in order to further explore which SRIs differed. These results are tabulated in Table 11 below and will be discussed in further detail in the following chapter.

Table 11: Tukeys HSD Post-hoc analysis for SRI and Stress

				95% Confidence Interval	
Group Comparison	**Mean Difference**	**Std. Error**	**Sig.**	**Lower Bound**	**Upper Bound**
M+ and M-	.3740	1.9659	1.000	-5.447	6.195
M+ and A+	.1769	1.6728	1.000	-4.776	5.130
F+ and M+	1.3712	1.9319	.992	-4.349	7.092
F+ and M-	1.7452	1.8551	.966	-3.748	7.238
F+ and A+	1.5481	1.5411	.953	-3.015	6.111
F- and M+	3.3668	1.7760	.484	-1.892	8.626
F- and M-	3.7407	1.6922	.292	-1.270	8.751
F- and F+	1.9955	1.6526	.891	-2.898	6.889
F- and A+	3.5436	1.3405	.116	-.426	7.513
A+ and M-	.1971	1.5835	1.000	-4.492	4.886
A- and M+	6.0785*	1.7431	.010	.917	11.240
A- and M-	6.4525*	1.6576	.002	1.544	11.361
A- and F+	4.7073	1.6172	.058	-.081	9.496
A- and F-	2.7118	1.4273	.481	-1.514	6.938
A- and A+	6.2554*	1.2966	.000	2.416	10.095
U and M+	6.3439*	2.1045	.043	.113	12.575
U and M-	6.7179*	2.0343	.018	.695	12.741
U and F+	4.9727	2.0015	.167	-.953	10.899
U and F-	2.9772	1.8514	.677	-2.505	8.459
U and A+	6.5208*	1.7526	.004	1.331	11.710
U and A-	.2654	1.8199	1.000	-5.123	5.654

Dependent Variable: Work Stress

*. The mean difference is significant at the 0.05 level.

The results of Table 11 above indicate that of the seven identities, significant differences in levels of perceived work stress exist between A- and M+, A- and M-, A- and A+, U and M+, U and M- and U and A+. The rest of the mean differences were statistically insignificant.

Additionally, a one-way ANOVA was run in order to explore the relationship between SRI and thriving. The output of this test is tabulated below.

Table 12: One-way ANOVA for SRI and Thriving

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	5796.071	6	966.012	9.200	.000
Within Groups	50192.065	478	105.004		
Total	55988.136	484			

In the one-way ANOVA conducted above, the results showed that there is a statistically significant difference between certain SRIs and the mean scores of workplace thriving ($F(6,478)=9,200$, $p<.05$). This means that some sex-role identities had higher levels of workplace thriving than others. Additionally, the eta square value obtained from this data was 0.10, indicating that 10% of the variability of thriving can be explained by the different SRIs. This corresponds to a medium effect size (Privitera, 2013). A post-hoc analysis was run in order to further explore which SRIs differed. The results of Table 13 will be outlined thereafter and discussed further in the following chapter.

Table 13: Tukeys HSD Post-hoc analysis for SRI and Thriving

				95% Confidence Interval	
Group Comparison	**Mean Difference**	**Std. Error**	**Sig.**	**Lower Bound**	**Upper Bound**
M+ and M-	1.5219	2.1312	.992	-4.789	7.832
M+ and F+	1.7011	2.0944	.984	-4.500	7.903
M+ and F-	3.6828	1.9254	.473	-2.018	9.384
M+ and A-	4.4419	1.8897	.222	-1.153	10.037
M- and F+	.1793	2.0111	1.000	-5.776	6.134
M- and F-	2.1610	1.8344	.902	-3.271	7.593
M- and A-	2.9200	1.7970	.666	-2.401	8.241
F+ and F-	1.9817	1.7915	.926	-3.323	7.286
F+ and A-	2.7407	1.7532	.706	-2.450	7.932
F- and A-	.7590	1.5473	.999	-3.822	5.341
A+ and M+	4.7033	1.8135	.130	-.666	10.073
A+ and M-	6.2252*	1.7167	.006	1.142	11.308
A+ and F+	6.4044*	1.6707	.003	1.457	11.351
A+ and F-	8.3861*	1.4532	.000	4.083	12.689
A+ and A-	9.1452*	1.4057	.000	4.983	13.307
A+ and U	4.5136	1.9000	.211	-1.112	10.139
U and M+	.1897	2.2815	1.000	-6.566	6.945
U and M-	1.7116	2.2053	.987	-4.818	8.241
U and F+	1.8908	2.1697	.977	-4.534	8.315
U and F-	3.8725	2.0071	.462	-2.070	9.815
U and A-	4.6316	1.9729	.224	-1.210	10.473

Dependent Variable: Workplace Thriving

*. The mean difference is significant at the 0.05 level.

The results of Table 13 above indicate that of the seven identities, significant differences in levels of workplace thriving exist between A+ and M-, A+ and F+, A+ and F- and A+ and A- The rest of the mean differences were statistically insignificant.

4.6. *Two-way ANOVA*

In order to examine whether an individual's SRI moderates the relationship between workplace stress and thriving, a two-way ANOVA was conducted. Workplace stress was converted to a categorical variable, with participants being placed in one of three groups: low, medium, or high stress. Table 14 below shows the distribution of participants between the groups, based on SRI category and stress category.

Table 14: Descriptive statistics for work stress as a function of SRI

Work Stress	SRI	Mean	Std. Deviation	N
High	**A-**	49.000	6.5629	29
	A+	56.947	9.3064	19
	F-	47.208	11.9127	24
	F+	46.000	12.5565	7
	M-	54.571	7.8285	7
	M+	47.625	14.9469	8
	U	55.462	8.1406	13
	Total	50.860	10.3918	107
Low	**A-**	50.667	11.5036	3
	A+	62.000	5.8992	6
	F-	58.000	7.0711	2
	F+	69.000	.	1
	M-	53.167	8.4242	6
	M+	40.000	.	1
	Total	56.211	9.5019	19
Medium	**A-**	48.918	10.9260	61
	A+	58.141	10.1197	99
	F-	50.544	10.5035	57
	F+	52.239	10.8938	46
	M-	51.216	11.1782	37
	M+	55.206	7.3764	34
	U	52.680	11.0744	25
	Total	53.240	10.8601	359
Total	**A-**	49.000	9.6920	93
	A+	58.145	9.8300	124
	F-	49.759	10.9429	83
	F+	51.741	11.3490	54
	M-	51.920	10.3979	50
	M+	53.442	9.6567	43
	U	53.632	10.1407	38
	Total	52.831	10.7554	485

Before conducting the two-way ANOVA, equality of variances needed to be assessed. These results are outlined in Table 15 below.

Table 15: Levene's Test of Homogeneity

F	df1	df2	Sig.
1.025	19	465	.429

Dependent Variable: Total WT

The results of the above table show that there was homogeneity of variance ($F(19,465)=1.025$, $p>.05$). Therefore, a traditional two-way ANOVA was conducted.

Table 16: Two-way ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7488.521[a]	19	394.133	3.779	.000
Intercept	250453.689	1	250453.689	2401.276	.000
WS_CAT	320.727	2	160.363	1.538	.216
SRI_CAT	2082.410	6	347.068	3.328	.003
WS_CAT * SRI_CAT	1344.594	11	122.236	1.172	.304
Error	48499.615	465	104.300		
Total	1409675.000	485			
Corrected Total	55988.136	484			

The results of Table 16 showed a significant relationship between SRI and thriving (as was shown in Table 12), however, a statistically insignificant relationship existed between work stress categoryand thriving ($p > .05$) and between the interaction of stress and SRI on thriving ($p>.05$).

5. DISCUSSION

In order to answer the research questions posed in Chapter 2, a number of statistical techniques were utilised, and the results of which were outlined in Chapter 4. The following chapter aims to provide a comprehensive discussion based on these findings.

5.1. *Descriptive Statistics for SRI*

Of the sample of 485 participants, 217 (44.1%) were classified as androgynous. Thereafter, 146 (30.1%) were sex-typed, meaning that they were biologically female endorsing feminine traits or biologically male endorsing masculine traits, and 84 (17.3%) were cross-typed, meaning that they were biologically male possessing predominantly feminine traits, and vice versa. The remaining 38 participants (7.8%) were classified as undifferentiated. These results suggest that, to some extent, socially constructed stereotypes are still enforced as a significant number of participants remained loyal to socially constructed sex-roles, with males being encouraged to adopt masculine gender-role traits, whereas feminine roles and traits are nurtured within females. Far fewer participants had traits integrated into their personalities that are socially considered inconsistent with their biological sex. Interestingly, a large proportion of the sample were classified as androgynous, highlighting that many participants drew on both masculine and feminine cues and incorporated both aspects into their personalities. Furthermore, the small percentage of undifferentiated individuals highlights the notion that, within this study, majority of the participants had established and distinct sex-role identities (Solomon, 2012).

As this study aimed to explore SRIs through a differentiated model, participants were classified as one of seven identities, which aimed to encapsulate both the positive and negative aspects of human functioning. Thus, the 217 androgynous individuals were further categorised, and 93 (19.2% of the sample) were A-, with the remaining 124 (25.6%) being categorised as A+. The participants were fairly equally split between the positive and negative identities, with 45.6% of the sample possessing a positive identity (either A+, M+ or F+) and 46.6% of the sample possessing a negative identity (either A-, M- or F-). This dispersion would suggest that approximately half of the sample would experience heightened stress with reduced thriving, whereas the other half would experience heightened thriving and reduced stress perception, and was therefore an appropriate sample to use in the conducting of this research.

Moreover, the relatively equal distribution of participants between the positive and negative identities highlights the importance of a differentiated model of SRI that considers positive and negative SRIs as separate entities. The fact that close to half of the sample possessed socially undesirable traits questions the vast majority of research in this field of study. Ultimately, investigating the impact of SRI on a number of different outcomes is theoretically and practically flawed if negative character traits are ignored, considering the high number of participants that in fact do fall within this category and cultivate these socially undesirable aspects of their SRI (Solomon, 2012; Woodhill & Samuels, 2003).

5.2. *Correlations between SRI subscales*

The relationships between the four SRI subscales (M+, M-, F+ and F-) is important as it allows for the understanding of the differences and similarities of the SRIs in their experiences of workplace stress and thriving. These relationships are explored further through the post-hoc analyses yielded from the ANOVA tests. The correlations generated from all four subscales were significant; however, the relationships were weak to moderate (Weinberg & Abramowitz, 2008). Ultimately, the results indicated towards a relationship between the positive masculine and feminine identities, a finding that contradicts a large volume of research in this field of study, which has found these two sex-roles to be unrelated (Solomon, 2013). However, there is some, albeit minimal, support for the apparent relationship between these constructs. For example, Ghaed and Gallo (2006) established this association when they found the personality constructs of agency and communion to be correlated. It is argued that this positive correlation exists as a result of both SRIs demonstrating the favourable aspects of human psychological functioning, and therefore they share the desirable aspects of sex-role dispositions, despite the fact that their manifestations and outcomes may differ (Ghaed & Gallo, 2006).

Similarly, the results found a positive correlation between M- and F-, indicating that a weak relationship exists between the two constructs. Helgeson and Fritz (1999) claim that the relationship between traits characteristic of negative femininity and negative masculinity (referred to as unmitigated communion and unmitigated agency respectively) would either be negatively correlated or uncorrelated as the two constructs are conceptually incompatible. It is argued that one cannot focus on the self to the exclusion of others and focus on others to the exclusion of the self at the same time, and thus the two constructs should never be positively related (Helgeson & Fritz, 1999). However, the positive correlation exhibited in

the results suggests that perhaps rather than being two mutually exclusive concepts, the common core of the two traits could be negativity and the social undesirability that these two gender-roles share.

A positive association was also found between M+ and M-, indicating that although the sex-roles reflect traits that differ in terms of social desirability, they both exhibit a common focus on the self. These results correspond with other research findings that found the masculine identities to be positively related (De Freitas, 2015; Helgeson & Fritz, 1999; Solomon, 2013). Similarly, a positive correlation was found between the two feminine identities, again highlighting the shared focus on others that seems to override the differences between the adaptive and maladaptive dimensions of femininity. A positive relationship between F+ and F- were also found in other research studies (e.g. De Freitas, 2015; Helgeson & Fritz, 1999; Ghaed & Gallo, 2006), concurring with the results of the current study.

Moderate negative correlations were found between positive masculinity and negative femininity, as well as between positive femininity and negative masculinity. These results are consistent with the inverse associations established in a number of other studies (De Freitas, 2015; Helgeson & Fritz, 1999; Yu & Xie, 2008; Solomon, 2013). Yu & Xie (2008) explain that this inverse relationship results from the fact that the undesirable or negative version of masculinity and femininity differs qualitatively from the non-extreme (or positive) form. Thus, negative femininity will negatively correlate with positive masculinity and vice versa. Bakan's (1966) conceptualisation of agency and communion further articulate this logic. If unmitigated agency (M-) is characterised by a focus on one's self to the exclusion of others, and unmitigated communion (F-) is involves focus on other to the exclusion of the self, it is highly unlikely for their opposites to occur simultaneously. Thus, higher levels of M+ will result in lower levels of F-, as a person who exhibits traits such as being ambitious, confident and self-reliant (Berger & Krahé, 2013) is unlikely to be yielding, dependent and easy to influence (Palan et al., 1999). Similarly, an F+ individual, who exhibits compassion, understanding and responsibility (Palan et al., 1999), is unlikely to manifest M-characteristics such as being authoritarian, forceful and selfish (Berger & Krahé, 2013). Thus it is apparent that the greater the positive masculine traits in an individual, the smaller the negative feminine traits. Likewise, the greater the positive feminine traits in an individual are, the smaller the negative masculine traits will be (Yu & Xie, 2008).

5.3. *Correlation between Stress and Thriving*

There was a weak inverse correlation between work stress and workplace thriving, suggesting that there is a degree of diametric opposition between these two variables. This enhances the notion that employee wellbeing and functioning exists along a spectrum, with stress occurring on the one end and thriving taking place at the positive end of this spectrum. Thus, positive functioning is not simply a matter of surviving and reducing stress, but rather, involves enhancing experiences of vitality and learning within the workplace (Kern, Waters, Adler & White, 2014). It can be understood that the work place is a major contributor to employee wellbeing. Either, it can impact negatively and manifest in the form of stress, with toxic effects on human vitality and health, or alternatively, it may enable positive health and functioning, supporting vitality and learning (Spreitzer et al., 2005). However, it is important to note that the contextual enablers of thriving are not merely the opposite of factors that exacerbate stress, and this may account for the weak correlation that was yielded between the two variables. Spreitzer and colleagues (2005) argue that thriving is not fostered simply by diminishing stressors, as it requires increases in certain psychological states, behaviours and resources. Similarly, an individual who is not thriving at work will not necessarily be experiencing stress-induced strain. In order to illustrate, stress research has shown that work overload, unsafe working conditions and job insecurity are key indicators of individual strain within organisations. Improving these conditions does not mean an individual will be thriving, as rather, it is necessary to ensure the right resources and conditions are present in order to increase the likelihood that an individual will thrive, even under difficult conditions (Spreitzer et al., 2005). Therefore, a two way ANOVA was conducted in order to establish whether one's SRI may be a factor that would reduce one's perception of stress and allow for increased experiences of thriving.

5.4. *SRI and Stress*

Statistically significant correlations were found between M+ and work stress, M- and work stress as well as F- and work stress. The negative correlation between M+ and work stress indicates that M+ individuals are likely to experience the lowest levels of stress of the four identities, although the inverse relationship was weak. M- and F- yielded positive correlations with work stress, supporting the hypothesis that negative SRIs are likely to experience higher levels of perceived stress. The correlation between F- and work stress was moderate, and the highest of the four identities. The relationship between F+ and work stress was statistically

insignificant. A one-way ANOVA was run in order to further explore the relationship between the sex-role identities and workplace stress and to examine the relationship between the seven categories as opposed to the correlations which only examined the relationship between the four subscales and stress. The post-hoc analyses yielded significant mean differences for negative androgyny and M+, M-, and A+, as well as significant mean differences for undifferentiated androgyny and M+, M- and A+.

According to the post-hoc analyses, undifferentiated individuals had significantly higher levels of stress than their M+, M- and A+ counterparts. Similar results were found by Steenbarger and Greenberg (1990), in which positively androgynous and masculine nurses experienced lower levels of vocational stress than their undifferentiated colleagues. Comparable findings have been reproduced in a number of other studies (e.g. Heilbrun, 1978; May & Spangenberg, 1997; Orlofsky & Windle, 1978). Additionally, negative androgynous participants had significantly higher levels of workplace stress than individuals within the positive masculine, negative masculine and positively androgynous categories. These results provide support for the androgyny and masculinity models outlined in Chapter 2.

The androgyny model maintains that it is the balance of masculine and feminine traits that results in a heightened experience of wellbeing for individuals. However, the fact that A+ individuals received lower stress scores whereas A- individuals experienced higher levels of stress extended this model further, in favour of a differentiated model that supports the idea that sex-role identities need to be explored with an understanding of both the positive and negative dimensions (Woodhill & Samuels, 2004). It is apparent that the balance of masculine and feminine traits results in heightened wellbeing when these traits are positive and favourable (Woodhill & Samuels, 2004). Clearly, the balance of unfavourable traits does not work in the same manner, with these individuals perceiving more stress than their A+ counterparts. Moreover, these findings suggest that behavioural adaptability and flexibility arise from strong identifications with both masculine and feminine roles and the ability to blend the coping strengths of both styles, rather than from a simple lack of identification with either sex role (Orlofsky & Windle, 1978; Steenbarger & Greenberg, 1990).

The masculinity model argues that the positive empirical support received by the androgyny model is due to the presence of the socially-desired masculine component of the construct (Bernstein & Osman, 2016; Steenbarger & Greenberg, 1990). Both M+ and M- individuals received significantly lower stress scores than A- and U individuals, further highlighting the

notion that the masculine SRI is a predictor of psychological health. It is not unexpected that M+ individuals fared better than A- and U individuals; however, the mean difference between A- and M- (mean difference = 6.4525) and U and M- (mean difference = 6.7179) is surprising. It was originally hypothesised that the negative identities would perceive higher levels of stress than the positive identities, yet not only did M- receive a significant difference to A- and U, it also showed to have the largest mean difference of the significant results, implying that M- individuals experienced the lowest levels of perceived stress. This suggests that perhaps, within the South African context, negative masculine traits are not actually appraised as undesirable, but rather may be perceived of as advantageous, especially within the organisational environment (Bernstein, 2013). Steenbarger and Greenberg (1990) argue that within competitive, achievement-oriented settings, positive adjustment tends to be promoted among those that possess instrumental and masculine traits. This idea is echoed by May and Spangenberg (1997), who maintain that within capitalist frameworks, masculine traits are highly valued, and therefore would almost be a prerequisite for employees, especially those who occupy managerial level positions. Therefore, such traits are endorsed, encouraged and promoted within patriarchal organisational settings (May & Spangenberg, 1997), suggesting an underlying societal reason for the effectiveness and positive adjustment levels found for M- participants. To further support this idea with relation to the South African context specifically, Luyt (2003) explored notions of masculinity. This study established that subjectively, participants felt that in order to be successfully masculine, they must exhibit toughness, lack of emotion, authoritarianism and dominance. Thus, these negatively masculine traits are woven into South African society as the picture of ideal masculinity, and it is likely that whether or not these traits are being increasingly adopted, they are not discouraged or penalised in any way.

Furthermore, it has been posited that M- individuals facilitate coping through externalising the threat. While this may result in interpersonal conflict and hostility, it appears to protect the individual from intrapersonal distress and depression (Steenbarger & Greenberg, 1990). Therefore, it is possible that the low perceived stress levels for this identity is attributed to the fact that M- individuals place blame on other people, events or objects when something goes wrong or when possible stress or strain could be caused. This relates to the core characteristic of unmitigated agency, the focus on one's self with the exclusion of others, allowing for the plausibility of the surprising low stress levels, as they do not actually perceive stress to the same extent as the other negative identities as a result of distancing

themselves and their involvement from the situation, focusing internally on their own wellbeing.

Ultimately, this study hypothesised that the positive identities (A+, M+ and F+) would have statistically significant lower levels of stress than their negative counterparts (namely A-, M- and F-). However, the results discussed above do not support this. The most peculiar non-significant finding that contradicts the expectations laid out in previous research (Chapter 2) is the fact that negatively feminine individuals did not significantly differ from any of the positive identities. This may be explained by the dispersion of the SRIs based on the participant's biological sex. Of the 384 females who partook in the study, 68 (17.7%) were categorised as F-. This was a larger category than F+, M+ and M- for the females, whereas for the 101 male participants, the M+, M- and F- categories were almost identical in size (14, 16 and 15 participants in each category respectively), with a substantially smaller F+ category (6 participants). Thus, the large proportion of F- participants resulted in 30.2% of the females being characterised as sex-typed, as opposed to the substantially smaller cross-typed category consisting of 16.4% of the female sample. Contrastingly, the split between the sex-typed and cross-typed for the males was a lot closer, with 29.7% of the males being classified as sex-typed and 20.8% as cross-typed.

This is an important distinction to examine, as it may in some way have influenced the levels of perceived stress for negatively feminine individuals. Perhaps this dispersion and the subsequent insignificant differences between F- and other groups suggests that the socially undesirable traits associated with unmitigated communion does not in fact result in negatively feminine individuals perceiving higher levels of stress, even though they may be alienating the social support of others. Rather, the social desirability of acting in a manner that is stereotypically expected of females, overrides the social undesirability of the negative personality components, at least with regard to the way in which these negatively feminine females subjectively perceive their stressful experiences. This argument would lend support to the congruency model (Van Ede et al., 1998), which maintains that sex-typed individuals, regardless of positive or negative traits, would experience heightened wellbeing over cross-typed individuals as they are behaving in a way that they believe is in line with what is expected of them. This may further explain why the combination of negative masculine and feminine traits, in the form of negative androgyny, experienced heightened levels of stress whereas on their own, M- and F- did not yield similar results. Ultimately, androgyny, like being cross-typed, involves transcending traditional gender roles, and this, in combination

with the social undesirability of their behaviour, may be a factor in individual's stress perceptions.

Additionally, these results may be explained by the occupations of the sample. A large number of individuals stated teacher or educator under their job role. Different sectors and industries require different skills and personality traits that may lessen stress perception and enhance thriving experiences. Within the teaching context, individuals working with high school or primary school students may be required to nag students, complain, and exhibit fussiness with work standards among other seemingly negatively feminine traits. Therefore, although exhibiting socially undesirable traits, they are unlikely to perceive higher levels of stress as in fact these traits assist them in performing effectively, as it is what is required in order to discipline and assist students in their learning. Thus, although previous research has established the negative wellbeing consequences for F- individuals, this study highlights the importance of taking organisational culture into account. This notion is further discussed within the next chapter.

5.5. *SRI and Thriving*

The correlations yielded between SRI and thriving were far more in line with the hypotheses of the research. M+ and F+ reported significant positive correlations with thriving, indicating that the positive identities experienced higher levels of thriving. Additionally, M- and F- reported weak inverse associations, supporting the idea that individuals with negative sex-role orientations would experience lower levels of thriving. This relationship was further explored through a one-way ANOVA and post-hoc analyses, which reported significant mean differences between A+ individuals and M-, F+, F- and A- sex-role orientations.

These results contribute to theory in two noteworthy ways. Firstly, the fact that A+ fared substantially better than all three negative identities, as well as positive femininity, further supports the androgyny model and the notion that the combination of positive femininity and positive masculinity allows for increased psychological wellbeing. A wealth of positive work outcomes have been found for positively androgynous individuals in the literature (Woodhill & Samuels, 2004; Bernstein & Volpe, 2016), and thus it is not surprising that participants in this study that were classified as A+ would report significantly higher levels of thriving in the workplace. As discussed previously, the success of A+ individuals is attributed to their ability to adapt their behaviour to whatever would be most effective in a given situation (Woodhill & Samuels, 2004). Therefore it can be argued that their wider range of traits allows them to

experience higher levels of workplace thriving than the other positive identities (namely F+) as their ability to adapt accordingly would allow them to have a wider range of traits at their disposal. This would not only assist them in behaving agentically (as prescribed by Spreiter et al. (2005)), but also allow them to manifest all three agentic behaviours (task focus, heedful relating and exploration), as opposed to only being able to demonstrate one or two of the aforementioned behaviours, as perhaps would be stereotypical of a strictly masculine or feminine individual. For example, an F+ individual, as a result of possessing predominantly expressive qualities (Woodhill & Samuels, 2003), would be expected to easily experience heedful relating, which refers to the degree to which individuals operate attentively to those around them (Spreitzer et al., 2005). However, an M+ individual may not be as successful in this manner, and it is probable that they would be more effective in utilising their instrumental traits in experiencing task focus or exploration. Thus, the combination and balance of both expressive and instrumental traits possessed by the A+ person would allow them to experience the F+ aligned heedful relating, as well as the possibly more M+ aligned task focus and exploration. The above illustration may also account for the unexpected statistically significant difference yielded between A+ and F+ individuals.

Secondly, these results further verify the need to explore sex-role identities from a differentiated framework, with a consideration of both desirable and undesirable traits. While no significant thriving differences were found between the negative identities themselves, the negative identities fared substantially worse than A+, highlighting the disadvantageous outcomes of the negative identities. This significant mean difference suggests that while A+ individuals have a variety of both positive masculine and feminine cues to draw on that may allow them to experience heightened levels of thriving, the collection of negative traits that M-, F- and A- individuals have in their repertoire does not allow them to draw on the right behaviours that would result in heedful relating, task focus, and exploration, subsequently limiting their experiences of vitality and learning.

5.6. *SRI as a Moderator between Stress and Thriving*

This study hypothesised that SRI would moderate the relationship between work stress and thriving, however, the results obtained from the two-way ANOVA indicated that the interaction between work stress and SRI on workplace thriving was statistically insignificant. Similar findings were yielded in previous studies that aimed to examine the interactional effects of SRI on numerous organisational outcomes (e.g. Chemaly 2014; De Freitas, 2015;

Solomon, 2012). Although the Pearson's correlations and one-way ANOVAs indicated a statistically significant relationship between SRI and thriving, SRI and stress as well as between stress and thriving, this insignificant result suggests that there is no interactional relationship between all three variables. This may be as a result of the inconsistent group sizes. In order to run the two-way ANOVA, both factors needed to be categorical variables, and therefore stress was split into three categories: low, medium and high. However, majority of the subjects fell into the medium group (359 participants), followed by 107 with high stress and only 19 in the low stress group. Therefore, when participants were further split between the SRI categories and stress levels, some groups yielded very small numbers. For example, there was only one F+ participant and one M+ individual in the low stress group. Therefore, in order to examine whether a significant interaction could exist between these three variables, perhaps a larger sample size would be needed or a different and more consistent categorisation of the stress variable (Norris, Qureshi, Howitt & Cramer, 2014).

6. CONCLUSION

6.1. *Theoretical and Practical Implications*

With no previous research found on the relationship between positive and negative SRIs and workplace thriving, and very little surrounding SRIs and workplace stress, this study contributed to sex-role identity, as well as workplace outcomes research through an evaluation of these relationships.

The findings of the current study highlighted the importance of considering both the positive and negative aspects of human personalities, and thus emphasised the need to incorporate all seven sex-role identities in SRI research. The EPAQ-R was confirmed as an appropriate scale to use in terms of its differentiation between positive and negative SRIs, as well as in terms of the reliability coefficients it yielded on a South African sample. In addition, this study lends support to the androgyny model, which emphasises that a combination of positive masculine and feminine traits results in heightened levels of psychological wellbeing. This can be seen though the results that found that A+ individuals perceived less stress and experienced improved levels of thriving than their negative counterparts. Similarly, this study supports a differentiated androgyny model, as A- individuals, through their balance of both negative masculine and feminine traits, experienced worse psychological wellbeing.

Furthermore, this study is valuable in understanding SRIs within the South African context. Ultimately, the majority of participants were androgynous, followed by sex-typed, highlighting the idea the stereotypical gender-roles are still predominantly enforced. However, within the work context, it would appear that a large proportion of individuals are beginning to integrate aspects of both gender roles into their personalities, potentially as a way to adapt within the organisational framework. Thus, gender-schema theory is an important model of sex role identity formation to understand, as it is important to know which traits and behaviours young children are being socialised with, that may either assist or hinder them later on in life.

With regard to workplace stress and thriving, the results of this study imply that these two workplace outcomes are not necessarily generated or prevented by characteristics of the work environment, but rather may be facilitated by one's inherent personality traits. The idea that these work outcomes may differ between individuals is of importance to organisations, which may need to tailor intervention programmes to suit the different SRIs, rather than only trying to change aspects of the work context to reduce perceived stress and improve thriving.

Ultimately, by organisations understanding the impact SRI plays on employee wellbeing, organisations can work to help employees foster the positive traits associated with their SRI, allowing them to adapt better, perceive less stress and experience improved thriving.

Additionally, the findings of this study question the traits and behaviours that are endorsed and encouraged within South African society. Ultimately, the fact that M- participants did not necessarily fare as negatively as expected, highlights the fact that masculinity, even in its socially undesirable form, may be encouraged and supported in order for success within the workplace. This has implications for the way in which organisations hire and seek talent, with a primary focus on masculine traits. However, the results of this study showed that there was not a statistically significant difference between M+ and F+ in terms of perceived stress, and therefore companies should reconsider the traits that are endorsed or seen as effective. Rather than purely supporting masculine instrumental traits, South African companies should begin to appreciate the communal traits that positively feminine individuals possess.

6.2. *Limitations*

Although cross-sectional research is advantageous in a number of ways, as outlined in Chapter 3, it is difficult to make causal statements because uncontrolled factors play such a large role in correlational research, therefore conclusions and cause-effect relations are difficult to reach with certainty (Mitchell & Jolley, 2012).

As a result of the researcher not being able to gain access to one specific organisation in order to obtain a sample, 485 participants were sourced through Wits Plus and social media. This resulted in participants working in a number of different businesses, sectors and industries, and thus it was impossible to account for organisational culture when analysing the results. Certain jobs may have different factors that induce stress or hinder and enforce thriving, and therefore it was impossible to account for these differences when examining the relationship between SRI and stress and thriving. Similarly, certain jobs may result in specific SRIs perceiving more stress than others. For example, a number of participants specified that they were teachers by profession. Such a job involves a lot of communication with others, ability to express oneself, patience, among a number of other traits. Thus, it would be expected that an F+ or A+ or possibly even an F- individual would be best suited for this role, and would therefore perceive less stress and experience more thriving in the job than a negative or even M+ SRI. As a result of the sampling strategy used, this research was unable to account for any potential effects this may have.

In addition, the EPAQ-R, while a useful measure in assessing both the positive and negative aspects of personality, is a self-report measure and is therefore subject to biases. As explained previously, this test asks participants to indicate the degree to which certain statements match their personality on a scale of 1 – 5; however, the extreme end of most of these items captures socially undesirable traits. Therefore, participants may aim to please the researcher by answering with more positive traits. Additionally, the participant may experience grandiose opinions of them self and therefore may not honestly reflect on the extent to which the negative traits identify them, or alternatively may be particularly harsh when characterising themselves. Additionally, the use of z-scores in characterising participants upon completion of the EPAQ-R may be a limitation, as participants are forced into a category, regardless of whether or not they may be borderline. This is necessary statistically in order to run the analyses; however, it does provide a narrow and somewhat restricted categorisation of one's personality.

6.3. *Conclusion and recommendations for future research*

The current research aimed to establish the relationship between positive and negative sex-role identities and workplace stress and thriving. Furthermore, the study aimed to evaluate whether an association exists between workplace stress and thriving and whether this relationship is moderated by one's SRI. The results of the study indicated the importance of assessing both the socially desirable and socially undesirable aspects of personality traits with regard to specific work outcomes, as significant differences were found between certain positive identities and their negative counterparts. Subsequently, this study affirmed the use of the EPAQ-R as a relevant and appropriate scale to use in the measurement of both positive and negative SRIs.

In addition, the findings of this study provided support for the androgyny model of psychological wellbeing. Results showed a statistically significant difference between A+ and A- individuals in terms of perceived stress and levels of thriving, with A+ individuals showing the lowest levels of stress and the highest levels of thriving. These results support a number of other studies that have shown that a balanced combination of both positive masculine and feminine traits is the best predictor for psychological wellbeing and positive outcomes, with these individuals being best able to adapt to the workplace and negotiate their environment. Moreover, this study highlighted that, within the South African organisational context, many people are beginning to incorporate aspects of both masculine and feminine

gender-role identities into their self-concepts, slowly moving away from strictly sex-typed gender-roles. Nevertheless, only a small percentage of individuals were classified as cross-typed, emphasising that to some extent, SRI stereotypes are still enforced. Additionally, the surprising results reflected by M- individuals displaying the lowest levels of perceived stress highlights the cultural emphasis placed on masculine traits within the South African context, even in its undesirable form.

A statistically insignificant interaction was found for the relationship between all three research variables. Therefore, future research should expand on this investigation through the use of a larger sample, as mentioned above. Additionally, future researchers may develop on this study by considering the limitations described above. Furthermore, future research should continue to expand the field of SRI by continuing to examine the effects it has on numerous work-related outcomes. However, a differentiated model should be continuously utilised in order to fully capture its profound effects.

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APPENDIX A – ACCESS REQUEST LETTER

SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT
UNIVERSITY OF THE WITWATERSRAND
Private Bag 3, WITS, 2050
Tel: (011) 717 4500 Fax: (011) 717 4559

Dear Sir / Madam

My name is Kayla Helfer, and I am presently completing my Masters in Industrial/Organisational Psychology at the University of the Witwatersrand. As part of the requirements for my degree, my area of research is designed to investigate the relationship between work stress, personality traits and workplace thriving. I would like to invite your company to participate in this study, which would involve the completion of an online survey that should take approximately 15 minutes to complete.

Please note that participation is voluntary and no employee will be advantaged or disadvantaged in any way for choosing to complete or not complete the questionnaire. Anonymity will be assured as there will be no identifying characteristics that will lead to the exposure of individual participant's identity. While questions are asked about employee's personal circumstances, no identifying information, such as their name or I.D. number, is asked for, and as such they will remain anonymous. Moreover, participants are requested to return all completed questionnaires through a secure and encrypted website. This will ensure that no one other than the researcher and supervisor will have access to the completed questionnaires, and will ensure their confidentiality. Responses will not be used for any purposes, other than research. Informed consent is assumed by the completion of the questionnaires. However, participants will be able to withdraw from the study until such time as they submit the questionnaires. Be assured that data would solely be used for academic purposes. The company would receive a summary of the results obtained from the study, in the form of group trends, which make it impossible to identify any particular respondent. Should an employee wish to receive feedback on the study; a summary of results will be made available upon request.

Allowing the employees to be invited to participate in this study would be greatly appreciated. This research will contribute both to a larger body of knowledge on the personality traits, stress and thriving in the workplace. This may help to assist your company in introducing management techniques to deal with stress and encourage thriving in the workplace.

The research study is an independent study which will be conducted under the supervision of an Industrial Psychologist at Wits University. Please contact me or my supervisor should you have any questions.

Kind Regards

Kayla Helfer
Masters Student

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

Department of Psychology
University of the Witwatersrand
Email: helferkayla@gmail.com

APPENDIX B – PARTICIPANT INFORMATION SHEET

SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT
UNIVERSITY OF THE WITWATERSRAND
Private Bag 3, WITS, 2050
Tel: (011) 717 4500 Fax: (011) 717 4559

Dear Sir / Madam

My name is Kayla Helfer, and I am presently completing my Masters in Industrial/Organisational Psychology at the University of the Witwatersrand. As part of the requirements for my degree, my area of research is designed to investigate the relationship between work stress, personality traits and workplace thriving. Participation will involve the completion of a questionnaire, which should take approximately 15 minutes to complete. If you choose to participate in the study, please complete and submit the survey within one month of receiving the link.

Please note that participation is completely voluntary and you will not be advantaged or disadvantaged in any way for choosing to complete or not complete the questionnaire. Anonymity will be assured as there will be no identifying characteristics that will lead to the exposure of your identity. While questions are asked about your personal circumstances, no identifying information, such as your name or I.D. number, is asked for, and as such you will remain anonymous. Moreover, you are requested to return all completed questionnaires through a secure and encrypted website. This will ensure that no one other than the researcher and supervisor will have access to the completed questionnaires, and will ensure your confidentiality. All data will be kept on a secure, password protected computer indefinitely, in order to ensure that all information remains confidential. Responses will not be used for any purposes, other than research. If you choose to complete and submit the online questionnaire, it will be considered as informed consent to participate in the study. However, you will be able to withdraw from the study until such time as you submit the questionnaires. Be assured that data would solely be used for academic purposes and would in no way be accessed by the management in the organisation as the organisation will only receive a summary of the overall results. Furthermore, no one in the organisation will be able to track your choice to participate or not. The results will be presented as group trends, which make it impossible to identify any particular respondent. Should you wish to receive feedback on the study; a summary of results will be made available upon request.

Your participation in this study would be greatly appreciated. This research will contribute both to a larger body of knowledge on the personality traits, stress and thriving in the workplace. This may help to assist your company to introduce management techniques to deal with stress and encourage thriving in the workplace.

The research study is an independent study which will be conducted under the supervision of an Industrial Psychologist at Wits University. Please contact me or my supervisor should you have any questions.

Kind Regards

Kayla Helfer
Masters Student
Department of Psychology
University of the Witwatersrand
Email: helferkayla@gmail.com

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

APPENDIX C – PARTICIPANT INFORMATION SHEET (WITS-PLUS STUDENTS)

SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT
UNIVERSITY OF THE WITWATERSRAND
Private Bag 3, WITS, 2050
Tel: (011) 717 4500 Fax: (011) 717 4559

Dear Sir / Madam

My name is Kayla Helfer, and I am currently completing my Masters in Industrial/Organisational Psychology at the University of the Witwatersrand. In the fulfillment of this degree my area of research is designed to investigate the relationship between work stress, personality traits and workplace thriving. I would like to invite you to participate in this study, which would involve the completion of an online survey that should take approximately 15 minutes to complete.

Please note that participation is voluntary and you will be not be disadvantaged in any way for choosing to complete or not complete the questionnaire. However, students registered for First Year Psychology will receive a 1% toward their final mark as part of the course credit. Other than this, there will be no direct benefits or risks associated in completing the survey. Should you wish to earn the 1% for participating in the survey, you will be required to provide your student number in the space provided. However, once the data has been downloaded and your 1% has been recorded by your course coordinator, your student number will be deleted from the dataset to ensure your complete anonymity.

You are requested to complete questionnaires through a secure and encrypted website. As such, this will ensure that no-one, other than the researcher and supervisor will have access to the completed questionnaires, and will ensure your confidentiality. Responses will not be used for any purposes, other than research. Informed consent is assumed by the completion of the questionnaires, i.e. if participants choose to complete and submit the online questionnaire, this will be considered as informed consent to participate in the study. However, you will be able to withdraw from the study until such time as you submit the questionnaires.

Be assured that data would solely be used for academic purposes. This research will contribute to a larger body of knowledge on the personality traits, stress and thriving in the workplace.

The research study is an independent study which will be conducted under the supervision of an Industrial Psychologist at Wits University. Your participation in the study will be highly appreciated. Please contact me or my supervisor should you have any questions.

Kind Regards

Kayla Helfer
Masters Student
Department of Psychology
University of the Witwatersrand
Email: helferkayla@gmail.com

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

APPENDIX D - SURVEY

Demographic Questionnaire

What is your age in years?

What is your gender?

What is your race?

Black	Indian	Coloured	White	Other

What is your marital status?

Married	Single	Divorced	Widowed	Separated	Co-habiting

What is your highest level of education? (For example: Matric, Post-Matric Diploma/s, University Degree/s – Please specify.

What is your home language?

What is your job title?

What is your job grade?

Personal Attributes Questionnaire

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

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

Each pair describes a contradictory characteristic. That is you cannot be both as the same times such as very artistic and not artistic at all. The numbers 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.

Note: Please answer each statement as honestly as possible. This questionnaire is totally anonymous and confidential. In no way will you be judged by your answers and in no way will anyone have access to your answers or be aware which answers belong to you specifically. PLEASE MAKE SURE THAT YOU ANSWER ALL FIFTY NINE QUESTIONS BELOW.

		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						Very aware of the feelings of

	of others						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.	Never tends to feel inferior						Tends to feel very 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

Work stress

The following questions assess your experience of stressful work situations. For each question please tick how often you are bothered by each situation. If you are never bothered by the situation tick 1; if you are rarely bothered by the situation tick 2; if you are sometimes bothered by the situation tick 3; if you are often bothered by the situation tick 4 and if you are bothered by the situation nearly all of the time tick 5.

Never = 1
Rarely = 2
Sometimes = 3
Often = 4

Nearly all of the time = 5
PLEASE MAKE SURE THAT YOU ANSWER ALL FIFTEEN QUESTIONS BELOW.

	How often are you bothered by:	**1**	**2**	**3**	**4**	**5**
1	Feeling that you have too little authority to carry out the responsibilities assigned to you					
2	Being unclear on just what the scope and responsibilities of your job are					
3	Not knowing what opportunities for advancement or promotion exist for you					
4	Feeling that you have too heavy a workload, one that you cannot possibly finish during an ordinary working day					
5	Thinking that you will not be able to satisfy the conflicting demands of the various people over you					
6	Feeling that you are not fully qualified to handle your job					
7	Not knowing what your immediate supervisor thinks of you and how he or she evaluates your performance					
8	Not being able to get the necessary information to carry out your job					
9	Having to decide things that affect the lives of individuals, people that you know					
10	Feeling that you may not be liked or accepted by the people that you work with					
11	Feeling unable to influence your immediate supervisor's decisions that affect you					
12	Not knowing what the people that you work with expect of you					
13	Thinking that amount of work that you have to do may interfere with how well it gets done					
14	Feeling that you have to do things on the job that go against your better judgement					
15	Feeling that your job tends to interfere with your family life					

Workplace Thriving

For each question please tick the extent to which you agree or disagree with each situation;with 1 being Strongly Disagree and 7 being Strongly Agree

Strongly Disagree = 1
Disagree = 2
Disagree somewhat = 3
Neither Agree nor Disagree = 4
Agree Somewhat = 5
Agree = 6
Strongly Agree = 7

PLEASE MAKE SURE THAT YOU ANSWER ALL TEN QUESTIONS BELOW.

	At work…	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1	I find myself learning often							
2	I continue to learn more as time goes by							
3	I see myself continually improving							
4	I am not learning							
5	I am developing a lot as a person							
6	I feel alive and vital							
7	I have energy and spirit							
8	I do not feel very energetic							
9	I feel alert and awake							
10	I am looking forward to each new day							