PREDICTORS OF SENSITIVITY TOWARD BEING THE TARGET OF UPWARD COMPARISON (STTUC): A STUDY OF FEMALE EMPLOYEES IN BOTSWANA

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DECLARATION

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ABSTRACT

Globally, regionally and locally, women are more likely to occupy lower positions in organisational hierarchies than men. Botswana is no exception as women are seldom found in leadership and/or managerial positions. In Botswana, most of the research aimed at evaluating the challenges faced by female employees has focused primarily on socioeconomic and legislative challenges. In addition, as far it could be ascertained, there has been no research conducted among women employees in Botswana or elsewhere in the world which focused on understanding the impact of Sensitivity Towards being the Target of Upward Comparison (STTUC) on their performance and/or advancement. While empirical research on the STTUC framework is now just crystallising, past studies have shown that out-performance may be a challenge for some individuals, with the STTUC framework offering insights into this phenomenon.

Research has examined various factors that may inhibit the career progress of females but, as far as the researcher has been able to ascertain, STTUC has not been sufficiently investigated as a factor that may hamper such progress. This study suggests such a focus because the work setting constantly places individuals in positions where they are obliged to present their abilities and/or achievements. In order to address the evident gap in existing research, this study investigated the STTUC framework within the organisational context in Botswana, Africa.

The main aim of this study was to investigate the antecedents of STTUC and to explore gender differences in the STTUC experiences of black employees in Botswana. The antecedents explored included individual characteristics (specifically, collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity and competitiveness), family-work variables (specifically, instrumental support from the spouse/partner and family-work conflict), and organisational variables (focusing specifically on masculine values within the organisational culture).

The study adopted a quantitative, cross-sectional survey approach. The sample comprised 464 black employees from a variety of organisations in Botswana. The proposed direct relationships were tested using an independent sample t-test, Pearson product moment correlations, and hierarchical multiple regression analyses. Structural equation modelling (SEM) was also used in the study to assess the extent to which the data supported the proposed conceptual models.

Generally, the results provided support for the hypothesised relationships between STTUC and gender; STTUC and the family-work variables, as well as STTUC and certain of the personality variables. Based on the findings, it is recommended that, in addition to making structural changes, including removing the glass ceiling and/or revamping organisational cultures, gender empowerment and/or development programmes may also encompass certain interventions on an individual level in order to help women and other individuals who are likely to experience STTUC to deal with these experiences.

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CHAPTER 1
INTRODUCTION AND BACKGROUND

1.1 Introduction

Chapter 1 presents both the background to and an overview of the current study. The chapter also contains a brief introduction to the Sensitivity Towards being the Target of Upward Comparison (STTUC) framework/construct and discusses both the importance and the relevance of the construct in organisational settings. In addition, the chapter presents the research questions, aims and objectives of the study, as well as the theoretical contributions and practical contributions of the study. Finally, the chapter offers an overview of the rest of the thesis.

1.2 Background

The study used Exline and Lobel's (1999) STTUC framework to investigate several factors that may predict the STTUC experiences of black female employees in Botswana. STTUC refers to an outperformer's concern about certain aspects of the outperformed person's response to outperformance (Exline & Lobel, 1997; 1999; 2001; Exline, Single, Lobel & Geyer, 2004; Henagan, 2006; Juola-Exline, 1998). As regards this definition, the outperformer refers to an individual who has surpassed another in terms of outcome and/or performance, while the outperformed is an individual who has been surpassed in terms of outcome and/or performance. Outperformance implies an achieved and/or ascribed status difference between the outperformer and those who have been outperformed.

Anagolous to the fear of success studies, the STTUC construct provides some insights into the ways in which personal achievements may be perceived as either costly or threatening (Henagan, 2010). STTUC discomfort may cause the outperformer to view their superior status with some ambivalence and, as a result, endeavour to conceal the strengths associated with outperformance because of the belief that the higher status may cause another person (i.e., the outperformed) to feel envious, discouraged

embarrassed or to anticipate alienation. The framework recognises that STTUC distress can be experienced even when the superior status carries more favourable self-evaluative implications for the outperformer and that the distress can coexist with other positive reactions to outperformance (Exline & Lobel, 1999; 2001; Juola-Exline, 1998).

According to Exline and Lobel (1999) and Juola-Exline (1998), whether or not outperformance poses a threat to the outperformer may depend on the following factors:

- the characteristics of the outperformer (e.g. personality, gender, age)
- the situational context (e.g. competitiveness, hostility, friendliness)
- the characteristics of the outperformed person (e.g. personality, gender, age)
- the nature of the relationship between the outperformer and the outperformed (e.g. close, friendly)

Sensitivity about outperforming others may arise when an outperformer moves beyond private social comparison to perceiving the outperformed individual as making a social comparison which is detrimental to the outperformer (Exline & Lobel, 2001). The outperformer's concern may lead him/her to experience discomfort, for example alienation, sympathy, awkwardness, fear of rejection, and fear of retaliation (Exline & Lobel, 1999; 2001).

Research further suggests that, when individuals experience STTUC, they may engage in strategies such as avoiding the outperformed person, avoiding the appearance of one-upmanship (Exline & Lobel, 2001; Exline *et al*. 2004; Juola-Exline, 1998), appeasement (Exline & Lobel, 2001; Geyer & Exline, 2004; Henagan, 2006), self-depreciation, and/or socially motivated underachievement (Henagan, 2006; Henagan & Bedeian, 2009) among others. Despite the fact that this research study did not investigate the consequences of STTUC, a mention of them is nevertheless important in explaining why leadership and organisational behaviour researchers should pay more attention to the research which investigates the STTUC construct, and also, why STTUC may impede the career development and advancement of women.

Both the theoretical claims discussed above and the related empirical evidence prompted the following questions: Can STTUC be one of the factors that inhibit Batswana women's career progress? If so, the following question arises: What factors can predict STTUC experiences?

The main purpose of this study was to answer the question: What factors predict the STTUC experiences among black female employees in Botswana? Answering this question is important in view of the fact that most countries in the world have experienced challenges as regards to reaching gender equality. Virtually, no country has yet attained gender equality "… as measured by comparable decision making power, equal opportunity for education and advancement, and equal participation and status in all walks of human endeavours" (Lopez-Claros & Zahidi, 2005, p. 2).

The current status of women in both the workplace and in decision-making positions is likely to be caused by individual factors (e.g. personality characteristics and gender identity), sociocultural factors (e.g. cultural orientation and gender role orientation), organisational factors (e.g. discrimination, prejudice against women and organisational culture) and even national factors (e.g. national culture, laws, policies and statutory requirements). It is undeniable that the factors identified by previous researchers do, indeed, contribute to the inequitable status of men and women in decision-making positions. However, it is still essential that researchers continue to uncover other factors which may also pose challenges for women, and, the literature reviewed suggests that STTUC might constitute one of those factors.

In 2004 it was reported that women constituted over 40 per cent of the global labour force and that this statistic was significantly lower in the developing countries. Between 2000 and 2002, the percentage of women in managerial positions ranged from 20 to 40 per cent in 48 of the 63 countries investigated (International Labour Organization (ILO; 2004). The proportion of women in managerial positions is even lower, as the statistics show that only a proportion of women obtain top jobs (ILO, 2004; Meng & Miller, 1995; Schein, 2001). This may, however, also be a result of the fact that traditionally,

leadership has been a male privilege in the corporate, political and military arenas, as well as in many other sectors of societies (Eagly & Karau, 2002).

Furthermore, in instances where women and men do occupy the same positions, on average the salaries of women tend to be lower than those of their male counterparts (Benokraitis & Feagin, 1994; Siphambe & Thokweng-Bakwena, 2001; UNDP, 2008) even when variables such as education, age, position, and job tenure are controlled for (ILO, 2004; Powell & Graves, 2003). While initiatives and interventions in respect of the empowerment of women have produced significant gains, with, comparatively more women now represented in leadership positions, women still report challenges in accessing managerial and/or leadership positions and in working as managers and/or leaders (Costen, Hardigree, & Testagrossa, 2003; Federal Glass Ceiling Commission, 1995; ILO, 2004).

The extent of the unbalanced representation of men and women in certain professions and in decision-making positions varies from country to country. Since the 1995 Beijing Platform for Action, Botswana has taken significant measures to create a policy environment that promotes gender equality (Pheko & Selemogwe, 2008). The Beijing Platform for Action recommended that governments and the relevant international bodies facilitate women's equal access to resources, employment, markets and trade, and also promote a more equitable distribution of productive assets, wealth, opportunities, income and services by analysing policies and programmes from a gender perspective (United Nations Division for the Advancement of Women, 2009). In order to both facilitate and to reach an acceptable level of gender equality, the Botswanan government, in cooperation with various organisations, has been developing and implementing several interventions supporting educational, developmental and decision-making opportunities for women. There have also been progressive changes in governmental policies and legislation, which have made the empowerment of women a pivotal national agenda in Botswana (Pheko & Selemogwe, 2008). For example, the government established a Women's Affairs Department (WAD), which is mandated to conduct research into women's issues, coordinate women empowerment activities at

local, national and international levels, and design programmes which are aimed at enhancing the participation of women in development (Department of Women Affairs, 1998; Rathapo, 2000).

However, despite the fact that the abovementioned changes have been made, Botswana has not yet reached 50 per cent gender parity in wage employment (UNECA, AU, & AfDB, 2008). In addition, Batswana women (i.e. the female citizens of Botswana) are also seldom found in leadership and/or managerial positions (Women's Affairs Department, 2003). This may be as a result of the fact that it takes much more than changes in laws and government policies to change practices and attitudes in the home and in the community, as well as in formal and informal decision-making environments (Lopez-Claros & Zahidi, 2005). For example, in 2002, of the 44 parliamentarians in Botswana only eight were women, while six of the 22 government ministers were women. This did, however, represent an improvement on the 1992 statistics, which reflected that only three of the 44 parliamentarians were women and only three of the 22 government ministers were women. In the same year (i.e. 2002), the number of women occupying senior leadership positions in Botswana was estimated to be 35 per cent (Republic of Botswana & United Nations, 2004). This figure included the civil service (28%), public enterprises (30%), the private sector (27%), and non-governmental organisations (NGOs) (48%). The statistics also took into account board members, heads of companies, deputy heads of companies and heads of departments (Republic of Botswana & United Nations, 2004).

However, in view of the fact that there are no current documented statistics, it is difficult to ascertain whether this number is either increasing or decreasing. Nevertheless, the UNECA et al.,'s (2008) suggestions that no country in Africa has reached 50 per cent gender parity in wage employment should promt researchers to continue to identify any other factors that may disadvantage women, especially in countries such as Botswana that have made concrete efforts to change those laws and policies which adversely affected women.

At global, regional, and local levels, there is ample literature that evaluates the factors that impede the career development and advancement of women; for example, Arvey, Rotundo, Johnson, Zhang, and McGue (2006), Hewlett and Luce (2005), Haslam and Ryan (2008), Horner (1972), Schuck and Liddle (2004), and Steele and Aronson (1995). The abundant literature on this phenomenon is important in view of the fact that the broader society (i.e. nations, organisations, NGOs and executive coaches) all benefit from well-researched theoretical and empirical advances aimed at the development of programmes and policies targeting the empowerment of women (Pheko, 2009).

In general, the slower advancement of women into managerial and leadership roles, as compared to that of men, has typically, been ascribed to gender discrimination (Eagly & Karau, 2002; Snizek & Neil, 1992), with researchers citing overt and covert sexual discrimination and the differential treatment of women and men as major reasons why the experiences of women in organisations differ from those of men. Other discussions have centred on the issue of the so-called glass ceiling (e.g. Costen *et al*., 2003; Federal Glass Ceiling Commission, 1995; Haslam & Ryan, 2008; Sampson & Moore, 2008). The glass ceiling has been defined as "… the invisible barriers that women confront as they approach the top of the corporate hierarchy" (Federal Glass Ceiling Commission, 1995, p. 3). There have also been suggestions that women may be subjected to incompatible expectations in respect of managerial roles as well as general female roles (Eagly & Johnson, 1990). Other factors, including work/life/family conflicts, prejudice towards women, personality, work experience, age and child bearing have also been identified as potential contributors to the inequitable representation of women in leadership and/or managerial positions.

It is interesting to note that the role of STTUC has been largely ignored by leadership and organisational behaviour researchers. General research on the STTUC construct suggests that STTUC may be another factor that inhibits the career progress of women (e.g. Exline & Lobel, 1997; 1999; 2001; Exline *et al*., 2004; Henagan, 2006; Juola-Exline, 1998). This may be as a result of the fact that an individual's functioning within the work context may be influenced by the way in which individuals think about

themselves (Vrugt & Koenis, 2002). Moreover, for females, the decision to pursue and/or advance in a chosen career may be influenced by other people's perceptions and views of women, especially career-oriented women.

Reviewing the literature described above, it is surprising that leadership and organisational behaviour researchers have not investigated the potential implications of STTUC for leadership and/or managerial progression. This possible oversight is particularly surprising in view of the fact that organisations are not immune to the impact of social comparison processes, with the work context presenting numerous opportunities for different forms of social comparison. Accordingly, in order to address what the researcher perceives as a gap in the existing research, the main purpose of this study was to apply STTUC theory to the study of leadership and organisational behaviour by investigating the antecedents of STTUC among Botswana's black employees. Gender differences in respect of STTUC experiences were also explored.

1.3 Importance of STTUC in Organisational Settings

Although STTUC has been studied in general, it is important to justify the investigations into predictors of the STTUC experiences for working individuals. As highlighted above, comparison processes are ingrained in the fabric of organisational life, thus making it imperative that researchers investigate their impact (Greenberg, Claire, & Ashkanasy, 2007). Specifically, social comparison processes have been found to have an impact on individual motivation (Goodman, 1977), to contribute to the formation of job attitudes (Salancik & Pfeffer, 1978) and to influence individual productivity (Vrugt & Koenis, 2002).

It is also important to study STTUC in organisational settings because research has revealed that, when individuals experience STTUC, in order to minimise the resultant discomfort they may employ strategies such as avoiding the outperformed person, avoiding the appearance of one-upmanship, appeasement, self-depreciation, and/or socially motivated underachievement. However, such strategies are believed to be detrimental to both individual and organisational performance. In addition, engaging in

one or all of these strategies may have negative psychological implications for the individual in cases where, for example, the strategy adopted includes the avoidance of colleagues or even spouses/partners. Furthermore, in organisations, socially motivated underachievement may have obvious negative effects on the performance of the team and/or division of which the individual concerned is a member. Organisational leaders may also have to rethink some of the strategies used to reward and recognise outperformers, as public recognition may intensify the experience of STTUC (Exline *et al*., 2004; Henagan, 2006).

1.4 Research Problem

In Botswana, most of the research aimed at evaluating the challenges faced by female employees has primarily investigated the socioeconomic and legislative challenges faced by women (e.g., Department of Women Affairs, 1998; Mookodi, n.d., 2005; Rathapo, 2000; Women's Affairs Department, 1995, 1998, 2003). Following the recommendations of the NGOs in respect of addressing gender issues, the government of Botswana has been changing some of the regulations, legislations and policies which adversely affect females. In addition, interventions have been implemented to facilitate gender empowerment and development. However, such interventions may have overlooked certain factors, including the impact of STTUC on the advancement and performance of women. While it is clear from the literature presented that STTUC may be another factor that may impede the advancement and/or performance of women, no research has been conducted among women employees in Botswana or elsewhere in the world in order to understand the impact of STTUC on their advancement and/or performance. Furthermore, there is still no comprehensive instrument which assesses the STTUC of outperformers, thus making it challenging for both practitioners and researchers to assess individual levels of STTUC accurately.

Accordingly, this study represents an opportunity to widen the scope of the existing research and literature relating to this relatively new construct/framework.

1.5 Research Questions

This study will address several research questions concerning the predictors of STTUC and gender differences in STTUC experiences. Specifically, the following research questions were addressed in this study:

1. In cases of outperformance, are there gender differences in experiences of STTUC?

2. What are the antecedents of STTUC among Botswana's black employees?

In order to focus the purpose of the study and to assist in providing help in the answering of the above broad questions, the research questions were divided into the following sub-questions:

i. In cases of outperformance, do women experience higher levels of STTUC than men, as suggested by past studies and in the theory?

ii. In cases of outperformance, do married women experience higher levels of STTUC than their unmarried counterparts, as suggested in the theory?

iii. Can an outperformer's need for affiliation (n-Aff), interpersonal sensitivity, competitiveness, collectivistic cultural orientation and traditional gender role orientation predict the outperformer's experiences of STTUC?

iv. Can an outperformer's perceptions of the outperformed individual's n-Aff, interpersonal sensitivity, competitiveness, collectivistic cultural orientation and traditional gender role orientation predict the outperformer's experiences of STTUC?

v. Can an outperformer's experiences of family-work conflict and instrumental support from the partner/spouse predict the outperformer's experiences of STTUC, as suggested in the theory?

vi. Can masculine values in an organisational culture predict the experiences of STTUC in the outperformer, as suggested in the theory?

1.6 Aims and Objectives of the Study

As discussed above, while research has examined various factors that may inhibit the career success of women, the role of STTUC in the advancement and performance of women has not been sufficiently investigated. Accordingly, this study aims to contribute to the research currently available by investigating both the predictors of STTUC and the gender differences in the STTUC experience. Both the theoretical objectives and empirical objectives are outlined below.

1.6.1 Theoretical objectives

The main theoretical objective of this study was to establish, from the existing literature, whether STTUC can be linked to factors that impede the career development and advancement of women in the workplace.

A second theoretical objective was to establish, from the literature, whether there are gender differences in the experiences of STTUC.

The third theoretical objective was to explore the literature for factors that may elicit an outperformer's experiences of STTUC and then to develop a model that will aid in exploring a selection of STTUC antecedents.

The final theoretical objective was to establish, from the literature, whether there are gender differences in the model identified.

1.6.2 Empirical objectives

The following empirical objectives were derived from the research questions and the theoretical objectives:

1. To compile a valid and reliable STTUC scale that assesses an outperformer's STTUC.
2. To investigate whether there are gender differences in the experiences of STTUC.

3a. To investigate whether collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse and masculine values within an organisational culture can explain variance in STTUC.

3b To investigate whether outperformers' perceptions of the outperformed individual's characteristics (specifically, collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, and competitiveness) can explain variance in STTUC.

1.7 Research Contributions

This research study attempts to offer at least six theoretical and three practical contributions. Firstly, the study will contribute to advancing the development of the STTUC construct since this construct is relatively new and underexplored. Specifically, research on STTUC has received little attention from leadership and Organisational Behaviour (OB) researchers and, thus, this study will contribute new knowledge to this area of research.

Secondly, as highlighted in the preceding sections, much of the research in Botswana which aims to evaluate the challenges faced by females has primarily investigated socioeconomic and legislative challenges. This study will, therefore, hopefully contribute

to new knowledge by investigating other factors that may inhibit the career progression of women in Botswana.

A third contribution is to be found in the fact that this research focuses on a non-student sample and was conducted outside of the United States of America. This is important as most of the studies in the field of STTUC have been conducted in the USA and have used university student samples (as far as it could be ascertained, five studies only did not use a student sample). While such approaches to research offer specific and undeniable benefits, Goodman and Haisley (2007) warn that the studies with student samples do not offer insights into the effect that work environments exert on the lives of individuals.

Fourthly, while other characteristics of the outperformer have been studied (e.g., gender, interpersonal sensitivity, empathic concern, trait competitiveness, narcissism and trait self-control), little empirical research has evaluated the relationship between gender role orientation and cultural orientation and the experiences of STTUC. Therefore, the fact that both were investigated in this research study may yield new insights.

Fifthly, the majority of studies investigating STTUC have been conducted using laboratory studies. However, this study specifically employed a quantitative, cross-sectional survey research approach, which made it possible both to include control variables and to address model specification when needed (Rogelberg, 2002).

A sixth theoretical contribution of this research is the fact that a comprehensive STTUC scale that assesses two STTUC conditions (i.e. Condition 2 and the three areas of concern under Condition 3) was compiled using existing measures. Detailed information about the STTUC conditions in provided in section 2.4. This contribution can also be viewed as being of practical benefit because both scholars and researchers may, in the future, use the instrument to assess the STTUC of individuals.

In addition, this research also provides at least three practical benefits for stakeholders at different levels (i.e. national/economic, sociocultural, organisational/group and individual/psychological). Firstly, nations and organisations that are seeking to diversify and to tap into the knowledge and experiences of women at all levels may use the research findings to accurately assess the STTUC related challenges women may face within organisations.

Secondly, national policymakers and senior managers in organisations could also use the findings from the research study to investigate if STTUC is one of the possible reasons for the unequal representation of men and women within their organisations. They may also incorporate the information into their gender policies and their organisational mentorship and succession management programmes.

Thirdly, women managers and executive coaches may use the information to accurately evaluate the behaviours, personal beliefs and experiences which may be inhibiting the career growth of women employees and, thereby, seek and use appropriate and informed interventions to address the issue.

1.8 Definition of Terms

For the purposes of this study, specific terms refer to constructs that are defined in terms of both their theoretical and operationalised meanings. These terms, as defined below, will be used throughout the study:

Social comparison is operationally defined as a process of relating information about the other person or other people to the self and/or vice versa.

Downward comparison is the process of comparing oneself with those who are worse off than oneself (Wood, 1996).

Upward comparison is the process of comparing oneself with those who are better off than oneself (Wood, 1996; Wills, 1981).

The **outperformer** is an individual who has surpassed another in terms of outcome or performance.

The **outperformed** refers to an individual who has been surpassed in terms of outcome or performance.

Outperformance implies an achieved and/or ascribed status difference between the outperformer and those who have been outperformed.

Sensitivity Towards being the Target of Upward Comparison (STTUC) refers to the outperformer's concern about certain aspects of the outperformed person's response to outperformance (Exline & Lobel, 1997; 1999; 2001; Exline *et al*., 2004; Henagan, 2006; Juola-Exline, 1998).

Comparison domain refers to the situation or context in which a comparison takes place.

Significant other is operationally defined as the outperformer's comparison target.

1.9 Overview of the Remainder of the Thesis

Chapter 2 will present the theoretical framework of the study. This will entail a review of both social comparison and STTUC theory.

Chapter 3 presents the integrated conceptual framework which was designed to investigate the predictors of the relationships between individual characteristics and experiences of STTUC. In addition, the research propositions and the hypotheses used in the study will also be discussed in Chapter three.

Chapter 4 presents the research methods used for testing the research hypotheses. Various statistical analyses techniques and their relevance to testing the hypotheses will also be discussed. In addition, chapter 4 describes the measuring instruments used.

Chapter 5 presents the results of the study.

Chapter 6 discusses the research findings and also highlights the contributions and implications of the research study. In addition, this chapter discusses the limitations of the study and offers suggestions for future research.

1.10 Summary of Chapter 1

Chapter 1 presented the background to and overview of the study. The chapter also gave an overview of the challenges facing women in the workplace. This was achieved by presenting statistics on the limited numbers of women in decision-making positions, despite the changes that have been made to empower women. It was argued that more efforts are needed to continue uncovering those factors that may be impeding the career advancement of women, as the existing inequities may be the result of multifaceted sources.

STTUC has been identified as one factor that has the potential to explain this phenomenon. However, to date, STTUC has not received much empirical attention within this domain. The research questions, aims of the research study, and the theoretical and practical contributions offered by the study were also discussed in this chapter. The chapter ended by defining some of the terms which are used throughout the thesis. The following chapter (i.e. chapter 2) will present the theoretical framework used in the study.

CHAPTER 2
THEORETICAL FRAMEWORK

2.1 Introduction

This chapter will present the theoretical framework used in the study. This will entail discussing the Sensitivity Towards being the Target of Upward Comparison (STTUC) framework and its conditions. The STTUC framework is an extension of Festinger's (1954) social comparison theory. The chapter will therefore begin by presenting a brief history of Festinger's social comparison theory and the importance of studying the social comparison processes in organisations.

2.2 Introduction to the STTUC Framework

The theoretical framework used in this research is that of STTUC, which is an extension of the social comparison theory. Studying social comparison processes in the workplace is important because, in their working life, employees will come across other individuals who are performing better than themselves, and also others who are performing worse than themselves (Buunk, Zurriaga, Gonzalez-Roma, & Subirats, 2003). For example, employees' performances are constantly evaluated by means of processes such as performance management and performance appraisals (Mumford, 1983). In addition, employees may also compare their salaries and other rewards with those of their coworkers (Greenberg *et al.,* 2007). Employees are also usually aware of the promotions and demotions of their fellow employees. It is, thus, generally believed that social comparison processes are entrenched in the fabric of organisational and personnel life, in both planned and unplanned ways (Greenberg *et al*., 2007). Employees may also share the news about their promotions and salary increases with their significant others, thus creating even more opportunities for social comparison. Accordingly, in this research study, significant others were introduced as comparison targets because comparison with them is probably unavoidable and is also believed to

elicit STTUC and to somehow influence performance related reactions for female employees.

2.3 Theoretical Background: Social Comparison

When discussing STTUC it is important first to provide an overview of the theory of social comparison. Festinger's (1954) original conception of the social comparison theory posits that: i) people possess fundamental tendencies to social comparison; ii) individuals similar to oneself are common targets of social comparison; and iii) the processes of social comparison may differ across the various situations of comparison.

It has also been suggested that social comparison processes are biological (Gilbert, Price & Allan, 1995) and are important for human adaptation and survival (Buunk & Mussweiler, 2001). According to Wood (1996), people engaging in social comparison may either compare themselves with those who have performed worse than they have (downward comparison), or with those who have performed better than they have (upward comparison). In the context of STTUC, the outperformer is in a position to make downward comparisons. In the main, the effects of social comparison depend, in part, on the: i) motive for social comparison, ii) direction (i.e. downward comparison or upward comparison) of social comparison, iii) comparison domain, and iv) choice of comparison target.

2.3.1 Motives for social comparison

Regardless of whether the comparison is downward or upward, there are different motives behind social comparison (Wood, 1989). For example, both upward and downward comparisons have been associated with the self-evaluation motive (Beach, Tesser, Mendolia, Anderson, Crelia, Whitaker & Fincham, 1996; Festinger, 1954; Lockwood, 2002; Tesser, 1988).

Upward comparisons generally provide information which is useful as regards the self-improvement motive (Helgeson & Mickelson, 1995; Huguet, Dumas, Monteil &

Genestoux, 2001; Collins, 1996; Wood, 1989). For example, comparing themselves with referents who perform better may lead the comparers to determine how they can improve their situations (Collins, 1996) or to set higher personal goals and standards (e.g. Helgeson & Mickelson, 1995; Huguet *et al*., 2001 for studies using school children and Wood, 1989; Vrugt & Koenis, 2002 for studies using employees). Self-improvement may occur because the outperformers may motivate the outperformed individuals to assess their current performance. Outperformers may also exhibit concrete illustrations in respect of desired goals, and they may provide useful information for improving oneself (Huguet *et al*., 2001; Steil & Hay, 1997).

Downward comparisons have been associated specifically with the self-enhancement motive (Buunk & Gibbons, 2007; Collins, 1996; Wills, 1981; Wood, 1989; Wood & Taylor, 1991). The basic principle behind the downward comparison theory is that individuals may increase subjective well-being through comparison with less fortunate others (Wills, 1981). For example, in specific cases, after comparison with a less fortunate other, an individual may be frightened into working hard to avoid being like the outperformed (McMullen & Markman, 2000), and they may also feel inspired to perform even better in the future (Buunk, Collins, Taylor, Van Yperen & Dakof, 1990).

Research has also shown that downward comparisons have a self-enhancing impact on the outperformer, especially when the outperformer does not perceive him/herself as being susceptible to the misfortune of the outperformed (Aspinwall & Taylor, 1997; Lockwood, 2002). Previous research has also demonstrated that threatened individuals, such as individuals with low self-esteem, may benefit from downward comparison as it may enhance their subjective well-being (Aspinwall & Taylor, 1997). In particular, downward comparison may allow the comparers to draw an analogy between their own circumstances and those of less fortunate others. It may also serve as a positive reminder of the outperformer's relative superiority (Lockwood, 2002).

2.3.2 Direction and the consequences of social comparison

Upward comparison refers to the process of comparing oneself with those who have performed better than oneself (Wood, 1996). Research suggests that, in contrast to downward comparison (i.e, the process of comparing oneself with those who have performed worse than oneself; Wills, 1981; Wood, 1996) engaging in upward comparison tends to lead to more negative feelings and lowered self-esteem (Brewer & Weber, 1994; Wills, 1981), especially if the individual concerned is outperformed in the ability domains that are relevant to self-esteem (Tesser, 1986; 1988). The negative affect and lower self-evaluations may be a consequence of the outperformed being reminded that he/she is somewhat inferior (Wehrens, Kuyper, Dijkstra, Buunk & Van der Werf, 2010). However, while upward comparison has been associated mostly with negative consequences, some research findings suggest that upward comparison may, in fact, have positive consequences (Brown, Novick, Lord & Richards, 1992; Taylor & Lobel, 1989; Tesser, 1988) as people may also engage in upward comparison in order to enhance self-assessments (Collins, 1996), as well as the purposes of inspiration, self-evaluation, and self-improvement (Huguet *et al*., 2001).

In contrast to upward comparison, people may actively or passively enhance their own subjective well-being by comparing themselves with outperformed others (Buunk & Bos, 1998; Wills, 1981). The experience of outperformance may elicit feelings of pride (Exline & Lobel, 2001) and/or positive affect in the outperformer (Aspinwall & Taylor, 1993; Wills, 1981), as well as predicting more psychological gains among older adults over time (Bailis, Chipperfield & Perry, 2005). Downward comparisons have also been associated with higher levels of life satisfaction (Frieswijk, Buunk, Steverink & Slaets, 2004).

However, contrary to these general findings on the positive effect of downward comparison, other researchers have demonstrated that outperformers may be distressed at the prospect of posing a threat to the outperformed others and this, in turn, may lead to the outperformers experiencing STTUC (e.g. Buunk *et al*., 1990; Exline *et al*., 2004, Exline & Lobel, 1999; 2001; Henegan, 2007; Juola-Exline, 1998).

Furthermore, if individuals reflect on how they may come to be like the worse-off other, they may see themselves as vulnerable to this outcome and be threatened by the downward comparison (Buunk *et al*., 1990; Lockwood, 2002; Wood & VanderZee, 1997).

2.3.3 Comparison domain

Comparison domain refers to the situation or context of comparison. For example, the comparison domain may refer to fields of study (e.g. a diploma in nursing versus a degree in electrical engineering), type of job (e.g. homemaker versus astronaut), or position in the organisational hierarchy (e.g. supervisor versus chief executive officer). In general, researchers agree that, traditionally, the male domains include occupational prestige (Exline & Lobel, 1999; Olsson & Walker, 2003) and fields (Horner, 1972), such as engineering and technology (Wilson-Kovacs, Ryan & Haslam, 2006). Researchers have also demonstrated that women tend to be overrepresented in the humanities and underrepresented in the fields of business and engineering (Biakolo, 2005; Richardsen, Mikkelsen & Burke, 1997). In addition, women seldom reach top managerial positions in these fields. Researchers have further documented that both teachers and parents may unintentionally work together to encourage boys to study science and engineering, while girls are encouraged to choose careers that are perceived culturally as being more feminine, for example languages and the humanities (Biakolo, 2005).

Research has also shown that the responses to social comparisons are significant when the comparison domain is self-relevant (Festinger, 1954; Tesser, 1988). For example, a woman may not experience STTUC if she outperforms a man in homemaking, but she may experience STTUC if she outperforms male engineers. Such findings imply that women's attempts to break into male domains may pose threats to both men and women (Exline & Lobel, 1999). The findings also imply that women may also have more reasons than men to be concerned about the responses to their outperformance in such domains.

2.3.4 Comparison target

The perceived threat of comparison may also depend on the comparison target (Beach *et al*., 1996, 1998; Tesser, 1986, 1988). This comparison target may be a friend, a significant other, a spouse, a colleague, or even one's children and/or parents. Research suggests that responses to social comparisons are significant when a comparison target is perceived as similar to oneself (Festinger, 1954; Tesser, 1988) because such interpersonal comparisons may have a more significant effect on self-evaluation (Festinger, 1954).

Beach *et al*. (1996) have argued that, although social comparison has been widely investigated, researchers have not focused on the role played by: i) one's own or one's partner's outstanding performance and the associated emotions of pride in one's partner; ii) potential contempt for one's partner; iii) pride in oneself; and iv) shame or envy that may result because of social comparison as regards married couples. Specific to this study, efforts were also made to investigate whether the individual characteristics of the partner may predict the outperformer's (i.e. comparing partner) experiences of STTUC. Examples of negative comparison, which are important in this study, may include situations in which a partner feels threatened because the other partner is perceived as financially better off, more intelligent and/or even as more beautiful or handsome (Beach *et al*., 1996). Within the context of career and STTUC, a partner/spouse may suffer a negative comparison when the other spouse/partner is perceived as having advanced further in their careers, or as more financially able.

To address the concerns of Beach *et al*. (1996), in the current study, significant others were used as comparison targets. Specifically, engaged, dating, married, divorced or widowed participants were prompted to recall a specific situation in which they had performed better than their spouse/partner/ex-spouse. The single comparers were prompted to recall a situation in which they had performed better than individuals whom they regarded as significant others. Female single comparers were prompted specifically to compare either with exboyfriends, male colleagues, or brothers while

male single comparers were prompted specifically to compare with either exgirlfriends, female colleagues, or sisters.

Researchers continue to debate on whether attitudes, behaviours, and cognitions are consistent across situations or situationally specific (Bem & Allen, 1974) and the same questions may be asked about STTUC related experiences. Generally, reseachers have suggested that drives to avoid success could just be motives, cultural stereotypes (Zuckerman & Wheeler, 1975) or personality characteristics (Tresemer, 1977). In the current study, it was assumed that STTUC related experiences might also be experienced cross situationally. This assumption was informed by research and several theories — one being the family work literature (see section 3.5 of this document) which has generally revealed how what happens at home might inhibit or enhance work outcomes or vice versa. Furthermore, theories such as the Self-evaluation Maintenance Model (Tesser, 1988; Beach *et al*., 1996) and Korman and Korman's (1980) career success/personal failure phenomenon may also help elucidate how STTUC related experiences might be experienced cross situationally. The career success/personal failure phenomenon explain that certain situations, individuals who obtain success in terms of income or organisational status may experience personal and social alienation, burnout, and even disappointment (Korman & Korman's, 1980).

The Self-evaluation Maintenance Model explains the way in which reflection and comparison processes are central to the maintenance of a positive self-evaluation (Tesser, 1988; Beach *et al*., 1996). According to this model, when one is outperformed, comparison leads to a negative reaction whereas reflection leads to a positive reaction. Both reflection and comparison are assumed to involve arousal, and both are more pronounced when the comparison target is a close other (Tesser, 1988). The Extended Self-evaluation Maintenance Model predicts that people will feel negative about outperformance if their romantic partners are, or are perceived to be, suffering negative comparison and/or if they are not benefiting from the outperformance (Beach & Tesser, as cited in Exline & Lobel, 1999, 2001).

Couples may, thus, avoid outcomes which may produce negative comparison in either partner and, instead, they would prefer outcomes that support the self-evaluative needs of both partners (Beach *et al.,* 1996). Such findings show that the emotional benefit which a spouse may derive from positive comparison (or reflection) may be offset by the perception that the other partner is either suffering negative comparison or failing to benefit from positive reflection (Beach *et al*., 1998). These findings also have clear implications for working female significant others, especially in cases there they continually outperform their partners'. Partners live together; therefore, a spouse's past behaviours, reactions and even attitudes are likely to be known to the other partner. Therefore, it is reasonable to suggest that the motivations for a spouse to outperform in the future could be influenced by negative consequences associated with their past outperformances.

2.4 STTUC: Conceptual Framework

According to Exline and Lobel (1999; 2001) and Juola-Exline (1998), if both the outperformer and the outperformed are aware of the difference in status, then the outperformer may feel some concern about certain aspects of the outperformed person's response. In this context, outperformance implies an achieved and/or ascribed status discrepancy between the outperformer and the outperformed. Exline and Lobel (1999; 2001) and Juola-Exline (1998) further explain that, for someone to be classified as STTUC, it is essential that the following three conditions be met:

- Condition 1: The individual must see him/herself as a target of upward comparison.

- Condition 2: The individual must believe that the outperformed person is threatened by the upward comparison. Henagan and Bedeian (2009) referred to this discomfort as the comparison threat. This discomfort will, hereafter, be referred to as the Perceived Comparison Threat (PCT).

- Condition 3: The individual must be concerned about the outperformed's response. The outperformer's concern may be focused on:

    - Condition 3a: The well-being of the outperformed person, hereafter referred to as Concerned for the Outperformed Person (COP) and/or

    - Condition 3b: Own well-being, hereafter referred to as Concern for the Self (CS), and/or

    - Condition 3c: The relationship between the outperformer and the outperformed, hereafter referred to as Concern for the Relationship with Outperformed (CRO). Figure 2.1 presents a diagrammatic representation of the STTUC framework.

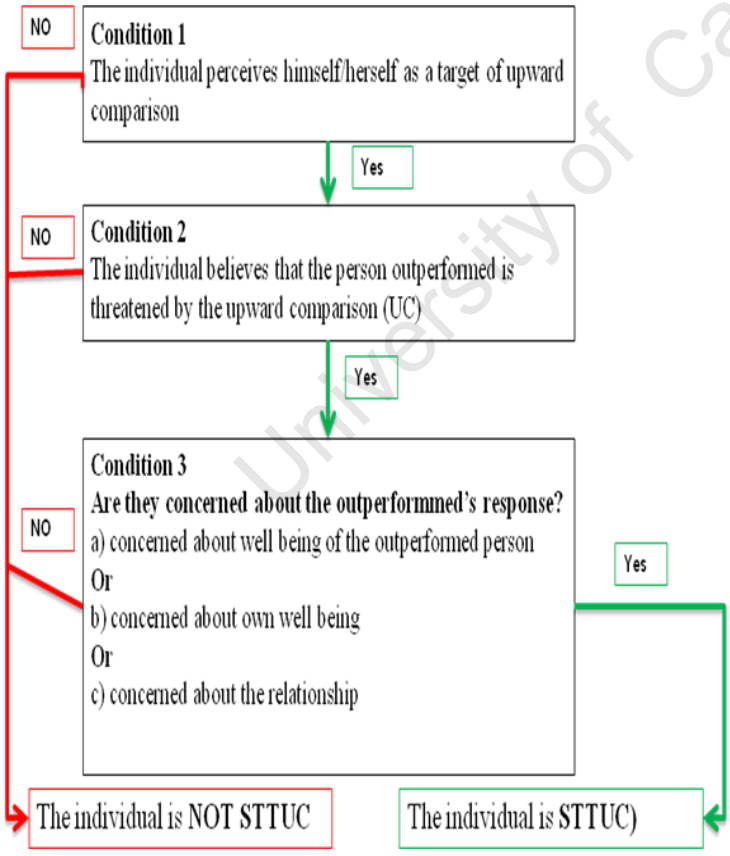

Figure 2.1: STTUC conceptual framework (Juola-Exline, 1998)

It is important to emphasise that STTUC distress may coexist with other positive reactions to outperformance, including feelings of superiority, happiness and pride. Factors such as the characteristics of the outperformer, the situational context of outperformance, the characteristics of the outperformed person, and the relationship between the outperformer and the outperformed may increase the discomfort experienced by the outperformer (Exline & Lobel, 1997, 1999, 2001; Exline *et al*., 2004).

Exline and Lobel (1999) stress that perceptions may also result in STTUC distress, regardless of whether these perceptions coincide with reality or not. Accordingly, in this study, outperformers were also asked to evaluate their perceptions of the individual characteristics of the outperformed as these were also assumed to predict the outperformer's STTUC.

Throughout this paper, STTUC has been used both as a noun and as an adjective. For example, STTUC *can be discussed*, an outperformer *can experience* STTUC, or an individual *can be* STTUC.

2.5 Summary of Chapter Two

Chapter 2 presented the theoretical framework used in this study for investigating predictors of experiences of STTUC. This was achieved by presenting a brief history of Festinger's (1954) social comparison theory and also the importance of studying the social comparison processes within organisations. The chapter also revealed the way in which a myriad of organisational processes present countless opportunities for social comparison. Exline and Lobel's (1999) STTUC framework and its components were also discussed.

CHAPTER 3
LITERATURE REVIEW

3.1 Introduction

This chapter presents an integrated conceptual model for investigating selected predictors of Sensitivity Towards being the Target of Upward Comparison (STTUC). The first requirement of the STTUC framework is that the individual concerned must believe that he/she has outperformed another/others in a relevant domain. The second requirement is that the individual concerned must believe that the outperformed other is experiencing a comparison threat. This may involve believing that the well-being or self-worth of outperformed others is being threatened by the experience of being outperformed. The last requirement of the STTUC model stipulates that the individual concerned must be experiencing concern for the outperformed person, concern for the self, and/or concern for the relationship with the outperformed. Experiencing any one of the above concerns will increase the intensity of the outperformer's own emotional discomfort and, in turn, his/her experiences of STTUC (Exline & Lobel, 1999; 2001; Juola-Exline, 1998; Henagan, 2006). It is also important to note that, in order to be classified as STTUC, it is not necessary for the individual to be affected by all three areas of concern (Exline & Lobel 1999; 2001; Juola-Exline, 1998).

Since Festinger's (1954) suggestion that people anchor their judgements through a process of social comparison, a wide variety of social comparison studies have been conducted. Whether conducted in school settings, work settings, home settings or other settings, research has consistently shown that individuals evaluate their attitudes, actions and attainments in absolute terms and by comparing themselves with others, especially those whom they perceive as similar to themselves (for reviews see Beach *et al*., 1996; Buunk *et al*., 2003; Eddleston, 2009; Exline & Lobel 1999; 2001; Festinger, 1954; Greenberg *et al*., 2007; Juola-Exline, 1998; Henagan, 2006; Lockwood, 2002; Tesser, 1988).

In general, engaging in downward comparison (i.e. being a target of upward comparison) has been associated with positive consequences. However, as researchers have recently shown, despite the positive effect of downward comparison, being a target of upward comparison can be threatening to some outperformers. It is, therefore, the purpose of this study to investigate potential predictors of such threats. The rationale for selecting the five levels of analysis, namely, demographic characteristics, cultural variables, personality variables, family/work variables and organisational variables, is discussed below.

3.2 Demographic Characteristics

Individual characteristics, such as gender, have consistently been found to predict the experience of STTUC (Exline & Lobel, 1999; 1997; Exline & Geyer, 2003). Related research on the effect of marriage on women suggests that gender role expectations for married women in the African context may further expose women to threats related to outperformance. Gender and marital status are believed to be related to experiences of STTUC and were, therefore, investigated in this study as demographic characteristics.

3.2.1 Gender Differences

Individuals may constantly ask themselves the questions: “Who am I? Which group memberships and affiliations have significance for me? How do I make sense of and give coherence to the paths my life has taken?” (Ferdman, 2000, p. 19). In view of the fact that gender represents one of the most salient social identities in human interactions (Heppner & Fu, 2011), an individual’s sense of being either male or female has been identified as the core element in the development of the self (Maccoby, 2002). For example, the first question asked when a child is born is: “Is it a boy or a girl?” Also, when an individual enters a room, gender and colour are often the most obvious and noticeable features observed. In addition, gender socialisation influences the way in which men and women behave, the attitudes they hold, and the expectations which individuals have of themselves and others with individuals acting according to the

beliefs, norms, attitudes and values that they perceive to be held by other members of their society, community, and/or group (Kemmelmeier & Oyserman, 2001). For example, in a study conducted by Blair and Johnson (1992), a relationship between gender ideology and division of household labour was revealed. Other researchers found that some women in management have reported feeling as if they are treated first as a woman and second as a manager/leader (Schuck & Liddle, 2004). This, in turn, reveals the saliency of one's gender. However, gender may be even more salient in cases in which the two sexes either interact face-to-face (Mueller, Mulinge & Glass, 2002) or have to compete and/or engage in social comparison.

While an investigation into the saliency of social identification was not within the scope of this research study, social identity theory (Hooper 1976) was used to understand the way in which one's gender may affect STTUC experiences. In general, individuals belong simultaneously to an indefinite number of social categories (Mussweiler, Gabriel & Bodenhausen, 2000). For example one individual may be simultaneously identified as a boy, child, village boy, school aged, black, and/or thin. Such a multifaceted nature of identity may probide a strategic basis for reducing the threat involved in social comparisons as individuals are more likely to identify themselves in terms of a salient social group (Tajfel & Turner, 1986, as cited in Ashforth & Mael, 1989). For example, a woman CEO with no family may identify more with being a manager than with being a wife, while a married woman CEO with children may identify more with being a wife than with being a manager. Salient categories are also more likely to influence an individual's perceptions of certain situations as well as his/her behavioural outcome expectations.

Social identification affects both intentions and behaviours (Chatzisarantis, Hagger, Wang, & Thøgersen-Ntoumani, 2009) while the saliency of identity also influences the types of social comparisons made (Hogg, 2000; Tajfel & Turner, 1986). Social comparison processes may also have potential behavioural implications for social identity (Shipley, 2008). For example, research has suggested that the amount of effort devoted to a specific role requirement may be dependent on the performer's extent of identification with the particular role (Aryee & Luk, 1996). Aryee and Luk (1996) further

suggest that identification with a role may play out differently for men and women. They give the example that a man who identifies strongly with his family role may expend a considerable amount of time on the work role in order to provide adequately for the family, whereas a woman who identifies more with the family role may devote more time to nurturing and taking care of the family.

People who identify strongly with a group may also espouse the group's accepted goals, attitudes, intentions, and expected behaviours and may also base their judgements of certain outcomes on the prevailing group norms and standards. Therefore, to what extent are gender identities related to STTUC experiences? Both the theoretical and the empirical research suggest that STTUC distress may be experienced more frequently and more intensely by women than by men (Exline & Lobel, 1999; Exline *et al*., 2004). Previous research has shown that, as a result of gender socialisation, women experience higher needs for affiliation than men. Furthermore, Markus and Kitayama (1991), suggests that individuals may have independent self construals (i.e., the tendency to view the self as autonomous and independent) or interdependent self construals (i.e., the tendency to see oneself as part of a group and to expect their actions to be determined by other individuals in the social relationship). Therefore, in view of the fact that women tend to pay more attention to relationships and other individuals, they are more likely to have interdependent self-construal (Kemmelmeier & Oyserman, 2001).

This focus on social contexts and relationships may also mean that women have deeper conceptual structures pertaining to their expectations of the behaviour of others and also of their own behaviours. For example, Barnett, Marshall, Raudenbush, and Brennan (1993) suggest that, because the job role may be more crucial than the family role to men's mental health, the workplace may regulate the psychological fate of men more than in the case of women. This, in turn, implies that the association between job role quality and psychological distress may be stronger for men than for women. Using similar arguments, it may be suggested that women are more likely to be aware of both the role that their partners/spouses are expected to play and also the psychological

distress that their partners may be experiencing when they are not able to perform as expected in such roles. Such awareness may, thus, influence the types of social comparisons women make and their reactions to being the targets of upward comparison; especially when they are comparing themselves with the significant others.

In view of the historically subordinate status of women, STTUC distress may also be more likely should women outperform men in traditionally male domains, for example, occupational status (Exline & Lobel, 1999) and in traditionally male dominated fields (Horner, 1972) such as engineering and technology. This may occur as a result of the fact that attempts on the part of women to break into these domains may pose actual threats to men (Exline & Lobel, 1999). For example, studies using Thematic Apperception Tests (Horner, 1972) and hypothetical career-oriented scenarios (Janman, 1989), in which women outperformed men prompted more negative imagery such as relationship breakups and quarrels than stories in which men outperformed women (Horner, 1972; Janman, 1989).

Kemmelmeier and Oyserman (2001) conducted a study in which they examined gender specific consequences of downward comparison and also the way in which cultural assumptions about the causes of failure may produce low levels of academic self-competence in women. Their study revealed that, as compared to men, women tend to assimilate social comparison into their sense of self. This, in turn, may lead to the assumption that, when women are exposed to the failures of others, their own self-confidence may be somewhat undermined. The proposition that women may experience higher levels of STTUC than men was, therefore investigated. The following proposition was formulated in order to encapsulate these notions:

Proposition 1: *Women report higher levels of STTUC than men.*

3.2.2 Marital status and experiences of STTUC

The phenomenal increase in the number of married women in paid employment has resulted in an increase in research activities investigating the dynamics between family

and work models (Aryee & Luk, 1996). Bernard (1972) argued that men benefit greatly from marriage but women do not. However, do these assertions still stand in 2012? Researchers such as Verbakel and de Graaf (2008) have also argued that employers may prefer men with families (i.e. wife and children) because the assumption that such men may feel a stronger sense of financial responsibility and which, in turn, means that they invest more in their work. One may inversely ask: Is it possible to make the same argument about married women with children? Do employers prefer married women with children? Based on the common gender role expectations and empirical evidence (Eagly & Karau, 2002; Eagly & Steffen, 1984; Gushue & Whitson, 2006) for women, the answer to the question may possibly be no. There are several factors that may make married women with children less attractive than their male counterparts. For example, it is a fact that women require maternity leave as a result of their responsibilities as child bearers and primary caregivers. In view of such theoretical considerations it may make sense to assume that employers may prefer married men with children to married women with children because of the potential increased work and family role conflicts which married women with children may experience.

Marital interaction consists of two individuals interacting in a relationship and, thus, individual characteristics and vulnerabilities play a part in such interactions (Mead, 2002). There has also been a suggestion that couples may avoid outcomes that may produce negative comparison in either partner, instead preferring outcomes that support the self-evaluative needs of both partners (Beach *et al*., 1996). In addition, many couples share family, career, and leisure interests and, thus, there are likely to be numerous opportunities for self-relevant comparisons with one's partner (Tesser, 1988).

Gender role expectations may also play an important part both in the marital interaction and in experiences of marital distress. The ecological systems approach (i.e. the adaptive fit between organisms and their environments) suggests that an individual's involvement in multiple systems often results in stress as a consequence of the competing demands of those systems (Fagan & Press, 2008). In addition, such stress may be increased if there are negative relationships between the role expectations.

Research has generally suggested that there are negative relationships between work–family conflict and marriage outcomes (Wu, Chang, & Zuang, 2010). In a study investigating the different ways in which married men and women perceive the level of marital equality, and the connection between the various indices of marital equality and marital satisfaction and tension, Rabin and Shapira-Berman (1997) found that equal role sharing and decision making were predictive of women's marital satisfaction, but predictive of men's marital tension. It is, therefore, imperative to understand the way in which couples' perceptions, values and beliefs about available career opportunities affect their choice and interest in particular careers (Kakiuchi & Weeks, 2009) and the impact of such perceptions, values and beliefs on couples' reaction to outperformance.

Balancing work and family demands is an issue that many working, married individuals from different countries have to face (Sowan & Goodwin, 2009) because role expectations in the work and in the family domains are often incompatible (Wu *et al*., 2010). For example, in a study investigating the way in which work impacted on marriage in three cultures and which was conducted in the United Kingdom, Hong Kong and China (Sowan & Goodwin, 2009), one-third to one-half of the respondents from each of the three cultures mentioned that work plays a negative role in respect of marriage. This may, however, depend on the married couples themselves.

Research has also established that different types of couples may respond to comparisons differently (Fitzpatrick, 1988). These different types of couple include the so-called separates (i.e. couples who displayed particularly low levels of "we-ness"), the independents (i.e. couples perceived as portraying the ideal example of marriage as they appear to be supportive of each other and are egalitarian in their orientation to marriage), and the traditionals (i.e. couples who reported having an extremely clear and distinct division of labour in the marriage, spending most of the time together and sharing most activities). Cooper, Arkkelin, and Tiebert (1994) explain that the importance that individuals ascribe to relationship issues, for example equity and achievement, may also be related to different career-marriage inspirations.

While understanding that different types of couples is important, it is also important for researchers to remember that family models are also highly dynamic. It is indisputable that, worldwide, the images of the traditional, nuclear family are changing (Wu *et al*., 2010). The renegotiation of both family and family roles has been necessitated by the changes in the traditional family model in terms of which the husbands were perceived as the breadwinners and wives as the homemakers (Bartley, Blanton, & Gilliard, 2005). This family model has been replaced by one which takes into account the fact that both husbands and wives, and women with children, are employed outside of the home (Wu *et al*., 2010).

However, despite such changes, some researchers have revealed that the husband's career is still commonly regarded as of primary importance and, in fact, of greater importance than the wife's career (Bartley *et al*., 2005). This occurs even when husbands and wives espouse non-traditional, gender role attitudes (Rogers & Amato, 2000). This position of greater influence in all areas of life allows husbands to avoid an equal involvement in household labour (Bartley *et al*., 2005). Earlier research has suggested that, among couples where the wife has a higher occupational status than the husband, there often appears to be marital dissatisfaction (Hornung & McCullough, 1981) which may lead to either separation or divorce (Philliber & Hiller, 1983).

Beach *et al*. (1996) used a self-evaluation maintenance model to explain the structure of what they referred to as performance ecology. They hypothesised that, in marriages, the relative performance of each partner within the respective set of performance positions provides a context for understanding marital processes. Beach *et al*. (1996) further asserted that negative social comparison is inevitable nowadays because, prior to married women working in paid employment, there were clear gender-based prescriptions for participation in the various performance domains, thus eradicating the opportunity for a negative social comparison with one's spouse.

There are also claims that married women with children are less likely to make an upward career move and are more likely to retreat from the labour market than single women (Verbakel & De Graaf, 2008). Furthermore, women tend to earn less than their

spouses and, in cases of divorce, they are also usually left with the children. Thus, when a marriage dissolves, the woman may have more to lose than the husband. This, in turn, implies that women are often more susceptible than men to perceiving threats and are more concerned about the relationship when they outperform their spouses or partners. Whelan (2011) also points out that marital advice has always been primarily geared toward women as it is assumed that women have a greater emotional and financial interest in marriage than men as they are often held accountable for the success or failure of the marital relationship.

The self-consistency theory (Aronson, 1968, as cited in Aronson, 1992; Korman, 1970, 1976) and the role congruity theories may be used to explain why female spouses/partners may be more likely to experience STTUC than their unmarried counterparts. The role congruity theory will be discussed under the subsection on gender role orientation in this thesis. This theory suggests that traditional gender role orientation may predict the experiences of STTUC in the case of the female outperformer. In addition, this may occur more frequently in marriages because marriages clearly articulate role expectations for both the wife and the husband. The self-consistency theory may also explain why female partners and spouses may experience STTUC when they outperform their male spouses/partners. The theory suggests that people are more comfortable when they are perceived in a manner that confirms their self-views (Aronson, 1968). Therefore, if a wife subscribes to the notion that a husband is supposed to be the breadwinner, and the wife finds herself in the position of either a breadwinner or an outperformer, this may be inconsistent with the wife's self-view and may result in her experiencing STTUC. It is also important to note that, while the female outperformer may not subscribe to certain cultural orientations or gender role orientations, she may be aware of them because, as an individual, she is, nevertheless, embedded within a broader cultural framework. This awareness may still elicit experiences of STTUC because she may be aware of how others perceive her or her spouse/partner. Based on the literature reviewed, the following proposition was explored:

Proposition 2*: Married women report higher levels of STTUC than women who are not married.*

3.3 Cultural Variables

When evaluating challenges in respect of the development and advancement of women, it is also important to understand the cultural framework in which women are operating and its potential impact on their career progression. This is important because the cultural environment may affect the way in which: i) women perceive themselves as leaders; ii) how they are perceived by those whom they are leading; and iii) how effective they perceive their own leadership styles and/or experiences to be (Pheko, 2009).

While there is limited empirical research linking specific STTUC experiences with cultural variables, related research does suggest that culture may influence STTUC experiences. Cultural values, norms, beliefs and traditions may regulate interpersonal relations and also influence the likelihood that autonomous and/or interdependent achievements are punished or rewarded (Exline & Lobel, 1999; Markus & Kitayama, 1991; Triandis, 1994). According to Exline and Lobel (1999), most of the empirical research which is relevant to STTUC has investigated collectivist and individualist cultures. This focus may, indeed, be justified because other researchers have indicated that the individualism-collectivism cultural dimension is an important factor that affects both the perception and the experience of work, marriage, and family (Yang, Chen, Choi & Zou, 2000). Therefore, in view of the theoretical assumptions relating to culture (e.g Exline & Lobel, 1999) this study investigated both traditional gender role orientation and collectivistic cultural orientation as cultural variables.

3.3.1 Traditional gender role orientation

Gender role has been broadly defined as a collection of norms describing expectations of qualities and behavioural tendencies associated with being a member of either gender, and prescribing behaviour and qualities for each gender (Eagly & Karau, 2002;

Eagly & Steffen, 1984; Gushue & Whitson, 2006). These expectations may include appropriate behavioural display and/or expectations about the social roles of each gender (Gushue & Whitson, 2006). This has been referred to as gender role orientation (Barry & Beitel 2006; Bem, 1974; Eagly & Steffen, 1984). There is consensus among some researchers that gender role orientation exists on a continuum ranging from Modern Sex Role Orientation (MSRO) to Traditional Sex Role Orientation (TSRO) (Barry & Beitel 2006; Bem, 1974; Eagly & Steffen, 1984).

Researchers have highlighted the role of socialisation in the formation of gender role orientation, the development of attitudes towards the genders (Langlois & Downs, 1980; Lytton & Romney, 1991; Martin & Halverson, 1981; Martin, Ruble, & Szkrybalo, 2002; Talbani & Hasanali, 2000), and the formation of gender stereotypes. Social role theory has also been used to explain the formation of gender role orientation. For example, researchers such as Bem (1974) and Wood and Lindorff (2001) have used social role theory to explain the way in which gender roles influence the formation of gender stereotypes, the qualities that the members of each gender would like to possess, and the social roles that members of each gender would like to play. Bussey and Bandura's (1999) Social Cognitive Theory (SCT) of gender development and differentiation explains how gender develops. This theory describes how cognitive constructs, biological underpinnings and socio-structural factors interact and influence each other to produce gender typed behaviours. The theory borrows from Bandura's (1986) SCT theory which explains how the individual's biological preparedness, his/her modelling experiences and self-standards, and also his/her anticipated outcomes, as governed by past success or failure in producing gender-typed behaviours, play an important role in the emergence and maintenance of gender typed behaviours (Martin *et al*., 2002).

One's biological make-up may further interact with socialisation and cognitive constructs to produce gender stereotypes, attitudes towards the genders, and gender role orientation. For example, Wood and Lindorff (2001) have revealed how gender stereotypes may lead to differences in the career progress seeking behaviours of both males and females. However, as a result of the fact that gender stereotypes reflect the

perceiver's observations of what people do in daily life (Eagly & Steffen, 1984), gender role attitude may change if what people do in daily life changes. For example, in a study designed to determine cohort changes in gender-role attitudes, university students were tested in 1972, 1976, 1980, and 1992. The results of these studies showed that, although men were more consistently traditional in their attitudes than women, all the groups across the years showed increased egalitarian attitudes towards gender roles (Spence & Hahn, 1997). These findings, as well as Eagly and Steffen's (1984) theoretical arguments, imply that because there is increased representation of women in the workplace, people may have a more egalitarian view of gender roles. By similar logic, one may argue that, because of the scarce representation of women in traditionally male domains such as occupational prestige (Exline & Lobel, 1999; Olsson & Walker, 2003), and fields such as engineering and technology (Wilson-Kovacs, Ryan, & Haslam, 2006), people may express negative attitudes towards women in such domains and fields.

Role congruity theory (Eagly *et al*., 2000; Eagly & Karau, 2002) offers a slightly different perspective on the way in which socialised gender roles may adversely affect females in the workplace. This theory may be interpreted in terms of the following question: In view of the fact that gender roles encompass consensual beliefs about the attributes of the two sexes (Eagly & Karau, 2002), what would happen if a member of the opposite sex occupied the social role that is not consistent with his/her sex category? According to this theory, socialised gender roles may spill over into organisational roles and, thus, impact negatively on the career progress of women. This theory extends further than social role theory by specifying key factors and processes that influence congruity perceptions, and the consequences of such for both prejudice and for prejudicial behaviours (Eagly & Karau, 2002). The theory explains that, because people tend to hold dissimilar beliefs about leaders and women, while they hold similar beliefs about leaders and men (Bosak & Sczesny, 2011), being a woman leader may elicit thoughts of incongruency for some individuals. Depending on how such individuals react to such incongruencies, this may pose a threat to the female outperformer.

It has been argued that TSRO is able to position men in the role of the provider with formal executive power and women in the role of the nurturer with referent power (Barry & Beitel, 2006; Judge & Livingston, 2008). As compared to the TSR, MSR ideologies do not recognise differences between male and female roles and, instead, emphasise role flexibility for both males and females (Larsen & Long, 1988). Wood and Lindorff (2001) went on to suggest that men and women's different beliefs, attitudes and values may work either concurrently or individually to impact on their promotion-seeking behaviours. Gushue and Whitson (2006) examined the way in which gender role attitudes and ethnic identity may be related to career decision self-efficacy and traditional career choice goals. Their results generally showed that career decision self-efficacy fully mediated the influence of egalitarian, gender role attitudes on gender traditionality in career choice goals. Promotion and working in a traditionally male domain are two examples of situations that may position women as the targets of upward comparison. Consequently, if the woman is traditional as regards her gender role orientation, career advances or advantages this may result in her experiencing STTUC. This may occur because success is commonly attributed to agentic tendencies (assertiveness, material success, toughness, ambition and independence) which are commonly associated with men (Hofstede, 2001; Wood & Lindorff, 2001).

Research further suggests that people with agentic tendencies have stronger motivation for achievement and value higher performance (Yoo & Naveen, 2002). While a stronger motivation as regards achievement has been commonly associated with men, other researchers have demonstrated that women with more modern gender role orientations tend to possess higher levels of aspiration and expectations than women with traditional gender role orientations (McWhirter, Hackett & Bandalos, 1998; O'Brien & Fassinger, 1993). Gender role orientation may, therefore, explain the difference between those females who experience STTUC and those who do not. Specifically, in the context of outperformance, women with TSRO may experience STTUC as compared to those with MSRO. In contrast, for men, TSRO may negatively predict the experience of STTUC. Thus, TRSO may work on its own or in conjunction with other variables to influence the

way in which an individual reacts to being the target of upward comparison. Based on the concepts presented above the following propositions were formulated:

Proposition 3a: *A direct positive relationship exists between the traditional gender role orientation of female outperformers and their experiences of STTUC.*

Proposition 3b*: A direct negative relationship exists between the traditional gender role orientation of male outperformers and their experiences of STTUC.*

Proposition 3c*: A direct positive relationship exists between female outperformers' perceptions of the significant others' traditional gender role orientations and experiences of STTUC within female outperformers.*

3.3.2 Collectivistic cultural orientations

The nature of social comparison is such that an individual positions the self-relative to others on a continuum which ranges from upward to downward comparisons and/or a continuum which ranges from contrastive to connective comparisons (Locke, 2003). In view of the fact that culture influences the attitudes, beliefs, behaviours, perceptions, and evaluations of experiences of individuals, it is also likely that culture will influence where the individual places either himself/herself or others, and also the way in which the individual will react to where he/she and/or relevant others are positioned.

Culture also has many different dimensions. According to Matsumoto and Juang (2004), the individualism–collectivism dimension of culture describes the degree to which a culture focuses on the needs and preferences of either individuals (i.e. individualism) or of groups (i.e. collectivism). Compared to people in individualistic cultures who tend to value individual recognition of their performance, people in collectivistic cultures tend to be both more interdependent and to work for the common good of the group (Hofstede, 1980; Hofstede & Hofstede, 2005; Triandis, 1989; Triandis & Gelfand, 1998). In individualistic cultures, the personal accomplishments achieved through work may be

perceived as an achievement of personal ambition (Yang *et al*., 2000) while, in collectivistic cultures, identity is embedded in the social systems, for example, the organisation, family and/or any other group to which the individual belongs. In such a social system, interdependence and harmony among group members are emphasised (Cheung & Halpern, 2010; Markus & Kitayama, 1991). It has also been suggested that individuals in collectivistic cultures may be motivated to fit in and adjust themselves to the expectations and needs of others (Morling, Kitayama, & Miyamoto, 2002). For example, it has been shown that some Asians (who are commonly profiled as collectivistic) may show dissonant effects when their performances are publicised because the accompanying public scrutiny may produce concerns about possible interpersonal rejection (Kitayama, Snibbe, Markus, & Suzuki, 2004).

In the Setswana culture, which can also be described as collectivistic in orientation, it is common to hear both men and women stating that *ga dike di etelelwa ke namagadi pele* − a woman is not supposed to lead a group (Pheko, 2009) or *monna thogo ya lolwapa* − a man is the head of the family (Mookodi, n.d.). Therefore, when women who have been exposed to such cultural teachings are placed in the position of outperformers, they may anticipate some type of threat related to their personal achievements.

STTUC reactions may be understood as a form of dissonance. Hoshino-Browne, Zanna, Spencer, Zanna, Kitayama, and Lackenbauer (2005) suggest that culture may shape the situations in which dissonance is aroused. This is as a result of the fact that one's cultural orientation influences expectations and, when an individual's behaviour departs from such expectations, the individual may experience dissonance. Research has also shown that cultural beliefs, values and norms may also influence the experience of work and family issues, and the extent to which the self, one's work, and one's family are perceived and experienced as either independent or interdependent (Schein, 1984). Researchers such as Kitayama *et al*. (2004) also explained that the potential rejection by liked significant others would be significantly more threatening to interdependent selves than to people with independent selves.

A collectivistic cultural orientation, in particular, may predict negative consequences of outperformance in respect to women. According to Hoshino-Browne *et al*. (2005, p. 294), "individuals encounter a myriad of choices every day ranging from very simple decisions … to more difficult ones … Sometimes people have to make choices not only for themselves but also for their family members or close friends". For women outperformers, such choices may be influenced by the fact that culture defines the social expectations in respect of men's and women's roles (Cheung & Halpern, 2010). For example, when the hierarchical norms of husband and wife were reversed, it was found that Chinese female leaders were sensitive to the way in which their husbands may lose face and, consequently, they took actions to obviate such situations. Thus, because both history and cultural values affect society's acceptance of women in the workforce (Caligiuri & Tung, 1999), this study suggests that collectivistic cultural orientations may predict women's experiences of STTUC. Accordingly, the following propositions were formulated.

***Proposition 4a**: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers and their experiences of STTUC.*

***Proposition 4b**: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers and their experiences of STTUC.*

***Proposition 4c**: A direct positive relationship exists between female outperformer's perceptions of their significant others' collectivistic cultural orientations and experiences of STTUC within female outperformers.*

3.4 Personality Factors

Personality has been revealed as an important predictor of work-related attitudes (Hulin & Judge, 2003) with several researchers showing that certain personality traits may play a role in comparison processes (Buunk & Gibbons, 2007; Exline & Lobel 1999; Exline *et al*., 2004; Exline & Zell, 2012; Henagan, 2006). Specifically, Exline and Lobel (1999) argue that, because STTUC distress is interpersonal, people should experience more

intense STTUC distress to the extent that they are interpersonally attuned, attentive to negative interpersonal situations, and highly motivated to avoid such events.

For example, Exline *et al*. (2004) investigated the relationship between desire for public recognition and three personality traits, namely, competitiveness, sociotropy, and narcissism. Their results revealed that competitiveness was associated with a greater expectation of negative responses from peers; sociotropy was associated with concern about both positive and negative peer responses; and narcissism was associated with both the desire for public recognition and with less concern about being the target of envious hostility. Previous research also suggests that people are more susceptible to STTUC when they perceive the outperformed as susceptible to the negative effects of upward comparison (Exline & Lobel, 1999). In this study, need for affiliation (n-Aff), the interpersonal sensitivity dimension of sociotropy, and competitiveness were investigated as personality variables which may be relevant to STTUC.

3.4.1 Need for affiliation

Social relations are both important and critical as people may use them in order to evaluate their own actions, attitudes and personal attainments (Baron & Pfeffer, 1994). According to Walton and Cohen (2007, p. 94), “[o]ne of the most important questions that people ask themselves in deciding to enter, continue, or abandon a pursuit is, “Do I belong?” Social bonds may also be used as sources of satisfaction and fulfilment (Denissen, Penke, Schmitt, & Van Aken, 2008). Social bonds may also serve to provide the individual with emotional, instrumental, and informational support. For example, researchers have shown that strong networks of family ties may facilitate the survival, health, and well-being of certain groups of people through the reciprocal sharing of resources, information, and emotional support (Brown, Gary, Greene & Milburn, 1992). In their study, Brown *et al*. (1992) showed specifically that individuals with greater family closeness, more religious involvement and a greater number of voluntary associations reported lower levels of depressive symptoms.

According to Leary (2007), people are also attuned to indications that other people may not value them as social interactants, group members and/or relationship partners. For the individual who is STTUC, outperformance may cause the outperformer as if he/she were neglecting his/her social relations. Therefore, in the context of STTUC, while outperformers may be motivated to enhance themselves (Exline & Lobel, 1999; Juola-Exline, 1998) in the domains of achievement, they may also be sensitive to the quality of their social bonds (Walton & Cohen, 2007), thus resulting in their experiencing STTUC when such bonds are threatened. This may occur because the outperformer's behaviour is influenced by what he/she perceives to be the thoughts, feelings, and actions of the outperformed individuals (Markus & Kitayama, 1991).

McClelland's (1987) motivation theory identified the need for achievement (n-Ach), need for affiliation (n-Aff), and need for power (n-Power) as important factors in motivating individuals in respect of certain patterns of behaviour. Researchers have subsequently been able to show that women may have higher n-Aff than men (Boneva, Frieze, Ferligoj, Jarsova, Pauknerová & Orgocka, 1998), even in young children (Query, Query & Singh, 1975).

In view of the fact that people high in n-Aff tend to receive gratification from harmonious relationships with others, one may also assume that these individuals possess desirable qualities, especially within the context of organisations. In particular, they may be capable of working well with other team members and organisational members. For example, n-Aff has been shown to have a positive impact on organisational citizenship behaviour and organisational identification. In a study conducted by Wiesenfeld, Raghuram and Garud (2001), n-Aff was significantly and positively related to the organisational identification of virtual workers. In addition, Johnson's (2008) study indicated a positive relationship between n-Aff and the self-ratings of organisational citizenship behaviour. In the same study, even when individuals with high n-Aff perceived that organisational culture and leadership support were low, they still tended to report higher citizenship behaviours as compared to individuals with lower n-Aff.

Generally, individuals with strong n-Aff are sensitive to the availability of social support and, because they may have an interdependent view of the self, they tend to be deeply concerned about separation from relatives or friends. This, in turn, may have implications for the way in which they perceive standing out from others. Markus and Kitayama (1991) explain that, for individuals with interdependent self-construals, the individual self may, on certain occasions, cease to be the primary unit of consciousness. This occurs because, for such individuals, other people within their social context may comprise an integral part of the setting, situation, and/or context to which the self is connected, fitted, and assimilated. Because of this interdependence, such an individual may be sensitive to interpersonal harm and this appears to be crucial to how guilty they may feel about the consequences of their actions (Baumeister, Stillwell & Heatherton, 1994; McClelland, 1987), including the consequence of outperformance. Situations that threaten an individual's social connectedness may have an impact on the motivation of those who are challenged by a threatened social identity (Walton & Cohen, 2007). In the area of STTUC, this threat may be either real or perceived and may lead to what MacDonald and Leary (2005) term *social pain.* Social pain theory suggests that there are specific emotional reactions to the perception that one is being excluded from desired relationships or that one is being devalued by desired relationship partners or groups.

In line with the above discussion, it may be easier for individuals with high n-Aff to perceive that the need to attend to others and to create harmonious interdependence with others may be somewhat threatened by outperformance. This may, in turn, lead to their experiencing STTUC. Thus, the following propositions were formulated:

Proposition 5a: *A direct positive relationship exists between the n-Aff of outperformers and their experiences of STTUC.*

Proposition 5b*: A direct positive relationship exists between female outperformers' perceptions of their significant others' n-Aff and experiences of STTUC within female outperformers.*

3.4.2 Interpersonal sensitivity

Sociotropy (social dependency) has been defined by Robins, Ladd, Welkowitz, Blaney, Diaz, and Kutcher (1994) as excessive concern about interpersonal relationships and by Clark, Steer, Beck, and Ross (1995, p. 325) as "… an investment in positive interactions with others."

People who achieve score high scores in sociotropy are characterised by a dependence on social feedback for gratification and support (Bieling Beck, & Brown, 2000); the belief that others should accept and love them (Clark *et al*.,1995); and an overvaluing of close interpersonal interactions involving, intimacy, empathy, social relatedness, approval of others, affection, protection, and guidance (Beck, 1987). Beck (1983) also explained that, upon perceiving loss of social relation or perceived rejection by others, those individuals scoring high in sociotropy may experience a so called sociotropic depression.

This study will focus on a dimension of sociotropy which is known as interpersonal sensitivity. This dimension of sociotropy involves both the fear of hurting others and fear of being rejected by others (Sato, 2003). Individuals who achieve high scores in the interpersonal sensitivity dimension of sociotropy (Robins *et al*., 1994) have also been shown to achieve high scores in STTUC (Exline & Lobel, 1999; Exline *et al*., 2004; Henagan, 2006).

Researchers such as Exline and Lobel (1999), Exline *et al*. (2004) and Henagan (2006) have also revealed that people who score high in interpersonal sensitivity are likely to be extremely concerned with both the way in which their peers respond to them and whether those responses are either positive or negative. They are also likely to expend considerable effort into maintaining smooth interpersonal relationships. In their study, Gorski and Young (2002) also found that sociotropy and interdependence were related, regardless of gender, thus showing that people high in sociotropy possess cognitive schemas that are based on dependency on and acceptance by others. This may occur because an individual may be motivated to behave in ways that maintain relationships

with others and avoid disapproval by peers, family, and other individuals within their social context (Gorski & Young, 2002).

In a study investigating the moderating effects of sociotropic cognition on stress-induced cardiovascular responsiveness, Sauro, Jorgensen, Larson, Frankowski, Ewart, and White (2001) found that people scoring high in sociotropy demonstrated a higher stress-induced cardiovascular responsiveness than those scoring low in sociotropy. They also revealed that, with tasks involving threats of social evaluation, the participants were likely to experience increased blood pressure. Such findings may explain the suggestions that certain relationships may activate sociotropic cognitions and behaviour, including fear of rejection, thoughts of social undesirability, and feelings of loss and reassurance seeking (Gorski & Young, 2002).

In view of the fact that these sociotropic outperformers may be interpersonally attuned, they are also likely to be aware of the possible negative consequences that may result from outperformance (Henagan, 2006). This, in turn, may render them more susceptible to experiencing STTUC. Accordingly, based on the above discussions, the following propositions were formulated:

***Proposition 6a**: A direct positive relationship exists between the interpersonal sensitivity of outperformers and their experiences of STTUC.*

***Proposition 6b**: A direct positive relationship exists between female outperformers' perceptions of their significant others' interpersonal sensitivity and experiences of STTUC within female outperformers.*

3.4.3 Competitiveness

The outperformer's degree of competitiveness may also predict his/her experiences of STTUC. Spence and Helmreich (1983) conceptualised trait competitiveness as an aspect of personality that involves the desire to win and to be better than others. However, researchers have warned that research on competitiveness may yield better

results if competitiveness is viewed as a multidimensional construct (Houston, McIntire, Kinnie, & Terry, 2002). Houston *et al*. (2002) administered 10 different paper-and-pencil measures of competitiveness to the same sample. The factor analysis results of their study revealed evidence of two factors that were labelled Self-Aggrandisement (SA) and Interpersonal Success (IS). The SA factor included items which portray competition as a way of validating one's own superiority while the IS factor contained items which offer a neutral view of others, but which stressed the benefits of competitiveness. The literature also suggests that males may be more competitive than females. For example, in a study testing the impact of trait competitiveness on the social and psychological adjustment of both males and females, Hibbard and Buhrmester (2010) found that the males scored higher on competing to win/dominate others than the females, although there were no gender differences in respect of competing to excel/surpass personal goals. For females, competing to win was associated with greater depression and loneliness while, for both males and females, competing to excel was associated with higher self-esteem and less depression.

Research findings on the association between competitiveness and performance are both contradictory and complex. For example, a study conducted by Brown *et al*. (1998) showed that individuals scoring low in trait competitiveness set relatively low goals both in highly competitive organisational climates and in non-competitive organisational climates. However, individuals high in trait competitiveness set higher goals only when they perceived the organisational climate to be competitive. Other studies have revealed that trait competitiveness is negatively related to modesty, morality, straightforwardness, sympathy, and tender-mindedness (Fletcher & Nusbaum, 2008). In their study, Standage, Duda, and Pensgaard (2005) noted differences in the participants' responses to task motivation (i.e. where one participates in competition to increase productivity as regards completing the task at hand) and ego-motivation (i.e. where one engages in competition to compare one's performance with the performance of others in order to feel superior and more competent). It was found that those participants who scored higher in ego-motivation experienced more negative affect and lower need satisfaction as compared to those who scored higher in task motivation.

Competitive individuals are also more likely to project their competitiveness onto other individuals and to believe that being recognised for superior achievement will elicit hostile reactions in their peers (Exline *et al*., 2004). For example, goal achievements in competitive organisational climates may be negatively correlated with performance because the individual may perceive that, when he/she performs better, all the others who were part of the goal failed to achieve the set goal (Tjosvold, Johnson & Sun, 2006). This, in turn, may result in the individual who attained his/her goals experiencing STTUC. Another factor to consider in outperformance is the effects of competition between men and women. This type of competition may result in the possible violation of sex role expectations and also the violation of male superiority (Peplau, 1976), thus leading to the female outperformers experiencing STTUC. Based on the arguments presented above, the following propositions were formulated:

Proposition 7a: *A direct positive relationship exists between the outperformers' competitiveness and their experiences of STTUC.*

Proposition 7b*: A direct positive relationship exists between female outperformers' perceptions of their significant others' competitiveness and experiences of STTUC within female outperformers.*

3.5 Family-Work Variables

Research suggests that career development and progression may be determined by a wide range of variables that reflect the ongoing interaction between people and their social contexts (Gushue & Whitson, 2006). One such example is the interaction between family and work. Similar to the other variables in this study, there has been limited research directly investigating the way in which family-work variables such as family-work-conflict (FWC) and work-family-conflict (WFC) may be related to STTUC. Thus, as a result of this lack of research, these variables were included in the current study in order to explore and expand the research investigating these relationships. Researchers such as Exline and Lobel (1999; 2001), Festinger (1954), and Tesser (1988) have suggested that social comparisons may, in particular, characterise those

interpersonal relationships in which individuals are concerned with the way in which their performance may be judged by the close other. This results from the fact that the nature of human pair bonding suggests that performance considerations may play some role in the development and evaluation of relationships (Beach *et al*., 1996). The family-work variables investigated in this study included instrumental support from the spouse/partner and FWC.

3.5.1 Family-Work-Conflict (FWC)

According to Netemeyer, Boles, and McMurrian(1996), family and work constitute the important focal points of adult life. However, these two domains are not always compatible and there may be conflict between the individual's work and his/her family life (Netemeyer *et al*., 1996). Netemeyer *et al*. (1996) further explain that strain-based conflicts may exist when the strain created by work or family role interferes with either work performance or family responsibilities while time-based conflict may arise when the amount of time devoted to either the work or the family role interferes with the carrying out of family or work related responsibilities. The antecedents of work-family and family-work conflict have been sought mainly in situational factors, including long working hours, number of children, and work and family overload (Rantanen, Pulkkinen, & Kinnunen, 2005). Rantanen *et al*. (2005) further emphasised that factors pertaining to individuals have received far less attention both as antecedents of or as moderating factors between work and family domains and psychological distress. Livingston and Judge (2008) also suggested that the literature on FWC and WFC lacks research on specific emotional responses to such conflict (Livingston & Judge, 2008). Other research findings have associated the FWC and WFC conflicts with emotions such as depression, psychosomatic symptoms and anxiety (Parasuraman, Purohit, Godshalk & Beutell, 1996). Livingston and Judge (2008) also revealed that FWC conflict may be positively related to guilt through interactions such as gender role orientation.

This study has contributed to this under-researched area by investigating whether FWC explains the variance in STTUC. Greenhaus and Beutell (1985) defined work-family conflict as a situation in which the demands of work and family roles are mutually

incompatible and exceed the resources available to the individual to manage these roles. Other researchers, such as Carlson, Kacmar, and Williams (2000), have conceptualised the two dimensions − work interfering with family life (WIF) and family interfering with work life (FIW) − as distinct experiences in terms of, when family interferes with work, family is presumed to be the primary cause of the conflict, and vice versa (Boyar, Carr, Mosley, & Carson, 2007; Mesmer-Magnus & Viswesvaran, 2005).

Current research has focused specifically on FWC, which has been defined as a form of inter-role conflict in which the time devoted to family and the strain created by the family both interfere with carrying out work-related responsibilities (Boyar *et al*., 2007; Netemeyer *et al*., 1996). Boyar *et al*. (2007) further indicated that, even when an individual brings work home or vice versa this may not be experienced as a conflict unless there is a negative spillover (either family or work activities are inhibited). Other researchers such as Van Daalen *et al*. (2006) have also revealed that social support from spouses and from colleagues is related to FWC and not to WFC, thus indicating that the two constructs are distinct from each other.

While it is believed that men and women love their families and children equally, "women generally continue to perform primary care-giving to children and dependents while simultaneously juggling the demands of their workforce participation and their career development issues, concerns, tasks, and responsibilities" (O'Neil & Bilimoria, 2005, p. 169). Multiple stressors − a variable conceptually similar to work-family conflict − have been be related to lowered levels of subjective career success (Aryee & Luk, 1996; Peluchette, 1993). Research has also revealed that exhaustion tends to be more prevalent in women than in men and that women also tend to suffer from job strain more often than men (Canivet, Östergren, Lindeberg, Choi, Karasek, Moghaddassi & Isacsson, 2010). Furthermore, in families which are characterised by traditional sex role orientations, women are usually expected to carry out the role of homemaker (Gutek, Nakamura & Nieva, 1981). It is, therefore, likely that both socialisation and the traditional view of gender roles will affect men and women's perceptions of their work experiences differently. For example, Gutek, Searle, and Kelpa (1991) explain that the

TSR view may affect both men and women's perceptions of work-interference-with-family (WIF) and family-interference-with-work (FIW) differently. It has also been widely suggested that family-work-conflict and work-family-conflict are among the factors that may inhibit the progress of women (Greenhaus, Parasuraman & Collins, 2001; McMahon, Limerick, Cranston & Andersen, 2006; Moore, Sikora, Grunberg & Greenberg, 2007; O'Neil & Bilimora, 2005).

As the research which was reviewed indicates, FWC has been primarily investigated as a dependent variable with researchers investigating factors that may predict FWC. However, this study takes up a different stance by investigating FWC as a predictor of STTUC. It is important also to highlight that the relationships between the experiences of STTUC and FWC are likely to be gendered, and also affected by other family-work variables (e.g. support). For example, in a study which analysed, according to gender, how WFC and FWC were related to exhaustion, Canivet *et al*. (2010) found that WFC and FWC remained statistically significant risk factors for exhaustion in both men and women. Specifically, WFC and FWC contributed 22 per cent explanatory power of the the variance in women and 14 per cent of the the variance in men (Canivet *et al*., 2010). In another study, Van Daalen *et al*. (2006) found that social support from both spouses and from colleagues was related to FWC conflict but not to WFC. This further reveals the complexity of the relationship between the two variables.

Despite the limited research investigating direct links between FWC and comparison processes it is, nevertheless, conceivable that work and family conditions are likely to influence both the attitudinal and behavioural reactions to being the target of upward comparison in either domain. In addition, it is also conceivable that FWC may explain variance in STTUC because, for outperformers to experience that family is interfering with work; they may already be feeling that they are not giving their families enough time and attention. It is, therefore, conceivable that the perception of such conflicts may possibly elicit STTUC experiences, particularly as regards women. The following propositions were, therefore, formulated:

Proposition 8: *A direct positive relationship exists between outperformers' experiences of FWC and their experiences of STTUC.*

3.5.2 Instrumental support from the spouse/partner

"Do people have better career chances if they have a partner?" (Verbakel & De Graaf, 2008 p. 8) and/or does it matter what type of support the partner provides? Such questions are important because it is undeniable that the problems encountered in combining work and family responsibilities may cause stress in a significant number of working people (Van Daalen *et al*., 2006) and, as a result, these people would probably require social support.

Seiger and Wiese (2009) explain that social support represents a key social resource which may be instrumental in protecting existing resources and obtaining new resources by enabling an individual to feel cared for, loved, and valued (King, Mattimore, King & Adams, 1995). Based on Ezzedeen and Ritchey's (2008) description of stress as an incongruence between environmental problems and coping resources it is possible to begin to understand the way in which social support, in general, may constitute a critical coping resource. The presence of social support may be perceived as an indicator that the individual feels his/her family is aware of the demands that he/she is facing at work (Matthews, Bulger & Barnes-Farrell, 2010). Accordingly, the easier answer to the question as to whether people have better career chances if they have a partner may be: "It depends on several different factors." Firstly, it may depend on the nature of the partner. Baumeister and Leary (1995) argue that, compared to interactions with changing relationship partners, a stable relationship with one partner is expected to satisfy the need to belong. Secondly, it may depend on the nature of the relationship or the supportiveness of the partner because a supportive spouse may reinforce acceptance or tolerance of negative events (Mead, 2002). For example, in their study, Phillips-Miller, Campbell, and Morrison (2000) revealed empirically that balancing work and family life may depend on the supportiveness of the spouse.

In addition to understanding the nature of the relationship and the supportiveness of the partner, it is also important to understand the benefits that a partner may offer. There is much evidence to show that spouses may represent an important source of support for their partners (e.g. Carlson & Perrewé, 1999; Ezzedeen & Ritchey, 2008; King *et al*., 1995).

In general, social support has been shown to affect certain work related outcomes and activities. For example, it has been shown that the support of spouses is positively associated with work-family balance and with life satisfaction for women (Gordon & Whelan-Berry, 2004). For example, in a study investigating antecedents to work-family and family-work enrichment, Wayne, Randel, and Stevens (2006) revealed that emotional support from one's family strongly predicted family-work enrichment. Van Daalen *et al*. (2006) investigated the relationship between four sources of spousal support, namely, support from relatives, friends, supervisors, and colleagues, and time and strain-based work-to-family and family-to-work conflict. Their results indicated that social support from the spouse was related to family-to-work conflict and that women who felt strongly supported by their environments were less affected by the strains and stressors.

In a study conducted by Matthews *et al*. (2010), family support was found to be negatively related to family-to-work conflict with the relationship being significantly stronger for people in the middle age group. In another study, Seiger and Wiese (2009) found that partner support predicted domain specific strain experiences, thereby influencing work-to-family and family-to-work conflicts. From a role demand or role conflict perspective the relationships between work demands and social support may arise because a supportive spouse may help with child care (Rao, Apte & Subbakrishna, 2003), household activities, and any other household demands. This buffering nature of social support will interact with stressors or strains to lessen their impact (Seiger & Wiese, 2009) and may prevent role demands from translating into work–life conflicts (Carlson & Perrewé, 1999).

The theoretical arguments and empirical evidence presented above warrant further investigation into the ways in which support may relate to other work and family factors. In addition, in view of the fact that it is generally accepted that labour at home is still gendered and this has been noted as negatively affecting the career experiences and performance of women, it remains an important issue to pay special attention to women (Aryee & Luk, 1996). Aryee and Luk (1996) further argue that, for married women, the encouragement and support provided by partners/spouses may enhance the wife's resilience in the face of work-role difficulties. Baumeister and Leary *(*1995) posit that belongingness motivation should be considered a fundamental motive that is not diminishable as compared to other motives. They argue that if the need to belong is either not fulfilled or is being challenged, the individual concerned may experience a lack of frequent, positively valenced social interactions and also a feeling of not being cared about. In addition, being in an unsupportive relationship may cause an individual to feel as if his/her need to belong is either not being fulfilled or is being challenged.

The specific type and nature of social support may also influence the relationship between support and other work related factors. For example, Ezzedeen and Ritchey (2008) found that the most valued behaviours on the part of spouses include emotional support, esteem support, help with family members, career support, and support in the household. Researchers have focused primarily on two types of social support, namely, emotional and instrumental support while this study focused primarily on the instrumental support component of social support. King *et al*. (1995) define instrumental support as behaviours and attitudes on the part of family members that are meant to accommodate the employee's work requirements by relieving the individual concerned of some of the household activities and expectations.

While the studies on social support overwhelmingly suggest that feeling cared about and supported in one's work and family environments is critical to certain experiences at work it is, nevertheless, essential that there be more investigations into such relationships. There is a lack in existing research as regards to the way in which instrumental support may relate to STTUC experiences, especially in terms of women

outperformers. In general, the research suggests that an individual is likely to perceive STTUC when he/she is under the impression that the outperformed is threatened by outperformance. However, a supportive relationship may minimise this experience because the outperforming partner may feel that the supportive partner is encouraging his/her career growth. Accordingly, when taking into account previous research and theoretical considerations, it was hypothesised that instrumental support may negatively predict STTUC experiences. More specifically, the following propositions were formulated:

***Proposition 9**: A direct negative relationship exists between outperformers' experiences of instrumental support and their experiences of STTUC.*

3.6 Organisational Factors

Certain additional organisational factors may predict STTUC experiences. It has been suggested that STTUC distress may be experienced in situations that render comparison issues salient (i.e., by drawing attention to the outperformer's higher performance status), or in situations that exacerbate the threat to the outperformed individual (Exline & Lobel, 1999). For example, Henagan's (2010) study revealed that a competitive psychological climate was a positive predictor of a perceived comparison target threat. It is against this background that this study investigated whether perceptions of the masculinity of the organisational culture may also predict STTUC experiences.

3.6.1 Masculinity of the organisational culture

The nature of a job determines whether coworkers comprise an important system within the work environment (Sherwood, 1988) and vice versa. Co-workers influence organisational culture, and organisational culture influences them. Similar to a national culture, organisational culture represents shared values, beliefs, norms, traditions and behavioural patterns within the employing organisation. Different practitioners and researchers have used a variety of instruments and approaches to the study and

assessment of organisational culture. This study adopted the approach of Hofstede (1980), who posits the following five dimensions of culture, namely, individualism versus collectivism, masculinity versus femininity, short term versus long-term orientation, high versus low power distance, and uncertainty avoidance. In this study it was decided to focus specifically on the masculinity of the organisational culture.

According to Hofstede and Hofstede (2005), masculinity represents a society in which the gender roles are clearly distinct. In masculine societies, men are expected to be assertive, tough, competitive, and focused on material success whereas women are supposed to be modest, tender and concerned with the quality of life. While the above description focuses on society, as does most of Hofstede's research on culture, in this research the description was used to describe an organisational culture. In addition, organisations with a masculine culture are also likely to be characterised by competitive psychological climates.

According to Brown *et al*. (1998), there is a difference between "… employees' perceptions of their organisation's environment," (p. 89) (psychological climate) and ''… the degree to which employees perceive organisational rewards to be contingent on comparisons of their performance against that of their peers,'' (p. 89) (competitive psychological climate). The above definition of a competitive psychological climate emphasises competition as an important aspect of psychological climate. Research has also suggested that individuals vary in their behavioural responses to a competitive psychological climate (Brown *et al*., 1998). For example, in a recent study investigating the antecedents to experiences of comparison target threat by outperformers, it was revealed that, in competitive work contexts, outperformers are more likely to anticipate greater negative peer reactions in response to their successes than they would in less competitive environments (Henagan, 2010). The same study revealed that, in competitive work environments, outperformers with empathic concern and who perceived their coworkers as having experienced an externally focused threat because of engaging in upward comparisons were likely to experience comparison target threat.

In terms of organisational culture, it is possible to understand an outperformer's reaction to outperformance from the perspective of organisation-fit. In view of the fact that individuals are simultaneously nested in multiple systems within the work environment, fit has also been studied at the different environmental levels − person-vocation (P-V); person-job (P-J); person-group (P-G); person-person (P-P) and person-organisation (P-O) fit (Jansen & Kristof-Brown, 2006).

From an organisational culture perspective, the environmental fit that is important is the P-O fit as this is established when individuals share the organisational cultural values. Working from a basic understanding of organisational culture and the STTUC framework it is, thus, reasonable to suggest that competitive organisational cultures may also elicit competitiveness in employees with this competitiveness being even more pronounced in the case of those individuals who are already competitive in nature. For example, one study revealed that those participants who attained high scores in trait competitiveness set higher goals when they perceived the organisational climate as competitive as compared to those participants who attained low scores in trait competitiveness who set relatively low goals regardless of their perceptions of the competitive nature of the organisational climate (Brown, Cron & Slocum, 1998).

Male-dominated fields, which include occupations and professions such as the scientific, engineering and technology domains (Wilson-Kovacs, Ryan,& Haslam, 2006) or higher level positions, for example, leadership or managerial positions (Olsson & Walker, 2003) may also espouse masculine values. Catanzaro, Moore and Marshall (2010) investigated the way in which the beliefs of male and female job applicants about a specific organisation's culture may affect their job hunting and application decisions. They revealed that, compared to women; men were more likely to pursue a job in a competitive organisation. McLean and Kalin's (1994) access discrimination theory suggests that both females and males who enter traditionally male-dominated fields tend to possess more masculine and less feminine self-concepts than those entering traditionally female-dominated fields (Gianakos & Subich, 1988; McLean & Kalin, 1994). This reveals the importance of the P-O fit for individuals within organisations. Other researchers have suggested that women may be facing a situation which is commonly

referred to “damned if you do, damned if you do not”. For example, Moore (1999) argued that, if females display traditionally feminine characteristics in masculine organisations, their behaviours may be labelled as inappropriate. However, if they display masculine characteristics they may be also perceived as either threatening the organisation's social order or contaminating its masculine unity. Accordingly, in masculine organisational cultures, females who do not possess masculine self-concepts may have difficulty in advancing and, when they outperform, they may be more likely to experience STTUC. Thus:

Proposition 10a: *A direct positive relationship exists between the female outperformers' perceptions that an organisation is characterised by masculine culturural values and their experiences of STTUC.*

Proposition 10b*: A direct negative relationship exists between the male outperformers' perceptions that an organisation is characterised by masculine culturural values and their experiences of STTUC.*

3.7 An Integrated Conceptual Model

Further steps were also taken to assess if the selected variables may explain variance in STTUC while taking the existence of all other variables into consideration. Based on the abovementioned theoretical arguments, an integrated conceptual model for investigating the predictors of STTUC was developed and the model is presented in Figure 3.1. The model depicted indicates that the selected variables explain variance in STTUC. The following proposition was also formulated:

Proposition 11: *Collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse, masculine values in an organisational culture, outperformers' perceptions of the outperformed's collectivistic cultural orientation, outperformers' perceptions of the outperformed's traditional gender role orientation, outperformers' perceptions*

of the outperformed's affiliative needs, outperformers' perceptions of the outperformed's interpersonal sensitivity, and outperformers' perceptions of the outperformed's competitiveness predict the outperformer's STTUC experiences.

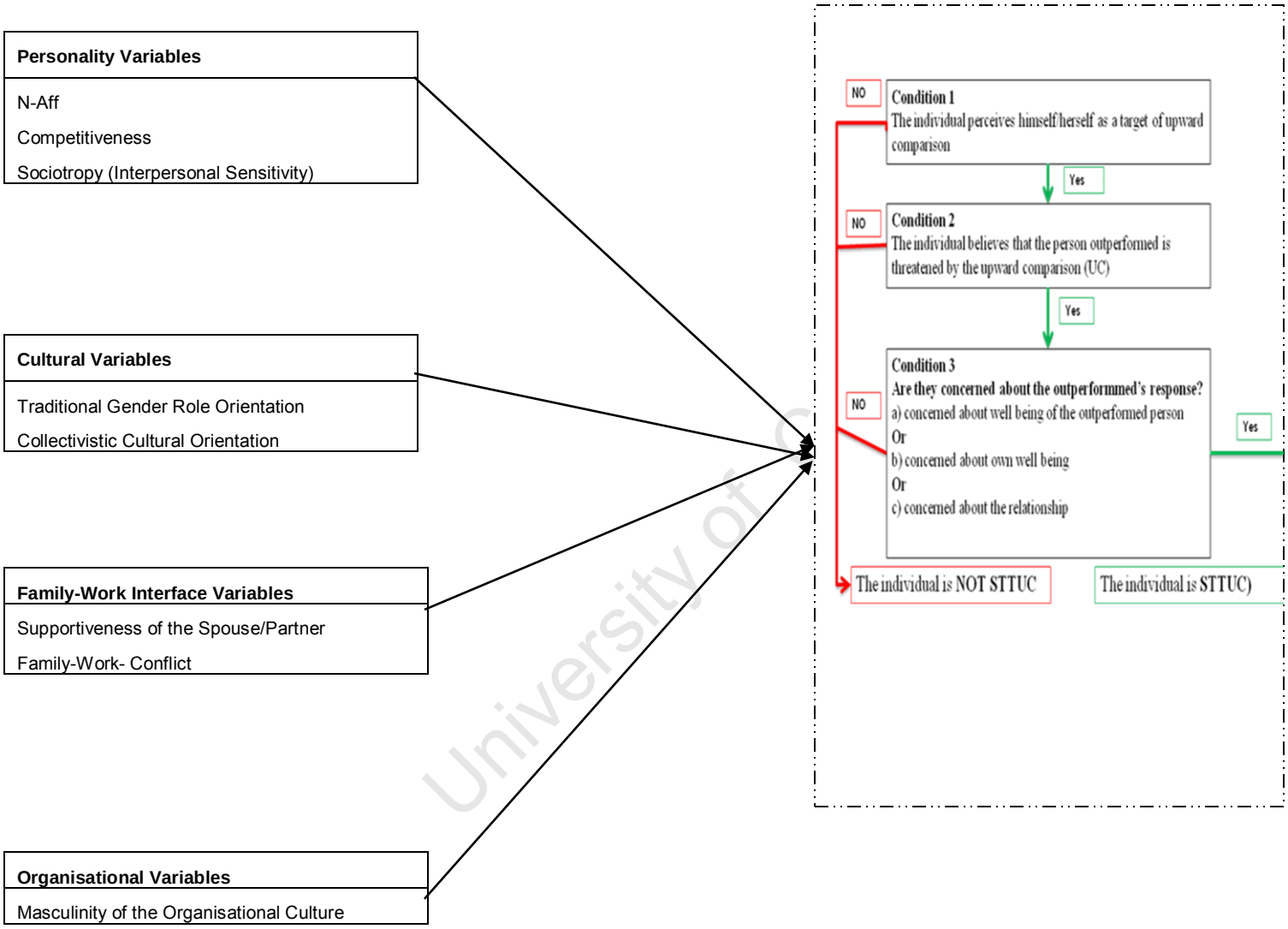

Figure 3.1: The integrated conceptual model under investigation

3.8 A Conceptual Structural Model

The structural model depicted in Figure 3.2 also shows the relationships between the exogenous and the endogenous variables investigated in this study. If it were possible for the model to provide a perfect explanation of the covariance between the indicator variables in the data, then the substantive research hypothesis would translate into the following exact fit, null hypothesis:

Hypothesis Twelve

H_{012}: RMSEA = 0

H_{12}: RMSEA > 0

If exact fit is not possible; the close fit hypothesis would be stated as:

Hypothesis Twelve

H_{012}: RMSEA ≤0

H_{12}: RMSEA > 0

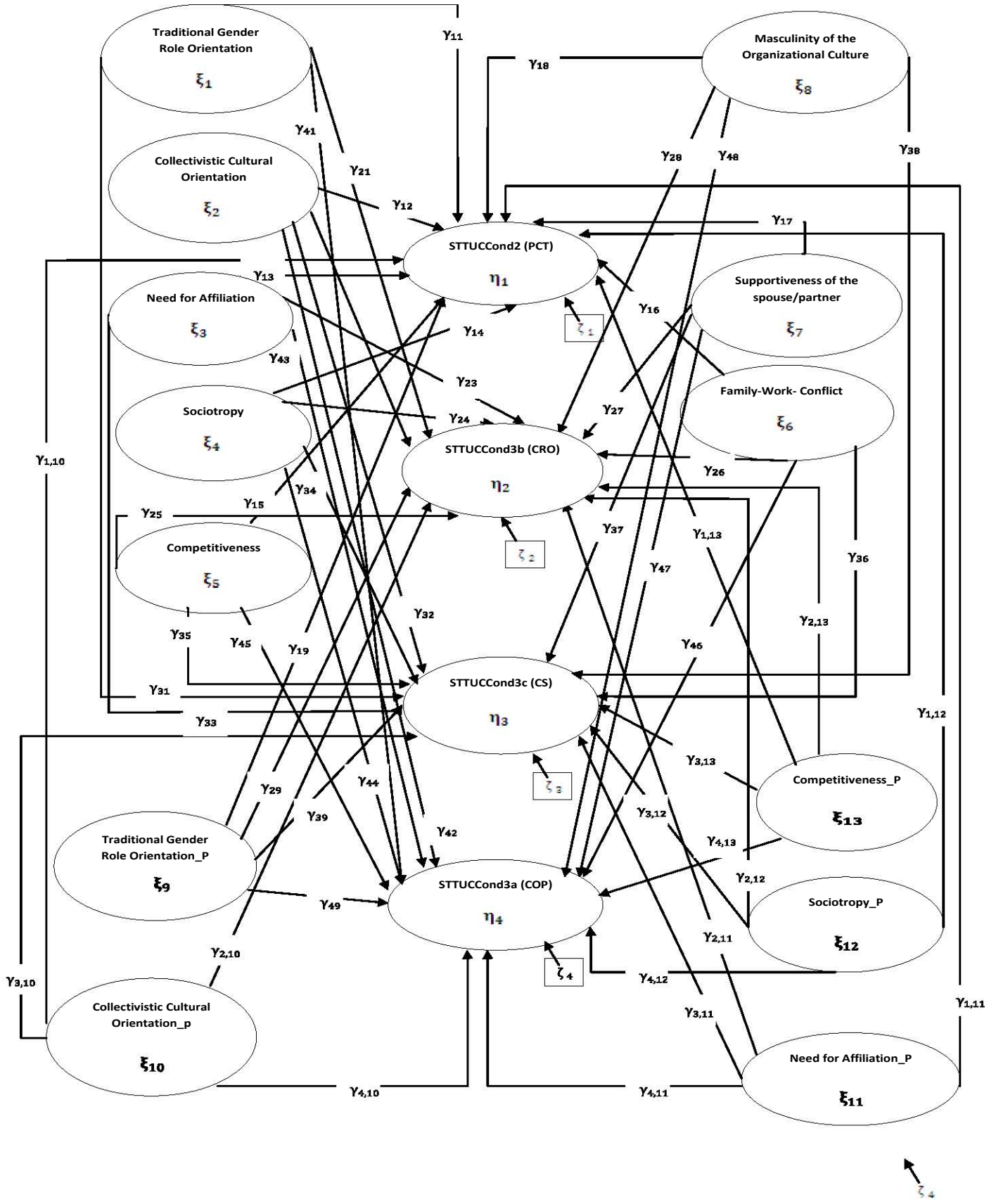

Figure 3.2: The conceptual structural model

3.9 Summary of Chapter 3

While there is burgeoning literature on the factors that may negatively inhibit the career success of women, there is almost no research investigating the factors contributing to STTUC. This research study aims to ease this research gap by examining whether Batswana female employees are more likely to experience STTUC as a result of outperformance than their male counterparts. In addition, as far as the researcher is aware, no empirical research exists which investigates the way in which most of the independent variables, specifically, collectivistic cultural orientation, traditional gender role orientation, n-Aff, instrumental support from the spouse/partner, family-work-conflict and the focus on masculine values within the organisational culture, may be related to STTUC.

This chapter presented both empirical research and theoretical arguments that suggest that the selected variables may either negatively or positively predict experiences of STTUC. This study investigated how characteristics of the outperformer, (i.e, interpersonal sensitivity, competitiveness, n-Aff, collectivistic cultural orientation and traditional gender role orientation), the situational context, (i.e, masculine organisational values), characteristics of the outperformed person, (i.e, his/her perceived interpersonal sensitivity, competitiveness n-Aff, collectivistic cultural orientation, and traditional gender role orientation), and the nature of relationship between the outperformer and the outperformed, (i.e., marital relationship) may work either individually or collectively to elicit STTUC experiences.

CHAPTER 4
METHOD

4.1 Introduction

This chapter discusses the methods which the study adopted to answer the research questions. Thus, the chapter discusses the research design, sampling strategies, data collection procedures, measuring instruments and data analysis techniques which were used.

As discussed in chapter 1, section 1.6.2, the empirical objectives of the study were:

- To compile a valid and reliable STTUC scale that assesses an outperformer's levels of STTUC.
- To investigate whether there are gender differences in STTUC experiences.
- To investigate whether collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict and instrumental support from the partner/spouse, and masculine values within an organisational culture can explain variances in STTUC.
- To investigate whether the outperformer's perceptions of the outperformed individual's characteristics, specifically, collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity and competitiveness, can explain variances in STTUC.

These empirical objectives were realised by conducting a series of statistical analyses which included item analysis, Exploratory Factor Analysis (EFA), independent sample t-tests, Hierarchical Multiple Regression and Structural Equation Modelling analyses.

The dependent variable in the current study was STTUC while the predictor variables were the following:

- the outperformer's individual characteristics, for example n-Aff, interpersonal sensitivity and competitiveness,
- cultural variables, for example collectivistic cultural orientation and traditional gender role orientation,
- the outperformer's perception of the outperformed's individual characteristics,
- supportiveness of the partner/spouse and family-work-conflict , and
- masculinity of the organisational culture.

Several of the data analysis techniques used were specifically selected to test the research hypotheses. For ease of reference, the research hypotheses are presented in section 4.2.

4.2 Propositions and Research Hypotheses

In order to realise the empirical objectives of this study, research hypotheses relating directly to the research propositions outlined in chapter 3 were formulated and are presented below. Appendix C presents a list of the acronyms used in the propositions and hypotheses.

It was explained in section 2.4 of the conceptual framework that, for someone to be classified as STTUC, the last two conditions of the framework are such that the outperforming individual must perceive/believe that the outperformed individual is threatened by the upward comparison (Condition 2: PCT) and the outperforming individual must also be concerned about the outperformed's response. The outperformer should either manifest Concern for the Outperformed Person (Condition 3a: COP), Concern for the Self (Condition 3c: CS) or Concern for the Relationship with the Outperformed (Condition 3b: CRO). As far as it could be ascertained, most of the studies which have been conducted to date have focused on one or two of the areas of concern identified. However, in this study, an effort was made to test whether it was possible for the predictors identified to explain variances in all three areas of concern under Condition 3. Assessing three areas of concern independently resulted further in

the breakdown of the propositions formulated in Chapter 3 into the more detailed and testable hypotheses presented below.

Proposition 1: Women report higher levels of STTUC than men.

Hypothesis 1a: Women report higher levels of PCT than men.

Hypothesis 1b: Women report higher levels of CRO than men.

Hypothesis 1c: Women report higher levels of CS than men.

Hypothesis 1d: Women report higher levels of COP than men.

Proposition 2*:* Married women report higher levels of STTUC than women who are not married.

Hypothesis 2a: Married women report higher levels of PCT than women who are not married.

Hypothesis 2b: Married women report higher levels of CRO than women who are not married.

Hypothesis 2c: Married women report higher levels of CS than women who are not married.

Hypothesis 2d: Married women report higher levels of COP than women who are not married.

Proposition 3a: A direct positive relationship exists between the traditional gender role orientation of female outperformers and their experiences of STTUC.

Hypothesis 3ai: A direct positive relationship exists between the traditional gender role orientation of female outperformers (ξ_1) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 3aii: A direct positive relationship exists between the traditional gender role orientation of female outperformers (ξ_1) and their experiences of CRO (η_2).

Hypothesis 3aiii: A direct positive relationship exists between the traditional gender role orientation of female outperformers (ξ_1) and their experiences of CS (η_3).

Hypothesis 3aiv: A direct positive relationship exists between the traditional gender role orientation of female outperformers (ξ_1) and their experiences of COP (η_4).

Proposition 3b: **A direct negative relationship exists between the traditional gender role orientation of male outperformers and their experiences of STTUC.**

Hypothesis 3bi: A direct negative relationship exists between the traditional gender role orientation of male outperformers (ξ_1) and their perceptions that the outperformed individual is PCT (η_1).

Hypothesis 3bii: A direct negative relationship exists between the traditional gender role orientation of male outperformers (ξ_1) and their experiences of CRO (η_2).

Hypothesis 3biii: A direct negative relationship exists between the traditional gender role orientation of male outperformers (ξ_1) and their experiences of CS (η_3).

Hypothesis 3biv: A direct negative relationship exists between the traditional gender role orientation of male outperformers (ξ_1) and their experiences of COP (η_4).

Proposition 3c: **A direct positive relationship exists between female outperformers' perceptions that their significant others posses traditional gender role and experiences of STTUC within female outperformers.**

Hypothesis 3ci: A direct positive relationship exists between female outperformers' perceptions that their significant others posses traditional gender role

orientation (ξ_9) and the female outperformers' perception that the outperformed individual is PCT (η_1).

Hypothesis 3cii: A direct positive relationship exists between female outperformers' perceptions that their significant others posses traditional gender role orientation (ξ_9) and the experiences of CRO (η_2) within female outperformers.

Hypothesis 3ciii: A direct positive relationship exists between female outperformers' perceptions that their significant others posses traditional gender role orientation (ξ_9) and the experiences of CS (η_3) within female outperformers.

.Hypothesis 3civ: A direct positive relationship exists between female outperformers' perceptions that their significant others posses traditional gender role orientation (ξ_9) and the experiences of COP (η_4) within female outperformers.

Proposition 4a: **A direct positive relationship exists between the collectivistic cultural orientation of female outperformers and their experiences of STTUC.**

Hypothesis 4ai: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers (ξ_2) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 4aii: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers (ξ_2) and their experiences of CRO(η_2).

Hypothesis 4aiii: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers (ξ_2) and their experiences of CS (η_3).

Hypothesis 4aiv: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers (ξ_2) and their experiences of COP (η_4).

Proposition 4b: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers and their experiences of STTUC.

Hypothesis 4bi: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers (ξ_2) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 4bii: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers (ξ_2) and their experiences of CRO (η_2).

Hypothesis 4bii: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers (ξ_2) and their experiences of CS (η_3).

Hypothesis 4bii: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers (ξ_2) and their experiences of COP (η_4).

Proposition 4c: **A direct positive relationship exists between female outperformer's perceptions that their significant others posseses collectivistic cultural orientations and experiences of STTUC within female outperformers.**

Hypothesis 4ci: A direct positive relationship exists between female outperformers' perceptions that their significant others possesses collectivistic cultural orientation (ξ_{10}) and the female outperformers' perception that the outperformed individual is PCT (η_1).

Hypothesis 4cii: A direct positive relationship exists between outperformers' perceptions that their significant others possesses collectivistic cultural orientation (ξ_{10}) and the experiences of CRO (η_2) within female outperformers.

Hypothesis 4ciii: A direct positive relationship exists between outperformers' perceptions that their significant others possesses collectivistic cultural

orientation (ξ_{10}) and the experiences of CS (η_3) within female outperformers.

Hypothesis 4civ: A direct positive relationship exists between outperformers' perceptions that their significant others possesses collectivistic cultural orientation (ξ_{10}) and the experiences of COP (η_4) within female outperformers.

Proposition 5a: A direct positive relationship exists between the n-Aff of outperformers and their experiences of STTUC.

Hypothesis 5ai: A direct positive relationship exists between the n-Aff of outperformers (ξ_3) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 5 aii: A direct positive relationship exists between the n-Aff of outperformers (ξ_3) and their experiences of CRO (η_2).

Hypothesis 5 aiii: A direct positive relationship exists between the n-Aff of outperformers (ξ_3) and their experiences of CS (η_3).

Hypothesis 5 aiv: A direct positive relationship exists between the n-Aff of outperformers (ξ_3) and their experiences of COP (η_4).

Proposition 5b*:* A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff and experiences of STTUC within female outperformers.

Hypothesis 5bi: A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff (ξ_{11}) and the female outperformers' perception that the outperformed individual is PCT (η_1).

Hypothesis 5bii: A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff (ξ_{11}) and the experiences of CRO (η_2) within the female outperformer.

Hypothesis 5bii: A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff (ξ_{11}) and the experiences of CS (η_3) within the female outperformer.

Hypothesis 5biv: A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff (ξ_{11}) and the experiences of COP (η_4) within the female outperformer.

Proposition 6a: A direct positive relationship exists between outperformers' interpersonal sensitivity and their experiences of STTUC.

Hypothesis 6ai: A direct positive relationship exists between outperformers' sociotropy (ξ_4) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 6ai: A direct positive relationship exists between outperformers' levels of sociotropy (ξ_4) and their experiences of CRO (η_2).

Hypothesis 6aiii: A direct positive relationship exists between outperformers' levels of sociotropy (ξ_4) and their experiences of CS (η_3).

Hypothesis 6aiv: A direct positive relationship exists between outperformers' levels of sociotropy (ξ_4) and their experiences of COP (η_4).

Proposition 6b*:* A direct positive relationship exists between female outperformers' perceptions of their significant others' interpersonal sensitivity and experiences of STTUC within female outperformers.

Hypothesis 6bi: A direct positive relationship exists between female outperformers' perceptions that their significant others are sociotropic (ξ_{12}) and the female outperformers' perception that the outperformed individuals are PCT (η_1).

Hypothesis 6bii: A direct positive relationship exists between female outperformers' perceptions that their significant others are sociotropic (ξ_{12}) and the experiences of CRO (η_2) within the female outperformers.

Hypothesis 6biii: A direct positive relationship exists between female outperformers' perceptions that their significant others are sociotropic (ξ_{12}) and the experiences of CS (η_3) within the female outperformers.

Hypothesis 6biv: A direct positive relationship exists between female outperformers' perceptions that their significant others are sociotropic (ξ_{12}) and the experiences of COP (η_4) within the female outperformers.

Proposition 7a: A direct positive relationship exists between outperformers' competitiveness and their experiences of STTUC.

Hypothesis 7ai: A direct positive relationship exists between outperformers' competitiveness (ξ_5) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 7aii: A direct positive relationship exists between outperformers' competitiveness (ξ_5) and their experiences of CRO (η_2).

Hypothesis 7aiii: A direct positive relationship exists between outperformers' competitiveness (ξ_5) and their experiences of CS (η_3).

Hypothesis 7aiv: A direct positive relationship exists between outperformers' competitiveness (ξ_5) and their experiences of COP (η_4).

Proposition 7b: **A direct positive relationship exists between female outperformers' perceptions of their significant others' competitiveness and experiences of STTUC within female outperformers.**

Hypothesis 7bi: A direct positive relationship exists between female outperformers' perceptions that their significant others are competitive (ξ_{13}) and the female outperformers' perception that the outperformed individuals are PCT (η_1).

Hypothesis 7bii: A direct positive relationship exists between female outperformers' perceptions that their significant others are competitive (ξ_5) and the experiences of CRO (η_2) within the female outperformers.

Hypothesis 7biii: A direct positive relationship exists between female outperformers' perceptions that their significant others are competitive (ξ_5) and the experiences of CS (η_3) within the female outperformers.

Hypothesis 7biv: A direct positive relationship exists between female outperformers' perceptions that their significant others are competitive (ξ_5) and the experiences of COP (η_4) within the female outperformers.

Proposition 8: A direct positive relationship exists between outperformers' experiences of FWC and their experiences of STTUC.

Hypothesis 8i: A direct positive relationship exists between outperformers' experiences of FWC (ξ_6) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 8ii: A direct positive relationship exists between outperformers' experiences of FWC (ξ_6) and their experiences of CRO (η_2).

Hypothesis 8iii: A direct positive relationship exists between outperformers' experiences of FWC (ξ_6) and their experiences of CS (η_3).

Hypothesis 8iv: A direct positive relationship exists between outperformers' experiences of FWC (ξ_6) and their experiences of COP (η_4).

Proposition 9*:* A direct negative relationship exists between outperformers' experiences of instrumental support and their experiences of STTUC.

Hypothesis 9i: A direct negative relationship exists between outperformers' experiences of IS (ξ_7) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 9ii: A direct negative relationship exists between outperformers' experiences of IS (ξ_7) and their experiences of CRO (η_2).

Hypothesis 9iii: A direct negative relationship exists between outperformers' experiences of IS (ξ_7) and their experiences of CS (η_3).

Hypothesis 9iv: A direct negative relationship exists between outperformers' experiences of IS (ξ_7) and their experiences of COP (η_4).

Proposition 10a: A direct positive relationship exists between the outperformers' perceptions that the organisation is characterised by a masculine culture and their experiences of STTUC.

Hypothesis 10ai: A direct positive relationship exists between the perceptions of female outperformers that their employer organisation is characterised by a MOC (ξ_8) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 10aii: A direct positive relationship exists between the perceptions of female outperformers that their employer organisation is characterised by a MOC (ξ_8) and their experiences of CRO (η_2).

Hypothesis 10aiii: A direct positive relationship exists between the perceptions of female outperformers that their employer organisation is characterised by a MOC (ξ_8) and their experiences of CS (η_3).

Hypothesis 10aiv: A direct positive relationship exists between the perceptions of female outperformers that their employer organisation is characterised by a MOC (ξ_8) and their experiences of COP (η_4).

Proposition 10b: **A direct negative relationship exists between the perceptions of male outperformers that the organisation is characterised by masculine cultures and their experiences of STTUC.**

Hypothesis 10bi: A direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by a MOC (ξ_8) and their perception that the outperformed individual is PCT (η_1).

Hypothesis 10bii: A direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by a MOC (ξ_8) and their experiences of CRO (η_2).

Hypothesis 10biii: A direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by a MOC (ξ_8) and their experiences of CS (η_3).

Hypothesis 10biv: A direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by a MOC (ξ_8) and their experiences of COP (η_4).

Proposition 11: Collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse, masculine values in an organisational culture, outperformers' perceptions of the outperformed's collectivistic cultural orientation, outperformers' perceptions of the outperformed's traditional gender role orientation, outperformers' perceptions of the outperformed's affiliative needs, outperformers' perceptions of the outperformed's interpersonal sensitivity, and outperformers' perceptions of the outperformed's competitiveness predict the outperformer's experiences of STTUC.

Hypothesis 11a: Collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse, masculine values in an organisational culture, outperformers' perceptions of the outperformed's collectivistic cultural orientation, outperformers' perceptions of the outperformed's traditional gender role orientation, outperformers' perceptions

of the outperformed's affiliative needs, outperformers' perceptions of the outperformed's interpersonal sensitivity, and outperformers' perceptions of the outperformed's competitiveness explain variances in the outperformer's experiences of PCT.

Hypothesis 11b: Collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse, masculine values in an organisational culture, outperformers' perceptions of the outperformed's collectivistic cultural orientation, outperformers' perceptions of the outperformed's traditional gender role orientation, outperformers' perceptions of the outperformed's affiliative needs, outperformers' perceptions of the outperformed's interpersonal sensitivity, and outperformers' perceptions of the outperformed's competitiveness explain variances in the outperformer's experiences of CRO.

Hypothesis 11c: Collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse, masculine values in an organisational culture, outperformers' perceptions of the outperformed's collectivistic cultural orientation, outperformers' perceptions of the outperformed's traditional gender role orientation, outperformers' perceptions of the outperformed's affiliative needs, outperformers' perceptions of the outperformed's interpersonal sensitivity, and outperformers' perceptions of the outperformed's competitiveness explain variances in the outperformer's experiences of CS.

Hypothesis 11d: Collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse, masculine values in an organisational culture, outperformers' perceptions of the outperformed's

collectivistic cultural orientation, outperformers' perceptions of the outperformed's traditional gender role orientation, outperformers' perceptions of the outperformed's affiliative needs, outperformers' perceptions of the outperformed's interpersonal sensitivity, and outperformers' perceptions of the outperformed's competitiveness explain variances in the outperformer's experiences of COP.

Hypothesis 12

The exact fit hypothesis was formulated as:

H_{o12}: RMSEA = 0

H_{a12}: RMSEA > 0

The overarching research hypothesis were further broken down into 52 path coefficients statistical hypotheses which are depicted in Table 4.1.

Table 4.1

Path Coefficients Statistical Hypotheses

Hypothesis 1 H_{03}:γ_{11} =0 H_{03}:γ_{11} >0	Hypothesis 10 H_{012}:γ_{23} =0 H_{a12}:γ_{23} >0	Hypothesis 19 H_{021}:γ_{35} =0 H_{a21}:γ_{35} >0	Hypothesis 28 H_{30}:γ_{47} =0 H_{a30}:γ_{47} >0	Hypothesis 37 H_{039}:$\gamma_{1,10}$ =0 H_{a39}:$\gamma_{1,10}$ >0	Hypothesis 46 H_{047}:$\gamma_{2,12}$ =0 H_{a47}:$\gamma_{2,12}$ >0
Hypothesis 2 H_{04}:γ_{21} =0 H_{a4}:γ_{21} >0	Hypothesis 11 H_{013}:γ_{33} =0 H_{a13}:γ_{33} >0	Hypothesis 20 H_{022}:γ_{45} =0 H_{a22}:γ_{45} >0	Hypothesis 29 H_{031}:γ_{18} =0 H_{a31}:γ_{18} >0	Hypothesis 38 H_{040}:$\gamma_{2,10}$ =0 H_{a40}:$\gamma_{2,10}$ >0	Hypothesis 47 H_{048}:$\gamma_{3,12}$ =0 H_{0a49}:$\gamma_{3,12}$ >0
Hypothesis 3 H_{05}:γ_{31} =0 H_{a5}:γ_{31} >0	Hypothesis 12 H_{014}:γ_{43} =0 H_{a14}:γ_{43} >0	Hypothesis 21 H_{023}:γ_{16} =0 H_{a23}:γ_{16} >0	Hypothesis 30 H_{032}:γ_{28} =0 H_{a32}:γ_{28} >0	Hypothesis 39 H_{041}:$\gamma_{3,10}$ =0 H_{a41}:$\gamma_{3,10}$ >0	Hypothesis 44 H_{049}:$\gamma_{4,12}$ =0 H_{a49}:$\gamma_{4,12}$ >0
Hypothesis 4 H_{06}:γ_{41} =0 H_{a6}:γ_{41} >0	Hypothesis 13 H_{015}:γ_{14} =0 H_{a15}:γ_{14} >0	Hypothesis 22 H_{024}:γ_{26} =0 H_{a24}:γ_{26} >0	Hypothesis 31 H_{033}:γ_{38} =0 H_{a33}:γ_{38} >0	Hypothesis 40 H_{042}:$\gamma_{4,10}$ =0 H_{a42}:$\gamma_{4,10}$ >0	Hypothesis 49 H_{051}:$\gamma_{1,13}$ =0 H_{a51}:$\gamma_{1,13}$ >0
Hypothesis 5 H_{07}:γ_{12} =0 H_{a7}:γ_{12} >0	Hypothesis 14 H_{016}:γ_{24} =0 H_{a16}:γ_{24} >0	Hypothesis 23 H_{025}:γ_{36} =0 H_{a25}:γ_{36} >0	Hypothesis 32 H_{034}:γ_{48} =0 H_{a34}:γ_{48} >0	Hypothesis 41 H_{043}:$\gamma_{1,11}$ =0 H_{a43}:$\gamma_{1,11}$ >0	Hypothesis 50 H_{052}:$\gamma_{2,13}$ =0 H_{a52}:$\gamma_{2,13}$ >0
Hypothesis 6 H_{08}:γ_{22} =0 H_{a8}:γ_{22} >0	Hypothesis 15 H_{017}:γ_{34} =0 H_{a17}:γ_{34} >0	Hypothesis 24 H_{026}:γ_{46} =0 H_{a26}:γ_{46} >0	Hypothesis 33 H_{035}:γ_{19} =0 H_{a35}:γ_{19} >0	Hypothesis 42 H_{044}:$\gamma_{2,11}$ =0 H_{a44}:$\gamma_{2,11}$ >0	Hypothesis 51 H_{053}:$\gamma_{3,13}$ =0 H_{a53}:$\gamma_{3,13}$ >0
Hypothesis 7 H_{09}:γ_{32} =0 H_{a9}:γ_{32} >0	Hypothesis 16 H_{018}:γ_{44} =0 H_{a18}:γ_{44} >0	Hypothesis 25 H_{027}:γ_{17} =0 H_{a27}:γ_{17} >0	Hypothesis 34 H_{036}:γ_{29} =0 H_{a36}:γ_{29} >0	Hypothesis 43 H_{045}:$\gamma_{3,11}$ =0 H_{a45}:$\gamma_{3,11}$ >0	Hypothesis 52 H_{054}:$\gamma_{4,13}$ =0 H_{a54}:$\gamma_{4,13}$ >0
Hypothesis 8 H_{010}:γ_{42} =0 H_{a10}:γ_{42} >0	Hypothesis 17 H_{019}:γ_{15} =0 H_{a19}:γ_{15} >0	Hypothesis 26 H_{028}:γ_{27} =0 H_{a28}:γ_{27} >0	Hypothesis 35 H_{037}:γ_{39} =0 H_{a37}:γ_{39} >0	Hypothesis 44 H_{046}:$\gamma_{4,11}$ =0 H_{a46}:$\gamma_{4,11}$ >0	
Hypothesis 9 H_{011}:γ_{13} =0 H_{a11}:γ_{13} >0	Hypothesis 18 H_{020}:γ_{25} =0 H_{a20}:γ_{25} >0	Hypothesis 27 H_{029}:γ_{37} =0 H_{a29}:γ_{37} >0	Hypothesis 36 H_{038}:γ_{49} =0 H_{a38}:γ_{49} >0	Hypothesis 45 H_{047}:$\gamma_{1,12}$ =0 H_{a47}:$\gamma_{1,12}$ >0	

4.3 Research Design

A research design provides the guidelines and instructions to be followed by the researcher in addressing the research problem (Mouton, 1996; Giuffre, 1997). The

design further ensures internal validity and provides an adequate way in which to find answers to the research questions asked (Giuffre, 1997).

For the purposes of this study, it was deemed appropriate to use a quantitative, cross-sectional survey approach to answer the research questions posed and to investigate the merit of the hypothesised relationships empirically. Using this approach, data was collected from various organisations and then statistically manipulated in order to test the relationships and the differences (White, Jennings, Renwick & Barker, 2005). The quantitative, cross-sectional survey approach also made it possible to include control variables and to address model specifications when necessary (Rogelberg, 2002). Furthermore, in view of the fact that the data in the study was collected anonymously, the approach adopted minimised the problem of protecting the identities of the participants (Spector, 2001).

While well-conceived, well-designed and well-executed experiments represent the ideal in science (Benke Jr & Street, 1992; Farrant, 1977; Lord, 1973), such a design was considered impractical for the purposes of this study. Accordingly, in this study, an *ex post facto* approach, that is, after the fact approach, (Benke Jr & Street, 1992; Farrant, 1977) was used as this approach was deemed capable of satisfactorily testing functional hypotheses or propositions (Farrant, 1977).

As in the other *ex post facto* approaches, it was only possible to investigate the effect of the independent variables on the dependent variables only after the events had already occurred (Steinberg, 2004). This, in turn, meant that both *y* and *x* were observed because direct control of both *y* and *x* could not be achieved (Benke Jr. & Street, 1992). Furthermore, the time and cost constraints which could not be overcome necessitated the use of the *ex post facto* approach.

In order to reproduce the observed covariance matrix closely, estimates for the freed structural and the measurement model were obtained in an iterative fashion (Diamantopoulos & Siguaw, 2000). Thereafter, goodness-of-fit measures were evaluated to determine how well the covariance matrix had been produced

(Diamantopoulos & Siguaw, 2000; Kline 2005). A high degree of fit between the estimated covariance structural model and the observed covariance matrix would imply that the variables selected were providing one possible explanation for the covariance matrix observed.

4.4 The sample

It was discussed under the subsection on the research problem that STTUC may be another factor that may impede the advancement and/or performance of women in organisations. However, there has been no research conducted amongst women employees in Botswana or elsewhere in the world investigating the impact of STTUC on the advancement and/or performance of women.

Except for very few studies (Henagan, 2006, 2010; Henagan & Bedeian, 2009; Tal-Or, 2008), most studies investigating the STTUC construct have also been conducted using university student samples. However, this study used a non-student sample from a country other than the United States of America. The target population was Batswana black employees. Nevertheless, while the focus of research was on female employees, for reasons of comparison, data was collected from both males and females.

In selecting a sample for this study, certain factors were taken into consideration. Ferber (1977) advises that, from an analytical point of view, it is essential that a sample satisfy three basic criteria at least. Firstly, the sample, or the target population should be relevant to the topic under study, secondly, the subjects should represent the population being studied and thirdly, the sample size must be adequate for the intended statistical analytical procedures. Researchers such as Arnett and Rikli (1981) and Ferber (1977) also highlight the importance of sampling and recruitment strategies in research by indicating that recruitment strategies may either result in the selection of participants with particular characteristics and they may limit the

generalisability of the research findings. Accordingly, care was taken to ensure that appropriate sample was selected for this study.

Researchers may utilise either probability samples, for example random samples, or purposive/non-probability samples, for example convenience samples (Gilbert, 1993). Probability samples yield samples that are broadly representative of the population from which they are drawn (Hultsch, MacDonald, Hunter, Maitland & Dixon, 2002). For example, using random sampling, the selection may be carried out proportionally from each sub-group (strata) so that larger strata contribute more and smaller strata contribute less to the total sample size. While the advantages of probability sampling are well documented, the method is rarely used in social sciences research because it is not always practical (Bailey, 1994). Most social scientists rely on the use of non-probability samples, such as convenience samples which are less rigorous. Such sampling strategies are more practical and less costly (Ferber, 1977). This study also used convenience sampling because of the practicality and cost efficiency of this type of sampling. The sample profile will be fully described in chapter five.

4.5 Data Collection Procedure

Firstly, ethics clearance for conducting a research study using human subjects was obtained from both the University of Cape Town and from the Botswanan Ministry of Labour and Home Affairs (Copies are attached in Appendix B). After obtaining the ethics clearances, letters were sent to several organisations requesting that the employers allow their employees to participate in the study. Five organisations agreed to participate in the study. Data was then collected using a paper-and-pencil questionnaire.

The questionnaires were distributed and then collected at a later date by the researcher and three research assistants.

The questionnaire started with a participant information cover page that detailed the research objectives and requested the respondent's consent (see appendix A). The

cover page also provided the respondents with the contact information of both the researcher and her supervisor. The participants were then asked to assess their individual characteristics and their perceptions of the outperformed individuals' characteristics.

4.6 Measuring Instruments

The instruments described below were chosen to measure the constructs under investigation. The first set of instruments was used to measure the independent variables selected and the second set of instruments were used to measure the STTUC construct and its four dimensions.

4.6.1 Measuring the selected predictor variables

Collectivistic Cultural Orientation was measured using the Vertical Collectivism (VC) sub-scale of the Individualism-Collectivism Scale (ICS) of Triandis and Gelfand (1998). The overall ICS consists of 16 items which are designed to evaluate the following four cultural orientation dimensions, namely, Horizontal Individualism (HI), Horizontal Collectivism (HC), Vertical Individualism (VI), and Vertical Collectivism (VC). For the purposes of this study, the four items of the VC sub-scale were used as the items on the measure have been used in the past to provide evidence of the practicality of the constructs in Korea, a non-Western culture (Triandis & Gelfand, 1998). The respondents were asked to indicate their level of agreement on a 4-point Likert-type scale, ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*). Samples of items included the following: "Parents and children must stay together as much as possible" and "It is my duty to take care of my family, even when I have to sacrifice what I want." Past research has shown that people who achieved high scores in VC have also stressed both authoritarianism (r = .29, p < .005), and interdependent construal (r = .52, p < .001; Triandis & Gelfand, 1998).

Competitiveness was assessed using Griffin-Pierson's (1990) Competitiveness Questionnaire (CQ). The CQ assesses two types of competitiveness, namely, goal attainment, that is the desire to strive for a goal; and interpersonal competitiveness, that is the desire to win in interpersonal exchanges. For the purposes of this study, eight items measuring interpersonal competitiveness were used. Griffin-Pierson (1990) reported a satisfactory Cronbach alpha (α = .76). Examples of items on this scale include "I perform better when I am competing against someone rather than when I am the only one striving for a goal" and "When I win an award or game it means that I am the best compared to everyone else who was playing. It is only fair that the best person win the game." The respondents were asked to indicate their level of agreement on a 4-point Likert-type response scale, ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*).

Traditional Gender Role Orientation was assessed using four items from Larsen and Long (1988)'s Traditional-Egalitarian Sex Roles scale (TESR). This scale measures attitudes toward traditional-egalitarian beliefs about sex roles. Sample items on this scale include "It is important that men feel in charge of their families" and "One of the main jobs of a husband is to protect his wife." The responses on this sub-scale were rated on a 4-point Likert-type response scale, ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*). The sub-scale score represents a continuum with low scores indicating an egalitarian attitude towards sex roles and high scores indicating a more traditional attitude towards sex roles. The sub-scale has demonstrated an acceptable level of internal consistency through split-half reliabilities of .85 and .91 when corrected using the Spearman-Brown's formula (Livingston & Judge, 2008). Support for the measure's validity has been provided by the finding that ther relationship between work interfering with family and guilt was more strongly positive for egalitarian individuals than for traditional individuals, as measured by TESR (Livingston & Judge, 2008).

Sociotropy was assessed using seven items identified by Henegan (2006). Henegan used items from the two dimensions of sociotropy, that is, dependence and

interpersonal sensitivity, identified through factor analysis by Sato (2003) on the Sociotropy-Autonomy Scale (Clark, Steer, Beck, & Ross, 1995) and the Personal Style Inventory (Robins *et al*., 1994). Items on this scale were scored on a scale from 1 (*Never*) to 4 (*Always*). Sample items include "I am more apologetic to others than I need to be" and "I find it difficult to say "no" to people." In one study, sociotropy was strongly associated with caring about both negative peer responses (r = .48, $p \leq$. 001), and positive peer responses (r = .61, $p \leq$. 01), thus indicating a satisfactory construct validity (Exline *et al*., 2004).

Need for affiliation was measured using a sub-scale of the Needs Assessment Questionnaire (NAQ) of Heckert, Cuneio, Hannah, Adams, Droste, Mueller, Wallis, Griffin, and Roberts (2000). The NAQ was chosen because it has proven to be a reliable and valid alternative in both student and worker samples which were used to measure the needs for achievement, affiliation, dominance and autonomy (Heckert, *et al*., 2000). The n-Aff scale scores also significantly correlated with criteria such as number of monthly, long-distance phone calls made to family/friends (r = .13, p = .016), number of organisations to which the individual belongs (r = .16, $p \leq$..00) and preference for exercising alone, with one other person, or in a group (r = .17, p = .001). The Cronbach's alpha for the 5-item n-Aff sub-scale was .59 (Heckert *et al*., 2000). Sample items for need for the n-Aff scale include "I spend a lot of time talking to other people," and "I am a "people" person". Items on this scale were scored on a scale ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*).

Family-Work-Conflict was measured using a five-item, Family-Work Conflict (FWC) sub-scale of the Work-Family Conflict (WFC) and Family-Work Conflict (FWC) scales of Netemeyer *et al*. (1996). Responses on this sub-scale were rated on a 4-point Likert-type scale, ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*). Sample items of this sub-scale included "My home life interferes with my responsibilities at work, such as getting to work on time, accomplishing daily tasks, and working overtime." Evidence of satisfactory internal consistency for this scale was provided by acceptable Cronbach's alphas ranging from .83 to .89 and average variance

extracted estimates ranging from .48 to .64 (Netemeyer *et al*., 1996). In demonstrating the construct validity of this measure, the scores on this scale also showed positive correlations with job burnout, job tension, role conflict, role ambiguity, and intention to leave an organisation and search for another job (Netemeyer *et al*., 1996). Another study demonstrated that those individuals who espoused more traditional gender roles experienced a stronger relationship between FWC and average daily guilt (Livingston & Judge, 2008).

Instrumental support was measured using the Instrumental Support (IS) sub-scale of the Postpartum Partner Support Scale (PPSS) of Dennis and Ross (2006). Several studies in the industrial-organisational literature use measures of family social support that are more representative of specific content domain and, therefore, finding a generic instrument suited to measuring partner support could be difficult (King *et al*., 1995). PPSS was developed to assess the following four functional elements of support, namely, instrumental; appraisal/emotional; problem-solving/informational and negative support. The IS sub-scale was used in this study because, despite the fact that it was specifically designed to measure the impact of support on postpartum women, the items on the measure provide evidence of validity of the constructs in the general adult population. Evidence of internal consistency for this scale was provided by an acceptable Cronbach's alpha of 0.96 (Dennis & Ross, 2006). Items on this scale were scored on a 4-point scale, ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*) in order to produce a summative score with the higher scores indicating higher levels of partner support. Sample items on the scale included "My partner/spouse/significant other helps me with the household chores" and "My partner/spouse/significant other provides me with opportunities to do things for myself".

Masculine organisational value was measured using a scale specifically developed for this study. Based on the theoretical work of Hofstede (1980), the Masculinity of Organisational Culture Index (MOCI) was developed for the purposes of this study to assess masculine organisational values. Using a scale ranging from 1 (*Not at all*

True) to 4 (*Very True*), the participants were required to indicate whether statements such as “In my organisation, it is important that managers hold ambitious career aspirations” and “In my organisation, it is important that managers are assertive” are applicable to the organisations for which they worked.

4.6.2 Compilation of the STTUC scale

It has been stated in previous chapters that there are no comprehensive instruments available for assessing an outperformer’s experiences of STTUC and which satisfies all three STTUC conditions. In the past, researchers have used a variety of self-report measures with which to assess STTUC (Exline *et al*., 2004; Exline & Lobel, 1999; 2001; Henagan, 2006; Henagan & Bedeian; 2009; Juola-Exline, 1998). However, most of these measures did not assess the entire spectrum of all the domains of STTUC. Accordingly, this study endeavoured to use existing scales to compile an STTUC measure that satisfied the three stipulated conditions. Specifically, it was important to ensure that Condition 1 be satisfied, that is, the respondents see themselves as targets of upward comparison.

Secondly, it was also important to assess whether the individual concerned believed that the person outperformed was threatened by the UC, that is, Condition 2 with this being operationalised as Perceived Comparison Threat (PCT).

Thirdly, it was important to assess whether the respondents were concerned about the outperformed individual’s response that is Condition 3. This concern was assessed at three different levels. The first level of concern referred to the well-being of the outperformed person and was operationalised as Concerned for the Outperformed Person (COP). The second level of concern referred to the individual concerned’s own well-being and was operationalised as Concern for the Self (CS). The last level of concern referred to the relationship between the outperformer and the outperformed and was operationalised as Concern for the Relationship with Outperformed (CRO). For a diagrammatic representation of the STTUC construct, see Chapter 2, Figure 2.1.

4.6.2.1 Condition 1: Perceiving oneself as a target of upward comparison.

The first set of instructions asked the participants to think of a specific situation in which they had outperformed a significant other. In this study, significant others were chosen as comparison targets because it has been suggested that performance considerations may play some role in the evaluation of relationships (Beach *et al*., 1996). It was also believed that STTUC related distress may occur when an outperforming partner anticipates rejection from the outperformed partner (Beach *et al*., 1996), and that outperforming significant others may become distressed at the prospect of posing a threat to their outperformed partners (e.g. Buunk *et al*., 1990; Exline *et al*., 2004).

Specific instructions included the following: i) the situation had to have actually taken place or be currently taking place, ii) both the outperformer and the outperformed needed to know about the situation and both had to agree that the outperformer had surpassed the outperformed, and iii) the situation chosen had to have been perceived as important to either the outperformer and/or the outperformed. These instructions were important in ensuring that the participants had perceived themselves as targets of upward comparison, thus fulfilling Condition 1 of the STTUC framework.

4.6.2.2 Condition 2: PCT.

The *Anticipated Negative and Positive Peer Response Scale* and the *Concern about Negative and Positive Peer Responses* (Exline *et al*., 2004) respectively were used to measure PCT and COP of the STTUC construct. In a study conducted by Exline *et al*. (2004), 21 items were used to assess anticipated peer responses, and factor analysis was used to separate those items being assigned negative labels from those being assigned positive labels.

In this study, items from Exline *et al*.'s (2004) *Anticipated Negative and Positive Peer Response sub-scale* were used to measure PCT. Specifically, the participants were

instructed as follows – While still thinking about the situation in which you outperformed your significant other, please respond to the following statements by ticking a number from 1 to 5 (1 = *Not at all*, 2 = *To a Small Extent*, 3 = *To a Moderate Extent*, 4 = *To a Great Extent*, 5 = *To an Extreme Extent*) to indicate whether the statement reflects how you think your significant other may have reacted or felt as a result of the outperformance. The question was followed by statements such as "Felt embarrassed because you performed better" and "Felt frustrated because you performed better."

4.6.2.3 Condition 3a: COP.

The items from the *Concern about Negative and Positive Peer Responses* (Exline *et al*., 2004) were used to measure the COP of the STTUC framework. Specifically, the participants were asked the following: While still thinking about the situation in which you outperformed your significant other, please respond to the following statements by ticking a number from 1 to 5 (1 = *Not at all Concerned*, 2 = *Unconcerned*, 3 = *Moderately Concerned*, 4 = *Concerned*, 4 = *Very Concerned*) to indicate how concerned you were that your significant other may have reacted in the the following ways. The statement was followed by items such as "Felt embarrassed because you performed better" and "Felt frustrated because you performed better."

4.6.2.4 Condition 3b: CRO.

Items from Ho and Zemaitis's (1981) Concern over Negative Consequences of Success Scale (CONCOSS), as identified by Hong and Caust (1985), were used to measure the CRO of the STTUC construct. Hong and Caust (1985) labelled this factor "*Anxiety over the Negative Evaluation of Others".* Examples of items on this sub-scale included "Worry that you may become so knowledgeable that your significant other will not like you," and "Done less than your very best so that your significant other will not be threatened".

4.6.2.5 Condition 3c: CS.

Items from Ho and Zemaitis's (1981) Concern over Negative Consequences of Success Scale (CONCOSS), as identified by Hong and Caust (1985), were also used to measure the CS of the STTUC construct. Hong and Caust (1985) labelled this factor "*Anxiety over Hostile Reactions of Others".* Example of items in this scale included: "Become embarrassed if others compliment you on your work in presence of your significant other", and "Believed that successful people are often sad and lonely".

4.7 Demographic Data

The demographic data of the participants was also collected. Items in this section of the questionnaire requested the participant's gender, age, relationship status, and number of children. In addition, data on the educational status and responsibility level at work of the participants and their partners was also gathered. The participants were also requested to indicate the length of time for which they had been formally employed, how long they had been working for their current employer, whether their partners/spouses earned more income than they did, and whether they had been brought up in a city, town or village.

4.8 Power Analysis

According to Tabachnick and Fidell (2007) and Connelly (2008), statistical power represents the probability that a test will detect a difference where a true difference does exist.

For the purposes of this study, power analysis was performed using the SPSS MANOVA program with power sub-commands (Stevens, 2002). The power analysis was conducted specifically to analyse whether there were a sufficient number of participants to establish relationships between the variables and to determine the

minimum number of respondents required to produce significant effects of treatment on the various measures used (Tabachnick & Fidell, 2001; 2007).

Factors such as sample size (Stevens, 2002), type of statistical tests used, directionality of the test (that is, one tailed or two tailed tests), alpha level set by the researcher (Stevens, 2002) and the sizes of the true effects (that is, the number of standard deviation units that separate the group means) may work either collectively and/or individually to influence statistical power (Cohen & Cohen, 1983; Stevens, 2002).

It is recommended that power levels of at least 0.80 be attained prior to continuing with analyses as such power levels will represent an 80 percent probability of achieving significant results if an effect exists (Cohen, 1992; Pallant, 2010; Tabachnick & Fidell, 2007). Cohen (1992) also recommended that, in order to avoid large experiment-wise risks when testing several hypotheses, alpha levels should be set at $\alpha = .01$ per hypothesis.

As recommended by Pallant (2010), group sizes was also taken into consideration by adjusting the cut-offs of alpha levels to compensate for the small sizes. This means that, for statistical tests involving two or more groups, alphas and effect sizes are also dependent on *N* for each group (Cohen, 1992). Power is also heavily dependent on the sample size such that when $N > 100$, there is no need to worry about power (Stevens, 2002). In view of the fact that the sample size for this study was 464 and all the groups were larger than $N = 100$, it was assumed that lack of power would not be a problem.

Retrospective effect sizes for both univariate and multivariate statistical tests were also used (Connelly, 2008; Onwuegbuzie & Leech, 2004; Pallant, 2010). Owing to the fact that different effect size calculations apply in different ways to specific types of statistical analysis, where applicable, effect sizes were calculated. These effect size calculations are presented in the tables which depict the results of the specific analyses.

4.9 Data Cleaning and Screening

There is always the possibility that data transcription may introduce errors such as miscoding and missing data into the data set (Odom & Henson, 2002) and, thus, a process of data cleaning involving repeated cycles of detecting, diagnosing and editing suspected data abnormalities (Van Den Broeck, Cunningham, Eeckels & Herbst, 2005) was carried out. It is important that this process be carried out to the maximum extent possible prior to conducting statistical analyses (O'Rourke, 2000). In this study, SPSS was used to identify any outliers, assess normalities and linearity and also address the problem of missing values.

Some of the processes followed included using frequency tables and histograms to examine the normality of distributions and the range to assess skewness and/or kurtosis. Frequency tables were also used to screen the categorical variables. Scatter plots were used to assist in the visual inspection of points that may have lain outside the general distribution of the data and among the write-in, continuous variables such as age. Histograms were used to inspect Likert-type (interval) and ordinal variables. The means and standard deviations of each item were also analysed to determine whether the scores were credible. In addition, recoding was carried out to ensure the conceptual consistency of items within scales and sub-scales.

4.9.1 Missing values

The methods used to deal with missing values were selected based on the conditions that must be assumed when selecting a method and, therefore, criteria for selecting a method were essential. Such criteria included the practicality of the method chosen, whether the method was based on the assumption of normality and/or whether the method would lead to cases being deleted. Approaches to handling missing values include listwise deletion, pairwise deletion, expectation maximisation, pattern-matching imputation/hot-deck imputation, full information maximum likelihood and multiple imputations (Schlomer, Bauman & Card, 2010). There are advantages and disadvantages to all these methods.

For the purposes of this study, pattern-matching imputation/hot-deck imputation (Kline, 2005; Olinsky, Chen & Harlow, 2003; Schlomer *et al*., 2010) was deemed to be most suitable approach. More sophisticated approaches such as multiple imputation and expectation maximisation are based on the assumption of multivariate normality, which may not be haphazardly assumed in social sciences type research (Lei & Lomax, 2005). Using hot-deck imputation, a missing value was replaced with a value from the nearest complete record from a record on the same variable (Kline, 2005; Olinsky *et al*., 2003; Schlomer *et al*., 2010). One of the advantages of hot-deck imputation is that it preserves the distributional characteristics of the data and does not lead to case deletion.

4.10 Data Analysis

Data analysis involves using a variety of statistical analysis techniques to test the research hypotheses. The data were inputted into the Statistical Package for the Social Sciences (SPSS) programme (IBM SPSS Statistics 20) with the aim of conducting item analysis, exploratory factor analysis (EFA), independent sample t-tests, and multiple regression analyses. Descriptive statistics, namely, means, standard deviations, percentages and ranges, as well as intercorrelations between all continuous variables were also calculated in SPSS, the latter using Pearson product moment correlations.

Structural equation modelling (SEM) was used to assess the extent to which the data supported the proposed integrated conceptual or theoretical model. For the SEM analysis, Linear Structural Relations (LISREL 8.8) was used.

4.10.1 Assessing multivariate normality using prelis

The multivariate normality of the data was also examined and non-normality, kurtosis, and skewness checked using the criteria of West, Finch, and Curran (1995) and also via visual inspection of the measured distributions for SPSS analyses. It was specified

that a value of kurtosis over 10 would indicate that the data had a non-normal distribution (Kline, 2005). Mahalanobis-d-squared results were used to remove cases, thus reducing the multivariate kurtosis value.

In order to determine whether to use the Maximum Likelihoods (ML) estimation method or the Robust Maximum Likelihood (RML) estimation method in SEM analyses, normality was evaluated using PRELIS (Jöreskog & Sörbom, 2006). The criteria used were such that, if the data were normally distributed, the ML estimation method would be used (Diamantopoulos & Siguaw, 2000) as this method requires that multivariate normality be obtained when handling data (Hair, Black, Babin, Anderson & Tatham, 2006; Sass & Smith, 2006).

It was also decided that, if the null hypothesis of multivariate normality were still rejected after normalisation, the model parameters would be determined by the means of RML estimation. In order to implement this estimation method, the data would be read into PRELIS so as to compute the Asymptotic Covariance Matrix (ACM) of the sample variances and covariances (Jöreskog & Sörbom, 2006; Mels, 2006). While other estimation methods such as weighted least squares (WLS) or diagonally weighted least squares (DWLS) could be utilised, RML is regarded as the more appropriate approach when dealing with multivariate, non-normal data (Jöreskog & Sörbom, 2006; Mels, 2006).

4.10.2 Item analysis

Item analysis is an important tool in the presentation of empirical findings as it increases the interpretability of empirical findings and also minimises assessment limitations (Ruggiero, Goodie & Morris, 1999). IBM SPSS Statistics 20 was used to perform item analysis. This process was carried out specifically to determine those items which measured the latent (or underlying) constructs identified and also to identify the items that should be removed because they did not contribute to the understanding of the scales and/or the sub-scales used.

Cronbach's alpha coefficients were calculated to assess the internal consistency of the measurement instruments (Clark & Watson, 1995; Cortina, 1993). As recommended by Litwin (1995) and Nunnally and Bernstein (1994), a score of .70 or higher on the Cronbach's alpha calculation was used as an indication of acceptable reliability. Cronbach's alphas of less than .60 are generally considered low and, thus, measuring instruments with a Cronbach's alpha of less than .60 were flagged and considered for elimination.

The following basket of evidence was used to identify those items that should be considered for removal in further analysis:

- The corrected item-total correlation was reviewed to observe the degree to which each item correlated with the total scale score. Values of less that 0.3 indicated that the item(s) may be measuring something different from the scale as a whole (Pallant, 2010).
- The possible impact of removing each item from the scale was also reviewed. If removal of an item(s) would numerically raise the alpha value, elimination of the item(s) was considered as this would indicate that the item(s) shared insufficient variance with the other items in the scale (Pallant, 2010).
- In addition, the squared multiple correlation, inter-item correlation, the item mean and the item standard deviation were also used to guide the inclusion of item(s) on the proposed scales or sub-scales (Pallant, 2010).

While coefficient alphas between 0.60 and 0.70 are considered to be low in strength (Hair, Babin, Money & Samouel, 2003; Nunnally & Bernstein, 1994), such alphas were accepted because certain researchers such as Hair *et al*. (2003) have suggested that alphas in this range may be used for preliminary research. In view of the fact that there is either little or no sufficient research on the STTUC construct, this study may be said to represent preliminary/exploratory research. In particular, research on STTUC has received little attention from leadership and organisational behaviour researchers. In addition, the STTUC construct has not been sufficiently investigated

within the Botswanan context. As a result, all sub-scales with Cronbach's alphas of .60 and above were deemed to be acceptable, as based on the suggestions of Hair *et al*. (2003) and Nunnally and Bernstein (1994).

4.10.3 Exploratory Factor Analysis

Factor analysis (FA) is widely used to limit error-variance in measurements (Cavusgil & Das, 1997; Fabrigar, Wegener, MacCallum & Strahan, 1999). In this study, both EFA and CFA were conducted. EFA, which is commonly used as a theory-generating procedure (Stevens, 2002), was used before CFA in order to provide some insight into the data set. Using EFA first was deemed necessary because the procedure does not impose any preconceived structure on the outcome and the technique is also important in terms of reducing the dimensionality of the instruments used (Todman & Dugard, 2007). In addition, EFA was also key in examining: i) whether the items produced the proposed factors; ii) the number of factors that existed; and iii) the patterns of the factor loadings (Hinkin 1995; Stevens, 2002; Todman & Dugard, 2007). Fabrigar *et al*. (1999) suggested that oblique rotations rather than orthogonal (e.g. varimax) solutions provide a more accurate and realistic representation of the way in which psychological constructs are likely to be related to one another. In view of the fact that the majority of the measures in this study were expected to be intercorrelated, direct oblimin rotation, which is an oblique rotation, was employed (Fabrigar *et al*., 1999).

The suitability of factor analysis for the data set in the study was first confirmed using the following criteria:

- The items on the variables had to meet the conservative rule of thumb of at least 10 (Costello & Osborne, 2005).
- A Kaiser-Meyer-Olkin (KMO index) measure of sampling adequacy value greater than 0.60 (Kaiser, 1974) was used to indicate whether the patterns of

correlations were relatively compact and whether factor analysis presented distinct and reliable factors (Field, 2005; Tabachnick &Fidell, 2007).

- The adequacy of the correlation matrix was determined by examining the correlations between variables and was specified to be, at the least, greater than 0.3.
- A significant ($p < .05$) Bartlett's test of sphericity indicated that it was, indeed, appropriate to conduct FA.

The next step involved extracting the factors. The following procedures were used to assist in determining the number of factors to be retained and in identifying the variables that clumped together:

- Using Catell's scree test, all factors above the elbow were retained as they contributed the most to explaining the variance in the dataset (Pallant, 2010).
- Kaiser's rule of retaining factors with eigenvalues > 1.00 was also used to determine the maximum number of meaningful factors that could be retained.
- A factor was interpreted and named by examining the largest values that linked the factor concerned to the measured variables (Green & Salkind, 2011).
- In order to enhance the stability of factor solutions items not loading > 0.40 on any factor were excluded (Pallant, 2010; Tabachnick & Fidell, 1996).
- Item(s) were removed where the factor loadings differed by 0.25 or less on two factors. Such items were considered to have cross-loaded (Nunnally & Bernstein, 1994; Tabachnick & Fidell, 1996).

The above procedure was carried out repeatedly until a clean structure that satisfied the abovementioned exclusion criteria was achieved.

The last step of the EFA analysis involved examining the pattern of factor loading to determine whether the data collected for the study were consistent with the notion that the items used did, in fact, measure the constructs that they were supposed to measure. In the main, this study used existing measuring instruments.

4.10.4 Independent samples t-test

Hypotheses 1 and 2 sought to investigate whether women experience higher levels of STTUC than men and, therefore, a set of one-tailed independent samples t-tests were conducted to test the sets of hypotheses, and to determine whether the mean scores for men and women differed significantly.

Cohen's d (i.e. the difference between two means divided by the average of their standard deviations) and eta squared (the proportion of total variance associated with or accounted for by each of the main effects, interactions, and error (Pallant, 2010; Tabachnick & Fidell, 2007) effect size statistics were used to compare the strength of the differences in the mean scores.

Cohen's (1992) criteria − 0.2 is indicative of a small effect size, 0.5 a medium effect size and 0.8 a large effect size − were used. This, in turn, meant that if the means of the two groups did not differ by at least 0.2 standard deviations or more, the difference between the groups was considered unimportant, even if it was statistically significant.

As regards eta squared, Cohen's (1988) criteria − 0.01 is indicative of a small effect size, 0.06 a medium effect size and 0.14 a large effect size – were used (Green & Salkind, 2011; Pallant, 2010).

4.10.5 Correlation analyses

The bivariate relationships between the variables were analysed using Pearson correlation coefficients. The significance level value was set at a 95% confidence interval level ($p < 0.05$) for all analyses, unless otherwise stated. Table 4.2 presents

the guidelines used in qualitatively determining the strength of the association between the variables (Cohen, 1988; Green & Salkin, 2012).

Using an index of effect sizes, a cut-off point of 0.30 (medium effect) was set as an indication of practical significance.

Table 4.2
Guidelines for Interpreting Coefficient r

	Coefficient *r*	
Strength of Association	Positive	Negative
Small	.10 to .29	-0.10 to -.29
Medium	.30 to .49	-0.30 to -0.59
Large	.50 to 1.0	-0.50 to -1.0

4.10.6 Multiple regression analyses

Proposition 11 − hypotheses 11a through to 11d − was concerned with assessing whether the independent variables could explain variances in STTUC and its components. It was also deemed important to separate the effect of the predictor variables from that of the control variables (Pallant, 2010) and, therefore, hierarchical multiple regression analysis was used to test the hypothesised relationships.

Using hierarchical regression, control variables and the remaining independent variables were entered into the analysis respectively in a sequence of two blocks. The demographic variables were entered in the first block and all the other independent variables were entered in the second block.

In order to avoid reporting erroneous findings, it was specified that independent variables tolerance values less than 0.10 and/or variance inflation factor (VIF) values above 10 would indicate the presence of mutlicollinearity (Pallant, 2010).

The values of R^2 and R square change were used to determine the proportion of the total variance of the dependent variable as explained by the independent variables. In addition, the *F*-test was used to test whether there was a significant regression (i.e. $p < 0.05$) between the predictor and the dependent variables.

The effect sizes for both the overall model and the individual independent variables were also assessed.

4.10.7 Structural Equation Modelling (SEM)

Structural equation modelling (SEM) was used in this study to assess the extent to which the data supported the proposed conceptual model. SEM is a hybrid of factor analysis and path analysis and allows the use of correlational, non-experimental and experimental data (Fassinger, 1987). In SEM, a major component of the analysis involves finding the most parsimonious summary of the interrelationships between the variables that accurately represents the associations observed in the data (Fassinger, 1987; Martens, 2005; Weston *et al*., 2008).

SEM also possesses unique capabilities that enable researchers to address issues that would be difficult, if not impossible, to address using other statistical procedures (Kline, 2005). In addition, this technique also allows for the empirical representation of complex theoretical models and this, in turn, facilitates an increased understanding of the relationships between both observed variables and latent variables (Cheung, 2008; Tomarken & Baker, 2003; Weston *et al*., 2008). Although perceived as complex (Weston & Gore Jr., 2006; Weston *et al*., 2008), SEM introduces different and, arguably, more rigorous criteria for the evaluation of complex models than do other available statistical techniques (Martens, 2005).

4.10.7.1 Variable type

In view of the fact that the parcelling technique is able to reduce the number of indicators in lengthy scales, instead of using individual items, item parcels were used

in this study (Bandalos & Finney, 2001; Little, Cunningham, Shahar & Widaman, 2002). There are arguments both for and against using item-parcelling techniques. However, the technique was deemed appropriate for the purposes of this study because using individual items to operationalise the latent variables would have become tedious with too many parameters to be estimated. The decision was in line with the suggestion that using parcels may also significantly improve model fit (Bandalos, 2002).

The parcels were calculated by taking the averages of the even numbered and uneven numbered items to form indicator variables for each one of the latent variables. The variable type of item parcels was treated as that of a continuous variable and the covariance matrix was analysed.

4.10.7.2 Model specification

SEM is *a priori* (Kline, 2005; Martens, 2005; Weston & Gore Jr, 2006) and, thus, to allow for estimation using SEM software, it was essential that the relationships that may have existed between the observed and the latent variables had to be specified before the commemcement of data collection (Weston *et al*., 2008). As recommended by Tabachnick and Fidell (2001), a two-step approach to the analysis was adopted, first, to specify and then to test latent-variable models. This included, firstly, specifying a measurement model, that is, specifying the relationships between the directly measured variables and the latent constructs (Hair *et al*., 2006) and then, secondly, testing the structural model (Tomarken & Baker, 2003).

4.10.7.3 Proposed measurement model

The path diagrams for the measurement models are illustrated in Figure 3.2. For the unidimensionality check, each parcel was specified to be loaded on one specific latent variable only. Specifications were based on the theory about the relationships between the measurement errors, latent factors and observed factors (Stevens,

2002). Furthermore, each hypothesis represented a specific relationship and, therefore, all the relationships were specified.

The STTUC construct was specified as an endogenous, latent variable, that is, a dependent variable. This model consisted of four latent variables with 17 indicators, that is, parcels. In addition, individual characteristics (specifically, collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, and competitiveness) and instrumental support from the spouse/partner, family-work-conflict, and the focus on masculine/feminine values within the organisational culture) were specified as exogenous, latent variables, that is, independent variables. This model consisted of 13 latent variables with 22 indicators.

Notations in the model specification were as follows: ξ represented exogenous, latent variables (*X* variables), η represented endogenous, latent variables (*Y* variables), δ represented the error term associated with estimated, measured X variables, ε represented the error term associated with estimated, measured *Y* variables, and ζ represented the structural error (specifically, a way of capturing covariation between η construct errors). Other notations included λ for Lambda (i.e. the path between the indicator and the latent variable), λy for lambda "y" (i.e. a path representing factor loadings between latent constructs and measured *Y* variables), λx for lambda "x" (i.e. a way of representing factor loadings between latent constructs and measured *X* variables), γ for Gamma (i.e. a path indicating regression coefficients between ξ and η), and β for beta (i.e. a path indicating regression coefficients between η construct and another η construct) (Hair *et al*., 2006; Kline, 2005).

4.10.7.4 Confirmatory factor analysis (CFA)

Prior to testing the structural models, the specified measurement models were tested for acceptable fit to the data through a series of Confirmatory Factor Analyses (Fabrigar *et al*., 1999; Todman & Dugard, 2007; Van Wyk, Boshoff, & Owen, 1999). The CFA technique was also useful in detecting the unidimensionality of the constructs (Anderson & Gerbing, 1988).

The initial measurement model specification is illustrated in Figure 3.2. The relationships between the measured and latent variables (i.e. direct effects) in SEM are similar to those found in ANOVA and multiple regressions (Weston *et al*., 2008) and these were indicated pictorially by using single directional arrows between the variables. Weston *et al*. (2008), however, cautioned that, while arrows may imply directionality in SEM figures, they should not be interpreted as causal.

4.10.7.5 Fitting the structural model

After obtaining measurement model fit, the hypothesised model was tested by evaluating both the directional and non-directional relationships between the latent constructs. A basket of model fit indices was used to evaluate the model. This process was crucial in providing empirical evidence of the relationships between the variables and constructs represented by measurement theory (Hair *et al*, 2006).

4.10.7.6 Assessing structural model fit

Model fit was tested using goodness-of-fit indexes (Kline, 2005; Hair *et al*., 2006; Schermelleh-Engel, Moosbrugger & Müller, 2003). It is recommended that fit be evaluated in terms of criteria such as: (i) how well the overall model fits the observed data; (ii) variance accounted for in endogenous observed and latent variables; and (iii) strength and significance of estimated parameters (Hair *et al*., 2006; Weston *et al*; Weston & Gore Jr, 2006). Diamantopoulos and Siguaw (2000) warn that global measures of fit may indicate a satisfactory model although certain measures parallel to hypothesised relations are nonsignificant or even when measures used are low in

reliability. They further advise that, while overall fit criteria may indicate poor or unsatisfactory fit, the overall fit may not indicate what is wrong with the model or which parts of the model are wrong. In order to counter such challenges, Diamantopoulos and Siguaw (2000) indicate that it is essential that assessment of model fit be accompanied by an assessment of both the measurement and structural models.

Schermelleh-Engel *et al*. (2003) and Martens (2005) also suggest that, because there is no single statistical significance test that measures goodness-of-fit, researchers need to evaluate model fit on the basis of various measures simultaneously. With this recommendation in mind, model fit was assessed using multiple indices such as Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Normal Fit Index (NFI), Root Mean Square Residual (RMSR), Standardised Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA) and Comparative Fit Index (CFI) (Hair *et al*., 2006; Kline, 2005; Schermelleh-Engel, *et al*; Weston & Gore Jr., 2006).

Table 4.3 presents a summary of the Goodness-of-Fit Indices used. However, while many other fit indices are discussed in the table below, a few of the indices only will be used to make decisions about model fits. This is in line with Diamantopoulos and Siguaw's (2000) recommendation that, for practical purposes, the results of a chi-square test may be used together with the results of RMSEA, EVCI, SRMR, GFI, and/or CFI to make informed decisions regarding model fit.

Table 4.3

Goodness-of-Fit Indices

Goodness-of-Fit Index	Description	Values indicating Model Fit
Absolute Fit Indices: These indices assess directly how well a model specified by the researcher,i.e., covariances predicted from parameter estimates, fits the observed data, i.e., sample covariances (Diamantopoulos & Siguaw, 2000; Jöreskog & Sörbom, 1981), thus providing a basic assessment of how well the described theory fits the sample data (Hair *et al*., 2006).		
Goodness-of-Fit Index (GFI),	– GFI may be seen as similar to *R*2 which is commonly used in regression to summarise the variance explained in a dependent variable (Weston *et al*., 2008). The GFI, however, refers to the relevant number of variances and covariances accounted for in the entire model (Diamantopoulos & Siguaw, 2000; Weston *et al*., 2008).	– Values of .90 or higher indicate a good model fit (Diamantopoulos & Siguaw, 2000; Kline, 2005).
Minimum Fit Function Chi-Square	– The basic assumption of chi-square (x^2) is that the model is an exact fit to the data (i.e., $\Sigma = \Sigma(\theta)$. This has been highlighted as a major limitation of the test in view of the fact that it renders the test highly restrictive as most models are merely an approximation of reality (Diamantopoulos & Siguaw, 2000; Weston *et al*., 2008). – Chi-Square tests whether the model is an exact fit to the data. In view of the fact that x^2 actually tests model misspecification; a significant x^2 suggests that the model does *not* fit the sample data. – Because large x^2 values indicate bad fit and small x^2 values indicate good fit, x^2 may be refered to as a badness-of-fit measure. – x^2 is sensitive to the departures from multivariate normality (especially kurtosis)	– Large x^2 values indicate bad fit and small x^2 values indicate good fit. – The degree of freedom is used as a standard in terms of which to judge whether x^2 is large or small.

Root Mean Square Error of Approximation (RMSEA)	– Measures how well the model will fit (approximate fit) the population (Schermelleh-Engel *et al*., 2003). This is carried out using unknown or limited parameter values (Diamantopoulos & Siguaw, 2000). – Focuses on error arising from approximation (i.e., the discrepancy between Σ and $\Sigma(\theta)$ per degree of freedom, and is regarded as one of the most informative fit indices. – It is also regarded as relatively independent of sample size.	– Values of .08 or lower indicate a good model fit (Kline, 2005). – Values of .06 or lower indicate a good model fit (Hu & Bentler, 1999).
Expected Cross-Validation Index (ECVI)	– While tests such as the RMSEA focus on the error arising from approximation, ECVI focuses on the discrepancy between Σ and $\acute{\Sigma}$, i.e., it focuses on the overall error of measurement (Diamantopoulos & Siguaw, 2000). In essence, this means that it measures the difference between how well the model fits the analysed sample as compared to how it well it would fit a comparable sample size (Jöreskog & Sörbom, 1993). – ECVI also adjust for model parsimony when assessing the fit of structural equation models (Schermelleh-Engel *et al*., 2003).	– The ECVI value is not informative in itself and, therefore, the ECVI values should be compared with the values of other models (Diamantopoulos & Siguaw, 2000). – The model with the smallest ECVI estimate indicates the model with the best fit and, thus, it represents a better potential for replication (Diamantopoulos & Siguaw, 2000); Schermelleh-Engel *et al*., 2003.
Root Mean Square Residual (RMSR) a.k.a.(RMR)	– Uses the fitted residuals to measure badness-of-fit (Schermelleh-Engel *et al*., 2003). Represents the average value of the elements in $(S - \acute{\Sigma})$. – The values depend on the sizes of the variances and covariances of the observed variables (Schermelleh-Engel *et al*., 2003). – RMR is a fitted residual. The challenge in interpreting RMR is that its size may vary with the unit of measurement. This is, in fact, challenging because the unit of measurements may vary from variable to variable (Diamantopoulos & Siguaw, 2000). In order to determine goodness-of-fit or badness-of-fit it is essential that the scales of the variables be taken into account (Schermelleh-Engel *et al*., 2003).	– Values close to 0 suggest a good fit (Schermelleh-Engel *et al*., 2003).

Goodness-of-Fit Index	Description	Values indicating Model Fit
Standardised Root Mean Square Residual (SRMR)	– An overall measures based on squared residuals. It is, thus, capable of providing information about the directions of discrepancies between **S** and $\hat{\Sigma}$ **ô. (**Schermelleh-Engel *et al*., 2003) – The standardised residuals are the fitted residuals divided by their estimated standard errors (Diamantopoulos & Siguaw, 2000). – When looking for the cause of model misfit, it is also advisable also to consider the sign of a residual.	– Values of .08 or lower indicate a good model fit (Kline, 2005). – Values lower that .08 indicate a reasonable model fit (Diamantopoulos & Siguaw, 2000). – Values close to 0 suggest a good fit (Schermelleh-Engel *et al*., 2003). – Values of .05 or lower indicate a good model fit (Hu & Bentler, 1995).
Information Criteria Fit Indices: The following sets of measures are used to compare models (Diamantopoulos & Siguaw, 2000).		
Akaike's Information Criterion (AIC)	– If the application is to be reliable, both the AIC and CAIC require a sample size of at least 200. The AIC and CAIC are also negatively impacted by departures from multivariate normality (Diamantopoulos & Siguaw, 2000).	– Small AIC values indicate a better fit for the hypothesised model (Diamantopoulos & Siguaw, 2000).
Consistent Akaike's Information Criterion (CAIC)	– Useful for adjusting AIC for sample size effects (Diamantopoulos & Siguaw, 2000). – If the application is to be reliable, both the AIC and CAIC require a sample size of at least 200. The AIC and CAIC are also negatively impacted by departures from multivariate normality (Diamantopoulos & Siguaw, 2000).	– Small AIC values indicate a better fit for the hypothesised model (Diamantopoulos & Siguaw, 2000)

Goodness-of-Fit Index	Description	Values indicating Model Fit
Parsimony Fit Indices- These sets of fit indices provide information about which model is best after considering its fit relative to its complexity (Diamantopoulos & Siguaw, 2000; Hair *et al*., 2006).		
Parsimony Goodness-of-Fit Index (PGFI)	– It is similar to the GFI but it makes other adjustments to account for model complexity	– It is similar to the PNFI. Its values range between 0 and 1, with higher values indicating a more parsimonious fit (Schermelleh-Engel *et al*., 2003).
Parsimony Normed-Fit-Index (PNFI)	– Assesses the fit of structural equation models and corrects model parsimony (Schermelleh-Engel *et al*., 2003). – It is a modification of the NFI.	– It is similar to the PGFI. Its values range between 0 and 1, with higher values indicating a more parsimonious fit (Schermelleh-Engel *et al*., 2003).
Relative or Incremental Fit Measures: These indices show how much better a model fits as compared to the independence model or the general baseline models (Hair *et al*., 2006).		
Normed-Fit-Index (NFI)	– Provides estimates of a model's incremental fit in relation to a more independent model, also known as a null model.	– Values range from 0 to 1, with higher values indicating better fit (Schermelleh-Engel *et al*., 2003). – Values of .90 or higher indicate a good model fit (Kline, 2005).
Non-Normed-Fit-Index (NNFI)	– This index is also known as the Tucker-Lewis Index (TLI). – Measures relative fit – NNFI takes the degrees of freedom of both the specified model and the independence model into consideration (Schermelleh-Engel *et al*., 2003). – One important advantage of the NNFI is that it is less affected by sample size (Hu & Bentler, 1995, 1999).	– As in the case of the NFI values also range from 0 to 1. However, because this index is not normed, values may leave this range, with higher values indicating better fit (Schermelleh-Engel *et al*., 2003).

Goodness-of-Fit Index	Description	Values indicating Model Fit
Comparative Fit Index (CFI)	– CFI compares the improvement of the fit of the researcher's model as compared to the null model, – Corrects small sample bias associated with NFI (Schermelleh-Engel *et al*., 2003).	– Values range from 0 to 1, with higher values indicating better fit (Schermelleh-Engel *et al*., 2003). – Values of .90 or higher indicate a good model fit (Kline, 2005).
Adjusted Goodness-of-Fit Index (AGFI)	– AGFI is the GFI adjusted for the degrees of freedom in the model	– Values of .90 or higher indicate a good model fit (Diamantopoulos & Siguaw, 2000; Kline, 2005).

4.11 Summary of Chapter 4

This chapter presented the research design, sampling strategies, data collection procedures and the types of measuring instruments which were used to assess the constructs identified. In addition, the data analysis techniques used in the study were fully explained. This entailed providing an overview of the LISREL model. The next chapter will present the results of the study.

CHAPTER 5
RESULTS

5.1 Introduction

The previous chapters introduced the research topic and presented the purpose and the background to the study as well as the methods used in the study. This chapter will now present the empirical findings of the study. The results are organised according to the research hypotheses and the statistical analyses performed. Where appropriate, some of the results will be summarised in tables and figures. The results of the initial analysis of the data are presented first in order to provide some insight into both the data and the instruments selected. The demographic details of the participants are also presented.

The results are presented in the following order: (i) Item analysis results, (ii) Descriptive statistics, (iii) exploratory factor analyses results, (iv) independent sample t-tests results, (v) correlation analysis results, (vi) hierarchical multiple regression analyses results, (vii) confirmatory factor analyses results, and (viii) structural equation modelling results.

5.1.1 Power analysis

As indicated in the preceding chapter, it was not expected that statistical power would be a problem in the study as the sample size was 464 and all the sub-samples considered were larger than $N = 100$. Where necessary, effect sizes for both univariate and multivariate statistical tests were calculated for specific types of statistical analyses and the information is provided in the tables which presents the results of the analysis in question.

5.2 Sample Profile

The characteristics of the respondents are summarised in Table 5.1.

Table 5.1

The Characteristics of the Respondents

Demographics	**Total sample (n = 464) 100% of sample**	**Female sub-sample (n = 278) 59.9% of sample**	**Male sub-sample (n = 185) 39.9% of sample**
Education			
Secondary School	44 (9.5%)	23 (8.3%)	21 (11.4%)
Post-Secondary Qualification (non-University)	67 (14.4%)	47 (16.9%)	20 (10.8%)
Bachelor's Degree	184 (39.7%)	103 (37.1%)	81 (43.8%)
Postgraduate Degree	69 (14.9%)	32 (11.5%)	37 (20.0%)
Other	89 (19.2%)	65 (23.4%)	23 (12.4%)
Place where Brought Up			
City	112 (24.1%)	71 (25.5%)	41 (22.2%)
Town	90 (19.4%)	75 (20.5%)	33 (17.8%)
Village	252 (54.3%)	147 (52.9%)	104 (56.2%)
Relationship Status			
Single	127 (27.4%)	78 (28.1%)	49 (26.5%)
Dating	156 (33.6%)	96 (34.5%)	60 (32.4%)
Married	154 (33.2%)	87 (31.3%)	66 (35.7%)
Separated	7 (1.5%)	6 (2.2%)	1 (0.5%)
Divorced	8 (1.7%)	5 (1.8%)	3 (1.6%)
Widowed	5 (1.1%)	3 (1.1%)	2 (1.1%)
Level of Responsibility at Work			
Non-supervisory/Non-management	166 (35.5%)	99 (35.6%)	67 (36.2%)
Supervisor	123 (26.5%)	79 (28.4%)	44 (23.8%)
Middle Manager	95 (20.5%)	50 (18.0%)	45 (24.3%)
Senior Manager	39 (8.4%)	22 (7.9%)	16 (8.6%)
Executive Management	5 (1.1%)	1 (0.4%)	4 (2.2%)
Age	**M** = 32.69 **SD** = 7.43 **S.E. Mean** = 0.353	**M** = 32.41 **SD** = 7.46 **S.E. Mean** = 0.457	**M** = 32.97 **SD** = 7.19 **S.E. Mean** = 0.542
Length of Formal Employment	**M** = 8.24 **SD** = 7.46 **S.E. Mean** = 0.362	**M** = 8.13 **SD** = 7.81 **S.E. Mean** = 0.491	**M** = 8.25 **SD** = 6.61 **S.E. Mean** = 7.82

The respondents comprised 464 black employees from a variety of organisations in Botswana. The participants were mostly female (59.9%), in a dating relationship

(67.9%), and between the ages of 20 and 57 (M = 32.69, SD = 7.43). The majority of the respondents had, at the very least, completed a Bachelor's degree (41.0%) while the majority of the respondents' significant others had also completed a Bachelor's degree (40.6 %). As regards their employee status 37.1% of the respondents were in non-supervisory/non-management positions, 27.5% were in supervisory positions, and 31.1% of respondents were in managerial positions. In addition, at least 25.5% of the respondents' significant others were in non-supervisory/non-management positions, 28.0% were in supervisory positions, and 41.6% were in managerial positions. Fifty nine percent of the respondents had one child (M = 1.15, SD = 1.26, S.E. Mean = 0.60).

The sample was considered to be reasonably representative in terms of the extent to which it portrayed the characteristics of the sampled population (see Table 5.1). A sample size of 464 was also considered reasonable as regards both SEM sample size requirements and statistical power in the SEM context. MacCallum, Browne, and Sugawara (1996) suggest that sample sizes of at least 200 observations are sufficient for most SEM applications. Determining the correct sample size was also critical in terms of preventing both Type I and Type II errors. A detailed discussion on power analysis is presented in sections 4.8 and 5.1.1.

5.3 Item Analysis

Item analysis was conducted to identify those items not contributing to an internally consistent description of the sub-scales used.

The identification of items as possible weak items was based on the following criteria: corrected item total correlations of < 0.30; squared multiple correlations of < 0.30; an increase in Cronbach's alpha when the item was deleted; inter-item correlation; the item mean, and the item standard deviation statistics.

Those items, the removal of which could lead to an increase in the overall reliability of the sub-scales in question were flagged and considered for deletion. It was further

decided that the removal of such items would be considered only after a dimensionality analysis confirmed or disconfirmed the items identified as weak.

5.3.1 Item analysis of the PCT sub-scale

Table 5.2 presents the item analysis results of the PCT sub-scale. The Cronbach's alpha for the scale was .926 and this was considered as satisfactory (i.e. > 0.70). This value exceeded the critical cut-off value set for the study.

Table 5.2

Item Statistics for the PCT Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.926	.926	10

Item Statistics

	Mean	Std. Deviation	N
PCT1	1.7453	1.10485	428
PCT2	1.7103	1.10785	428
PCT3	1.6612	1.08198	428
PCT4	1.9322	1.16248	428
PCT5	1.7033	1.09642	428
PCT6	1.7967	1.11127	428
PCT7	1.9206	1.17078	428
PCT8	1.7734	1.08321	428
PCT9	1.7734	1.12770	428
PCT10	1.6192	1.12135	428

Inter-Item Correlation Matrix

	PCT1	PCT2	PCT3	PCT4	PCT5	PCT6	PCT7	PCT8	PCT9	PCT10
PCT1	1.000	.594	.598	.501	.591	.423	.515	.368	.348	.385
PCT2	.594	1.000	.709	.545	.720	.521	.499	.525	.480	.460
PCT3	.598	.709	1.000	.589	.709	.585	.633	.538	.509	.563
PCT4	.501	.545	.589	1.000	.557	.468	.528	.522	.410	.386
PCT5	.591	.720	.709	.557	1.000	.600	.647	.543	.514	.477
PCT6	.423	.521	.585	.468	.600	1.000	.681	.672	.613	.562
PCT7	.515	.499	.633	.528	.647	.681	1.000	.645	.627	.624
PCT8	.368	.525	.538	.522	.543	.672	.645	1.000	.681	.621
PCT9	.348	.480	.509	.410	.514	.613	.627	.681	1.000	.711
PCT10	.385	.460	.563	.386	.477	.562	.624	.621	.711	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum/Minimum	Variance	Number of Items
Item Mean	1.764	1.619	1.932	.313	1.193	.010	10
Item Variance	1.248	1.171	1.371	.200	1.171	.005	10
Inter-Item Correlation	.555	.348	.720	.371	2.066	.009	10

Total Item Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's alpha if Item Deleted
PCT1	15.8902	62.876	.609	.470	.924
PCT2	15.9252	61.062	.721	.641	.918
PCT3	15.9743	60.428	.783	.668	.914
PCT4	15.7033	61.788	.636	.454	.922
PCT5	15.9322	60.429	.771	.666	.915
PCT6	15.8388	60.810	.734	.592	.917
PCT7	15.7150	59.371	.778	.655	.914
PCT8	15.8621	61.168	.734	.625	.917
PCT9	15.8621	61.192	.698	.625	.919
PCT10	16.0164	61.524	.682	.594	.920

The item analysis for the PCT sub-scale produced a high reliability (α = .926) with all the items contributing satisfactorily to the reliability score. Using the stated criteria, no items were deleted. Based on these results, the sub-scale was deemed to be reliable.

5.3.2 Item analysis for the CRO scale

The six items of the CRO sub-scale were also item analysed. Table 5.3 presents the results of this analysis. The Cronbach's alpha for the scale was .857. This value also exceeded the critical cut-off value set for the study.

Table 5.3

Item Statistics for the CRO Sub-scale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha ased on Standardised Items	N of Items
.857	.857	4

Item Statistics			
	Mean	Std. Deviation	N
CRO11	1.7000	1.03385	460
CRO12	1.8261	1.10858	460
CRO13	1.9696	1.15052	460
CRO14	1.6609	1.05109	460

Inter-Item Correlation Matrix				
	CRO11	CRO12	CRO13	CRO14
CRO11	1.000	.686	.630	.506
CRO12	.686	1.000	.683	.563
CRO13	.630	.683	1.000	.536
CRO14	.506	.563	.536	1.000

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Mean	1.789	1.661	1.970	.309	1.186	.019	4
Item Variance	1.182	1.069	1.324	.255	1.238	.014	4
Inter-Item Correlation	.600	.506	.686	.181	1.357	.005	4

Total Item Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
CRO11	5.4565	8.005	.713	.528	.815
CRO12	5.3304	7.389	.767	.598	.790
CRO13	5.1870	7.385	.725	.535	.809
CRO14	5.4957	8.434	.607	.371	.856

The item analysis of the CRO sub-scale did not raise any concerns and, therefore, no items were identified as problematic nor were any items flagged for potential deletion. Based on these results, the sub-scale was deemed to be reliable.

5.3.3 Item analysis for the CS sub-scale

All items in the CS sub-scale were also item-analysed (see Table 5.4). The item analysis indicated a high reliability score of .876. This value also exceeded the critical cut-off value set for the study.

Table 5.4

Item Statistics for the CS Sub-scale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.876	.877	12

Item Statistics			
	Mean	Std. Deviation	N
CS15	1.6051	.97119	433
CS16	1.9423	1.13198	433
CS17	1.8637	1.03073	433
CS18	1.7090	1.02440	433
CS19	1.8083	1.05529	433
CS20	1.7714	.99346	433
CS21	1.5196	.97430	433
CS22	1.7275	1.09274	433
CS23	1.7460	1.03196	433
CS24	1.8337	1.18246	433
CS25	1.7875	1.13494	433
CS26	1.7875	1.16115	433

Inter-Item Correlation Matrix

	CS15	CS16	CS17	CS18	CS19	CS20	CS21	CS22	CS23	CS24	CS25	CS26
CS15	1.000	.575	.383	.450	.353	.309	.261	.217	.322	.273	.245	.274
CS16	.575	1.000	.513	.489	.483	.466	.357	.305	.312	.294	.309	.345
CS17	.383	.513	1.000	.563	.597	.410	.451	.409	.466	.224	.232	.268
CS18	.450	.489	.563	1.000	.567	.512	.451	.394	.416	.323	.349	.331
CS19	.353	.483	.597	.567	1.000	.459	.464	.398	.431	.184	.262	.305
CS20	.309	.466	.410	.512	.459	1.000	.410	.388	.393	.194	.291	.315
CS21	.261	.357	.451	.451	.464	.410	1.000	.407	.376	.143	.215	.251
CS22	.217	.305	.409	.394	.398	.388	.407	1.000	.487	.185	.185	.215
CS23	.322	.312	.466	.416	.431	.393	.376	.487	1.000	.250	.254	.316
CS24	.273	.294	.224	.323	.184	.194	.143	.185	.250	1.000	.733	.696
CS25	.245	.309	.232	.349	.262	.291	.215	.185	.254	.733	1.000	.833
CS26	.274	.345	.268	.331	.305	.315	.251	.215	.316	.696	.833	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum/Minimum	Variance	Number of Items
Item Mean	1.758	1.520	1.942	.423	1.278	.013	12
Item Variance	1.140	.943	1.398	.455	1.482	.025	12
Inter-Item Correlation	.372	.143	.833	.690	5.808	.019	12

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item − Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
CS15	19.4965	60.723	.504	.386	.869
CS16	19.1594	57.463	.615	.500	.863
CS17	19.2379	58.395	.625	.503	.862
CS18	19.3926	57.721	.676	.520	.859
CS19	19.2933	58.175	.622	.495	.862
CS20	19.3303	59.541	.572	.395	.866
CS21	19.5820	60.517	.517	.341	.869
CS22	19.3741	59.878	.487	.338	.871
CS23	19.3557	59.429	.553	.384	.867
CS24	19.2679	58.947	.493	.585	.871
CS25	19.3141	58.346	.558	.746	.866
CS26	19.3141	57.545	.591	.728	.864

All items on the CS sub-scale were retained as they all contributed satisfactorily to the reliability of the sub-scale.

5.3.4 Item analysis for the COP sub-scale

Table 5.5 presents the item analysis results of the COP sub-scale. The Cronbach's alpha for the sub-scale was .933, exceeding critical cut-off value set for the study.

Table 5.5

Item Statistics for the COP Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.933	.934	7

Item Statistics

	Mean	Std. Deviation	N
COP27	1.9321	1.15073	442
COP28	1.7873	1.15863	442
COP29	1.9457	1.19968	442
COP30	2.0407	1.23191	442
COP31	1.9819	1.23061	442
COP32	2.0023	1.32223	442
COP33	1.9050	1.33674	442

Inter-Item Correlation Matrix

	COP27	COP28	COP29	COP30	COP31	COP32	COP33
COP27	1.000	.729	.636	.552	.598	.562	.562
COP28	.729	1.000	.649	.640	.648	.612	.608
COP29	.636	.649	1.000	.763	.737	.701	.634
COP30	.552	.640	.763	1.000	.772	.728	.647
COP31	.598	.648	.737	.772	1.000	.812	.703
COP32	.562	.612	.701	.728	.812	1.000	.733
COP33	.562	.608	.634	.647	.703	.733	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	1.942	1.787	2.041	.253	1.142	.007	7
Item Variances	1.525	1.324	1.787	.463	1.349	.033	7
Inter-Item Correlations	.668	.552	.812	.260	1.471	.005	7

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
COP27	11.6629	41.662	.700	.586	.931
COP28	11.8077	40.863	.755	.632	.926
COP29	11.6493	39.698	.810	.681	.921
COP30	11.5543	39.377	.808	.699	.921
COP31	11.6131	38.855	.848	.754	.917
COP32	11.5928	38.224	.820	.727	.920
COP33	11.6900	38.917	.760	.601	.926

After the item analysis, not any of the items indicated any possible weakness and, therefore, all the items were retained. The Cronbach's alpha value of .934 was considered highly satisfactory; and therefore, the scale was deemed to be reliable.

5.3.5 Item analysis for the CCO sub-scale

Table 5.6 presents the item analysis results for the CCO sub-scale. The Cronbach's alpha for the scale was .681.

Table 5.6

Item Statistics for the CCO Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.681	.682	4

Item Statistics

	Mean	Std. Deviation	N
CCO34	3.5405	.74560	457
CCO35	3.3720	.75038	457
CCO36	3.2888	.79454	457
CCO37	2.9803	.76780	457

Inter-Item Correlation Matrix

	CCO34	CCO35	CCO36	CCO37
CCO34	1.000	.428	.410	.195
CCO35	.428	1.000	.504	.306
CCO36	.410	.504	1.000	.250
CCO37	.195	.306	.250	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.295	2.980	3.540	.560	1.188	.055	4
Item Variances	.585	.556	.631	.075	1.136	.001	4
Inter-Item Correlations	.349	.195	.504	.309	2.584	.013	4

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
CCO34	9.6411	3.042	.456	.235	.620
CCO35	9.8096	2.790	.571	.338	.545
CCO36	9.8928	2.763	.527	.307	.572
CCO37	**10.2013**	**3.315**	**.315**	**.108**	**.708**

The CCO scale reported a Cronbach's alpha of .681, which was just below the .70 value. This seemingly low strength alpha may be explained by the shortness of the scale (four items only). An inspection of the corrected item-total correlations and the squared multiple correlations indicated that item CCO37 could be flagged as problematic. The item analysis further revealed that, if item CCO37 were removed, the scale's alpha would improve from .681 to .708. As a result, this item was flagged and closely monitored when the dimensionality analysis was performed.

5.3.6 Item analysis for the TSRO sub-scale

Table 5.7 presents the item analysis results for the TSRO sub-scale. The Cronbach's alpha for the scale was .763. This value also exceeded the critical cut-off value set for the study.

Table 5.7
Item Statistics for the TSRO Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.763	.765	4

Item Statistics

	Mean	Std. Deviation	N
TSRO38	3.1792	.84298	452
TSRO39	3.5000	.75194	452
TSRO40	3.1217	.88634	452
TSRO41	3.3230	.81673	452

Inter-Item Correlation Matrix

	TSRO38	TSRO39	TSRO40	TSRO41
TSRO38	1.000	.355	.410	.386
TSRO39	.355	1.000	.497	.513
TSRO40	.410	.497	1.000	.528
TSRO41	.386	.513	.528	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.281	3.122	3.500	.378	1.121	.028	4
Item Variances	.682	.565	.786	.220	1.389	.008	4
Inter-Item Correlations	.448	.355	.528	.172	1.486	.005	4

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
TSRO38	9.9447	4.075	.468	.221	.757
TSRO39	9.6239	4.071	.574	.345	.703
TSRO40	10.0022	3.554	.610	.379	.680
TSRO41	9.8009	3.787	.606	.379	.683

As regards the TRSO sub-scale, the item analysis indicated an acceptable reliability score and, therefore, the sub-scale was deemed to be reliable.

5.3.7 Item analysis for the COMP sub-scale

The COMP sub-scale comprised eight items. The Cronbach's alpha for the sub-scale was .806, which also exceeded the .70 value. Table 5.8 presents the item analysis results for the COMP sub-scale.

Table 5.8
Item Statistics for the COMP Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.806	.807	8

Item Statistics

	Mean	Std. Deviation	N
COMP42	2.5714	1.01412	448
COMP43	3.2210	.85546	448
COMP44	2.9040	.92307	448
COMP45	2.3415	.90084	448
COMP46	2.8683	.90392	448
COMP47	2.4174	.96348	448
COMP48	2.7656	.95584	448
COMP49	2.9576	.92709	448

Inter-Item Correlation Matrix

	COMP42	COMP43	COMP44	COMP45	COMP46	COMP47	COMP48	COMP49
COMP42	1.000	.329	.238	.192	.248	.339	.344	.290
COMP43	.329	1.000	.446	.195	.362	.173	.400	.401
COMP44	.238	.446	1.000	.209	.406	.267	.449	.445
COMP45	.192	.195	.209	1.000	.360	.286	.322	.181
COMP46	.248	.362	.406	.360	1.000	.359	.516	.394
COMP47	.339	.173	.267	.286	.359	1.000	.500	.383
COMP48	.344	.400	.449	.322	.516	.500	1.000	.564
COMP49	.290	.401	.445	.181	.394	.383	.564	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.756	2.342	3.221	.879	1.376	.087	8
Item Variances	.868	.732	1.028	.297	1.405	.008	8
Inter-Item Correlations	.343	.173	.564	.392	3.265	.011	8

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
COMP42	19.4754	18.827	.420	.205	.800
COMP43	18.8259	19.111	.496	.317	.788
COMP44	19.1429	18.499	.529	.333	.783
COMP45	19.7054	19.801	.367	.175	.805
COMP46	19.1786	18.281	.576	.361	.776
COMP47	19.6295	18.475	.501	.323	.787
COMP48	19.2813	17.160	.692	.510	.757
COMP49	19.0893	18.104	.582	.399	.775

As reflected in Table 5.8, the item analysis did not indicate that the removal of any of the items on this sub-scale would result in a substantial increase in Cronbach's alpha. Accordingly, the scale was also deemed to be reliable.

5.3.8 Item analysis for the n-Aff sub-scale

Table 5.9 presents the item analysis results for the n-Aff sub-scale**,** which comprised five items. The Cronbach's alpha for the sub-scale was .513, which was well below the critical cut-off value set for the study.

Table 5.9
Item Statistics for the n-Aff Sub- scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.513	.507	5

Item Statistics

	Mean	Std. Deviation	N
n-Aff 50	2.5262	.87035	458
n-Aff 51	2.6507	.88025	458
n-Aff 52	3.0983	.70413	458
n-Aff 53	2.9934	.74696	458
n-Aff 54	3.0524	.86349	458

Inter-Item Correlation Matrix

	n-Aff 50	n-Aff 51	n-Aff 52	n-Aff 53	n-Aff 54
n-Aff 50	1.000	.346	.055	.120	.289
n-Aff 51	.346	1.000	.052	.053	.309
n-Aff 52	.055	.052	1.000	.380	.038
n-Aff 53	.120	.053	.380	1.000	.065
n-Aff 54	.289	.309	.038	.065	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.864	2.526	3.098	.572	1.226	.067	5
Item Variances	.666	.496	.775	.279	1.563	.017	5
Inter-Item Correlations	.171	.038	.380	.342	9.917	.019	5

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
n-Aff 50	11.7948	3.708	.354	.165	.408
n-Aff 51	11.6703	3.744	.333	.168	.423
n-Aff 52	**11.2227**	**4.580**	**.192**	**.145**	**.508**
n-Aff 53	**11.3275**	**4.387**	**.227**	**.155**	**.490**
n-Aff 54	11.2686	3.873	.305	.134	.443

Despite the low Cronbach's alpha, the item analysis did not indicate that the removal of any of the items on this sub-scale would improve the scale's Cronbach's alpha. The corrected item total correlations for items n-Aff 52 and n-Aff 53 were both less .30. However, these two items were negatively worded and required reverse coding which

may, in turn, have caused problems with the issue of homogeneity. However, a decision was made that, before completely excluding the sub-scale from any further analysis, a dimensionality analysis would first be performed to confirm the factor loadings of all the items.

The EFA results (see section 5.4.2) confirmed that items nAff52 and nAff53 had failed the uni-dimensionality test and, therefore, both items were subsequently deleted. The three remaining items were once again subjected to item analysis and they produced an improved, but still unsatisfactory, Cronbach's alpha of .578. Using the Spearman-Brown prophecy formula ($new\ r_{xx} = \frac{n \text{ x old } r_{xx}}{1+(n-1)\text{old } r_{xx}}$), it was determined that, if the N-Aff items could have been doubled using other similar items, the Cronbach alpha could have been increased to .891. The sub-scale was therefore retained in further analyses.

5.3.9 Item analysis for the SCO sub-scale

The sociotropy sub-scale comprised seven items. These seven items were all item analysed. Table 5.10 presents the results for the SCO sub-scale. The Cronbach's alpha for the scale was .777. This value exceeded the critical cut-off value of set for the study.

Table 5.10
Item Statistics for the SCO Sub-scale

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.777	.777	7

Item Statistics			
	Mean	Std. Deviation	N
SCO55	3.0110	.87864	453
SCO56	1.9161	.82120	453
SCO57	2.3731	.89486	453
SCO58	2.3664	.94444	453
SCO59	2.7351	.92197	453
SCO60	2.1192	.94021	453
SCO61	2.9735	.91168	453

Inter-Item Correlation Matrix

	SCO55	SCO56	SCO57	SCO58	SCO59	SCO60	SCO61
SCO55	1.000	.265	.344	.344	.340	.239	.329
SCO56	.265	1.000	.350	.296	.199	.486	.186
SCO57	.344	.350	1.000	.409	.318	.299	.319
SCO58	.344	.296	.409	1.000	.577	.327	.350
SCO59	.340	.199	.318	.577	1.000	.251	.400
SCO60	.239	.486	.299	.327	.251	1.000	.339
SCO61	.329	.186	.319	.350	.400	.339	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.499	1.916	3.011	1.095	1.571	.177	7
Item Variances	.815	.674	.892	.218	1.323	.006	7
Inter-Item Correlations	.332	.186	.577	.391	3.098	.008	7

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCO55	14.4834	13.352	.462	.224	.757
SCO56	15.5784	13.731	.441	.298	.760
SCO57	15.1214	12.996	.511	.275	.747
SCO58	15.1280	12.289	.591	.420	.730
SCO59	14.7594	12.754	.530	.389	.743
SCO60	15.3753	12.961	.480	.316	.754
SCO61	14.5210	13.078	.483	.266	.753

It was not possible to identify any items that could improve the Cronbach's alpha and, therefore, all the items were retained. The scale was also deemed to be reliable.

5.3.10 Item analysis for the PS Sub-scale

Table 5.11 presents the item analysis results for the PS sub-scale. The Cronbach's alpha for the scale was .918. This value also exceeded the critical cut-off value set for the study.

Table 5.11
Item Statistics for the PS Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.918	.920	6

Item Statistics

	Mean	Std. Deviation	N
PS62	3.4654	1.26416	434
PS63	3.8295	1.10152	434
PS64	3.8157	1.18814	434
PS65	3.7442	1.12356	434
PS66	3.7051	1.14960	434
PS67	3.7235	1.24468	434

Inter-Item Correlation Matrix

	PS62	PS63	PS64	PS65	PS66	PS67
PS62	1.000	.639	.578	.564	.533	.612
PS63	.639	1.000	.812	.719	.699	.676
PS64	.578	.812	1.000	.724	.674	.648
PS65	.564	.719	.724	1.000	.676	.605
PS66	.533	.699	.674	.676	1.000	.689
PS67	.612	.676	.648	.605	.689	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.714	3.465	3.829	.364	1.105	.017	6
Item Variances	1.393	1.213	1.598	.385	1.317	.024	6
Inter-Item Correlations	.657	.533	.812	.279	1.523	.005	6

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
PS62	18.8180	25.387	.675	.478	.917
PS63	18.4539	25.057	.844	.741	.894
PS64	18.4677	24.614	.810	.712	.897
PS65	18.5392	25.565	.770	.617	.903
PS66	18.5783	25.381	.766	.613	.904
PS67	18.5599	24.672	.757	.590	.905

After all the items had been analysed, none of the items indicated any possible weakness and, therefore, all the items were retained. Based on these results, the sub-scale was deemed to be reliable.

5.3.11 Item analysis for the FWC sub-scale

All five items of the FWC sub-scale were analysed and the results are presented in Table 5.12. The scale's Cronbach's alpha of .869 exceeded the critical cut-off value set for the study.

Table 5.12
Item Statistics for the FWC Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.869	.870	5

Item Statistics

	Mean	Std. Deviation	N
FWC68	2.1258	.84642	453
FWC69	1.9823	.83594	453
FWC70	1.8146	.79882	453
FWC71	1.9161	.87088	453
FWC72	1.9801	.88850	453

Inter-Item Correlation Matrix

	FWC68	FWC69	FWC70	FWC71	FWC72
FWC68	1.000	.616	.522	.468	.424
FWC69	.616	1.000	.631	.600	.515
FWC70	.522	.631	1.000	.655	.606
FWC71	.468	.600	.655	1.000	.693
FWC72	.424	.515	.606	.693	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	1.964	1.815	2.126	.311	1.172	.013	5
Item Variances	.720	.638	.789	.151	1.237	.003	5
Inter-Item Correlations	.573	.424	.693	.269	1.634	.007	5

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
FWC68	7.6932	8.209	.599	.413	.865
FWC69	7.8366	7.779	.719	.546	.836
FWC70	8.0044	7.872	.741	.555	.831
FWC71	7.9029	7.526	.742	.595	.830
FWC72	7.8389	7.706	.676	.524	.847

The results of item analysis did not reveal any items that could have any possible positive effects on Cronbach's alpha and, therefore, all the items were retained. The sub-scale was also deemed to be reliable.

5.3.12 Item analysis for the MOCI scale

Table 5.13 presents the item analysis results for the MOCI scale which comprised five items. The Cronbach's alpha for the scale was .868, reflecting satisfactory internal consistency reliability.

Table 5.13
Item Statistics for the MOCI Scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.868	.869	5

Item Statistics

	Mean	Std. Deviation	N
MOC73	2.6135	.99494	445
MOC74	3.0247	.91869	445
MOC75	2.8787	.91465	445
MOC76	2.8360	.95981	445
MOC77	2.8202	.94394	445

Inter-Item Correlation Matrix

	MOC73	MOC74	MOC75	MOC76	MOC77
MOC73	1.000	.535	.532	.528	.497
MOC74	.535	1.000	.663	.541	.553
MOC75	.532	.663	1.000	.649	.559
MOC76	.528	.541	.649	1.000	.639
MOC77	.497	.553	.559	.639	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.835	2.613	3.025	.411	1.157	.022	5
Item Variances	.897	.837	.990	.153	1.183	.004	5
Inter-Item Correlations	.570	.497	.663	.166	1.335	.003	5

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MOC73	11.5596	9.783	.625	.392	.857
MOC74	11.1483	9.811	.696	.514	.839
MOC75	11.2944	9.636	.738	.572	.829
MOC76	11.3371	9.481	.721	.549	.832
MOC77	11.3528	9.756	.681	.485	.842

As regards the MOCI scale, all of the items analysed conformed to the criteria and, therefore, all the items were retained.

5.3.13 Item analysis for the CCO_Perceived sub-scale

Table 5.14 presents the item analysis results of the CCO_Perceived sub-scale. The Cronbach's alpha for the sub-scale was .721.

Table 5.14
Item Statistics for the CCO-Perceived Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.721	.720	4

Item Statistics

	Mean	Std. Deviation	N
CCO34_2	3.3795	.79172	390
CCO35_2	3.2205	.78061	390
CCO36_2	3.1846	.82802	390
CCO37_2	2.8667	.79047	390

Inter-Item Correlation Matrix

	CCO34_2	CCO35_2	CCO36_2	CCO37_2
CCO34_2	1.000	.434	.446	.213
CCO35_2	.434	1.000	.541	.360
CCO36_2	.446	.541	1.000	.356
CCO37_2	.213	.360	.356	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.163	2.867	3.379	.513	1.179	.046	4
Item Variances	.637	.609	.686	.076	1.125	.001	4
Inter-Item Correlations	.392	.213	.541	.329	2.548	.011	4

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
CCO34_2	9.2718	3.530	.466	.251	.684
CCO35_2	9.4308	3.254	.597	.367	.607
CCO36_2	9.4667	3.108	.599	.373	.602
CCO37_2	9.7846	3.743	.385	.166	.730

The perceived CCO sub-scale reported a Cronbach's alpha of .721. While this alpha exceeded the critical cut-off value set for the study, as with the CCO sub-scale, the results showed that Cronbach's alpha would improve marginally from .721 to .730 if item CCO37_2 were removed. Accordingly, this item was also flagged and closely monitored when the dimensionality analysis was performed.

5.3.14 Item analysis for the TRSO_Perceived sub-scale

Table 5.15 presents the item analysis results for the TSRO_Perceived sub-scale. The Cronbach's alpha for the scale was .749. This value exceeded the critical cut-off value set for the study.

Table 5.15
Item Statistics for the TSRO_Perceived Sub-scale.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.749	.749	4

Item Statistics

	Mean	Std. Deviation	N
TSRO38_2	3.2057	.81789	389
TSRO39_2	3.4293	.75523	389
TSRO40_2	3.2082	.88535	389
TSRO41_2	3.3265	.80196	389

Inter-Item Correlation Matrix

	TSRO38_2	TSRO39_2	TSRO40_2	TSRO41_2
TSRO38_2	1.000	.395	.396	.318
TSRO39_2	.395	1.000	.406	.449
TSRO40_2	.396	.406	1.000	.601
TSRO41_2	.318	.449	.601	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.292	3.206	3.429	.224	1.070	.012	4
Item Variances	.667	.570	.784	.213	1.374	.008	4
Inter-Item Correlations	.427	.318	.601	.283	1.891	.008	4

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
TSRO38_2	9.9640	3.937	.456	.224	.739
TSRO39_2	9.7404	3.940	.525	.283	.702
TSRO40_2	9.9614	3.331	.609	.416	.652
TSRO41_2	9.8432	3.627	.594	.412	.663

The item analysis of the TSRO_Perceived sub-scale did not reveal any items that, if removed, would improve the Cronbach's alpha of the sub-scale and, thus, all of the items were retained. Based on the results, the sub-scale was also deemed to be reliable.

5.3.15 Item analysis for the COMP_Perceived sub-scale

Similar to the COMP sub-scale, the COMP_Perceived sub-scale also comprised eight items. These eight items were all item analysed. Table 5.16 presents the results of the COMP_Perceived sub-scale. The Cronbach's alpha for the sub-scale was .823, which was regarded as satisfactory.

Table 5.16
Item Statistics for the COMP_Perceived Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.823	.823	8

Item Statistics

	Mean	Std. Deviation	N
COMP42_2	2.8256	.97347	367
COMP43_2	3.2507	.83786	367
COMP44_2	3.0136	.87923	367
COMP45_2	2.5858	.93072	367
COMP46_2	2.9891	.89007	367
COMP47_2	2.6049	.96907	367
COMP48_2	2.8883	.98959	367
COMP49_2	3.0245	.89134	367

Inter-Item Correlation Matrix

	COMP42_2	COMP43_2	COMP44_2	COMP45_2	COMP46_2	COMP47_2	COMP48_2	COMP49_2
COMP42_2	1.000	.362	.328	.270	.294	.355	.334	.282
COMP43_2	.362	1.000	.429	.235	.344	.254	.406	.376
COMP44_2	.328	.429	1.000	.257	.461	.314	.441	.425
COMP45_2	.270	.235	.257	1.000	.341	.351	.332	.272
COMP46_2	.294	.344	.461	.341	1.000	.429	.483	.427
COMP47_2	.355	.254	.314	.351	.429	1.000	.532	.410
COMP48_2	.334	.406	.441	.332	.483	.532	1.000	.551
COMP49_2	.282	.376	.425	.272	.427	.410	.551	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.898	2.586	3.251	.665	1.257	.050	8
Item Variances	.849	.702	.979	.277	1.395	.010	8
Inter-Item Correlations	.368	.235	.551	.316	2.345	.007	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
COMP42_2	20.3569	19.350	.462	.234	.814
COMP43_2	19.9319	19.801	.503	.294	.808
COMP44_2	20.1689	19.174	.559	.350	.800
COMP45_2	20.5967	19.848	.427	.195	.818
COMP46_2	20.1935	18.883	.592	.369	.796
COMP47_2	20.5777	18.594	.565	.371	.799
COMP48_2	20.2943	17.733	.665	.481	.784
COMP49_2	20.1580	18.931	.584	.380	.797

The item analysis of the COMP_Perceived sub-scale also did not reveal any items that, if removed, could improve the Cronbach's alpha of the sub-scale and, thus, all of the items were retained.

5.3.16 Item analysis for the n-Aff _Perceived sub- scale

The five items of the n-Aff _Perceived sub-scale were also item analysed (see Table 5.17). The item analysis produced a low reliability (α = .541).

Table 5.17
Item Statistics for the n-Aff _Perceived Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.541	.539	5

Item Statistics

	Mean	Std. Deviation	N
n-Aff 50_2	2.8079	.87017	380
n-Aff 51_2	2.7526	.85452	380
n-Aff 52_2	3.0868	.65406	380
n-Aff 53_2	3.0158	.79561	380
n-Aff 54_2	3.0842	.84295	380

Inter-Item Correlation Matrix

	n-Aff 50_2	n-Aff 51_2	n-Aff 52_2	n-Aff 53_2	n-Aff 54_2
n-Aff 50_2	1.000	.337	.122	.130	.335
n-Aff 51_2	.337	1.000	.081	-.014	.384
n-Aff 52_2	.122	.081	1.000	.373	.154
n-Aff 53_2	.130	-.014	.373	1.000	-.006
n-Aff 54_2	.335	.384	.154	-.006	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.949	2.753	3.087	.334	1.121	.025	5
Item Variances	.652	.428	.757	.329	1.770	.018	5
Inter-Item Correlations	.190	-.014	.384	.398	-28.165	.023	5

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
n-Aff 50_2	11.9395	3.677	.393	.182	.426
n-Aff 51_2	11.9947	3.889	.334	.199	.466
n-Aff 52_2	**11.6605**	**4.531**	**.283**	**.164**	**.500**
n-Aff 53_2	**11.7316**	**4.572**	**.159**	**.158**	**.568**
n-Aff 54_2	11.6632	3.828	.366	.211	.446

Items n-Aff 52_2 and n-Aff 53_2 were highlighted as problematic items. The item analysis indicated that the removal of item n-Aff 53_2 would improve the scale's Cronbach's alpha marginally from .541 to 568. However, removing this item would still not improve the alpha value to a number above the value of >.70 and, therefore, the

decision was made to leave the item since the effect of removing the item was deemed unimportant. Furthermore, it was also not very clear which of the other items were not contributing satisfactorily to the reliability score. It was, thus, decided that a, dimensionality analysis was to be performed before excluding the sub-scale from further analysis.

Following the results of the EFA analysis (see section 5.4.3), the two items, that is nAff52_2 and nAff53_2, were removed and the remaining items were, once again, subjected to an item analysis. The remaining items produced an improved Cronbach's alpha of .619. The Spearman-Brown prophecy formula was also used and it was determined that, if the items could have been doubled using other similar items, the resulting corrected Cronbach's alpha could have been .906. The n-Aff_ Perceived sub-scale was, therefore, retained.

5.3.17 Item analysis for the SCO_Perceived sub-scale

The SCO_Perceived sub-scale consisted of seven items. Table 5.18 presents the item analysis results for the perceived SCO_Perceived sub-scale. The Cronbach's alpha for the scale was .810.

Table 5.18
Item Statistics for the SCO_Perceived Sub-scale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.810	.809	7

Item Statistics

	Mean	Std. Deviation	N
SCO55_2	2.6817	.91936	377
SCO56_2	2.0769	.94076	377
SCO57_2	2.3554	.93167	377
SCO58_2	2.2334	.97503	377
SCO59_2	2.5040	.95126	377
SCO60_2	2.2520	.94961	377
SCO61_2	2.7745	.94508	377

Inter-Item Correlation Matrix

	SCO55_2	SCO56_2	SCO57_2	SCO58_2	SCO59_2	SCO60_2	SCO61_2
SCO55_2	1.000	.247	.384	.401	.394	.226	.441
SCO56_2	.247	1.000	.397	.340	.188	.487	.298
SCO57_2	.384	.397	1.000	.453	.362	.322	.378
SCO58_2	.401	.340	.453	1.000	.587	.399	.447
SCO59_2	.394	.188	.362	.587	1.000	.330	.482
SCO60_2	.226	.487	.322	.399	.330	1.000	.360
SCO61_2	.441	.298	.378	.447	.482	.360	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.411	2.077	2.775	.698	1.336	.064	7
Item Variances	.893	.845	.951	.105	1.125	.001	7
Inter-Item Correlations	.377	.188	.587	.398	3.115	.008	7

Total Item Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SCO55_2	14.1963	15.919	.498	.286	.793
SCO56_2	14.8011	16.048	.462	.321	.799
SCO57_2	14.5225	15.495	.553	.322	.783
SCO58_2	14.6446	14.650	.645	.460	.766
SCO59_2	14.3740	15.293	.567	.428	.781
SCO60_2	14.6260	15.698	.507	.327	.791
SCO61_2	14.1034	15.226	.583	.362	.778

In view of the fact that the item analysis of the sub-scale did not reveal any items that, if removed, could improve the Cronbach's alpha, all of the items were retained. The scale was also deemed to be reliable.

5.3.18 Summary of the item analysis results and descriptive statistics

Item analyses were conducted for all the scales and sub-scales used in the study. Table 5.19 presents a summary of the alpha coefficients of the scales and sub-scales analysed.

Table 5.19
Means, Standard Deviations and Alpha Coefficients of Measures

Measure	The Original No of Items	Cronbach α	The Final No of Items	Cronbach α after Items were Deleted
1. Perceived Comparison Threat (PCT)	10	.926		
2. Concern for the Self (CS)	12	.877		
3. Concerned for Outperformed Person (COP)	7	.933		
4. Concern for Relationship with Outperformed (CRO)	4	.857		
5. Collectivistic Cultural Orientation (CCO)	**4**	**.681**	**3**	**.708**
6. Traditional Sex Role Orientation (TSRO)	4	.763		
7. Competitiveness Questionnaire (CQ).	8	.806		
8. Needs Assessment Questionnaire (NAQ)	**5**	**.513**	**3**	**(.891)**
9. Sociotropy (SOC)	7	.777		
10. Collectivistic Cultural Orientation _Perceived	**4**	**.721**	**3**	**.730**
11. Traditional Sex Role Orientation (TSRO)_Perceived	4	.749		
12. Competitiveness Questionnaire _Perceived	8	.823		
13. Needs Assessment Questionnaire_Perceived	**5**	**.541**	**3**	**(.906)**
14. Sociotropy _Perceived	7	.810		
15. Instrumental Support (IS)	6	.918		
16. Family–Work Conflict (FWC)	5	.869		
17. Masculinity of Organisational Culture Index (MOCI)	5	.868		

Note. The values in the columns tittled 1) the final number of items and 2) Cronbach's α after items were deleted apply to the scales that required re-analyses after the items had been deleted.
Spearman-Brown's formula corrected alphas appear in parentheses.

Overall, the results of the reliability analyses suggested reasonably satisfactory levels of internal consistency. As reported in Table 5.19, most of the Cronbach's alphas exceeded .70 (specifically, 15 of the 17). The alphas ranged from 0.58 to 0.95. Only two measures raised some concern, namely, the n-Aff and n-Aff _Perceived sub-scales) as they reported Cronbach's alphas below the critical cut-off value set for the study. Based on the arguments detailed in chapter 4, section 4.10.2, all the sub-factors with alphas .60 and above were accepted, in accordance with the recommendations of Hair *et al*. (2003) and Nunnally and Bernstein (1994).

5.4 EFA Analysis Results

As explained in section 4.10.3, the objective of the EFA analyses was to evaluate whether the items identified, together with the remainder of the items in the specific sub-scales, measured the specific latent variables they were designed to measure. In terms of conducting the factor analysis, the procedure outlined in section 4.10.3 was carried out repeatedly until a so called clean structure, that satisfied the detailed exclusion criteria, was achieved. All the items, including those that had been flagged as problematic in the preceding item analyses, were included in the factor analyses.

The following three sets of EFA analyses were conducted:

1. The first EFA analysis was aimed at examining the factor structure of the dependent variables measures, that is, the compiled STTUC scale.
2. The second EFA analysis was aimed at examining the factor structure of all the independent variables measures used to measure collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family–work-conflict, instrumental support from the partner/spouse and masculine values within an organisational culture.
3. The third EFA analysis was aimed at examining the factor structure of all the independent variables measures used to evaluate the outperformers' perceptions of the outperformed individual's characteristics.

5.4.1 EFA of the dependent variables measures

The four sub-scales of the compiled STTUC scale were factor analysed. The sub-scales used were expected to manifest unidimensional sets of items in order to reflect variances in each of the four latent variables. These sub-scales consisted of 33 items; thus meeting the conservative rule of thumb of 10 participants per scale per item (Costello & Osborne, 2005). Principal axis factoring analysis was used, and a direct oblimin, that is, an oblique rotation was used. All the items loaded satisfactorily in their respective factors without any cross-loadings (see Table 5.20).

The KMO value was .937, thus exceeding the recommended value of .6. Bartlet's test of sphericity also attained statistical significance ($p < .05$). Based on these results, this data was considered to be suitable for factor analysis.

In view of the fact that all 33 items had loaded satisfactory on the four underlying factors, they were all retained. Table 5.20 presents the final extracted factor structure for the STTUC sub-scales.

Table 5.20

Final Rotated Pattern Matrix for the STTUC Sub-scales

Sub-scales and Items	Factor Loadings 1	2	3	4
Sub-scale 1: Perceived Comparison Threat (PCT)				
1. PCT5 −Felt embarrassed because you performed better.	.870			
2. PCT2 − Felt disappointed because you performed better.	.862			
3. PCT3 − Felt irritated because you performed better.	.860			
4. PCT4 − Felt intimidated by you.	.623			
5. PCT1 − Felt frustrated because you performed better.	.600			
6. PCT7 − Felt awkward being around you.	.594			
7. PCT6 − Felt anxious because you performed better.	.573			
8. PCT8 − Wished you would fail next time.	.549			
9. PCT9 − Felt vengeful toward you.	.541			
10. PCT10 − Acted rejecting toward you.	.528			
Sub-scale 2: Concerned for Outperformed Person (COP)				
11. COP26 − Felt disappointed because you performed better.		-.834		
12. COP28 − Wished you would fail next time.		-.820		
13. COP25 − Felt frustrated because you performed better.		-.809		
14. COP31 − Felt intimidated by you.		-.761		
15. COP32 − Felt embarrassed because you performed better.		-.752		
16. COP30 − Felt like rejecting you.		-.752		
17. COP24 − Felt irritated because you performed better.		-.751		
18. COP29 − Felt awkward being around you.		-.749		
19. COP33 − Felt anxious because you performed better.		-.725		
20. COP27 − Felt vengeful toward you.		-.694		

Sub-scale 3: Concern for the Self (CS)				
21. CS19 − Found it nerveracking to be regarded as one of the best in your field.			.712	
22. CS21 − Became worried that you may become so knowledgeable that your significant other would not like you.			.671	
23. CS17 − Believed that you have succeeded at work because of good luck and the carelessness of supervisors.			.649	
24. CS22 − Became worried that others would think you werea show-off.			.622	
25. CS23 − Became embarrassed if others complimented you on your work in the presence of your significant other.			.615	
26. CS20 − Became worried about the possibility of being criticised by your friends or associates for being too involved with your work.			.575	
27. CS18 − Believe that successful people are often sad and lonely.			.535	
28. CS16 − Felt that it just could not last when you noticed that things had been going particularly well for you.			.497	
29. CS15 − When things seemed to be going really well for you, felt uneasy that you would do something to ruin it.			.353	
Sub-scale 4: Concern for Relationship with Outperformed (CRO)				
30. CRO12 − Worried that you may may become so knowledgeable that your significant other would not like you.				-.822
31. CRO13 − Worried that your significant other may become jealous because you were so very good at something.				-.755
32. CRO11 − Worried that you may push your significant other away if your work were of superior quality.				-.695
33. CRO14 − Did less than your very best so that your significant other would not feel threatened.				-.472
Eigenvalues	12.50	3.46	2.66	1.13
Percentage Variance Explained	39.08%	10.80%	8.33%	3.52%

Using the parameters and criteria described in section 4.10.3, a four-factor structure with eigenvalues >1.00 and which explained 61.73% of the variance was retained for the compiled STTUC scale. The eigenvalues and variance percentage from the rotated solution for each of the factors were PCT (12.50, 39.08%), COP (3.46, 10.80%), CS (2.66, 8.33%), and CRO (1.13, 3.52%).

The results indicated that the items had loaded on the preidentified factors and, thus, the original names for each sub-scale were used. The PCT sub factor had factor loadings ranging from .873 to .540. The results also indicated that the items on the COP sub factor had factor loadings ranging from -.840 to -.698 and that the CS sub factor had factor loadings ranging from .718 to .353. In addition, the items on the CRO sub factor had factor loadings ranging from -.848 to -.471. All these factor loadings were satisfactory (i.e. > .35).

5.4.2 EFA of the independent variable measures

The independent variables measures collectively consisted of 44 items. The items were subjected to EFA using the parameters and criteria described in section 4.10.3. Initially, a nine-factor structure was retained although this was not consistent with the initial design intention of the eight sub-scales.

In terms of the TSRO, IS, FWC, MOCI, SOC, and CQ sub-scales, the evidence provided by the EFA results indicated that a single underlying factor was needed to explain the observed correlations between the items of each sub-scale.

A problem was identified with both the n-Aff sub-scale and the CCO sub-scale.

The initial EFA of the n-Aff sub-scale reflected that, contrary to the initial design intention, two underlying factors were needed to explain the observed correlations between the items of the n-Aff sub-scale. The preceding item analysis had indicated that the Cronbach's alpha for the n-Aff sub-scale was below the lenient critical cut-off

value set for the study. However, in view of the fact that the item analysis had not indicated that the removal of any item on this sub-scale would improve the scale's Cronbach's alpha, a decision was made to wait for the results of EFA before completely excluding the scale from further analysis. Of concern were items n-Aff 52 and n-Aff 53, which loaded on the second extracted factor. However, these two-flagged items failed the unidimensionality test, and they were both subsequently deleted.

The Collectivistic Cultural Orientation sub-scale was another problematic sub-scale. This necessitated the indentification and removal of the problem items. The initial analysis results identified CCO37 as the problematic item as it had produced inadequate factor loading, that is, item loadings of less than 0.35. This item was also flagged as problematic in the item analysis and, therefore, a decision was made to remove it.

After removing the three items, i.e, n-Aff 52, n-Aff 53, and CCO37, the remaining items were again subjected to EFA. All the items then produced improved and satisfactory loadings in all the sub-scales with a clean, simple structure without any cross-loadings (see Table 5.21).

The KMO value of the final EFA was .836, thus exceeding the recommended value of .6. Bartlet's test of sphericity also reached statistical significance ($p < .05$).

Table 5.21

Exploratory Factor Analysis of the Independent Variables Sub-Scales

Scales and Items	Factor Loadings							
	1	2	3	4	5	6	7	8
Scale 1: Traditional Sex Roles Orientation (TSRO)								
1. TSRO40 − One of the main tasks of a wife is to serve her husband.	.747							
2. TSRO41 − A wife should make a special effort to love her husband.	.643							
3. TSRO39 − One of the main responsibilities of a husband is to protect his wife.	.577							
4. TSRO38 − It is important that men feel in charge of their families.	.506							
Scale 2: Instrumental Support (IS)								
1. PS63 − My significant other is there for me when I need him/her.		-.888						
2. PS64 − My significant other makes me feel that I am able to count on him/her if I need help.		-.860						
3. PS65 − My significant other provides me with companionship to do different things.		-.811						
4. PS66 − My significant other provides me with opportunities to do things for myself.		-.796						
5. PS67 − My significant other helps me take care of family activities.		-.781						
6. PS62 − My significant other helps me with the household chores.		-.716						
Scale 3: Family–Work Conflict (FWC)								
1. FWC69 −I have to put off doing things at work because of demands on my time at home.			.822					
2. FWC71 −My home life interferes with my responsibilities at work, for example, getting to work on time, accomplishing daily tasks, and working overtime.			.796					
3. FWC70 –I am not able to do the things I want to do at work because of the demands of my family or significant other.			.777					
4. FWC72 −Family-related strain interferes with my ability to perform job-related duties.			.704					

Scale 4: Masculinity of Organisational Culture Index (MOCI)				
1.	MOC75 − In my organisation, it is important that employees are assertive.	-.808		
2.	MOC76 − In my organisation, it is important that employees are competitive.	-.778		
3.	MOC74 − In my organisation, it is important that managers performance.	-.764		
4.	MOC77 − In my organisation, it is important that managers are firm.	-.739		
5.	MOC73 − In my organisation, it is important that employees have ambitious career aspirations.	-.668		
Scale 5: Sociotropy				
1.	SCO58 − I am more apologetic to others than I need to be.		.668	
2.	SCO56 − I do things that are not in my best interest in order to please others.		.593	
3.	SCO57 − I censor what I say because I am concerned that the other person may either disapprove or disagree.		.586	
4.	SCO60 − I find it difficult to say no to people.		.582	
5.	SCO59 − If I think somebody may be upset with me, I want to apologise.		.558	
6.	SCO61 − I feel I have to be nice to other people.		.481	
7.	SCO55 −s I am afraid of hurting other people's feelings.		.466	
Scale 6: Competitiveness Questionnaire (CQ)				
1.	COMP48 − I would want an A Grade because that would mean that I had done better than other people.			.785
2.	COMP46 − I have always wanted to be better than others.			.644
3.	COMP49 − As it is important that a winner is decided, I do not like to leave a game unfinished.			.608
4.	COMP47 − When nominated for an award, I focus on how much better or worse the other candidates' qualifications are as compared to mine.			.595
5.	COMP44 − When I win an award or game it means that I am the best compared to everyone else who was playing. It is only fair that the best person win the game.			.546
6.	COMP43 − I feel that winning is important in both work and games.			.498
7.	COMP45 − In school, I always liked to be the first one to finish a test.			.449

8. COMP42 − I perform better when I am competing against someone rather than when I am the only one striving for a goal.						.434		
Scale 7: Needs Assessment Questionnaire (NAQ)								
1. N-AFF 50 − I spend a lot of time talking to other people.							.648	
2. n-Aff 51 − When I have a choice, I try to work in a group instead of by myself.							.533	
3. n-Aff 54 − I am a "people" person.							.515	
Scale 8: Collectivistic Cultural Orientation (CCO)								
1. CCO35 − It is my duty to take care of my family, even when I have to sacrifice what I want.								-.689
2. CCO34 − Parents and children must stay together as much as possible.								-.618
3. CCO36 − Family members should stick together, no matter the sacrifices required.								-.565
Eigenvalues	5.97	4.62	3.26	2.92	2.43	2.16	1.43	1.10
Percentage Variance Explained (%)	14.56	11.27	7.96	7.12	5.91	5.27	3.49	2.69

The analyses indicated that eight distinct factors underlined the responses to the proposed scales and sub-scales. The eigenvalues and percentage of variance from the rotated solution for each factor were as follows: TSRO (5.97, 14.56%), PS (4.62, 11.27%), FWC (3.26, 7.96%), MOC (2.92, 7.12%), SOC (2.43 5.91%), COMP (2.16, 5.27%), n-Aff (1.43, 3.49%), and CCO (1.10, 2.69%).

The ranges of factor loadings for each factor were as follows: TSRO (.747 to .506) PS (-.888 to -716) FWC (.822 to .680), MOC (.808 to .668), SOC (.668 to .466), COMP (.785 to .434), n-Aff (.648 to .515), and CCO (.689 to .565). All these factor loading were considered satisfactory (i.e. > .40).

5.4.3 EFA of the perceived independent variable measures

The perceived independent variables measures initially consisted of five sub-scales which were expected to have unidimensional sets of items reflecting variance in each of the five latent variables.

The TSRO_Perceived, SOC_Perceived, and CQ_Perceived sub-scales respectively returned a three-factor structure, thus indicating that the items loaded satisfactorily on the respective factors.

Both the n-Aff _Perceived and the CCO_Perceived were, however, identified as problematic.

The initial EFA of the n-Aff _Perceived sub-scale indicated that two underlying factors, instead of one, were required to explain the correlations observed between the items of the sub-scale. The results indicated that items n-Aff 52_2 and n-Aff 53_2 loaded on the second extracted factor. The evidence provided by both the initial item analysis and the EFA analysis of the n-Aff sub-scale led to a decision to delete the two items, thus reducing the scale to three items.

The CCO_Perceived sub-scale was another problematic sub-scale. Item CCO37_2, which was also flagged as problematic in the item analysis, did not load satisfactorily with the rest of the items. The decision was, therefore, made to remove item CCO37_2 from the remaining analyses.

The remaining 25 items were again subjected to principal axis factor analysis and a five-factor structure, which explained 53.38% of the variance was retained. The KMO value was .804, thus exceeding the recommended value of .6. Bartlet's test of sphericity also reached statistical significance ($p < .05$).

Table 5.22

Exploratory Factor Analysis of the Independent Variables (Sub-scales Measuring Perceived Outperformer Characteristics)

Scales and Items	Factor Loadings				
	1	2	3	4	5
Scale 11: Competitiveness Questionnaire (CQ) _Perceived					
1. COMP48_2 − I would want an A Grade because that would mean that I had done better than other people.	.772				
2. COMP46_2 − I have always wanted to be better than others.	.661				
3. COMP47_2 − When nominated for an award, I focus on how much better or worse the other candidates' qualifications are as compared to mine.	.652				
4. COMP49_2 − As it is important that a winner is decided, I do not like to leave a game unfinished.	.637				
5. COMP44_2 − When I win an award or game it means that I am the best as compared to everyone else that was playing. It is only fair that the best person win the game.	.593				
6. COMP43_2 − I feel that winning is important in both work and games.	.552				
7. COMP42_2 − I perform better when I am competing against someone rather than when I am the only one striving for a goal.	.490				
8. COMP45_2 − In school, I always liked to be the first one to finish a test.	.468				
Scale 10: Sociotropy _Perceived					
1. SCO58_2 − I am more apologetic to others than I need to be.		.761			
2. SCO59_2 − If I think somebody may be upset at me, I want to apologise.		.656			
3. SCO57_2 − I censor what I say because I am concerned that the other person may either disapprove or disagree.		.639			
4. SCO61_2 − I feel I have to be nice to other people.		.627			
5. SCO60_2 − I find it difficult to say no to people.		.564			
6. SCO55_2 − I am afraid of hurting other people's feelings.		.552			
7. SCO56_2 − I do things that are not in my best interests in order to please others.		.479			

Scale 13: Collectivistic Cultural Orientation (CCO) _Perceived					
1. CCO36_2 − Family members should stick together, no matter the sacrifices required.			-.639		
2. CCO35_2 − It is my duty to take care of my family, even when I have to sacrifice what I want.			-.609		
3. CCO34_2 − Parents and children must stay together as much as possible.			-.534		
Scale12: Needs Assessment Questionnaire (NAQ) _Perceived					
1. N-AFF 50_2 − I spend a lot of time talking to other people.				.626	
2. n-Aff 51_2 − When I have a choice, I try to work in a group instead of by myself.				.582	
3. n-Aff 54 − I am a "people" person.				.554	
Scale 9: Traditional Sex Roles Orientation (TSRO)_Perceived					
1. TSRO40_2 − One of the main tasks of a wife is to serve her husband.					.898
2. TSRO41_2 − A wife should make a special effort to love her husband.					.660
3. TSRO38_2 − It is important that men feel in charge of their families.					.478
4. TSRO39_2 −One of the main responsibilities of a husband is to protect his wife.					.430
Eigenvalues	4.61	3.14	2.72	1.61	1.23
Percentage Variance Explained (%)	18.42	12.55	10.88	6.43	5.10

The final EFA indicated that five distinct factors underlined the responses to the proposed sub-scales. The eigenvalues and percentage of variance from the rotated solution for each factor were as follows: COMP_Perceived (4.61, 18.42%), SOC_Perceived (3.14 12.55%), CCO_Perceived (2.72 10.88%), n-Aff _Perceived (1.61, 6.43%), and TSRO_Perceived (1.23, 5.10%).

The ranges of factor loadings for each factor were as follows: COMP_Perceived (.772 to .468), SOC_Perceived (.761 to 479), CCO_Perceived (.639 to .534), n-Aff _Perceived (.626 to .554), and TSRO_Perceived (.898 to .430).

5.5 Gender Differences in Experiences of STTUC

Table 5.23 presents the results of the one-tailed independent sample t-test. The t-test was conducted to test the hypothesis that women outperformers will report significantly higher levels of STTUC than men.

Table 5.23
Results from T-tests for Gender Differences in Experiences of STTUC

	Gender					
	Females	Males	*t*	*p*	Cohen's *d*	Effect size *r*
1. PCT	1.90 (0.97)	1.63 (0.78)	-3.14	0.002	0.30	0.15
2. COP	2.00 (1.06)	1.72 (0.88)	-3.05	0.002	0.30	0.15
3. CS	1.79 (0.76)	1.70 (0.64)	-1.27	0.206	0.12	0.06
4. CRO	1.90 (0.95)	1.57 (0.66)	-3.98	0.000	0.39	0.19

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed.

Standard Deviations appear in parentheses next to the means

The results summarised in Table 5.23 show that the means for females was consistently higher than for males across the four components of STTUC. While the evidence provided by Cohen's *d* values (i.e. *d* = 0.30, *d* = 0.30, and *d* = 0.39) and eta squared values (i.e. 0.15, 0.15, and 0.19), respectively, represented small effect sizes, the null hypotheses for $H_{1a,\ H1b,}$ and H_{1d} could be rejected ($p < 0.05$) as the

results were both statistically and numerically significant. The null hypotheses for H_{1c} could, however, not be rejected in favour of the notions presented ($p > 0.05$).

5.6 Marital Status Differences in Experiences of STTUC

Table 5.24 presents the results of the one-tailed independent sample t-test for assessing the hypothesis that married women outperformers report significantly higher levels of STTUC than unmarried women outperformers.

Table 5.24
Results from T-tests for Marital Status Differences in Experiences of STTUC

		Marital Status			
		Married	Not married	*t*	*p*
1.	**PCT**	1.91 (0.96)	1.83 (0.96)	0.59	0.553
2.	**COP**	2.00 (1.03)	1.94 (1.09)	0.53	0.594
3.	**CS**	1.62 (0.69)	1.57 (0.70)	0.52	0.605
4.	**CRO**	0.76 (0.38)	0.75 (0.41)	0.24	0.813

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed.
Standard Deviations appear in parentheses besides the means

It emerges from the results summarised in Table 5.24 that the null hypotheses for $H_{2a, H2b,}$ and H_{2c}, and H_{2d} could, however, not be rejected ($p < 0.05$). Despite the fact that the means for married women were numerically higher than the means for unmarried women, they were not statistically significant.

5.7 Pearson Product-Moment Correlations

Tables 5.25, 5.26, and 5.27 present the intercorrelations between all the variables.

Table 5.25

Intercorrelations Among the Variables for the Total Sample (n = 464)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. TPCT	—																
2. TCOP	.497**	—															
3. TCS	.467**	.469**	—														
4. TCRO	.600**	.392**	.618**	—													
5. TCCO	.002	-.066	-.077	-.014	—												
6. TTSRO	.000	-.080	-.021	-.035	.495**	—											
7. TCOMP	.153**	.032	.105*	.158**	.209**	.314**	—										
8. Tn-Aff	.020	.059	.023	.051	.161**	.137**	.122**	—									
9. TSOC	.117*	.131**	.236**	.177**	.172**	.160**	.234**	.262**	—								
10. TPS	-.355**	-.217**	-.223**	-.207**	.181**	.184**	.020	.084	-.022	—							
11. TFWC	.248**	.174**	.200**	.235**	-.088	.001	.037	.106*	.085	-.163**	—						
12. TMOC	-.020	-.046	-.088	.003	.131**	.183**	.244**	.122*	.100*	.121*	.063	—					
13. TCCO_P	-.060	-.138**	-.115*	-.055	.537**	.313**	.112*	.095	.123*	.322**	-.076	.181**	—				
14. TTSRO_P	.016	-.020	-.104*	-.019	.306**	.393**	.179**	.025	.026	.144**	-.023	.166**	.471**	—			
15. TCOMP_P	.196**	.032	.108*	.121*	.178**	.178**	.736**	.166**	.235**	-.094	.023	.202**	.200**	.233**	—		
16. Tn-Aff _P	-.087	-.089	-.069	-.066	.066	-.014	.022	.280**	.139**	.080	.009	.036	.176**	.096	.156**	—	
17. TSCO_P	.000	-.029	.097	.030	-.041	.018	.091	.111*	.334**	.129*	-.006	-.049	.128*	.069	.129*	.203**	—

Note: TPCT = Total Perceived Comparison Threat; TCOP = Total Concerned for Outperformed Person; TCS = Total Concern for the Self; TCRO = Total Concern for Relationship with Outperformed; TCCO = Total Collectivistic Cultural Orientation; TTSRO = Total Traditional Sex Role Orientation; Tn-Aff = Total N-Aff ; TIS = Total Interpersonal Sensitivity; TCOMP = Total Competitiveness; TFWC = Total Family-Work-Conflict; TIS = Total Partner Support; TMOCI Total Masculine Organisational Culture Index; TCCO_P = Total Collectivistic Cultural Orientation Perceived; TTSRO_P = Total Traditional Sex Role Orientation Perceived; Tn-Aff _P = Total Affiliative Needs Perceived; TIS_P = Total Interpersonal Sensitivity Perceived; and TCOMP_P = Total Competitiveness Perceived.

** $p < 0.01$ level.

* $p < 0.05$ level.

Table 5.26
Intercorrelations Among the Variables for the Male Sub-sample (n = 185)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. TPCT	—																
2. TCOP	.363**	—															
3. TCS	.409**	.480**	—														
4. TCRO	.549**	.338**	.630**	—													
5. TCCO	-.074	-.102	-.152*	-.045	—												
6. TTSRO	.020	-.083	-.013	-.061	.513**	—											
7. TCOMP	.133	-.056	.119	.106	.230**	.375**	—										
8. Tn-Aff	.017	-.039	.027	.049	.138	.128	.194**	—									
9. TSOC	.041	.063	.216**	.120	.185*	.113	.289**	.197**	—								
10. TPS	-.250**	-.160*	-.240**	-.248**	.254**	.143	.057	.067	-.036	—							
11. TFWC	.127	.022	.225**	.183*	-.012	.080	.030	.084	.105	-.131	—						
12. TMOC	-.168*	-.131	-.169*	-.072	.052	.055	.143	.055	.158*	.089	.005	—					
13. TCCO_P	-.127	-.161	-.219**	-.110	.552**	.256**	.092	.000	-.018	.397**	-.097	.022	—				
14. TTSRO_P	-.083	-.036	-.145	-.038	.228**	.416**	.177*	.016	-.065	.161*	.032	.070	.451**	—			
15. TCOMP_P	.156	-.084	.086	.075	.227**	.307**	.803**	.136	.256**	-.006	-.002	.093	.174*	.227**	—		
16. Tn-Aff _P	-.150	-.075	-.053	-.105	.112	.115	.047	.299**	.203*	.117	-.054	.141	.147	.053	.101	—	
17. TSCO_P	-.003	-.066	.130	.067	-.079	-.015	.074	.093	.343**	.194*	.006	.061	.053	.007	.043	.139	—

Note: TPCT = Total Perceived Comparison Threat; TCOP = Total Concerned for Outperformed Person; TCS = Total Concern for the Self; TCRO = Total Concern for Relationship with Outperformed; TCCO = Total Collectivistic Cultural Orientation; TTSRO = Total Traditional Sex Role Orientation; Tn-Aff = Total N-Aff ; TIS = Total Interpersonal Sensitivity; TCOMP = Total Competitiveness; TFWC = Total Family-Work-Conflict; TIS = Total Partner Support ; TMOCI Total Masculine Organisational Culture Index; TCCO_P = Total Collectivistic Cultural Orientation Perceived; TTSRO_P = Total Traditional Sex Role Orientation Perceived; Tn-Aff _P = Total Affiliative Needs Perceived; TIS_P = Total Interpersonal Sensitivity Perceived; and TCOMP_P = Total Competitiveness Perceived.

** $p < 0.01$ level

* $p < 0.05$ level.

Table 5.27

Intercorrelations Among the Variables for the Female Sub-sample (n = 278)

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	TPCT	__																
2.	TCOP	.532**	__															
3.	TCS	.478**	.459**	__														
4.	TCRO	.599**	.396**	.611**	__													
5.	TCCO	.028	-.051	-.043	-.004	__												
6.	TTSRO	.013	-.074	-.016	-.010	.490**	__											
7.	TCOMP	.146*	.065	.090	.175**	.196**	.275**	__										
8.	Tn-Aff	.032	.120	.024	.061	.178**	.142*	.075	__									
9.	TSOC	.124*	.145*	.238**	.185**	.166**	.198**	.189**	.310**	__								
10.	TPS	-.414**	-.231**	-.212**	-.176**	.138*	.218**	.011	.096	.002	__							
11.	TFWC	.331**	.251**	.197**	.282**	-.133*	-.061	.042	.120*	.081	-.188**	__						
12.	TMOC	.056	.002	-.044	.046	.180**	.265**	.310**	.167**	.070	.143*	.097	__					
13.	TCCO_P	-.065	-.138*	-.058	-.038	.589**	.373**	.125	.134*	.134*	.285**	-.104	.289**	__				
14.	TTSRO_P	-.032	-.100	-.143*	-.109	.370**	.421**	.142*	.040	.040	.206**	-.083	.239**	.524**	__			
15.	TCOMP_P	.188**	.070	.102	.118	.147*	.092	.686**	.193**	.211**	-.133	.038	.269**	.190**	.193**	__		
16.	Tn-Aff _P	-.070	-.100	-.081	-.057	.040	-.095	.003	.270**	.101	.058	.048	-.023	.126	.127	.189**	__	
17.	TSCO_P	-.005	-.014	.079	.009	-.019	.040	.099	.124	.330**	.093	-.014	-.113	.116	.105	.173*	.239**	__

Note: TPCT = Total Perceived Comparison Threat; TCOP = Total Concerned for Outperformed Person; TCS = Total Concern for the Self; TCRO = Total Concern for Relationship with Outperformed; TCCO = Total Collectivistic Cultural Orientation; TTSRO = Total Traditional Sex Role Orientation; Tn-Aff = Total N-Aff ; TIS = Total Interpersonal Sensitivity; TCOMP = Total Competitiveness; TFWC = Total Family-Work-Conflict; TIS = Total Partner Support ; TMOCI Total Masculine Organisational Culture Index; TCCO_P = Total Collectivistic Cultural Orientation Perceived; TTSRO_P = Total Traditional Sex Role Orientation Perceived; Tn-Aff _P = Total Affiliative Needs Perceived; TIS_P =Total Interpersonal Sensitivity Perceived; and TCOMP_P = Total Competitiveness Perceived.

** $p < 0.01$ level

* $p < 0.05$ level.

Table 5.28 presents results a summary of the relationships between the 12 predictors and the four dependent variables (i.e. PCT, COP, CS and CRO).

Table 5.28

A summary of the Significant Relationships of Interest to this Study

	Combined sample (n=464) 100 % of sample					Male sub-sample (n=185) 39.9 % of sample					Female sub-sample (n=278) 59.9 % of sample			
Variables	**TPCT**	**TCOP**	**TCS**	**TCRO**		**TPCT**	**TCOP**	**TCS**	**TCRO**		**TPCT**	**TCOP**	**TCS**	**TCRO**
1. TCCO	.002	-.066	-.077	-.014		-.074	-.102	-.152*	-.045		.028	-.051	-.043	-.004
2. TTSRO	.000	-.080	-.021	-.035		.020	-.083	-.013	-.061		.013	-.074	-.016	-.010
3. TCOMP	.153**	.032	.105*	.158**		.133	-.056	.119	.106		.146*	.065	.090	.175**
4. Tn-Aff	.020	.059	.023	.051		.017	-.039	.027	.049		.032	.120	.024	.061
5. TSOC	.117*	.131**	.236**	.177**		.041	.063	.216**	.120		.124*	.145*	.238**	.185**
6. TPS	-.355**	-.217**	-.223**	-.207**		-.250**	-.160*	-.240**	-.248**		-.414**	-.231**	-.212**	-.176**
7. TFWC	.248**	.174**	.200**	.235**		.127	.022	.225**	.183*		.331**	.251**	.197**	.282**
8. TMOC	-.020	-.046	-.088	.003		-.168*	-.131	-.169*	-.072		.056	.002	-.044	.046
Relationship Between Outperformers' Perceptions of their Significant Others' Individual Characteristics and Components Of STTUC														
9. TCCO_P	-.060	-.138*	-.115*	-.055		-.127	-.161	-.219**	-.110		-.065	-.138*	-.058	-.038
10. TTSRO_P	.016	-.020	-.104*	-.019		-.083	-.036	-.145	-.038		-.032	-.100	-.143*	-.109
11. TCOMP_P	.196**	.032	.108*	.121*		.156	-.084	.086	.075		.188**	.070	.102	.118
12. Tn-Aff _P	-.087	-.089	-.069	-.066		-.150	-.075	-.053	-.105		-.070	-.100	-.081	-.057
13. TSCO_P	.000	-.029	.097	.030		-.003	-.066	.130	.067		-.005	-.014	.079	.009

Strength of Association	**Positive**	**Negative**
None	.00 to .09	-.00 to -.09
Small	.10 to .29	-0.10 to -.29
Medium	.30 to .49	-0.30 to -0.59
Large	.50 to 1.0	-0.50 to -1.0

5.7.1 Pearson Product-Moment Correlations between Traditional Gender Role Orientation and Components of STTUC

Summaries of the relationships between Traditional Gender Role Orientation and four dependent variables for both the male sub-sample and the female sub-sample are presented in Tables 5.28ai to Table 5.28aiii.

5.7.1.1 Pearson Pearson product-moment correlations for Proposition 3a

The following relationships were analysed. Table 5.28ai presents the results.

- Hypothesis 3ai: A direct positive relationship exists between the traditional gender role orientation of female outperformers (ξ_1) and their perception that the outperformed individual is PCT (η_1).
- Hypothesis 3aii: A direct positive relationship exists between the traditional gender role orientation of female outperformers (ξ_1) and their experiences of CRO (η_2).
- Hypothesis 3aiii: A direct positive relationship exists between the traditional gender role orientation of female outperformers (ξ_1) and their experiences of CS (η_3).
- Hypothesis 3aiv: A direct positive relationship exists between the traditional gender role orientation of female outperformers (ξ_1) and their experiences of COP (η_4).

Table 5.28ai

A summary of the Relationships for Proposition 3a: A Direct Positive Relationship Exists between the Traditional Gender Role Orientation of Female Outperformers and their Experiences of STTUC

	PCT	COP	CS	CRO
Traditional Gender Role Orientation	.013	-.074	-.016	-.010

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The results presented in Table 5.28ai show that not one of the hypotheses under proposition 3a were supported. Accordingly, the null hypotheses for H_{3ai}, H_{3aii}, H_{3aiii}, H_{3aiv} could not be rejected. These results are not consistent with the theory presented in this study.

5.7.1.2 Pearson product-moment correlations for Proposition 3b

The following relationships were analysed under Proposition 3b. Table 5.28aii presents the results.

- Hypothesis 3bi: A direct negative relationship exists between the traditional gender role orientation of male outperformers (ξ_1) and their perception that the outperformed individual is PCT (η_1).
- Hypothesis 3bii: A direct negative relationship exists between the traditional gender role orientation of male outperformers (ξ_1) and their experiences of CRO (η_2).
- Hypothesis 3biii: A direct negative relationship exists between the traditional gender role orientation of male outperformers (ξ_1) and their experiences of CS (η_3).
- Hypothesis 3biv: A direct negative relationship exists between the traditional gender role orientation of male outperformers (ξ_1) and their experiences of COP (η_4).

Table 5.28aii

A summary of the Relationships for Proposition 3b: A Direct Negative Relationship Exists Between the Traditional Gender Role Orientation of Male Outperformers and their Experiences of STTUC.

	TPCT	TCOP	TCS	TCRO
Traditional Gender Role Orientation	.020	-.083	-.013	-.061

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The results presented in Table 5.28aii did not support $H_{3bi,}$ $H_{3bii,}$ $H_{3biii,}$ and H_{3biv}. These results are, therefore, not consistent with the theory presented in this study.

5.7.1.3 Pearson product-moment correlations for Proposition 3c

The following relationships were analysed under proposition 3c. Table 5.28aiii presents the results:

- Hypothesis 3ci: A direct positive relationship exists between female outperformers' perceptions that their significant others possess traditional gender role orientation (ξ_9) and the female outperformers' perception that the outperformed individual is PCT (η_1).
- Hypothesis 3cii: A direct positive relationship exists between female outperformers' perceptions that their significant others possess traditional gender role orientation (ξ_9) and the experiences of CRO (η_2) within female outperformers.
- Hypothesis 3ciii: A direct positive relationship exists between female outperformers' perceptions that their significant others possess traditional gender role orientation (ξ_9) and the experiences of CS (η_3) within female outperformers.
- Hypothesis 3civ: A direct positive relationship exists between female outperformers' perceptions that their significant others possess traditional gender role orientation (ξ_9) and the experiences of COP (η_4) within female outperformers.

Table 5.28aiii
A summary of Relationships for Proposition 3c: A Direct Positive Relationship Exists Between Female Outperformers' Perceptions of the Significant Others' Traditional Gender Role Orientations and Experiences of STTUC within the Female Outperformers.

	TPCT	TCOP	TCS	TCRO
Traditional Gender Role Orientation	-.032	-.100	**-.143***	-.109

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The null hypotheses for $H_{3ci,}$ $H_{3cii,}$ $_{H3ciii}$ and H_{3civ} could not be rejected. However, these results are not consistent with the theory presented in this study.

For $H_{3ciii,}$ Table 5.28aiii indicated that a significant, but small, negative relationship existed between the perceptions of female outperformers that their significant other possesses traditional gender role orientation and the experiences of CS (r = -.14, p < 0.05). This relationship was, however, not in the hypothesised direction.

5.7.2 Pearson product-moment correlations between CCO and components of STTUC

The results for the relationships between CCO and four dependent variables for both the male sub-sample and the female sub-sample are presented in Table 5.28bi, Table 5.28biii, and Table 5.28biii.

5.7.2.1 Pearson product-moment correlations for Proposition 4a

$H_{4ai,}$ $H_{4aii,}$ $H_{4aiii,}$ and H_{4aiv} were tested under proposition 4a. Table 5.28bi presents the results of the analysis.

- Hypothesis 4ai: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers (ξ_2) and their perception that the outperformed individual is PCT (η_1).

- Hypothesis 4aii: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers (ξ_2) and their experiences of CRO (η_2).
- Hypothesis 4aiii: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers (ξ_2) and their experiences of CS (η_3).
- Hypothesis 4aiv: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers (ξ_2) and their experiences of COP (η_4).

Table 5.28bi
A summary of the Relationships for Proposition 4a: A Direct Positive Relationship Exists Between the Collectivistic Cultural Orientation of Female Outperformers and their Experiences of STTUC.

	TPCT	TCOP	TCS	TCRO
Collectivistic Cultural Orientation	.028	-.051	-.043	-.004

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The null hypotheses for H_{4ai}, H_{4aii}, H_{4aiii}, and H_{4aiv} could not be rejected. These results are, however, not consistent with the theory presented in this study.

5.7.2.2 Pearson product-moment correlations for Proposition 4b

H_{4bi}, H_{4bii}, H_{4biii}, and H_{4biv} were tested under proposition 4b. Table 5.28bii presents the results of the analysis.

- Hypothesis 4bi: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers (ξ_2) and their perception that the outperformed individual is PCT (η_1).
- Hypothesis 4bii: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers (ξ_2) and their experiences of CRO (η_2).

- Hypothesis 4bii: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers (ξ_2) and their experiences of CS (η_3).
- Hypothesis 4bii: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers (ξ_2) and their experiences of COP (η_4).

Table 5.28bii
A summary of the Relationships for Proposition 4b: A Direct Negative Relationship Exists between the Collectivistic Cultural Orientation of Male Outperformers and their Experiences of STTUC.

	TPCT	TCOP	TCS	TCRO
Collectivistic Cultural Orientation	-.074	-.102	**-.152***	-.045

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

With the exception of H_{4biii} which showed a significant, but small, relationship ($r = -.15$, $p < 0.05$), other hypotheses under Proposition 4b were nonsignificant. Accordingly, H_{04biii} only could be rejected in favour of the alternative hypothesis.

5.7.2.3 Pearson product-moment correlations for Proposition 4c

The following relationships were analysed:

- Hypothesis 4ci: A direct positive relationship exists between female outperformers' perceptions that their significant other possesses collectivistic cultural orientation (ξ_{10}) and the female outperformers' perception that the outperformed individual is PCT (η_1).
- Hypothesis 4cii: A direct positive relationship exists between outperformers' perceptions that their significant others possess collectivistic cultural orientation (ξ_{10}) and the experiences of CRO (η_2) within female outperformers.

- Hypothesis 4ciii: A direct positive relationship exists between outperformers' perceptions that their significant others possess collectivistic cultural orientation (ξ_{10}) and the experiences of CS (η_3) within female outperformers.
- Hypothesis 4civ: A direct positive relationship exists between outperformers' perceptions that their significant others possess collectivistic cultural orientation (ξ_{10}) and the experiences of COP (η_4) within female outperformers.

Table 5.28biii presents the results

Table 5.28biii
A summary of Relationships for Proposition 4c: A Direct Positive Relationship Exists between Female Outperformer's Perceptions of their Significant Others' Collectivistic Cultural Orientations and Experiences of STTUC within Female Outperformers.

	TPCT	TCOP	TCS	TCRO
Collectivistic Cultural Orientation	-.065	**-.138***	-.058	-.038

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The results presented in Table 5.28biii suggest that $H_{04ci,}$ $H_{04cii,}$ and H_{04ciii} could not be rejected. It also emerged that, for proposition 4c, the only significant relationship was $H_{4civ,}$ (r = -.14, p < 0.05). However, this relationship was not in the hypothesised direction and therefore was not consistent with the theory regarding this relationship.

5.7.3 Pearson product-moment correlations for the relationships between n-Aff and components of STTUC

The results for the relationships between n-Aff and the four dependent variables for both the male sub-sample and the female sub-sample are presented in Table 5.28ci and Table 5.28cii.

5.7.3.1 Pearson Product-Moment correlations for proposition 5a

The following relationships were analysed under proposition 5a:

- Hypothesis 5ai: A direct positive relationship exists between the n-Aff of outperformers (ξ_3) and their perception that the outperformed individual is PCT (η_1).
- Hypothesis 5 aii: A direct positive relationship exists between the n-Aff of outperformers (ξ_3) and their experiences of CRO (η_2).
- Hypothesis 5 aiii: A direct positive relationship exists between the n-Aff of outperformers (ξ_3) and their experiences of CS (η_3).
- Hypothesis 5 aiv: A direct positive relationship exists between the n-Aff of outperformers (ξ_3) and their experiences of COP (η_4).

Table 5.28ci presents the results of the analysis performed under proposition 5a.

Table 5.28ci
A summary of the Relationships for Proposition 5a: A Direct Positive Relationship Exists between the n-Aff of Outperformers and their Experiences of STTUC.

	TPCT	TCOP	TCS	TCRO
N-Aff	.020	.059	.023	.051

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The null hypotheses for H_{5ai}, H_{5aii}, H_{5aiii}, H_{5aiv} could not be rejected. Therefore, these results are also not consistent with the theory presented in this study.

5.7.3.2 Pearson product-moment correlations for Proposition 5b

The following relationships were analysed:

- Hypothesis 5bi: A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff (ξ_{11}) and

the female outperformers' perception that the outperformed individual is PCT (η_1).

- Hypothesis 5bii: A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff (ξ_{11}) and the experiences of CRO (η_2) within the female outperformers.
- Hypothesis 5bii: A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff (ξ_{11}) and the experiences of CS (η_3) within the female outperformers.
- Hypothesis 5biv: A direct positive relationship exists between female outperformers' perceptions that their significant others have n-Aff (ξ_{11}) and the experiences of COP (η_4) within the female outperformers.

Table 5.28cii below indicates the values that were obtained from the analysis.

Table 5.28cii

A summary of Relationships for Proposition 5b: A Direct Positive Relationship Exists Between Female Outperformers' Perceptions of their Significant Others' n-Aff and Experiences of STTUC Within Female Outperformers.

	TPCT	**TCOP**	**TCS**	**TCRO**
N-Aff -Perceived	-.070	-.100	-.081	-.057

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The null hypotheses for H_{5bi}, H_{5bii}, H_{5biii}, H_{5biv} could not be rejected. These results are also not consistent with the theory presented in this study.

5.7.4 Pearson product-moment correlations for the relationships between interpersonal sensitivity and components of STTUC

The results for the relationships between sociotropy and the four dependent variables for both the male sub-sample and the female sub-sample are presented in Table 5.28di and Table 5.28dii.

5.7.4.1 Pearson product-moment correlations for Proposition 6a

The following relationships were analysed. Table 5.28di presents the results.

- Hypothesis 6ai: A direct positive relationship exists between the levels of sociotropy of outperformers (ξ_4) and their perception that the outperformed individual is PCT (η_1).
- Hypothesis 6ai: A direct positive relationship exists between the levels of sociotropy of outperformers (ξ_4) and their experiences of CRO (η_2).
- Hypothesis 6aiii: A direct positive relationship exists between the levels of sociotropy of outperformers (ξ_4) and their experiences of CS (η_3).
- Hypothesis 6aiv: A direct positive relationship exists between the levels of sociotropy of outperformers (ξ_4) and their experiences of COP (η_4).

Table 5.28di
A Summary of the Relationships for Proposition 6a: A Direct Positive Relationship Exists between the Sociotropy of Outperformers and their Experiences of STTUC

	TPCT	TCOP	TCS	TCRO
Sociotropy	**.117***	**.131****	**.236****	**.177****

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

As is evident from Table, 5.28dii, significant positive relationships were found for H_{6ai} ($r = .12$, $p < 0.05$), H_{6aii} ($r = .18$, $p < 0.05$), H_{6aiii} ($r = -.15$, $p < 0.05$), and H_{6aiv} ($r = .24$, $p < 0.05$). Thus, these findings support the previous findings and the propositions suggested by the theory in the current study.

5.7.4.2 Pearson product-moment correlations for Proposition 6b

The following relationships were analysed and Table 5.28dii presents the results

- Hypothesis 6bi: A direct positive relationship exists between female outperformers' perceptions that their significant other is sociotropic (ξ_{12}) and the female outperformers' perception that the outperformed individual is PCT (η_1).
- Hypothesis 6bii: A direct positive relationship exists between female outperformers' perceptions that their significant other is sociotropic (ξ_{12}) and the experiences of CRO (η_2) within the female outperformer.
- Hypothesis 6biii: A direct positive relationship exists between female outperformers' perceptions that their significant other is sociotropic (ξ_{12}) and the experiences of CS (η_3) within the female outperformer.
- Hypothesis 6biv: A direct positive relationship exists between female outperformers' perceptions that their significant other is sociotropic (ξ_{12}) and the experiences of COP (η_4) within the female outperformer.

Table 5.28dii

A Summary of Relationships for Proposition 6b: A Direct Positive Relationship Exists Between Female Outperformers' Perceptions that their Significant Other' is Sociotropic and Experiences of STTUC within the Female Outperformer.

	TPCT	TCOP	TCS	TCRO
Sociotropy	-.005	-.014	.079	.009

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

It emerged that the null hypotheses for H_{6bi}, H_{6bii}, H_{6biii}, and H_{6biv}, (i.e, hypotheses based on the proposition that a direct positive relationships exist between the perceptions of female outperformers regarding their significant others' interpersonal

sensitivity and the experiences of STTUC and its components of the female outperformers) could not be rejected.

5.7.5 Pearson product-moment correlations for the relationships between competitiveness and components of STTUC

The results for the relationships between competitiveness and the four dependent variables are presented in Table 5.28ei and Table 5.28eii.

5.7.5.1 Pearson product-moment correlations for Proposition 7a

The following relationships were analysed.Table 5.28ei presents the results.

- Hypothesis 7ai: A direct positive relationship exists between the outperformers' competitiveness (ξ_5) and their perception that the outperformed individual is PCT (η_1).
- Hypothesis 7aii: A direct positive relationship exists between the outperformers' competitiveness (ξ_5) and their experiences of CRO (η_2).
- Hypothesis 7aiii: A direct positive relationship exists between the outperformers' competitiveness (ξ_5) and their experiences of CS (η_3).
- Hypothesis 7aiv: A direct positive relationship exists between the outperformers' competitiveness (ξ_5) and their experiences of COP (η_4).

Table 5.28ei

A Summary of the Relationships for Proposition 7a: A Direct Positive Relationship Exists between the Outperformers' Competitiveness and their Experiences of STTUC

	TPCT	**TCOP**	**TCS**	**TCRO**
Competitiveness	**.153****	.032	**.105***	**.158****

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

As expected, the results of the correlational analysis presented in Table 5.28ei provided support for H_{7ai} (r = .15, p < 0.05), H_{7aii} (r = .15, p < 0.05), and H_{7aiii} (r = .11, p < 0.05). However, it was not possible to find support for H_{7biv}.

5.7.5.2 Pearson product-moment correlations for Proposition 7b

The following relationships were analysed. Table 5.28eii presents the results.

- Hypothesis 7bi: A direct positive relationship exists between female outperformers' perceptions that their significant others are competitive (ξ_{13}) and the female outperformers' perception that the outperformed individual is PCT (η_1).
- Hypothesis 7bii: A direct positive relationship exists between female outperformers' perceptions that their significant others are competitive (ξ_5) and the experiences of CRO (η_2) within the female outperformers.
- Hypothesis 7biii: A direct positive relationship exists between female outperformers' perceptions that their significant others are competitive (ξ_5) and the experiences of CS (η_3) within the female outperformers.
- Hypothesis 7biv: A direct positive relationship exists between female outperformers' perceptions that their significant others are competitive (ξ_5) and the experiences of COP (η_4) within the female outperformers.

Table 5.28eii
A Summary of Relationships for Proposition 7b: A Direct Positive Relationship Exists between Female outperformers' Perceptions of their Significant Others' Competitiveness and Experiences of STTUC within Female Outperformers

	TPCT	TCOP	TCS	TCRO
Competitiveness_Perceived	**.188****	.070	.102	.118

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

While the literature study performed in advance had led to formulation of Proposition 7b, one hypothesis only under this proposition was supported. The results summarised in Table 5.28 indicate that no support was found for $H_{7bii,}$ $H_{7biii,}$ $H_{7biv.}$ In addition, as indicated in the table, a small, positive, but significant, relationship ($r = .19$; $p < .05$) was found for $H_{7bi.}$

5.7.6 Pearson Product-Moment correlations for the relationships between FWC and components of STTUC

The following relationships were analysed:

- Hypothesis 8i: A direct positive relationship exists between the outperformers' experiences of FWC (ξ_6) and their perception that the outperformed individual is PCT (η_1).
- Hypothesis 8ii: A direct positive relationship exists between the outperformers' experiences of FWC (ξ_6) and their experiences of CRO (η_2).
- Hypothesis 8iii: A direct positive relationship exists between outperformers' experiences of FWC (ξ_6) and their experiences of CS (η_3).
- Hypothesis 8iv: A direct positive relationship exists between outperformers' experiences of FWC (ξ_6) and their experiences of COP (η_4).

The results for the relationships between FWC and the four dependent variables are presented in Tables 5.28f:

Table 5.28f
A Summary of the Relationships for Proposition 8: A Direct Positive Relationship Exists between the Outperformers' Experiences of FWC and their Experiences of STTUC

	TPCT	TCOP	TCS	TCRO
Family-Work-Conflict	**.248****	**.174****	**.200****	**.235****

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The theory presented also suggested that direct positive relationships exist between the outperformers' experiences of FWC and their experiences of STTUC and its components. As expected, the results of the correlational analysis presented in Table 5.28f provided support for H_{8i} ($r = .25$, $p < 0.01$), H_{8ii} ($r = .24$, $p < 0.01$), H_{8iii} ($r = .20$, $p < 0.01$) and H_{8iv} ($r = .18$, $p < 0.01$).

5.7.7 Pearson product-moment correlations for the relationships between instrumental support and components of STTUC

The following relationships were analysed:

- Hypothesis 9i: A direct negative relationship exists between outperformers' experiences of IS (ξ_7) and their perception that the outperformed individual is PCT (η_1).
- Hypothesis 9ii: A direct negative relationship exists between outperformers' experiences of IS (ξ_7) and their experiences of CRO (η_2).
- Hypothesis 9iii: A direct negative relationship exists between outperformers' experiences of IS (ξ_7) and their experiences of CS (η_3).
- Hypothesis 9iv: A direct negative relationship exists between outperformers' experiences of IS (ξ_7) and their experiences of COP (η_4).

The results are presented in Table 5.28g.

Table 5.28g

A Summary of the Relationships for Proposition 9: A Direct Negative Relationship Exists between Outperformers' Experiences of Instrumental Support and their Experiences of STTUC

	TPCT	TCOP	TCS	TCRO
Instrumental Support	**-.355****	**-.217****	**-.223****	**-.207****

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The results presented in Table 5.28g further suggest that H_{09ci} ($r = -.36$, $p < 0.01$). , H_{09cii} ($r = -.21$, $p < 0.01$), H_{09ciii} ($r = -.22$, $p < 0.01$), and H_{09civ} ($r = -.22$, $p < 0.01$) could be rejected. These results were consistent with the theory regarding these relationships.

5.7.8 Pearson product-moment correlations for the relationships between perceptions of masculine organisational cultures and components of STTUC

The results for the relationships between Perceptions of Masculine Organisational Cultures and the four dependent variables for both the male sub-sample and the female sub-sample are presented in Tables 5.28hi and 5.28hii.

5.7.8.1 Pearson product-moment correlations for proposition 10a

The following relationships were analysed. Table 5.28hi presents the results.

- Hypothesis 10ai: A direct positive relationship exists between female outperformers' perceptions that their employing organisation has MOC (ξ_8) and their perceptions that the outperformed individuals are PCT (η_1).
- Hypothesis 10aii: A direct positive relationship exists between female outperformers' perceptions that their employing organisation has MOC (ξ_8) and their experiences of CRO (η_2).

- Hypothesis 10aiii: A direct positive relationship exists between female outperformers' perceptions that their employing organisation has MOC (ξ_8) and their experiences of CS (η_3).
- Hypothesis 10aiv: A direct positive relationship exists between female outperformers' perceptions that their employing organisation has MOC (ξ_8) and their experiences of COP (η_4).

Table 5.28hi

A Summary of the Relationships for Proposition 10a: A Direct Positive Relationship Exists between the Perceptions of Female Outperformers that their Organisation is Characterised by Masculine Culture and their Experiences of STTUC

	TPCT	TCOP	TCS	TCRO
Masculine Organisational Culture	.056	.002	-.044	.046

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The null hypotheses for H_{10ai}, H_{10aii}, H_{10aiii}, and H_{10aiv} could not be rejected. These results are also not consistent with the theory and arguments presented in this study.

5.7.8.2 Pearson product-moment correlations for proposition 10b

The following relationships were analysed. Table 5.28hii presents the results:

- Hypothesis 10bi: A direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by MOC (ξ_8) and their perception that the outperformed individuals are PCT (η_1).
- Hypothesis 10bii: A direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by MOC (ξ_8) and their experiences of CRO (η_2).

- Hypothesis 10biii: A direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by MOC (ξ_8) and their experiences of CS (η_3).
- Hypothesis 10biv: A direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by MOC (ξ_8) and their experiences of COP (η_4).

Table 5.28hii

A Summary of the Relationships for Proposition 10b: A Direct Negative Relationship Exists between the Perceptions of Male Outperformers that their Organisation is Characterised by a Masculine Culture and their Experiences of STTUC

	TPCT	**TCOP**	**TCS**	**TCRO**
Masculine Organisational Culture	**-.168***	-.131	**-.169***	-.072

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed
** $p < 0.01$ level, * $p < 0.05$ level.

The null hypotheses for $H_{10bii,}$ and H_{10biv} could not be rejected. These results were also not consistent with the theory and arguments presented in this study. As expected, evidence for a weak, but significant, negative relationship was found for H_{10bi} (r = -.17, $p < 0.01$) and H_{10biii} (r = -.17, $p < 0.01$). The null hypothesis for $H_{10bii,}$ H_{10biii} was, therefore, rejected.

5.8 Multiple Regression Analysis Results

Hierarchical multiple regression was performed to assess whether collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse, masculine values in an organisational culture, outperformers' perceptions of the outperformed's collectivistic cultural orientation, outperformers' perceptions of the outperformed's traditional gender role orientation, outperformers' perceptions of the outperformed's affiliative needs, outperformers' perceptions of the outperformed's interpersonal sensitivity, and outperformers' perceptions of the outperformed's competitiveness significantly exlplain variances in STTUC and its compenents after controlling for the effects of gender, number of children, significant other's income, and age.

As explained under the conceptual framework, for an individual to be classified as STTUC, the last two conditions of STTUC are such that the outperforming individual must believe that the outperformed individual is threatened by the upward comparison (Condition 2: PCT) and the individual must be concerned about the outperformed's response. The outperformer should, thus, manifest either Concern for Outperformed Person (Condition 3a: COP), Concern for the Self (Condition 3c: CS) and/or Concern for Relationship with Outperformed (Condition 3b: CRO). Thus, to test this framework using multiple regression analysis, separate analyses using PCT, CRO, COP, and CS as dependent variables were conducted. Furthermore, in each analysis, regression models were performed separately for the total sample and for the male sub-sample and the female sub-sample.

In addition, both the literature and past research suggest that female outperformers may report higher levels of STTUC related experiences than male outperformers. These assertions were further supported by the one-tailed independent sample t-test results conducted in the study (see Table 5.23).

The hypotheses requiring hierarchical multiple regression analyses were, therefore, tested using the total sample, female sub-sample, and the male sub-sample.

5.8.1 Hierarchical Multiple Regression analyses predicting PCT

In order to explore the relationship between PCT and the eight predictors, the following hypothesis was formulated:

Hypothesis 11a: Collectivistic cultural orientation, traditional gender role orientation, affiliative needs, interpersonal sensitivity, competitiveness, family work conflict, instrumental support from the partner/spouse, masculine values in an organisational culture, outperformers' perceptions of the outperformed's collectivistic cultural orientation, outperformers' perceptions of the outperformed's traditional gender role orientation, outperformers' perceptions of the outperformed's affiliative needs, outperformers' perceptions of the outperformed's interpersonal sensitivity, and outperformers' perceptions of the outperformed's competitiveness explains variances in the outperformers' experiences of PCT.

Tables 5.29a and 5.29b present the results of the multiple regression analysis when using PCT as a dependent variable. Tables 5.29a present the results when predicting PCT using the total sample and Table 5.29b presents the results when predicting PCT using the male and female sub-samples.

Table 5.29a

Hierarchical Multiple Regression Analyses Predicting PCT for the Total Sample

Predictor	Unstandardised Coefficients B	S. Error	S.C. Beta	t	Sig.
Step 1: Control Variables					
(Constant)	6.868	3.072		2.236	.026
Gender	**3.342**	**.974**	**.190**	**3.431**	**.001***
Age	.085	.082	.073	1.038	.300
Children	.392	.484	.057	.810	.418
SO Income Higher	**1.178**	**.506**	**.129**	**2.331**	**.020****
R^2 = .062, *F* (4,323) = 5.34, *p* < .05					
Step 2					
(Constant)	7.106	5.149		1.380	.169
Gender	**2.667**	**.976**	**.151**	**2.732**	**.007***
Age	.126	.077	.108	1.634	.103***
Children	.080	.458	.012	.176	.861
SO Income Higher	.642	.477	.070	1.345	.180
Collectivistic Cultural Orientation	.188	.337	.040	.559	.576
Traditional Gender Role Orientation	.011	.222	.003	.047	.962
Competitiveness	.096	.144	.054	.667	.505
N-Aff	.077	.249	.017	.309	.758
Sociotropy	.049	.123	.023	.397	.691
Supportiveness of the Spouse	**-.430**	**.083**	**-.297**	**-5.184**	**.000***
Family-work conflict	**.481**	**.132**	**.191**	**3.648**	**.000***
Masculinity of the Organisational Culture	-.085	.122	-.037	-.692	.489
Collectivistic Cultural Orientation_Perceived	.099	.321	.022	.309	.758
Traditional Gender Role Orientation_Perceived	-.090	.228	-.026	-.394	.694
Competitiveness_Perceived	.207	.147	.114	1.415	.158
N-Aff _Perceived	**-.475**	**.246**	**-.106**	**-1.929**	**.055****
Sociotropy_Perceived	.048	.108	.025	.450	.653
R^2 = .24, *F* (16, 311) = 6.04, *p* < .05.					
R^2 square change = .18, *F* change (13, 300) = 5.482, *p* < .05.					

Note. *p < 0.01, * *p < 0.05, ***p < 0.10

Table 5.29b

Hierarchical Multiple Regression Analyses Predicting PCT for the Male and Female Sub-samples

	Male Sub-sample					**Female Sub-sample**				
	Unstandardised Coefficients		Standardised Coefficients			Unstandardised Coefficients		Standardised Coefficients		
Predictor	B	S. Error	Beta	t	Sig.	B	S. Error	Beta	t	Sig.
Step 1: Control Variables										
(Constant)	16.071	3.622		4.437	.000	11.686	3.435		3.402	.001
Age	-.062	.107	-.068	-.585	.560	.125	.117	.098	1.066	.288
Children	.452	.583	.090	.775	.440	.591	.717	.076	.825	.410
SO Income Higher	.626	.901	.063	.695	.488	**1.340**	**.630**	**.153**	**2.127**	**.035**
R^2 = .008, *F* (3,122) = .347, *p* > .05						**R^2 = .049, *F* (3,188) = 3.218, *p* >.05**				
Step 2										
(Constant)	18.666	7.044		2.650	.009	10.287	7.014		1.467	.144
Age	.094	.113	.102	.829	.409	.059	.109	.047	.543	.588
Children	.153	.588	.030	.260	.795	.350	.670	.045	.522	.602
SO Income Higher	.158	.899	.016	.176	.861	.620	.587	.071	1.056	.292
Collectivistic Cultural Orientation	-.290	.509	-.076	-.569	.570	.369	.449	.073	.821	.413
Traditional Gender Role Orientation	.225	.307	.087	.734	.464	.078	.318	.020	.245	.807
Competitiveness	.043	.223	.031	.192	.848	.072	.188	.037	.382	.703
N-Aff	.186	.319	.056	.583	.561	-.058	.369	-.012	-.158	.875
Sociotropy	-.011	.185	-.006	-.059	.953	.124	.163	.056	.761	.448
Supportiveness of the Spouse	**-.263**	**.119**	**-.233**	**-2.215**	**.029****	**-.557**	**.116**	**-.352**	**-4.806**	**.000***
Family-work-conflict	.160	.171	.085	.937	.351	**.702**	**.192**	**.250**	**3.667**	**.000***
Masculinity of the Organisational Culture	**-.282**	**.164**	**-.157**	**-1.722**	**.088****	.050	.179	.021	.281	.779
Collectivistic Cultural Orientation_Perceived	.089	.427	.027	.209	.835	-.053	.468	-.010	-.113	.910
Traditional Gender Role Orientation_Perceived	-.313	.283	-.120	-1.105	.272	.086	.345	.020	.249	.804
Competitiveness	.249	.227	.171	1.097	.275	.176	.194	.090	.907	.366
N-Aff _Perceived	-.546	.357	-.151	-1.529	.129	-.400	.340	-.084	-1.175	.242
Sociotropy_Perceived	.105	.156	.068	.674	.501	.014	.148	.007	.094	.926
R^2 = .16, *F* (16, 109) = 1.336, *p* < .05						**R^2 = .29, *F* (16, 175) = 4.486, *p*<.05**				
R^2 square change = .18, *F* change (13, 300)= 5.482, *p* < .05						**R^2 square change = .24, *F* change (13, 175)= 4.594, *p*<.05**				

Note. **p* < 0.01, * **p* < 0.05, ****p* < 0.10

1. Hierarchical Multiple Regression Analyses Predicting PCT for the Total Sample

For the total sample, the results indicated that the the control variables entered at step 1 explained 6.2% of the variance in the PCT scores: R^2 = .062, F (4,323) = 5.34, p<.05.

The results further indicated that, at step 2, when TSCO_2, TTSRO, TFWC, Tn-Aff, TMOC, TCOMP_2, Tn-Aff _2, TPS, TCCO_2, TSCO, TTSRO_2, TCCO and TCOMP were added to the equation, there was a significant improvement in the prediction of PCT scores, R^2 = .24, F (16, 311) = 6.04, p<.05. This set of predictors explained an additional 18.0% of the variance in the PCT scores after controlling for gender, number of children, significant other's income, and age: R^2 square change = .18, F change (13, 300) = 5.482, p < .05.

The regression results indicate that, while the model explained 18.0% of the variance in the PCT scores only Gender. (β = .967, p < 0.01), Supportiveness of the Spouse, (β = -.297, p < 0.01), Family-Work Conflict (β = .191, p < 0.01), and N-Aff _ Perceived (β = .967, p < 0.05) made significant and unique contributions to explaining the variance in the PCT scores. Thus, hypothesis 11a was partially supported for the total sample.

2. Hierarchical Multiple Regression Analyses Predicting PCT for the Male Sub-samples

For the male sub-sample, number of children, significant other's income, and age were entered at step 1 and TSCO_2, TTSRO, TFWC, Tn-Aff, TMOC, TCOMP_2, Tn-Aff_2, TPS, TCCO_2, TSCO, TTSRO_2, TCCO, and TCOMP were added at step 2.

The first set of predictors explained 0.8% of the variance in the PCT scores: R^2 = .008, F (3,122) = .347, p > .05).

At step 2, there was an improvement in the prediction of the PCT scores: R^2 = .16, F (16, 109) = 1.336, p < .05. This set of predictors explained an additional 18.0% of the variance in the PCT scores after controlling for the control variables identified: R^2 square change = .18, F change (13, 300) = 5.482, p <. 05.

Table 5.29b indicates that, while the model explained 18.0% of the variance in the PCT scores, only Supportiveness of the Spouse, (β = -.233, p < 0.01), and Masculinity of the Organisational Culture (β = -1.57, p < 0.10) made significant and unique contributions to explaining the variance in the PCT scores. Thus, hypothesis 11a was partially supported for the male sub-sample.

3. Hierarchical Multiple Regression Analyses Predicting PCT for the Female Sub-samples

For the female sub-sample, number of children, significant other's income, and age were also entered at step 1 and TSCO_2, TTSRO, TFWC, Tn-Aff, TMOC, TCOMP_2, Tn-Aff _2, TPS, TCCO_2, TSCO, TTSRO_2, TCCO, and TCOMP were added at step 2.

The first set of predictors explained 4.9% of the variance in the PCT scores: R^2 = .049, F (3,188) = 3.218, p >.05.

At step 2, there was an improvement in the prediction of the PCT scores: R^2 = .29, F (16, 175) = 4.486, p < .05. This set of predictors explained an additional 24.2% of the variance in the PCT scores after controlling for number of children, significant other's income, and age: R^2 square change = .24, F change (13, 175) = 4.594, p <.05.

For the female sub-sample, the degree of variance in the PCT scores that was explained by the eight predictors was higher than in the total sample and in the male sub-sample. Nevertheless, the regression results indicate that only Supportiveness of the Spouse (β = -.352, p < 0.01) and Family-Work Conflict (β = .250, p < 0.01) made significant and unique contributions to explaining the variance in the PCT scores. Thus, hypothesis 11a was partially supported for the female sub-sample.

5.8.2 Hierarchical multiple regression analyses predicting COP

Tables 5.30a and 5.30b present the results of multiple regression analysis when using COP as a dependent variable.

Table 5.30a

Hierarchical Multiple Regression Analyses Predicting COP for the Total Sample

Predictor	Unstandardised Coefficients B	S. Error	Standardised Coefficients Beta	t	Sig.
Step 1: Control Variables					
(Constant)	12.007	3.625		3.312	.001
Gender	**2.958**	**1.149**	**.145**	**2.574**	**.011**
Age	.028	.097	.021	.286	.775
Children	.142	.571	.018	.249	.803
SO Income Higher	.590	.597	.056	.988	.324
R^2 = .024, F (4,323) = 1.98, p >.05					
Step 2					
(Constant)	19.042	6.423		2.964	.003
Gender	**2.185**	**1.218**	**.107**	**1.794**	**.074*** **
Age	.052	.096	.039	.545	.586
Children	-.111	.571	-.014	-.195	.846
SO Income Higher	-.003	.595	.000	-.004	.996
Collectivistic Cultural Orientation	.057	.420	.010	.136	.892
Traditional Gender Role Orientation	-.348	.276	-.088	-1.257	.210
Competitiveness	.089	.180	.043	.495	.621
N-Aff	.416	.311	.080	1.338	.182
Sociotropy	**.301**	**.153**	**.124**	**1.966**	**.050** **
Supportiveness of the Spouse	**-.248**	**.104**	**-.148**	**-2.394**	**.017** **
Family-work-conflict	**.375**	**.165**	**.129**	**2.281**	**.023** **
Masculinity of the Organisational Culture	-.106	.152	-.041	-.697	.486
Collectivistic Cultural Orientation_Perceived	-.337	.401	-.065	-.842	.400
Traditional Gender Role Orientation_Perceived	.181	.285	.045	.637	.524
Competitiveness	-.059	.183	-.028	-.325	.746
N-Aff _Perceived	**-.562**	**.307**	**-.108**	**-1.831**	**.068*** **
Sociotropy_Perceived	-.083	.134	-.037	-.616	.538
R^2 = .12, F (16, 311) = 2.61, p <. 05					
R^2 square change = .09, F change (12, 311) = 2.772, p <. 05					

Note. *p < 0.01, * *p < 0.05, ***p < 0.10

Table 5.30b

Hierarchical Multiple Regression Analyses Predicting COP for Male and Female Sub-Samples

	Male Sample					**Female Sample**				
	Unstandardised Coefficients		Standardised Coefficients			Unstandardised Coefficients		Standardised Coefficients		
Predictor	B	S. Error	Beta	t	Sig.	B	S. Error	Beta	t	Sig.
Step 1: Control Variables										
(Constant)	19.359	4.811		4.024	.000	15.052	3.883		3.877	.000
Age	-.148	.142	-.121	-1.044	.298	.129	.133	.091	.971	.333
Children	.442	.775	.066	.570	.570	.018	.810	.002	.023	.982
SO Income Higher	1.117	1.197	.084	.933	.353	.432	.712	.045	.607	.545
R^2 = .002, *F* (3,123) = 0.642, *p* > .05						**R^2 = .01, *F* (3, 188) = 0.704, *p* >.05**				
Step 2										
(Constant)	32.375	9.832		3.293	.001	18.701	8.486		2.204	.029
Age	-.125	.158	-.102	-.792	.430	.087	.132	.061	.656	.512
Children	.309	.821	.046	.377	.707	-.333	.811	-.038	-.411	.682
SO Income Higher	.724	1.255	.054	.577	.565	-.370	.710	-.038	-.521	.603
Collectivistic Cultural Orientation	-.068	.711	-.013	-.096	.924	.244	.544	.043	.449	.654
Traditional Gender Role Orientation	-.226	.428	-.066	-.527	.599	-.418	.385	-.099	-1.088	.278
Competitiveness	.115	.311	.062	.370	.712	.127	.227	.059	.561	.576
N-Aff	-.148	.446	-.034	-.333	.740	**.750**	**.447**	**.134**	**1.679**	**.095*** **
Sociotropy	.366	.259	.157	1.413	.160	.276	.197	.113	1.401	.163
Supportiveness of the Spouse	-.092	.166	-.061	-.556	.579	**-.284**	**.140**	**-.162**	**-2.025**	**.044** **
Family-work conflict	-.039	.239	-.016	-.164	.870	**.622**	**.232**	**.200**	**2.686**	**.008***
Masculinity of the Organisational Culture	-.308	.229	-.128	-1.345	.181	-.009	.216	-.003	-.039	.969
Collectivistic Cultural Orientation_Perceived	-.439	.596	-.101	-.736	.463	-.507	.566	-.090	-.896	.372
Traditional Gender Role Orientation_Perceived	.356	.395	.102	.900	.370	.101	.418	.021	.242	.809
Competitiveness	-.264	.317	-.136	-.834	.406	-.017	.234	-.008	-.074	.941
N-Aff _Perceived	-.068	.498	-.014	-.137	.891	**-.781**	**.412**	**-.147**	**-1.897**	**.060*** **
Sociotropy_Perceived	-.200	.218	-.097	-.918	.361	-.023	.179	-.010	-.130	.897
R^2 = .08, *F* (15, 111) = 0.619, *p* > .05						**R^2 = .16, *F* (16, 175) = 2.013, *p* <. 05**				
R^2 square change = .06, *F* change (12, 111) = 5.482, *p* > .05						**R^2 square change = .14, *F* change (13, 175) = 2.301, *p* <. 05**				

Note. *p < 0.01, * *p < 0.05, ***p < 0.10

1. Hierarchical Multiple Regression Analyses Predicting COP for the Total Sample

For the combined female and male sample, gender, number of children, significant other's income and age were entered at step 1, while the predictor variables (i.e. TSCO_2, TTSRO, TFWC, Tn-Aff, TMOC, TCOMP_2, Tn-Aff_2, TPS, TCCO_2, TSCO, TTSRO_2, TCCO, and TCOMP) were added to the equation at step 2.

The control variables explained 2.4% of the variance in the COP scores: $R^2 = .024$, F (4,323) = 1.98, p >.05. When the predictor variables were entered at step 2, there was an improvement in the prediction of COP scores: $R^2 = .12$, F (16, 311) = 2.61, p < .05.

The set of predictors identified explained an additional 9.0% of the variance in the COP scores: R^2 square change = .09, F change (12, 311) = 2.772, p < .05. However, only Gender (β = .107, p < 0.01), Sociotropy (β = .124, p < 0.05), Supportiveness of the Spouse (β = -.148, p < 0.05), Family-Work Conflict (β = .191, p < 0.05), and N-Aff _Perceived (β = -.108, p < 0.10) were significant. Thus, hypothesis 11a was partially supported for the total sample.

2. Hierarchical Multiple Regression Analyses Predicting COP for the Male Sub-Sample

For both the male sub-sample and the sub-female sample, number of children, significant other's income, and age were entered at step 1 and TSCO_2, TTSRO, TFWC, Tn-Aff, TMOC, TCOMP_2, Tn-Aff _2, TPS, TCCO_2, TSCO, TTSRO_2, TCCO, and TCOMP were added at step 2.

For the male sub-sample, the control variables explained 0.2% (F (3,123) = 0.642, p > .05) of the variance in the COP scores. However, at step 2, there was an improvement in the prediction of the COP scores: $R^2 = .08$, F (15, 111) = 0.619, p > .05. This set of predictors explained an additional 7.0% of the variance in the COP

scores after controlling for number of children, significant other's income and age: R^2 square change = .07, F change (12, 111)= 5.482, p >.05.

For the male sub-sample, not one of the independent variables entered into the regression model made a significant and unique contribution to explaining the variance in the COP scores. The proposed hypothesis was, therefore, not supported for this sub-sample.

3. Hierarchical Multiple Regression Analyses Predicting COP for the Female Sub-sample

For the female sub-sample, the control variables explained 1.1% of the variance in the COP scores: R^2 = .01, F (3, 188) = 0.704, p >.05.

At step 2, there was an improvement in the prediction of the COP scores: R^2 = .16, F (16, 175) = 2.013, p < .05. This set of predictors explained an additional 14.4% of the variance in the COP scores after controlling for number of children, significant other's income, and age: R^2 square change = .14, F change (13, 175) = 2.301, p <. 05.

For the female model, four of the independent variables entered into the regression model at step 2 made a significant and unique contribution to explaining the variance in the COP scores. These independent variables were n-Aff (β = .134, p < 0.10), Supportiveness of the Spouse (β = -.162, p < 0.05), Family-Work Conflict (β = .200, p < 0.00) and n-Aff _Perceived (β = -.147, p < 0.10). The proposed hypothesis was, therefore, partially supported for the female sub-sample.

5.8.3 Hierarchical Multiple Regression analyses predicting CS

Tables 5.31a and 5.31b present the results of multiple regression analysis when using CS as a dependent variable.

Table 5.31a

Hierarchical Multiple Regression Analyses Predicting CS for the Total Sample

	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
Predictor	B	S. Error	Beta		
Step 1: Control Variables					
(Constant)	15.213	2.377		6.401	.000
Gender	.761	.754	.057	1.009	.314
Age	-.056	.063	-.064	-.882	.378
Children	.371	.374	.072	.992	.322
SO Income Higher	.394	.391	.057	1.007	.315
R^2 = .009, *F* (4,313) = .734, *p* >.05					
Step 2					
(Constant)	16.664	4.072		4.092	.000
Gender	.458	.772	.035	.593	.553
Age	-.058	.061	-.067	-.959	.338
Children	.317	.362	.061	.876	.381
SO Income Higher	.007	.377	.001	.017	.986
Collectivistic Cultural Orientation	-.208	.266	-.058	-.782	.435
Traditional Gender Role Orientation	.088	.175	.034	.501	.616
Competitiveness	.067	.114	.050	.588	.557
N-Aff	-.047	.197	-.014	-.238	.812
Sociotropy	**.333**	**.097**	**.212**	**3.441**	**.001***
Supportiveness of the Spouse	**-.167**	**.066**	**-.153**	**-2.545**	**.011***
Family-work-conflict	**.286**	**.104**	**.151**	**2.746**	**.006***
Masculinity of the Organisational Culture	**-.176**	**.097**	**-.104**	**-1.824**	**.069*****
Collectivistic Cultural Orientation_Perceived	-.019	.254	-.006	-.074	.941
Traditional Gender Role Orientation_Perceived	-.226	.180	-.086	-1.254	.211
Competitiveness	.073	.116	.054	.630	.529
N-Aff _Perceived	-.281	.195	-.083	-1.442	.150
Sociotropy_Perceived	.074	.085	.052	.874	.383
R^2 = .16, *F* (17, 300) = 3.45, *p*<.05					
R^2 square change = .15, *F* change (13, 300) = 4.26, *p*<.05					

Note. *$p < 0.01$, * *$p < 0.05$, ***$p < 0.10$

Table 5.31b

Hierarchical Multiple Regression Analyses Predicting CS for the Male and Female Sub-Samples

	Male Sample					**Female Sample**				
	Unstandardised Coefficients		Standardised Coefficients			Unstandardised Coefficients		Standardised Coefficients		
Predictor	B	S. Error	Beta	t	Sig.	B	S. Error	Beta	t	Sig.
Step 1: Control Variables										
(Constant)	18.287	3.111		5.878	.000	15.654	2.555		6.126	.000
Age	**-.182**	**.092**	**-.226**	**-1.984**	**.049**	-.004	.087	-.005	-.051	.959
Children	.828	.501	.188	1.653	.101	.131	.533	.023	.246	.806
SO Income Higher	1.061	.774	.121	1.370	.173	.210	.469	.033	.447	.655
R^2 = .046, *F* (3,122) = 0.1.943, *p* > .05						**R^2 = .00, *F* (3, 188) = 0.87, *p*>.01**				
Step 2										
(Constant)	17.416	5.869		2.968	.004	18.429	5.548		3.322	.001
Age	-.088	.094	-.110	-.936	.351	-.075	.087	-.081	-.868	.387
Children	.642	.490	.146	1.309	.193	.180	.530	.032	.339	.735
SO Income Higher	.833	.749	.095	1.111	.269	-.211	.464	-.033	-.456	.649
Collectivistic Cultural Orientation	-.366	.424	-.110	-.863	.390	-.142	.356	-.038	-.398	.691
Traditional Gender Role Orientation	.150	.255	.067	.588	.557	.100	.252	.036	.398	.691
Competitiveness	.142	.185	.117	.766	.445	.036	.149	.025	.240	.811
N-Aff	-.067	.266	-.023	-.250	.803	-.099	.292	-.027	-.340	.735
Sociotropy	**.260**	**.154**	**.169**	**1.681**	**.096*** **	**.366**	**.129**	**.230**	**2.844**	**.005***
Supportiveness of the Spouse	-.120	.099	-.122	-1.218	.226	**-.194**	**.092**	**-.169**	**-2.114**	**.036****
Family-work-conflict	**.275**	**.142**	**.167**	**1.930**	**.056*** **	**.319**	**.151**	**.157**	**2.106**	**.037****
Masculinity of the Organisational Culture	**-.309**	**.137**	**-.196**	**-2.260**	**.026****	-.107	.141	-.061	-.755	.452
Collectivistic Cultural Orientation_Perceived	-.250	.356	-.088	-.703	.483	.218	.370	.059	.590	.556
Traditional Gender Role Orientation_Perceived	-.181	.236	-.080	-.769	.444	-.409	.273	-.132	-1.499	.136
Competitiveness	.010	.189	.008	.055	.956	.085	.153	.060	.553	.581
N-Aff _Perceived	-.015	.298	-.005	-.051	.959	-.354	.269	-.102	-1.313	.191
Sociotropy_Perceived	.135	.130	.100	1.038	.301	.060	.117	.041	.514	.608
R^2 = .24, *F* (16, 109) = 2.183, *p* > .05						**R^2 = .16, *F* (16, 175) = 2.055, *p*<.05**				
R^2 square change = .20, *F* change (13, 109)= 2.181, *p* >.05						**R^2 square change = .16, *F* change (13, 175)= 2.508, *p*<.05**				

Note. *p < 0.01, * *p < 0.05, ***p < 0.10

1. Hierarchical Multiple Regression Analyses Predicting CS for the Total Sample

Hierarchical multiple regressions were also performed using CS as a dependent variable. For the total sample, gender, number of children, significant other's income and age were entered at step 1 and the predictor variables, that is, SCO_2, TSRO, FWC, n-Aff, MOC, COMP_2, n-Aff _2, PS, CCO_2, SCO, TSRO_2, CCO, and COMP, were added to the equation at step 2. The control variables explained 0.9% of the variance in the CS scores: R^2 = .009, F (4,313) = .734, p > .05.

When the predictor variables were entered at step 2, there was an improvement in the prediction of the CS scores: R^2 = .16, F (17, 300) = 3.45, p < .05. This set of predictors explained an additional 15.4% of the variance in the CS scores: R^2 square change = .15, F change (13, 300) = 4.26, p < .05.

An analysis of the results depicted in Table 5.31a indicates that Sociotropy (β = .212, p < 0.01), Supportiveness of the Spouse (β = -.153, p < 0.01), Family-Work Conflict (β = .151, p < 0.01), and Masculinity of the Organisational Culture (β = -.104, p < 0.10) were the only predictors that significantly explain the unique variance in the CS criterion. Hence, partial support for hypothesis 11c was concluded for the total sample.

2. Hierarchical Multiple Regression Analyses Predicting CS for the Male Sub-sample

For both the male sub-sample and the female sub-sample, number of children, significant other's income and age were entered at step 1 and SCO_2, TSRO, FWC, n-Aff, MOC, COMP_2, n-Aff _2, PS, CCO_2, SCO, TSRO_2, CCO, and COMP were added at step 2.

For the male sub-sample, the control variables explained 4.6% (F (3,122) = 0.1.943, $p > .05$) of the variance in the CS scores. At step 2, there was a significant improvement in the prediction of CS scores: $R^2 = .24$, F (16, 109) = 2.183, $p < .05$. This set of predictors explained an additional 19.7% of the variance in the CS scores after controlling for number of children, significant other's income and age: R^2 square change = .20, F change (13, 109)= 2.181, $p < 05$.

These results indicate that Family-Work Conflict ($\beta = .167$, $p < 0.10$), Sociotropy ($\beta = .169$, $p < 0.10$), and Masculinity of the Organisational Culture ($\beta = -.196$, $p < 0.05$) made a significant and unique contribution to explaining the variance in the CS scores when entered into the regression model. Thus, partial support for hypothesis 11c was provided.

3. Hierarchical Multiple Regression Analyses Predicting CS for the Female Sub-sample

For the female sub-sample, the control variables explained 0.1% of the variance in the CS scores: $R^2 = .00$, F (3, 188) = 0.87, $p > .05$. At step 2, there was an improvement in the prediction of the CS scores: $R^2 = .16$, F (16, 175) = 2.055, $p < .05$. This set of predictors explained an additional 15.7% of the variance in the COP scores after controlling for number of children, significant other's income, and age: R^2 square change = .16, F change (13, 175) = 2.508, $p < .05$.

In this model, Sociotropy ($\beta = .230$, $p < 0.01$), Family-Work Conflict ($\beta = .157$, $p < 0.05$), and Supportiveness of the Spouse ($\beta = -.169$, $p < 0.05$) made a significant and unique contribution to explaining the variance in the CS scores when entered into the regression model. Thus, partial support for hypothesis 11c was concluded for the female sub-sample.

5.8.4 Hierarchical multiple regression analyses predicting CRO

Tables 5.32a and 5.32b present the results of multiple regression analysis when using CRO as a dependent variable.

Table 5.32a

Hierarchical Multiple Regression Analyses Predicting CRO for the Total Sample

	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
Predictor	B	S. Error	Beta		
Step 1: Control Variables					
(Constant)	6.139	1.317		4.662	.000
Gender	**.989**	**.418**	**.133**	**2.368**	**.018**
Age	-.034	.035	-.069	-.966	.335
Children	.310	.207	.107	1.497	.135
SO Income Higher	.100	.217	.026	.463	.644
R^2 = .027, *F* (4, 313) = 2.136, *p* >.05					
Step 2					
(Constant)	5.014	2.292		2.187	.029
Gender	**.792**	**.435**	**.107**	**1.823**	**.069*** **
Age	-.022	.034	-.045	-.648	.517
Children	.190	.204	.066	.931	.353
SO Income Higher	-.086	.212	-.022	-.406	.685
Collectivistic Cultural Orientation	-.002	.150	-.001	-.014	.989
Traditional Gender Role Orientation	-.106	.099	-.074	-1.073	.284
Competitiveness	**.134**	**.064**	**.179**	**2.092**	**.037** **
N-Aff	.059	.111	.031	.536	.593
Sociotropy	**.116**	**.055**	**.132**	**2.127**	**.034** **
Supportiveness of the Spouse	**-.101**	**.037**	**-.165**	**-2.724**	**.007** *
Family-work-conflict	**.205**	**.059**	**.194**	**3.498**	**.001** *
Masculinity of the Organisational Culture	-.030	.054	-.032	-.556	.579
Collectivistic Cultural Orientation_Perceived	.088	.143	.047	.617	.537
Traditional Gender Role Orientation_Perceived	-.044	.102	-.030	-.436	.663
Competitiveness	-.041	.065	-.053	-.623	.534
N-Aff _Perceived	-.151	.110	-.080	-1.376	.170
Sociotropy_Perceived	.005	.048	.006	.108	.914
R^2 = .15, *F* (17, 300)= 3.163, *p* < .05					
R^2 square change = .13, *F* change (13, 300) = 3.414, *p* < .05					

Note. *p < 0.01, * *p < 0.05, ***p < 0.10

Table 5.32b

Hierarchical Multiple Regression Analyses Predicting CRO for the Male and Female Sub-Samples

	Male Sample					**Female Sample**				
	Unstandardised Coefficients		Standardised Coefficients			Unstandardised Coefficients		Standardised Coefficients		
Predictor	B	S. Error	Beta	t	Sig.	B	S. Error	Beta	t	Sig.
Step 1: Control Variables										
(Constant)	8.118	1.693		4.796	.000	7.707	1.435		5.373	.000
Age	-.072	.050	-.168	-1.455	.148	-.023	.049	-.043	-.463	.644
Children	.247	.272	.105	.908	.366	.393	.299	.123	1.312	.191
SO Income Higher	.272	.421	.058	.647	.519	.064	.263	.018	.242	.809
R^2 = .020, *F* (3,122) = .822, *p* > .05						**R^2 = .010, *F* (3,188) = 0.650, *p* >.05**				
Step 2										
(Constant)	6.633	3.365		1.971	.051	6.268	3.116		2.012	.046
Age	-.014	.054	-.032	-.253	.801	-.039	.049	-.074	-.799	.425
Children	.066	.281	.028	.236	.814	.275	.298	.086	.924	.357
SO Income Higher	.171	.429	.036	.398	.691	-.187	.261	-.052	-.716	.475
Collectivistic Cultural Orientation	.095	.243	.053	.389	.698	.000	.200	.000	-.002	.999
Traditional Gender Role Orientation	-.143	.146	-.118	-.976	.331	-.047	.141	-.030	-.331	.741
Competitiveness	.110	.106	.169	1.033	.304	**.139**	**.083**	**.175**	**1.670**	**.097*** **
N-Aff	.072	.153	.046	.470	.640	.023	.164	.011	.141	.888
Sociotropy	.045	.089	.055	.511	.610	**.150**	**.072**	**.167**	**2.075**	**.039** **
Supportiveness of the Spouse	**-.123**	**.057**	**-.233**	**-2.178**	**.032**	**-.091**	**.052**	**-.140**	**-1.760**	**.080*** **
Family-work-conflict	.125	.082	.141	1.528	.130	**.273**	**.085**	**.238**	**3.208**	**.002***
Masculinity of the Organisational Culture	-.061	.078	-.072	-.776	.440	-.013	.079	-.013	-.167	.868
Collectivistic Cultural Orientation_Perceived	-.001	.204	.000	-.003	.998	.109	.208	.053	.525	.600
Traditional Gender Role Orientation_Perceived	.039	.135	.032	.288	.774	-.162	.153	-.093	-1.059	.291
Competitiveness	-.035	.108	-.052	-.326	.745	-.034	.086	-.043	-.395	.693
N-Aff _Perceived	-.149	.171	-.087	-.872	.385	-.121	.151	-.062	-.802	.424
Sociotropy_Perceived	.071	.075	.097	.949	.345	-.023	.179	-.010	-.130	.897
R^2 = .14, *F* (16, 109) = 1.073 *p* > .05						**R^2 = .17, *F* (16, 175) = 2.164, *p* < .05**				
R^2 square change = .12, *F* change (13, 109) = 5.482, *p* > .05).						**R^2 square change = .16, *F* change (13, 175) = 2.498, *p* <.05.**				

Note. *p < 0.01, * *p < 0.05, ***p < 0.10

1. Hierarchical Multiple Regression Analyses Predicting CRO for the Total Sample

Hierarchical multiple regressions were also performed using CRO as a dependent variable. For the combined female and male sample, gender, number of children, significant other's income and age were entered at step 1. These sets of predictors explained 2.7% of the variance in the CRO scores: R^2 = .0.27, F (4, 313) = 2.136, p > .05.

At step 2, when the SCO_2, TSRO, FWC, n-Aff, MOC, COMP_2, n-Aff _2, PS, CCO_2, SCO, TSRO_2, CCO, and COMP were added to the equation, there was an improvement in the prediction of the CRO scores: R^2 = .15, F (17, 300)= 3.163, p <.05. This set of predictors explained an additional 12.5% of the variance in the CRO scores after controlling for gender, number of children, significant other's income, and age: R^2 square change = .13, F change (13, 300) = 3.414, p < .05.

As depicted in Table 5.32a, for the total sample, only Gender (β = .107, p < 0.10), Competitiveness (β = .179, p < 0.05), Supportiveness of the Spouse (β = -.165, p < 0.01), Family-Work Conflict (β = .194, p < 0.01), and Socitropy (β = .132, p < 0.05) reached significance, thus providing partial support for hypothesis 11d.

2. Hierarchical Multiple Regression Analyses Predicting CRO for the Male Sub-sample

For the male sample, number of children, significant other's income and age were entered at step 1. These control variables explained 2.0% of the variance in the CRO scores: R^2 = .020, F (3,122) = .822, p > .05. However, at step 2, there was no improvement in the prediction of CRO scores: R^2 = .14, F (16, 109) = 1.073 p > .05. This set of predictors explained an additional 11.6% of the variance in the CRO scores after controlling for number of children, significant other's income and age: R^2 square change = .12, F change (13, 109) = 5.482, p > .05.

This model was not significant ($p > 0.05$). However, Supportiveness of the Spouse (β = -.233, $p < 0.05$) did make made a significant and unique contribution in explaining the variance in the CRO scores when entered into the regression model. Nevertheless, there was no support for hypothesis 11c found as the overall model was not significant.

3. Hierarchical Multiple Regression Analyses Predicting CS for the Female Sub-sample

For the female sample, number of children, significant other's income and age were entered at step 1 and TSCO_2, TTSRO, TFWC, Tn-Aff, TMOC, TCOMP_2, Tn-Aff _2, TPS, TCCO_2, TSCO, TTSRO_2, TCCO, and TCOMP were added at step 2. The control variables explained 1.0% of the variance in the CRO scores: R^2 = .010, F (3,188) = 0.650, p >.05.

At step 2, there was an improvement in the prediction of the CRO scores: R^2 = .17, F (16, 175) = 2.164, $p < .05$. This set of predictors explained an additional 15.5% of the variance in the CRO scores after controlling for number of children, significant other's income and age: R^2 square change = .16, F change (13, 175) = 2.498, $p <$ .05.

The results further indicated that only Competitiveness (β = .175, $p < 0.10$), Supportiveness of the Spouse (β = -.140, $p < 0.10$), Family-Work-Conflict (β = .238, $p < 0.01$), and Socitropy (β = .167, $p < 0.05$) reached significance; thus providing partial support for hypothesis 11d.

5.9 SEM Results

As indicated in the chapter on research method, the LISREL Programme, Version 8.8 was used to perform the SEM analyses. Before conducting the SEM analyses it was necessary to address the problem of the missing values. In addition, normality also had to be ascertained. The following sections, that is, 5.9.1 and 5.9.2, present information on the way in which the two procedures were addressed.

5.9.1 Missing values

As discussed in section 4.9.1, multiple imputations were used as a possible solution to the problem of missing values. Using the PRELIS Programme (Jöreskog & Sörbom, 1996) items with the least reported missing values were identified and these items were used as matching variables. Using this procedure, all the cases with missing values were successfully imputed and no cases were eliminated.

5.9.2 Testing multivariate normality assumptions

Multivariate normality of the indicator variables was tested using PRELIS. This step was important because a lack of multivariate normality may inflate the chi-square statistic and also lead to a Type 1 error that is, rejecting a model which should not be rejected. In order to assess multivariate normality, both the skewness and kurtosis of the indicators (Jöreskog & Sörbom, 1996) were examined. Table 5.33a presents the multivariate normality results before the normalisation attempts.

Table 5.33a

Test of Multivariate Normality Before Normalisation

Skewness			**Kurtosis**			**Skewness and Kurtosis**	
Value	Z-Score	P-Value	Value	Z-Score	P-Value	Chi-Square	P-Value
337.727	100.597	0.000	1876.933	37.073	0.000	11494.276	0.000

As reflected in Table 5.33a the null hypothesis of multivariate normality had to be rejected ($p<0.05$). Accordingly, normalisation was attempted using PRELIS. The results are presented in Table 5.33b.

Table 5.33b

Test of Multivariate Normality after Normalisation

Skewness			**Kurtosis**			**Skewness and Kurtosis**	
Value	Z-Score	P-Value	Value	Z-Score	P-Value	Chi-Square	P-Value
246.129	73.352	0.000	1663.299	33.074	0.000	6474.394	0.000

Normalisation slightly improved the levels of skewness and kurtosis. However, the data failed to satisfy the multivariate normality assumption (see Table 5.33b) as the results continued to reflect unacceptable levels of skewness and kurtosis. As a result, the Robust Maximum Likelihood estimation method (Du Toit & Du Toit, 2001; Mels, 2006) was used to produce the estimates.

5.9.3 Model trimming

As reflected by the outputs from the CFA analyses some of the exogenous variables were not included in the SEM analyses. Initial attempts to fit the model with the entire original set of endogenous variables resulted in a model that failed to converge. A decision was, thus, made to remove all the variables measuring the outperformers' perceptions of the outperformed individuals' characteristics from the SEM analysis. This decision was also informed by both the correlational and the HMR analyses as the two analyses had, from the data, consistently revealed that the outperformers' perceptions of the outperformeds' individual characteristics were not related to the experiences of STTUC. Accordingly, to scale down the number of exogenous variables and for the sake of parsimony, the variables measuring outperformer perceptions were trimmed.

A decision was also made to remove the n-Aff and n-Aff_Perceived constructs from further analysis. Before Spearman's correction, the Cronbach's alpha for the sub-scales were the lowest that is, failed to exceed the .70 value, compared to other

scales. In addition, the initial CFA analysis with the n-Aff scale showed that the sub-scale may be problematic. An examination of the unstandadised Lambda-X matrix resulted in the n-Aff sub-scale producing the lowest t-values for both parcels − Pn-Aff 1 (8.61), and Pn-Aff 2 (8.248). The squared multiple correlations of the two parcels were also the lowest (Pn-Aff 1 =0.50, and Pn-Aff 2 = 0.32) as compared to indicators of the other latent variables.

Table 5.34 presents the trimmed down path coefficients statistical hypotheses:

Table 5.34

Trimmed Path Coefficients Statistical Hypotheses

Hypothesis 1 H_{03}:γ_{11} =0 H_{03}:γ_{11} >0	Hypothesis 10 H_{012}:γ_{23} =0 H_{a12}:γ_{23} >0	Hypothesis 19 H_{021}:γ_{35} =0 H_{a21}:γ_{35} >0	Hypothesis 28 H_{30}:γ_{47} =0 H_{a30}:γ_{47} >0
Hypothesis 2 H_{04}:γ_{21} =0 H_{a4}:γ_{21} >0	Hypothesis 11 H_{013}:γ_{33} =0 H_{a13}:γ_{33} >0	Hypothesis 20 H_{022}:γ_{45} =0 H_{a22}:γ_{45} >0	Hypothesis 29 H_{031}:γ_{18} =0 H_{a31}:γ_{18} >0
Hypothesis 3 H_{05}:γ_{31} =0 H_{a5}:γ_{31} >0	Hypothesis 12 H_{014}:γ_{43} =0 H_{a14}:γ_{43} >0	Hypothesis 21 H_{023}:γ_{16} =0 H_{a23}:γ_{16} >0	Hypothesis 30 H_{032}:γ_{28} =0 H_{a32}:γ_{28} >0
Hypothesis 4 H_{06}:γ_{41} =0 H_{a6}:γ_{41} >0	Hypothesis 13 H_{015}:γ_{14} =0 H_{a15}:γ_{14} >0	Hypothesis 22 H_{024}:γ_{26} =0 H_{a24}:γ_{26} >0	Hypothesis 31 H_{033}:γ_{38} =0 H_{a33}:γ_{38} >0
Hypothesis 5 H_{07}:γ_{12} =0 H_{a7}:γ_{12} >0	Hypothesis 14 H_{016}:γ_{24} =0 H_{a16}:γ_{24} >0	Hypothesis 23 H_{025}:γ_{36} =0 H_{a25}:γ_{36} >0	Hypothesis 32 H_{034}:γ_{48} =0 H_{a34}:γ_{48} >0
Hypothesis 6 H_{08}:γ_{22} =0 H_{a8}:γ_{22} >0	Hypothesis 15 H_{017}:γ_{34} =0 H_{a17}:γ_{34} >0	Hypothesis 24 H_{026}:γ_{46} =0 H_{a26}:γ_{46} >0	
Hypothesis 7 H_{09}:γ_{32} =0 H_{a9}:γ_{32} >0	Hypothesis 16 H_{018}:γ_{44} =0 H_{a18}:γ_{44} >0	Hypothesis 25 H_{o27}:γ_{17} =0 H_{a27}:γ_{17} >0	
Hypothesis 8 H_{010}:γ_{42} =0 H_{a10}:γ_{42} >0	Hypothesis 17 H_{019}:γ_{15} =0 H_{a19}:γ_{15} >0	Hypothesis 26 H_{028}:γ_{27} =0 H_{a28}:γ_{27} >0	
Hypothesis 9 H_{011}:γ_{13} =0 H_{a11}:γ_{13} >0	Hypothesis 18 H_{020}:γ_{25} =0 H_{a20}:γ_{25} >0	Hypothesis 27 H_{029}:γ_{37} =0 H_{a29}:γ_{37} >0	

5.9.4 Evaluation of the measurement models

Confirmatory factor analyses were performed on the measurement models to determine their fit and also to assess whether the indicator variables used were valid measures of the proposed latent variables (Diamantopoulos & Siguaw, 2000; Anderson & Gerbing, 1988).

As discussed in section 4.10.7.1, item parcelling was utilised to reduce the number of indicators (Bandalos & Finney, 2001; Little *et al*., 2002) and to improve the ratio of the number of parameters to be estimated (Kim & Hagtvet, 2003). The parcels were calculated by taking the means of the even-numbered and odd-numbered items to form indicator variables for each one of the latent variables. The variable type of the item parcels was treated as that of a continuous variable and the covariance matrix was analysed.

In addition, in order to evaluate the success with which the latent variables had been operationalised, the exogenous variables model and the endogenous variables model were fitted separately.

5.9.4.1 The measurement model fit for the exogenous variables for the total sample

Figures 5.1a presents the final CFA diagram of the *X* model. For this model, an admissible final solution of parameter estimates was obtained after 17 iterations.

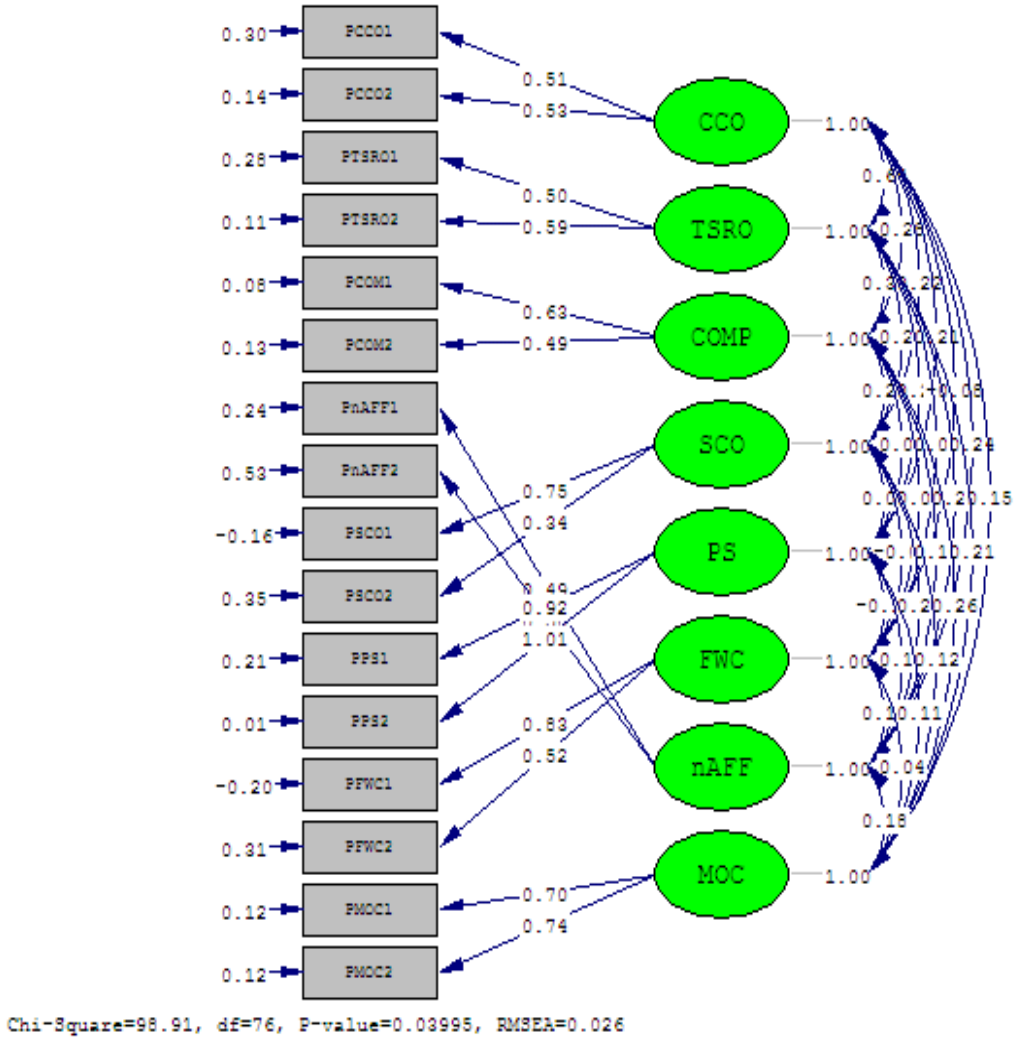

Figure 5.1a: The Collectivistic Cultural Orientation, Traditional Gender Role Orientation, Needs for Affiliation, Interpersonal Sensitivity, Competitiveness, Family–Work Conflict, Instrumental Support, and Masculine Organisational Culture Measurement Model

The chi-square test was used to asses for a perfect model fit. The aim of the chi-square was not to reject the null hypothesis as rejection of the null hypothesis would have indicated an imperfect model fit and possible rejection of the model (Diamantopoulos & Siguaw, 2000; Kelloway, 1998). In view of the fact that large x^2 values indicate bad fit and small x^2 values indicate a good fit, x^2 may be referred to as a badness-of-fit measure (Pousette & Hanse, 2002). The null

hypothesis tested by the chi-square test was H0: Σ = Σ (θ) (as suggested by Diamantopoulos & Siguaw, 2000).

Figure 5.1a shows that the Satorra-Bentler x^2 test statistic (98.91) was significant ($p < 0.05$), thus resulting in a rejection of the null hypothesis of the exact model fit, that is, H0: Σ = Σ (θ), and a possible rejection of the model (Diamantopoulos & Siguaw, 2000). In an effort to overcome the shortcoming of the x^2 test, the expression x^2 in terms of the degrees of freedom (x^2 /*df*) had to be considered. The accepted norm range of x^2 /*df* value is between 2 and 5 (Kelloway, 1998). The reported x^2 /*df* value 1.30 was, therefore, considered not satisfactory.

The chi-square test is sensitive to departures from multivariate normality, especially kurtosis. Therefore, as suggested by Diamantopoulos and Siguaw (2000) and Kline (2005), for practical purposes, the results of a chi square test were used together with those of the RMSEA, RMR, SRMR, and GFI to make informed decisions regarding model fit. For a detailed description of each index, refer to Table 4.3, which presents both a summary and description of the Goodness-of-Fit Indices used.

Table 5.35 below presents the goodness of fit statistics for the exogenous variables for the total sample.

Table 5.35

The Goodness of Fit Statistics for the Exogenous Variables for the Total Sample.

Degrees of Freedom = 76
Minimum Fit Function Chi-Square = 104.071 (P = 0.0180)
Normal Theory Weighted Least Squares Chi-Square = 104.808 (P = 0.0159)
Satorra-Bentler Scaled Chi-Square = 98.906 (P = 0.0399)
Chi-Square Corrected for Non-Normality = 119.607 (P = 0.00105)
Estimated Non-Centrality Parameter (NCP) = 22.906
90 Percent Confidence Interval for NCP = (1.216 ; 52.701)

Minimum Fit Function Value = 0.225
Population Discrepancy Function Value (F0) = 0.0495
90 Percent Confidence Interval for F0 = (0.00263 ; 0.114)
Root Mean Square Error of Approximation (RMSEA) = 0.0255
90 Percent Confidence Interval for RMSEA = (0.00588 ; 0.0387)
P-Value for Test of Close Fit (RMSEA < 0.05) = 1.00

Expected Cross-Validation Index (ECVI) = 0.473
90 Percent Confidence Interval for ECVI = (0.426 ; 0.537)
ECVI for Saturated Model = 0.587
ECVI for Independence Model = 6.341

Chi-Square for Independence Model with 120 Degrees of Freedom = 2904.089
Independence AIC = 2936.089
Model AIC = 218.906
Saturated AIC = 272.000
Independence CAIC = 3018.328
Model CAIC = 527.299
Saturated CAIC = 971.024

Normed Fit Index (NFI) = 0.966
Non-Normed Fit Index (NNFI) = 0.987
Parsimony Normed Fit Index (PNFI) = 0.612
Comparative Fit Index (CFI) = 0.992
Incremental Fit Index (IFI) = 0.992
Relative Fit Index (RFI) = 0.946
Critical N (CN) = 504.631

Root Mean Square Residual (RMR) = 0.0205
Standardised RMR = 0.0345
Goodness of Fit Index (GFI) = 0.972
Adjusted Goodness of Fit Index (AGFI) = 0.951
Parsimony Goodness of Fit Index (PGFI) = 0.543

While the null hypotheses of exact fit was rejected ($p<0.05$), the values of RMSEA, RMR, standardised RMR and GFI were 0**.**026**,** 0.021, 0.035, and 0.97, respectively; all reflecting good model fit (Diamantopoulos & Siguaw, 2000).

Based on the values of all the indices selected, it may, therefore, be stated that the model reproduced the observed covariance matrix. Therefore, these results warranted further interpretation of the model parameter estimates.

5.9.4.2 Evaluation of the X measurement model parameter estimates for the total sample

In order to evaluate the measurement model parameter estimates, an unstandardised Lambda-X matrix and the squared multiple correlations (R^2) were assessed. Table 5.36 presents the results for the X model's unstandardised Lambda-X matrix for the total sample.

Table 5.36
The X Model Unstandardised LAMBDA-X Matrix for the Total Sample

	CCO	TSRO	COMP	SCO	PS	FWC	MOC
PCCO1	0.511 (0.038) **13.525**						
PCCO2	0.525 (0.040) **13.041**						
PTSRO1		0.503 (0.035) **14.215**					
PTSRO2		0.593 (0.038) **15.626**					
PCOM1			0.631 (0.033) **19.102**				
PCOM2			0.490 (0.033) **15.075**				
PSCO1				0.959 (0.211) 4.551			
PSCO2				0.269 (0.065) **4.133**			
PPS1					0.917 (0.049) 18.840		
PPS2					1.013 (0.051) **19.816**		
PFWC1						0.860 (0.119) 7.233	
PFWC2						0.496 (0.074) **6.731**	
PMOC1							0.686 (0.043) 16.065
PMOC2							0.753 (0.047) **16.177**

The unstandardised Lambda-X matrix showed the loadings of the manifest variables on the latent variables. T-values of ≥|1.96| confirmed the validity of the indicators (Diamantopoulos & Siguaw, 2000). Accordingly, all the manifest variables loaded significantly on the latent variables that they were designed to reflect. Factor loadings ranged from 4.13 to 19.91.

Diamantopoulos and Siguaw (2000) warn against absolute reliance on the unstandardised loadings and their associated t-values and, thus, assessments of the squared multiple correlations (R^2) of the indicators were also carried out. Table 5.37 presents these results.

Table 5.37

Squared Multiple Correlations for X Variables for the Total Sample

Squared Multiple Correlations for X - Variables

PCCO1	PCCO2	PTSRO1	PTSRO2	PCOM1	PCOM2	PSCO1
0.465	0.665	0.475	0.764	0.839	0.640	2.251

Squared Multiple Correlations for X - Variables

PSCO2	PPS1	PPS2	PFWC1	PFWC2	PMOC1	PMOC2
0.154	0.804	0.990	1.529	0.427	0.771	0.850

In general, the R^2 values range from 0.00 to 1.00 with high R^2 values reflecting that variance in the specified indicator reflects variance in the latent variable to which it has been linked (Diamantopoulos & Siguaw, 2000).

The R^2 values shown in Table 5.37 reveal above average correlations, except for variables PCCO1, PTSRO1, PFWC2, and PSCO2, which were moderate in terms of indicator strength. This indicated that the operationalisation of the X model latent variables for the total sample had succeeded.

5.9.4.3 The measurement model for the endogenous latent variables for the total sample

Figure 5.1b depicts the measurement model for the endogenous latent variables (*Y* variables).

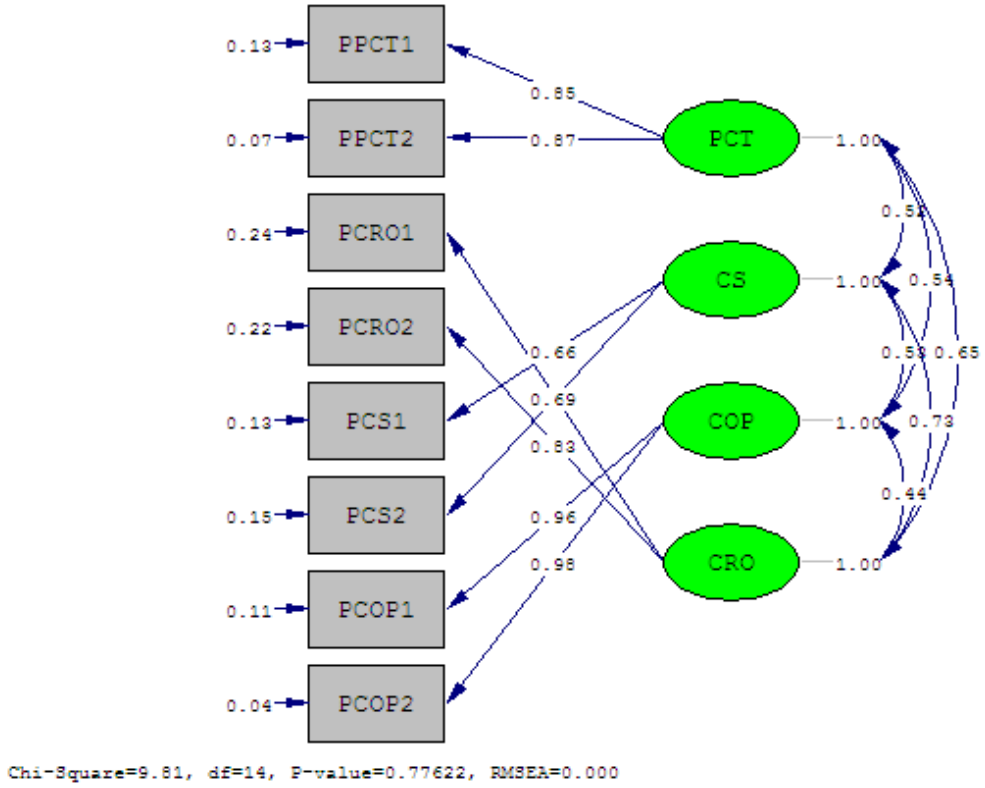

Figure 5.1b: The Concerned for the Outperformed Person; Concern for the Self; Concern for Relationship with the Outperformed measurement model for the endogenous variables for the total sample

As regards the Y model, the Satorra-Bentler x^2 test statistic (9.81) was not significant ($p > 0.05$). The null hypothesis of exact fit was, therefore, not rejected. It may, therefore, be said that the model approximately reproduced the covariance matrix observed. The RMSEA, RMR, SRMR, and GFI values were also evaluated in order to make informed decisions regarding model fit (Diamantopoulos & Siguaw, 2000; Kline, 2005). The full spectrum of the fit indices provided by the LISREL

Programme are depicted in Table 5.38 with the fit indices which were interpreted highlighted in bold.

Table 5.38

The Goodness of Fit Statistics for the Endogenous Variables for the Total Sample.

Degrees of Freedom = 14
Minimum Fit Function Chi-Square = 15.389 (P = 0.352)
Normal Theory Weighted Least Squares Chi-Square = 15.066 (P = 0.374)
Satorra-Bentler Scaled Chi-Square = 9.806 (P = 0.776)
Chi-Square Corrected for Non-Normality = 16.041 (P = 0.311)
Estimated Non-Centrality Parameter (NCP) = 0.0
90 Percent Confidence Interval for NCP = (0.0 ; 6.184)

Minimum Fit Function Value = 0.0332
Population Discrepancy Function Value (F0) = 0.0
90 Percent Confidence Interval for F0 = (0.0 ; 0.0134)
Root Mean Square Error of Approximation (RMSEA) = 0.0
90 Percent Confidence Interval for RMSEA = (0.0 ; 0.0309)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.997

Expected Cross-Validation Index (ECVI) = 0.125
90 Percent Confidence Interval for ECVI = (0.125 ; 0.139)
ECVI for Saturated Model = 0.156
ECVI for Independence Model = 8.234

Chi-Square for Independence Model with 28 Degrees of Freedom = 3796.548
Independence AIC = 3812.548
Model AIC = 53.806
Saturated AIC = 72.000
Independence CAIC = 3853.667
Model CAIC = 166.883
Saturated CAIC = 257.036

Normed Fit Index (NFI) = 0.997
Non-Normed Fit Index (NNFI) = 1.002
Parsimony Normed Fit Index (PNFI) = 0.499
Comparative Fit Index (CFI) = 1.000
Incremental Fit Index (IFI) = 1.001
Relative Fit Index (RFI) = 0.995

Critical N (CN) = 1377.052

Root Mean Square Residual (RMR) = 0.0106
Standardised RMR = 0.0113
Goodness of Fit Index (GFI) = 0.992
Adjusted Goodness of Fit Index (AGFI) = 0.979
Parsimony Goodness of Fit Index (PGFI) = 0.386

The RMR value of 0.011 and SRMR value of 0.011 indicated good fit. The RMSEA (0.00) also indicated an extremely good fit. Evaluating the fit of the model in terms of the GFI (0.99) also reflected a relatively good fit of the model. Collectively, these indices indicated that the model had reproduced the covariance matrix observed. A decision was, therefore, made to continue to analyse the model's parameter estimates.

5.9.4.4 Evaluation of the Y measurement model parameter estimates for the total sample

The unstandardised Lambda-X matrix and the squared multiple correlations (R^2) for the Y measurement model were also assessed. Table 5.39 and Table 5.40, present the results.

Table 5.39

The Y model Unstandardised LAMBDA-X matrix for the Total Sample

	PCT	CS	COP	CRO
	---	---	---	---
PPCT1	0.847 (0.040) **20.971**			
PPCT2	0.871 (0.037) **23.250**			
PCRO1				0.862 (0.039) **22.007**
PCRO2				0.832 (0.042) **19.946**
PCS1		0.661 (0.031) **21.101**		
PCS2		0.692 (0.036) **19.092**		
PCOP1			0.960 (0.039) **24.823**	
PCOP2			0.984 (0.039) **25.195**	

All the t-values in Table 5.39 exceeded 1.96; thus providing evidence of the validity of the indicators used to represent the constructs of interest.

Table 5.40 presents the regression coefficients of the Y model manifest variables.

Table 5.40

Squared Multiple Correlations for X Variables for the Total Sample

Squared Multiple Correlations for X - Variables

PPCT1	PPCT2	PCRO1	PCRO2	PCS1	PCS2
0.845	0.918	0.754	0.760	0.766	0.764

Squared Multiple Correlations for X - Variables

PCOP1	PCOP2
0.892	0.960

The R^2 values (see Table 5.40 above) showed the loadings of the manifest variables on the latent variables. All the R^2 values reveal values above 0.75, thus indicating that the operationalisation of the Y model latent variables for the total sample had succeeded.

5.9.5 Testing the structural model for the total sample

After conducting a CFA analysis of the Y and the X models, the structural models were tested to determine whether the theoretical relationships specified at the conceptual model level were supported by the study's data. The structural models were fitted for the total sample, the female sub-sample and the male sub-sample.

The structural model for the total sample model is depicted in Figure 5.2. The model converged after 73 iterations.

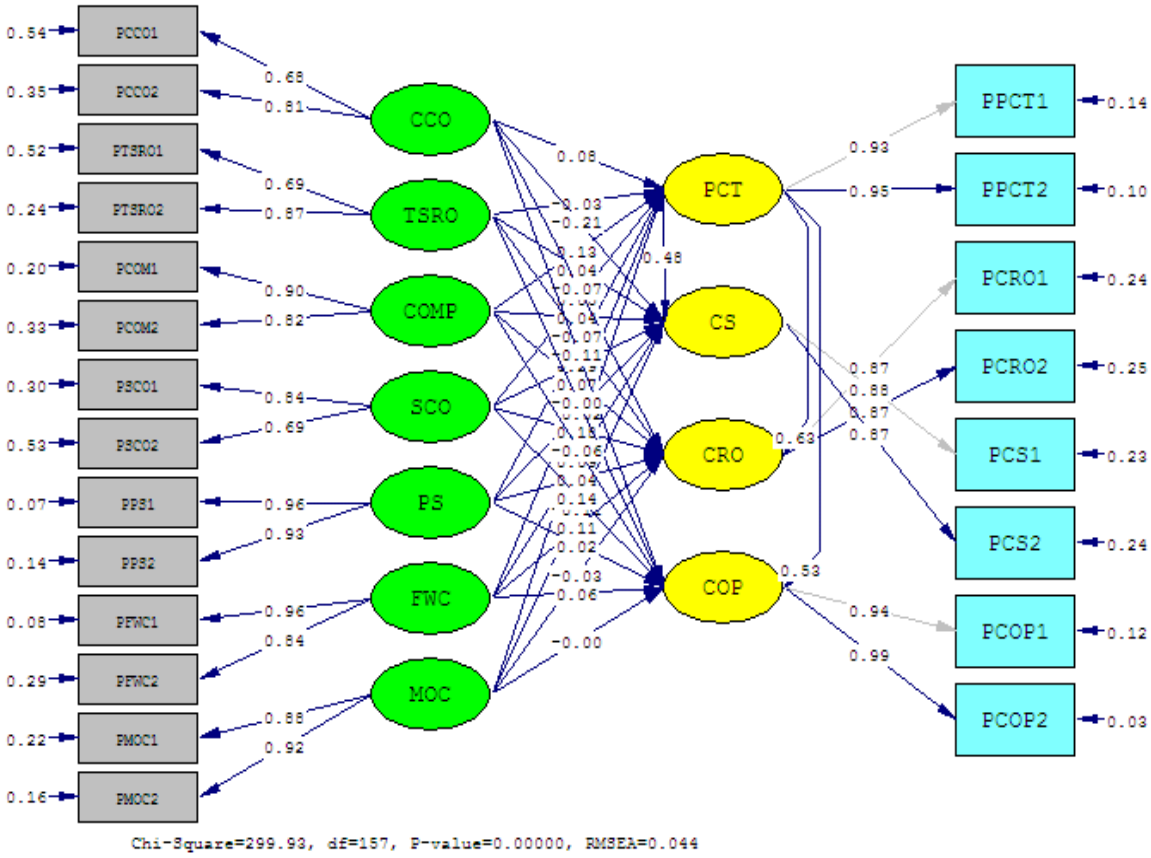

Figure 5.2: The structural model for the total sample

The Satorra-Bentler scaled chi-square values of 299.99 (p = 0.00) showed poor fit, thus suggesting that the null hypothesis of exact fit should be rejected. The reported x^2 /*df* value of 1.90 was considered satisfactory.

Hair *et al*. (2006) advise that there are shortcomings as regards the chi-Square test statistic and, thus, in order to obtain a more comprehensive fit, other relevant fit indices were evaluated. Table 5.41 presents the full spectrum of fit statistics. The fit indices of interest in the evaluation of the model fit in this study are highlighted in bold.

Table 5.41

Goodness of Fit Statistics for the Total Sample Structural Model

Goodness of Fit Statistics

Degrees of Freedom = 157
Minimum Fit Function Chi-Square = 333.631 (P = 0.00)
Normal Theory Weighted Least Squares Chi-Square = 329.490 (P = 0.00)
Satorra-Bentler Scaled Chi-Square = 299.926 (P = 0.00)
Chi-Square Corrected for Non-Normality = 418.858 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 142.926
90 Percent Confidence Interval for NCP = (97.832; 195.827)

Minimum Fit Function Value = 0.721
Population Discrepancy Function Value (F0) = 0.309
90 Percent Confidence Interval for F0 = (0.211 ; 0.423)
Root Mean Square Error of Approximation (RMSEA) = 0.0443
90 Percent Confidence Interval for RMSEA = (0.0367 ; 0.0519)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.888

Expected Cross-Validation Index (ECVI) = 1.062
90 Percent Confidence Interval for ECVI = (0.965 ; 1.177)
ECVI for Saturated Model = 1.093
ECVI for Independence Model = 16.173

Chi-Square for Independence Model with 231 Degrees of Freedom = 7443.929
Independence AIC = 7487.929
Model AIC = 491.926
Saturated AIC = 506.000
Independence CAIC = 7601.007
Model CAIC = 985.355
Saturated CAIC = 1806.391

Normed Fit Index (NFI) = 0.960
Non-Normed Fit Index (NNFI) = 0.971
Parsimony Normed Fit Index (PNFI) = 0.652
Comparative Fit Index (CFI) = 0.980
Incremental Fit Index (IFI) = 0.980
Relative Fit Index (RFI) = 0.941

Critical N (CN) = 311.510

Root Mean Square Residual (RMR) = 0.0320
Standardised RMR = 0.0452
Goodness of Fit Index (GFI) = 0.939
Adjusted Goodness of Fit Index (AGFI) = 0.902
Parsimony Goodness of Fit Index (PGFI) = 0.583

As indicated in Table 5.41, the RMSEA value of 0.044 showed good fit. The RMR (0.032) and the SRMR (0.045) also demonstrated that the model fitted the data extremely well. The GFI (0.90) and the AGFI (0.90) also indicated acceptable model fit.

Collectively, the fit indices results suggested that the data approximately reproduced the observed covariance matrix.

5.9.5.1 Evaluating the structural model residuals for the total sample

The model standardised residuals were used to diagnose information on probable causes of lack of fit in structural model (Jöreskog & Sörbom, 1993). Figure 5.3 presents a stem-and-leaf plot and Figure 5.4 presents the Q-plot. Both the stem-and-leaf plot and the Q-plot presented the standardised residuals.

```
- 7|9
 - 6|5
 - 5|4
 - 4|3
 - 3|776310
 - 2|87542100
 - 1|77766554444444333332222211100
 - 0|99999988888887777766655555444444443333322222221111111000000000000000000+27
   0|1111111122223333333344444555555555566677788888889999999
   1|000011111222233344455555668888899
   2|011122335578
   3|
   4|8
   5|0145
   6|002
```

Figure 5.3: A stem-and-leaf plot of the standardised residuals

A good model fit would be characterised by a stem-and-leaf plot in which the residuals were distributed symmetrically around zero (Diamantopoulos & Siguaw, 2000). However, the stem-and-leaf plot in Figure 5.3 showed the distribution of the standardised residuals to be positively skewed; thus indicating that the model may have under-estimated the covariance terms observed.

The Q-plot (see Figure 5.4 below) presents a plot of the standardised residuals against normal quantiles. According to Jöreskog and Sörbom (1989), if the points

fall on the 45 degree reference line, the model has a good fit. However, if the data points fall over the 45-degree reference line, the model may be misspecified; the relations between some variable pairs may be of a nonlinear nature, and/or the data may not be normally distributed (Jöreskog & Sörbom, 1989; 1993).

The Q-plot depicted below shows some deviation from the dotted line, thereby providing evidence that some parameters in the model may be misspecified, the relations between some variable pairs may be of nonlinear nature, and/or the data may not be normally distributed.

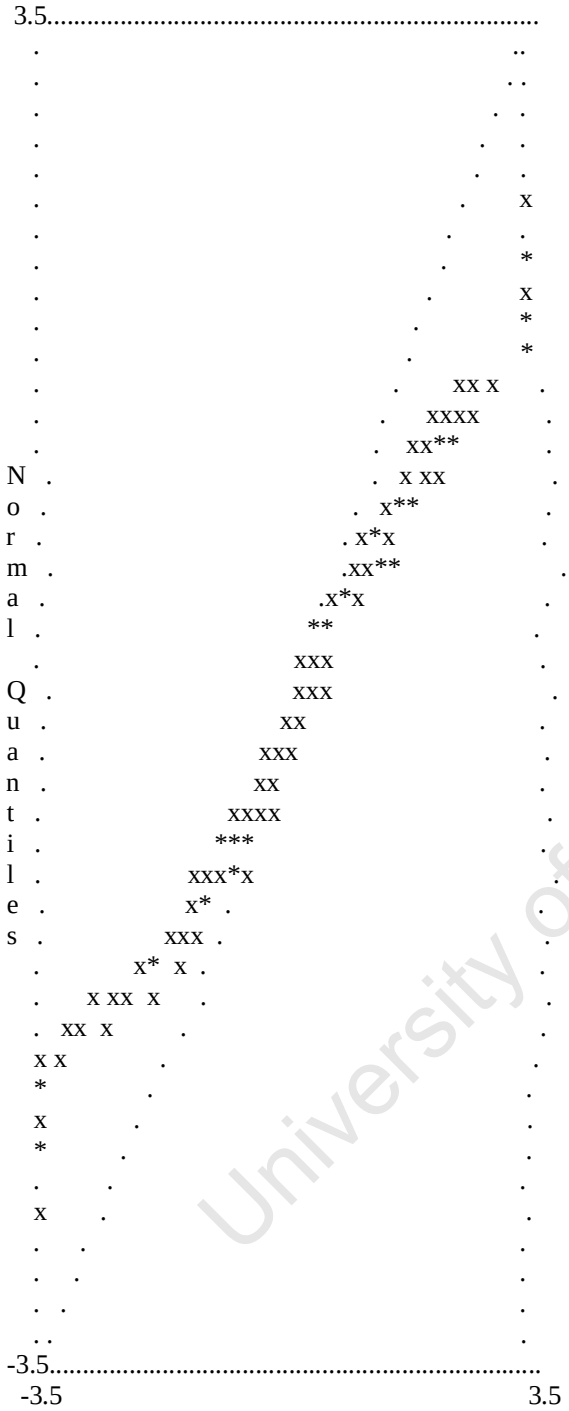

Figure 5.4: A Q-plot of the standardised residuals

5.9.5.2 Evaluating the proposed structural model residuals for the total sample

The evaluation of the structural model also entailed an assessment of the unstandardised parameters for the Beta (β) and Gamma (Γ) matrices.

The Gamma Matrix

The unstandardised Gamma matrix indicated the significance of the estimated path coefficients between the exogenous latent variables and the endogenous latent variables. The estimated parameters would be significant if t > |1.96| (Diamantopoulos & Siguaw, 2000). Significant path coefficients implied that the null hypothesis in question could be rejected in favour of the relevant alternative-hypothesis.

Table 5.42

The Unstandardised Gamma Matrix of Path Coefficients for the Structural Model for the Total Sample

GAMMA	CCO	TSRO	COMP	SCO	PS	FWC	MOC
PCT	0.077	-0.027	0.128	0.053	-0.337	0.196	-0.032
	(0.082)	(0.081)	(0.051)	(0.063)	(0.051)	(0.051)	(0.050)
	0.939	-0.337	**2.512**	0.837	**-6.553**	**3.818**	-0.625
CS	-0.207	0.039	0.045	0.289	-0.022	0.091	-0.109
	(0.072)	(0.070)	(0.055)	(0.057)	(0.057)	(0.048)	(0.049)
	-2.878	0.556	0.811	**5.101**	-0.384	**1.873**	**-2.209**
CRO	-0.072	-0.068	0.071	0.176	0.039	0.111	-0.027
	(0.069)	(0.066)	(0.050)	(0.054)	(0.047)	(0.046)	(0.046)
	-1.036	-1.031	1.415	**3.259**	0.831	**2.437**	-0.580
COP	-0.108	0.000	-0.064	0.142	0.019	0.059	-0.001
	(0.080)	(0.091)	(0.063)	(0.053)	(0.045)	(0.043)	(0.045)
	-1.347	-0.004	-1.019	**2.709**	0.428	1.386	-0.022

Note: The standard error estimates are in brackets. The bold t-values≥|1.96| indicate that the parameter estimates are significant.

The results depicted in Table 5.42 above indicate that the hypothesised paths coefficient between CCO and CS; COMP and PCT; PS and PCT; FWC and PCT;

SCO and CS; FWC and CS; FWC and CRO; SCO and CRO; SCO and COP and MOC and CS estimates were significant (t= > |1.96 |.

The Beta Matrix

The β matrix also describes the relationship(s) between the exogenous latent variables and the endogenous latent variables. The significance of the parameters is indicated by t > |1.96| (Diamantopoulos & Siguaw, 2000). A significant β estimate would imply that the null hypothesis in question could be rejected in favour of the alternative hypothesis. The unstandardised Beta matrix for the total sample is presented in Table 5.43.

Table 5.43

The Unstandardised Beta Matrix of Path Coefficients for the Structural Model for the Total Sample

BETA

	PCT	CS	CRO	COP
PCT	- -	- -	- -	- -
CS	0.483	- -	- -	- -
	(0.064)			
	7.527			
CRO	0.629	- -	- -	- -
	(0.057)			
	11.024			
COP	0.533	- -	- -	- -
	(0.054)			
	9.913			

Note: The standard error estimates are in brackets. The bold t-values≥|1.96| indicate that the parameter estimates are significant.

The results depicted in Table 5.43 show some significant paths between the endogenous variables. However, these relationships were not the main focus of this study.

Table 5.44
The Completely Standardised Gamma and Beta Matrix of Path Coefficients for the Structural Model for the Total Sample

BETA

	PCT	CS	CRO	COP
PCT	- -	- -	- -	- -
CS	0.483	- -	- -	- -
CRO	0.629	- -	- -	- -
COP	0.533	- -	- -	- -

GAMMA

	CCO	TSRO	COMP	SCO	PS	FWC	MOC
PCT	0.077	-0.027	0.128	0.053	-0.337	0.196	-0.032
CS	-0.207	0.039	0.045	0.289	-0.022	0.091	-0.109
CRO	-0.072	-0.068	0.071	0.176	0.039	0.111	-0.027
COP	-0.108	0.000	-0.064	0.142	0.019	0.059	-0.001

Note: The standard error estimates are in brackets. The bold t-values≥ | 1.96 | indicate that the parameter estimates are significant.

As shown in Table 5.44, no t-values were above the 1.96 value. This, in turn, suggested that the null hypotheses proposed could be rejected.

5.9.6 Testing the structural models for the male sub-sample

The structural model for the male sub-sample is depicted in Figure 5.5. The model converged after 100 iterations.

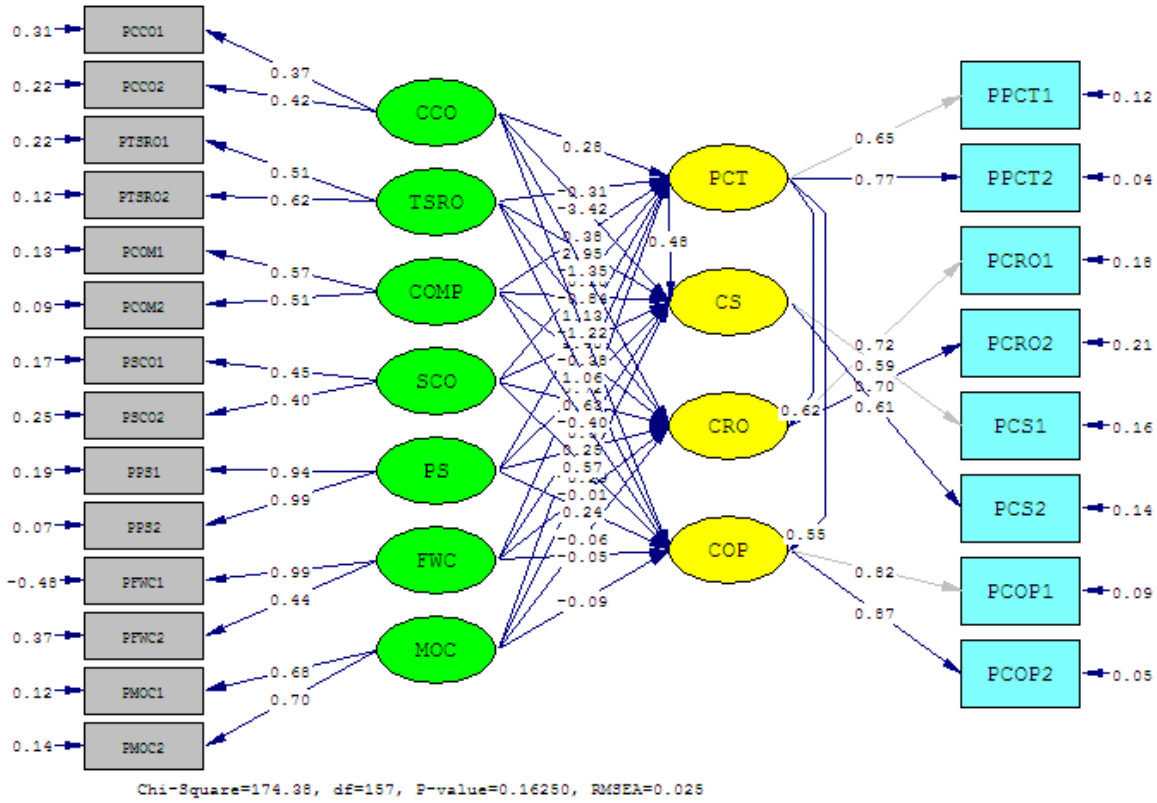

Figure 5.5: The structural models for the male sub-sample.

The Satorra-Bentler Scaled Chi-Square values of 174.35 (p = 0.162) showed good fit, thus suggesting that the null hypothesis of exact fit should not be rejected. In order to obtain a more comprehensive fit, other relevant fit indices were evaluated. Table 5.45 presents the full spectrum of fit statistics. The fit indices of interest in the evaluation of model fit in this study are in bold.

Table 5.45

Goodness of Fit Statistics for the Male Sub-Sample Structural Model

Degrees of Freedom = 157
Minimum Fit Function Chi-Square = 192.851 (P = 0.0272)
Normal Theory Weighted Least Squares Chi-Square = 174.957 (P = 0.155)
Satorra-Bentler Scaled Chi-Square = 174.383 (P = 0.163)
Chi-Square Corrected for Non-Normality = 1741.805 (P = 0.0)
Estimated Non-Centrality Parameter (NCP) = 17.383
90 Percent Confidence Interval for NCP = (0.0 ; 53.805)

Minimum Fit Function Value = 1.048
Population Discrepancy Function Value (F0) = 0.0945
90 Percent Confidence Interval for F0 = (0.0 ; 0.292)
Root Mean Square Error of Approximation (RMSEA) = 0.0245
90 Percent Confidence Interval for RMSEA = (0.0 ; 0.0432)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.992

Expected Cross-Validation Index (ECVI) = 1.991
90 Percent Confidence Interval for ECVI = (1.897 ; 2.189)
ECVI for Saturated Model = 2.750
ECVI for Independence Model = 15.797

Chi-Square for Independence Model with 231 Degrees of Freedom = 2862.723
Independence AIC = 2906.723
Model AIC = 366.383
Saturated AIC = 506.000
Independence CAIC = 2999.571
Model CAIC = 771.537
Saturated CAIC = 1573.750

Normed Fit Index (NFI) = 0.939
Non-Normed Fit Index (NNFI) = 0.990
Parsimony Normed Fit Index (PNFI) = 0.638
Comparative Fit Index (CFI) = 0.993
Incremental Fit Index (IFI) = 0.994
Relative Fit Index (RFI) = 0.910

Critical N (CN) = 213.238

Root Mean Square Residual (RMR) = 0.0236
Standardised RMR = 0.0436
Goodness of Fit Index (GFI) = 0.920
Adjusted Goodness of Fit Index (AGFI) = 0.872
Parsimony Goodness of Fit Index (PGFI) = 0.571

As indicated in Table 5.45, the RMSEA value of 0.025 showed good fit. The RMR (0.025) and the SRMR (0.044) also demonstrate that the model fitted the data extremely well. The GFI (0.92) and the AGFI (0.87) also showed acceptable model fit.

In short**,** the indices indicated that the null hypothesis of exact fit should not be rejected. Furthermore, the other fit indices results indicated that the data approximately reproduced the observed covariance matrix.

5.9.6.1 Evaluating the structural model residuals for the male sub-sample

The model standardised residuals were also reviewed. This analysis involved reviewing both the stem-and-leaf plot and the Q-plot.

```
- 4|0
 - 3|80
 - 2|53222211100
 - 1|998877666654433332211111
 - 0|99998777777666666555555444444444444433333333322211111000000000000000000+46
   0|1111112222223333333344444445555556666666667777788889999
   1|00111112222333445556666788888
   2|0000279
   3|0158
   4|
   5|
   6|4
```

Figure 5.6: A stem-and-leaf plot of the standardised residuals for the male sub-sample

The results from the stem-and-leaf plot showed the distribution of the standardised residuals to be somewhat positively skewed, thus indicating that the model may have undererestimated the covariance terms observed.

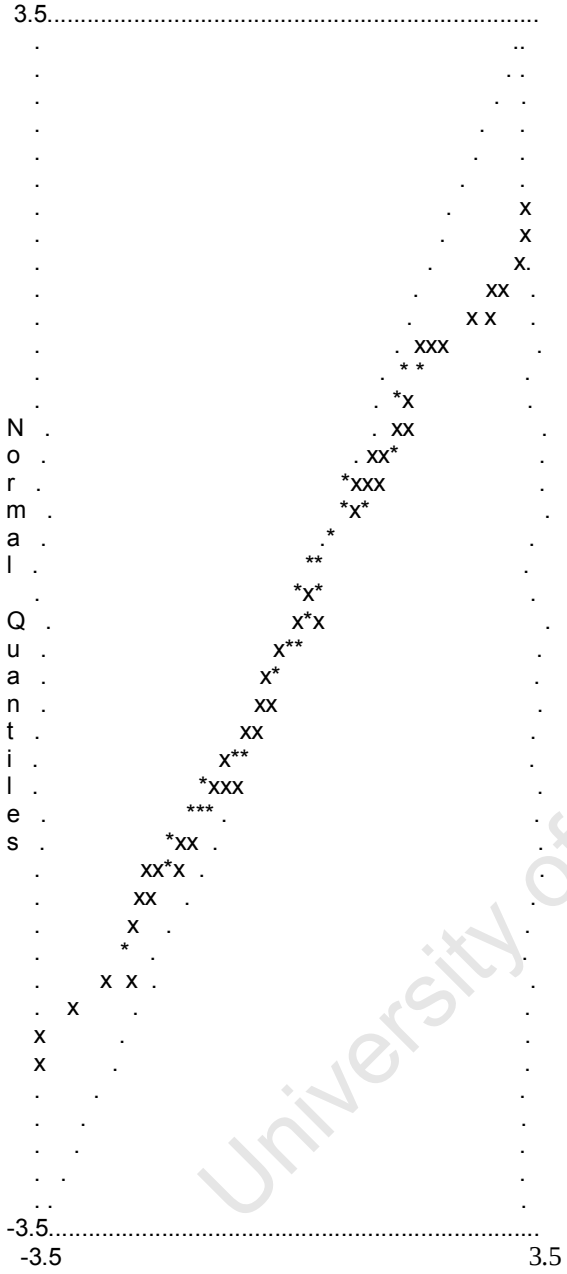

Figure 5.7: A Q-plot of the standardised residuals for the male sub-sample

The Q-plot depicted in Figure 5.7 above illustrates a slight deviation from the dotted line, thereby providing evidence that some of the parameters in the model may be misspecified, the relations between some of the variable pairs may be nonlinear nature, and/or the data may not be normally distributed.

5.9.6.2 Evaluating the proposed structural model residuals for the male sub-sample

As in the structural model for the total sample, the unstandardised parameters for the Beta (β) and Gamma (Γ) matrices for the male sub-sample were also evaluated.

The Gamma Matrix

Table 5.46 presents the unstandardised Gamma matrix of path coefficients for the structural model for the male sub-sample. Similar to other models, the estimated parameters would be significant if t > |1.96| (Diamantopoulos & Siguaw, 2000). The significant path coefficients implied that the null hypothesis in question could be rejected in favour of the relevant alternative hypothesis.

Table 5.46

The Unstandardised Gamma Matrix of Path Coefficients for the Structural Model for the Male Sub-Sample

GAMMA

	CCO	TSRO	COMP	SCO	PS	FWC	MOC
PCT	0.279	-0.313	0.379	-0.179	-0.389	0.008	-0.166
	(1.093)	(1.002)	(0.313)	(0.429)	(0.267)	(0.080)	(0.106)
	0.256	-0.313	1.210	-0.417	-1.459	0.099	-1.568
CS	-3.418	2.949	-0.838	1.478	0.724	-0.066	-0.287
	(1.408)	(1.334)	(0.556)	(0.608)	(0.564)	(0.189)	(0.364)
	-2.427	**2.211**	-1.506	**2.430**	1.283	-0.348	-0.787
CRO	-1.346	1.126	-0.377	0.633	0.255	-0.010	-0.063
	(0.504)	(0.495)	(0.246)	(0.234)	(0.229)	(0.087)	(0.170)
	-2.671	**2.274**	-1.533	**2.710**	1.115	-0.120	-0.373
COP	-1.225	1.065	-0.400	0.571	0.236	-0.049	-0.085
	(0.462)	(0.468)	(0.222)	(0.201)	(0.210)	(0.077)	(0.148)
	-2.650	**2.275**	-1.800	**2.844**	1.119	-0.633	-0.578

Note: The standard error estimates are in brackets. The bold t-values≥|1.96| indicates that the parameter estimates are significant.

The results depicted in Table 5.46 indicate that the hypothesised path coefficient between the CCO and CS; CCO and CRO; CCO and COP; TRSO and CS; TRSO and CRO; TRSO and COP; SCO and CS; SCO and CRO; SCO and COP estimates were significant (t > |1.96 |).

The Beta Matrix

The unstandardised Beta matrix for the male sub-sample is presented in Table 5.47.

Table 5.47

The Unstandardised Beta Matrix of Path Coefficients for the Structural Model for the Male Sub-sample

BETA

	PCT	CS	CRO	COP
PCT	- -	- -	- -	- -
CS	0.483 (0.355) 1.359	- -	- -	- -
CRO	0.623 (0.179) 3.475	- -	- -	- -
COP	0.546 (0.145) 3.758	- -	- -	- -

Note: The standard error estimates are in brackets. The bold t-values ≥ | 1.96 | indicate that the parameter estimates are significant.

The results depicted in Table 5.47 show some significant paths between PCT and the four areas of concern. These relationships were anticipated, however, not of any major importance in the study.

Table 5.48 below presents the the completely standardised Gamma and Beta matrix of path coefficients for the structural model for the male sub-sample.

Table 5.48

The Completely Standardised Gamma and Beta Matrix of Path Coefficients for the Structural Mode for the Male Sub-sample

BETA

	PCT	CS	CRO	COP
PCT	- -	- -	- -	- -
CS	0.483	- -	- -	- -
CRO	0.623	- -	- -	- -
COP	0.546	- -	- -	- -

GAMMA

	CCO	TSRO	COMP	SCO	PS	FWC	MOC
PCT	0.279	-0.313	0.379	-0.179	-0.389	0.008	-0.166
CS	**-3.418**	**2.949**	-0.838	1.478	0.724	-0.066	-0.287
CRO	-1.346	1.126	-0.377	0.633	0.255	-0.010	-0.063
COP	-1.225	1.065	-0.400	0.571	0.236	-0.049	-0.085

Note: The standard error estimates are in brackets. The bold t-values ≥ | 1.96 | indicate that the parameter estimates are significant.

The results depicted in Table 5.48 indicate that the hypothesised path coefficient between the CCO and CS and the TRSO and CS estimates only were significant (t > |1.96 |).

5.9.7 Testing the structural models for the female sub-sample

The structural model was also tested using the female sub-sample and is depicted in Figure 5.8. The model converged after 360 iterations.

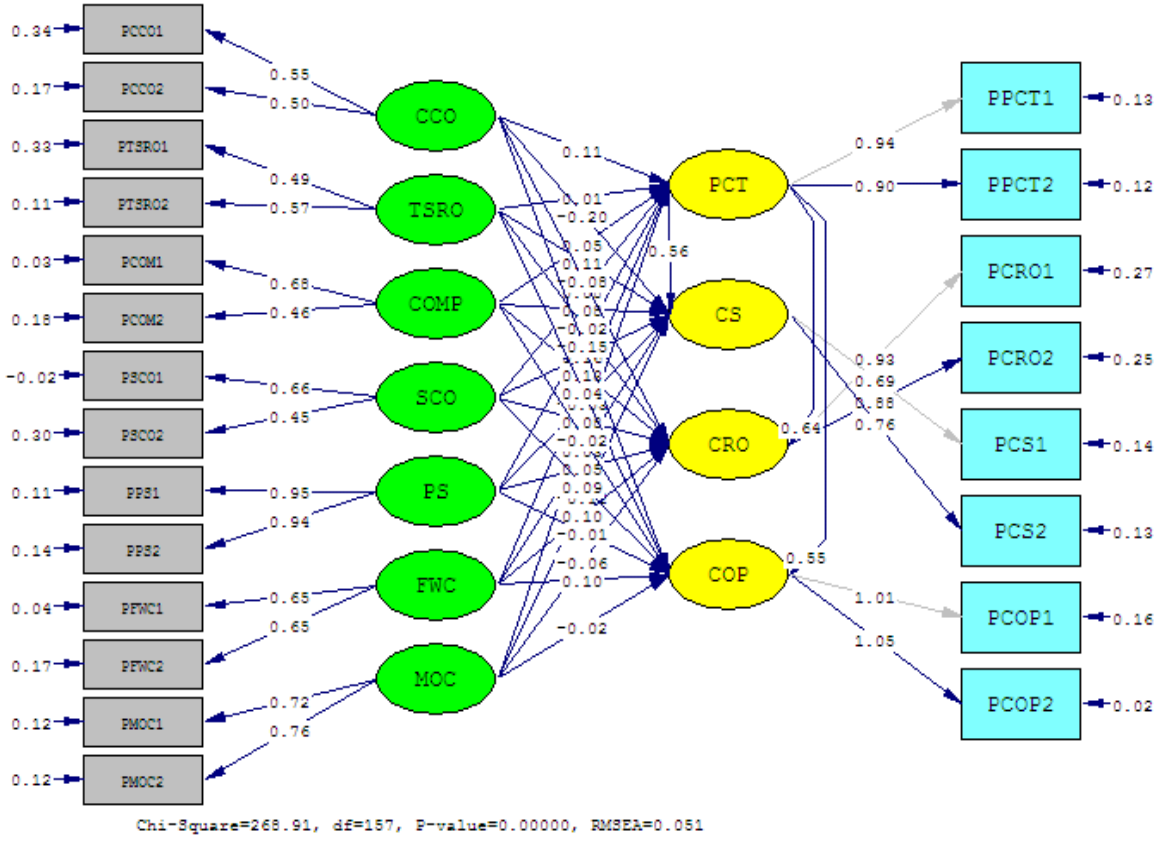

Figure 5.8: Structural model for the female sub-sample

The Satorra-Bentler scaled chi-square value of 268.91 (p=0.00) showed poor fit. The x^2 */df was* calculated and the reported x^2 */df* value of 1.71 was considered satisfactory. As in the testing of the structural models using the the total sample and the male sub-sample, more relevant fit indices were evaluated. Table 5.48 presents the full spectrum of fit statistics for the female sub-sample model. The fit indices of interest are highlighted in bold.

Table 5.48

Goodness of Fit Statistics for the Female Sub-sample Structural Model

Degrees of Freedom = 157
Minimum Fit Function Chi-Square = 280.657 (P = 0.00)
Normal Theory Weighted Least Squares Chi-Square = 281.561 (P = 0.00)
Satorra-Bentler Scaled Chi-Square = 268.912 (P = 0.000)
Chi-Square Corrected for Non-Normality = 630.405 (P = 0.0)
Estimated Non-Centrality Parameter (NCP) = 111.912
90 Percent Confidence Interval for NCP = (70.408 ; 161.290)

Minimum Fit Function Value = 1.010
Population Discrepancy Function Value (F0) = 0.403
90 Percent Confidence Interval for F0 = (0.253 ; 0.580)
Root Mean Square Error of Approximation (RMSEA) = 0.0506
90 Percent Confidence Interval for RMSEA = (0.0402 ; 0.0608)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.447

Expected Cross-Validation Index (ECVI) = 1.658
90 Percent Confidence Interval for ECVI = (1.509 ; 1.836)
ECVI for Saturated Model = 1.820
ECVI for Independence Model = 17.790

Chi-Square for Independence Model with 231 Degrees of Freedom = 4901.633
Independence AIC = 4945.633
Model AIC = 460.912
Saturated AIC = 506.000
Independence CAIC = 5047.519
Model CAIC = 905.508
Saturated CAIC = 1677.697

Normed Fit Index (NFI) = 0.945
Non-Normed Fit Index (NNFI) = 0.965
Parsimony Normed Fit Index (PNFI) = 0.642
Comparative Fit Index (CFI) = 0.976
Incremental Fit Index (IFI) = 0.976
Relative Fit Index (RFI) = 0.919

Critical N (CN) = 208.942
Root Mean Square Residual (RMR) = 0.0408
Standardised RMR = 0.0533
Goodness of Fit Index (GFI) = 0.916
Adjusted Goodness of Fit Index (AGFI) = 0.864
Parsimony Goodness of Fit Index (PGFI) = 0.568

As indicated in Table 5.48, the RMSEA (0.051), the RMR (0.04) and the SRMR (0.05) demonstrated that the model fitted the data well. The GFI (0.92) and the AGFI (0.86) also showed acceptable model fit.

Collectively**,** while the chi-square index indicated that the null hypothesis of exact fit should be rejected; the null hypothesis of close fit was not rejected as the RMSEA,

RMR, SRMR, GFI and AGFI results indicated that the data approximately reproduced the covariance matrix observed.

5.9.7.1 Evaluating the structural model residuals for the female sub-sample

The standardised residuals for the female sub-sample structural models are depicted in Figure 5.9 and Figure 5.10.

```
- 3|30
 - 2|85554311
 - 1|88877665532222222111000
 - 0|99988888887777666666655554443333333333322222222221111111100000000000000+41
   0|11111111222223333333333444455556666667777777788899999
   1|00000011122333444455666677778999
   2|12335677799
   3|149
   4|28
   5|36
   6|019
```

Figure 5.9: A stem-and-leaf plot of the standardised residuals for the female sub-sample

The stem-and-leaf plot in Figure 5.9 shows the distribution of the standardised residuals to be positively skewed, thus indicating that the model may have undererestimated the covariance terms observed.

Figure 5.10 below presents the Q-plot which suggested that some of the parameters in the model may be misspecified, the relations between some of the variable pairs may be nonlinear in nature, and/or the data may not be normally distributed.

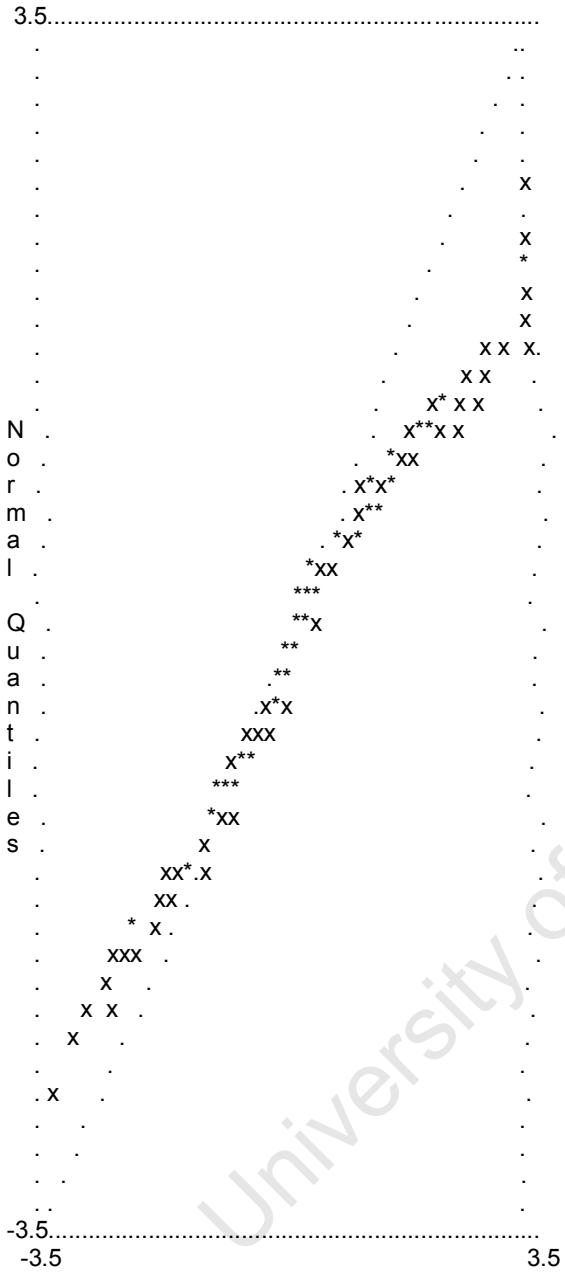

Figure 5.10: A Q-plot of the standardised residuals for the female sub-sample

5.9.7.2 Evaluating the proposed structural model residuals for the female sub-sample

The unstandardised parameters for the Beta (β) and Gamma (Γ) matrices were also evaluated for the female sub-sample.

The Gamma Matrix

Table 5.49 presents the unstandardised Gamma matrix of path coefficients for the female sub-sample structural model. Similar to other models, the estimated parameters would be significant if t > |1.96| (Diamantopoulos & Siguaw, 2000). The significant path coefficients implied that the null hypothesis in question could be rejected in favour of the relevant alternative hypothesis.

Table 5.49

The Unstandardised Gamma Matrix of Path Coefficients for the Structural Mode for the Female Sub-Sample

GAMMA

	CCO	TSRO	COMP	SCO	PS	FWC	MOC
PCT	0.106	0.012	0.047	0.077	-0.372	0.308	.044
	(0.117)	(0.114)	(0.060)	(0.064)	(0.065)	(0.066)	(0.063)
	0.910	0.108	0.783	1.205	**-5.716**	**4.691**	0.694
CS	-0.199	0.115	0.077	0.165	-0.028	0.027	-0.115
	(0.107)	(0.101)	(0.063)	(0.064)	(0.081)	(0.067)	(0.061)
	-1.857	1.129	1.222	**2.569**	-0.349	0.409	**-1.900**
CRO	-0.083	-0.023	0.132	0.077	0.052	0.097	-0.060
	(0.100)	(0.094)	(0.058)	(0.059)	(0.062)	(0.066)	(0.061)
	-0.827	-0.246	**2.267**	1.312	0.841	1.467	-0.992
COP	-0.149	0.044	-0.018	0.090	-0.011	0.103	-0.016
	(0.118)	(0.138)	(0.066)	(0.055)	(0.063)	(0.056)	(0.058)
	-1.259	0.316	-0.272	1.625	- 0.178	**1.824**	-0.275

Note: The standard error estimates are in brackets. The bold t-values ≥|1.96| indicate that the parameter estimates are significant.

The results depicted in Table 5.49 indicate that the hypothesised path coefficients between CCO and CS; COMP and CRO; SCO and CS; PS and PCT; FWC and PCT; FWC and COP; and MOC and CS estimates were significant (t > |1.96 |).

The Beta Matrix

The significance of the parameters for the Beta matrix are also indicated by t > |1.96| (Diamantopoulos & Siguaw, 2000). The unstandardised Beta matrix is presented in Table 5.50 below.

Table 5.50

The Unstandardised Beta Matrix of Path Coefficients for the Structural Model for the Female Sub-Sample

BETA

	PCT	CS	CRO	COP
PCT	- -	- -	- -	- -
CS	0.483	- -	- -	- -
	(0.355)			
	1.359			
CRO	0.623	- -	- -	- -
	(0.179)			
	3.475			
COP	0.546	- -	- -	- -
	(0.145)			
	3.758			

Note: The standard error estimates are in brackets. The bold t-values ≥ | 1.96 | indicate that the parameter estimates are significant.

The results depicted in Table 5.50 above indicated some significant paths between the endogenous variables. For the purposes of this study, these relationships were not of importance.

Table 5.51

The Completely Standardised Gamma and Beta Matrix of Path Coefficients for the Structural Model for the Female Sub-sample

BETA

	PCT	CS	CRO	COP
PCT	- -	- -	- -	- -
CS	0.555	- -	- -	- -
CRO	0.636	- -	- -	- -
COP	0.545	- -	- -	- -

GAMMA

	CCO	TSRO	COMP	SCO	PS	FWC	MOC
PCT	0.106	0.012	0.047	0.077	-0.372	0.308	0.044
CS	-0.199	0.115	0.077	0.165	-0.028	0.027	-0.115
CRO	-0.083	-0.023	0.132	0.077	0.052	0.097	-0.060
COP	-0.149	0.044	-0.018	0.090	-0.011	0.103	-0.016

Note: The standard error estimates are in brackets. The bold t-values ≥ | 1.96 | indicate that the parameter estimates are significant.

Table 5.51 above suggested that none of the hypothesised path coefficient were significant.

5.9.8 Comparison of the three model fits.

Table 5.52 presents the results which emerged from comparing the model statistics for the total sample, male sub-sample and the female sub-sample.

Table 5.52

Comparing Model Statics for the Total Sample, Male Sub-Sample and the Female Sub-Sample

	Fit Statistics		
Fit Index	**Total Sample**	**Male Sub-sample**	**Female Sub-samples**
Degrees of Freedom	**157**	**157**	**157**
Minimum Fit Function Chi-Square	333.631 (P = 0.00)	192.851 (P = 0.0272)	280.657 (P = 0.00)
Normal Theory Weighted Least Squares Chi-Square	329.490 (P = 0.00)	174.957 (P = 0.155)	281.561 (P = 0.00)
Satorra-Bentler Scaled Chi-Square	**299.926 (P = 0.00)**	**174.383 (P = 0.163)**	**268.912 (P = 0.000)**
Chi-Square Corrected for Non-Normality	418.858 (P = 0.0)	1741.805 (P = 0.0	630.405 (P = 0.0)
Estimated Non-Centrality Parameter (NCP)	142.926	17.383	111.912
90 Percent Confidence Interval for NCP	(97.832; 195.827)	(0.0 ; 53.805)	(70.408 ; 161.290)
Minimum Fit Function Value	0.721	1.048	1.010
Population Discrepancy Function Value (F0)	0.309	0.0945	0.403
90 Percent Confidence Interval for F0	(0.211 ; 0.423)	(0.0;0.292)	(0.253 ; 0.580)
Root Mean Square Error of Approximation (RMSEA)	**0.0443**	**0.0245**	**0.0506**
90 Percent Confidence Interval for RMSEA	(0.0367 ; 0.0519)	(0.0 ; 0.0432)	(0.0402 ; 0.0608)
P-Value for Test of Close Fit (RMSEA < 0.05)	0.888	0.992	0.447
Expected Cross-Validation Index (ECVI)	1.062	1.991	1.658
90 Percent Confidence Interval for ECVI	(0.965 ; 1.177)	(1.897 ; 2.189)	(1.509 ; 1.836)
ECVI for Saturated Model	.093	2.750	1.820
ECVI for Independence Model	16.173	15.797	17.790
Chi-Square for Independence Model with 231 Degrees of Freedom	7443.929	2862.723	4901.633
Independence AIC	7487.929	2906.723	4945.633
Model AIC	491.926	366.383	460.912
Saturated AIC	506.000	506.000	506.000
Independence CAIC	7601.007	2999.571	5047.519
Model CAIC	985.355	771.537	5047.519
Saturated CAIC	1806.391	1573.750	1677.697
Normed Fit Index (NFI)	0.960	0.939	0.945
Non-Normed Fit Index (NNFI)	0.971	0.990	0.965
Parsimony Normed Fit Index (PNFI)	0.652	0.638	0.642
Comparative Fit Index (CFI)	0.980	0.993	0.976
Incremental Fit Index (IFI)	0.980	0.994	0.976
Relative Fit Index (RFI)	0.941	0.910	0.919
Critical N (CN)	311.510	213.238	208.942
Root Mean Square Residual (RMR)	**0.0320**	**0.0236**	**0.0408**
Standardised RMR	**0.0452**	**0.0436**	**0.0533**
Goodness of Fit Index (GFI)	**0.939**	**0.920**	**0.916**
Adjusted Goodness of Fit Index (AGFI)	**0.902**	**0.872**	**0.864**
Parsimony Goodness of Fit Index (PGFI)	0.583	0.571	0.568

It is evident from Table 5.52 that the best fit was the fit based on the male sub-sample data. This sub-sample was the only sample to produce a Satorra-Bentler

Scaled Chi-Square that allowed for the rejection of the null hypothesis of exact fit. When the x^2 /*df,* RMSEA, RMR, SRMR, GFI and AGFI were taken into consideration, the results indicated that the data from the three structural models approximately reproduced the covariance matrix observed (Diamantopoulos & Siguaw, 2000). The fit statistics for the male sub-sample data were still slightly better than those of other samples. The second best fit was demonstrated by the total sample. These results were surprising as it had been hypothesised that the female sub-sample would produce a better fit.

5.9.9 Model modification

The variables associated with the largest standard residuals were inspected to determine whether model modification should be attempted. For all the structural models, largest significant paths were identified between the four variables used to measure STTUC only. However, while these relationships had been anticipated, there were not of the main focus in the study.

MacCallum *et al*. (1992) advised that modification indices should be used with extreme caution, and should not be the only guide to model modification. Other researchers have also advised that, while tempting, model modification "should be firmly resisted" (Diamantopoulos & Siguaw, 2000, p. 102) or should be attempted only when it is theoretically congruent to do so (Schreiber, Stage, King, Nora & Barlow, 2006).

Furthermore, apart from the fact that most of the hypothesised paths were not supported, the fit indices indicated that all the models fitted well. Diamantopoulos and Siguaw (2000) advised against modifying models that fitted well because the modifications may be "simply fitting idiosyncratic characteristics of the sample" (p. 102). Accordingly, in view of the sound theoretical arguments that were advanced in previous chapters, and the limited information provided by the modification indices, it was resolved that, instead of modifying the model, future research should attempt

to replicate the study in a quest to seek further evidence that the proposed relationships are, indeed, nonsignificant.

5.10 Summary

This chapter presented the empirical findings of the study. Item analysis and EFA results led to the removing of two items from the n-Aff and n-Aff _perceived sub-scales and one item each from the CCO and CCO_perceived sub-scales. Independent sample t-tests, correlation analyses, multiple regression analyses and SEM analyses were carried out to test for the proposed relationships. The results provided by the data supported some of the proposed relationships while support for some of the proposed relationships was not found. The next chapter, that is, the discussions chapter, will entail unpacking and discussing the results.

CHAPTER 6
Discussions

6.1 Introduction

This chapter will discuss the findings presented in chapter five. The results will be discussed in light of both the research objectives as well as the theoretical arguments advanced to support the stated hypotheses.

This study purported to answer specific research questions concerning the predictors of STTUC and gender differences as regards STTUC experiences. Specifically, the following research questions were addressed in the course of the study: 1) In cases of outperformance, are there any gender differences in STTUC experiences? and 2) How are the selected antecedents related to the STTUC experiences?

Providing answers to these central research questions required that specific statistical hypotheses be tested. The aim of this chapter is, thus, to discuss the extent to which the results supported the hypothesised relationships and/or the theory presented.

The reliability and validity of the measurement instruments used will be discussed and, thereafter, a table summarising the results of the hypothesised relationships will be presented. This will be followed by a detailed discussion of results. This discussion will be presented in three sections with the first section discussing the relationships that were confirmed, the second section discussing the relationships that produced mixed results and the third section discussing the relationships that were not supported.

The limitations of the study, theoretical and managerial implications of the study, as well as the research conttributions of the study are also discussed in this chapter. The chapter concludes with recommendations for future research.

6.1.1 Psychometric properties of the measurement instruments used in the study

With the exception of the need for affiliation (n-Aff) and the n-Aff _Perceived sub-scales, the psychometric integrity (as reported by item analysis and EFA analysis) of the measurement instruments used in the study was satisfactory. As detailed in the chapter on the research findings, certain items in the n-Aff and the n-Aff _Perceived sub-scales were negatively worded and required reverse coding. In view of the fact that the dimensionality analyses of both sub-scales revealed that the reverse coded items loaded on separate factors, it was concluded that the reverse coding may have interfered with the homogeneity of the sub-scales. Action was, therefore, taken to remove the problematic items from further analysis. However, even after removing the problematic items, the Cronbach's alpha values of the remaining items were still below the critical cut-off values. Nevertheless, the two scales were used in further analysis because, when using the Spearman-Brown prophecy formula, it was determined that, if the sub-scales items could have been doubled using other similar items, the Cronbach's alpha could have been satisfactory.

The other sub-scales with problematic items included the collectivistic cultural orientation (CCO) and the CCO_Perceived sub-scales. However, these two sub-scales were deemed reliable because, after removing the problematic item from each sub-scale, the remaining items produced satisfactory Cronbach's alphas.

The CFA analysis was also used to assess the extent to which the hypothesised model fitted the data (Diamantopoulos & Siguaw, 2000). The interpretation of the goodness-of-fit indices further revealed that the proposed measurement model fitted the data reasonably well and this, in turn, provided support for the validity and reliability of the indicators observed.

6.1.2 Summary of supported relationships

Table 6.1 below presents a summary of findings for the relationships which were analysed using Pearson correlation, hierarchical multiple regression and structural equation modelling analyses across the four components of STTUC, namely, Perceived Comparison Threat (PCT); Concerned for Outperformed Person (COP); Concern for the Self (CS) and Concern for Relationship with Outperformed (CRO).

Table 6.1
A Summary of the Findings Across the Four Components of STTUC

Propositions	Findings
1. Proposition 1: Women report higher levels of STTUC than men.	PCT: Supported by t-tests analyses. CRO: Supported by t-tests analyses. COP: Supported by t-tests analyses. CS: Not supported.
2. Proposition 2*:* Married women report higher levels of STTUC than women who are not married.	PCT: Not Supported. CRO: Not Supported. COP: Not Supported. CS: Not Supported. All not supported by t-tests analyses.
3. Proposition 3a: A direct positive relationship exists between the traditional gender role orientation of female outperformers and their experiences of STTUC.	PCT: Not Supported. CRO: Not Supported. COP: Not Supported. CS: Not Supported. All of the above not supported by Pearson correlations, HMR, or SEM analyses.
4. Proposition 3b: A direct negative relationship exists between the traditional gender role orientation of male outperformers and their experiences of STTUC.	PCT: Not Supported by Pearson correlations, HMR, and SEM analyses. CRO: Not Supported by Pearson correlations and HMR analyses. COP: Not Supported by Pearson correlations and HMR analyses. CS: Not Supported by Pearson correlations and HMR analyses. CRO, COP, and CS supported by SEM analyses.
5. Proposition 3c: A direct positive relationship exists between female outperformers' perceptions of the significant others' traditional gender role orientations and experiences of STTUC within female outperformers.	PCT: Not Supported. CRO: Not Supported. COP: Not Supported. All of the above not supported by Pearson correlations, HMR, and SEM analyses. CS: Supported by HMR analyses
6. Proposition 4a: A direct positive relationship exists between the collectivistic cultural orientation of female outperformers and their experiences of STTUC.	PCT: Not Supported. CRO: Not Supported. COP: Not Supported. CS: Not Supported. All of the above not supported by Pearson correlations, HMR, and SEM analyses.
7. Proposition 4b: A direct negative relationship exists between the collectivistic cultural orientation of male outperformers and their experiences of STTUC.	PCT: Not Supported. CRO: Not Supported. COP: Not Supported. All of the above not supported by Pearson correlations, HMR, and SEM analyses CS: Supported by Pearson correlations. CRO, COP, and CS supported by SEM analyses.

8. Proposition 4c: A direct positive relationship exists between female outperformer's perceptions of their significant others' collectivistic cultural orientations and experiences of STTUC within female outperformers.	PCT: Not Supported. CRO: Not Supported. CS: Not Supported. All of the above not supported by Pearson correlations, HMR, and SEM analyses COP: Supported by Pearson correlations analyses.
9. Proposition 5a: A direct positive relationship exists between the n-Aff outperformers and their experiences of STTUC.	PCT: Not Supported. CRO: Not Supported. COP: Not Supported. CS: Not Supported. All of the above not supported by Pearson correlations, HMR, and SEM analyses.
10. Proposition 5b*:* A direct positive relationship exists between female outperformers' perceptions of their significant others' n-Aff and experiences of STTUC within female outperformers.	PCT: Not Supported. CRO: Not Supported. CS: Not Supported. All of the above not supported by Pearson correlations, HMR, and SEM analyses. COP: Supported by HMR analyses.
11. Proposition 6a: A direct positive relationship exists between the outperformers' interpersonal sensitivity and their experiences of STTUC.	PCT: Supported by Pearson correlations. CRO: Supported by Pearson correlations, HMR, and SEM analyses. COP: Supported by Pearson correlations, HMR, and SEM analyses. CS: Supported by Pearson correlations, HMR, and SEM analyses.
12. Proposition 6b*:* A direct positive relationship exists between female outperformers' perceptions of their significant others' interpersonal sensitivity and experiences of STTUC within female outperformers.	PCT: Not Supported. CRO: Not Supported. COP: Not Supported. CS: Not Supported. All of the above not supported by Pearson correlations, HMR, and SEM analyses.
13. Proposition 7a: A direct positive relationship exists between outperformers' competitiveness and their experiences of STTUC.	PCT: Supported by Pearson correlations and SEM analyses. CRO: Supported by Pearson correlations. COP: Not Supported. CS: Supported by Pearson correlations.
14. Proposition 7b*:* A direct positive relationship exists between female outperformers' perceptions of their significant others' competitiveness and experiences of STTUC within female outperformers.	PCT: Supported by Pearson correlations. CRO: Not Supported. COP: Not Supported. CS: Not Supported.

15. Proposition 8: A direct positive relationship exists between outperformers' experiences of FWC and their experiences of STTUC.	PCT: Supported by Pearson correlations, HMR, and SEM analyses. CRO: Supported by Pearson correlations and HMR analyses. COP: Supported by Pearson correlations, HMR, and SEM analyses. CS: Supported by Pearson correlations and HMR analyses.
16. Proposition 9: A direct negative relationship exists between outperformers' experiences of instrumental support and their experiences of STTUC.	PCT: Supported by Pearson correlations, HMR, and SEM analyses. CRO: Supported by Pearson correlations and HMR analyses. COP: Supported by Pearson correlations, HMR, and SEM analyses. CS: Supported by Pearson correlations and HMR analyses.
17. Proposition 10a: A direct positive relationship exists between female outperformers' perceptions that the organisation is characterised by masculine culture and their experiences of STTUC.	PCT: Not Supported. CRO: Not Supported. COP: Not Supported. CS: Not Supported. All of the above not supported by Pearson correlations, HMR, and SEM analyses.
18. Proposition 10b: A direct negative relationship exists between male outperformers' perceptions that the organisation is characterised by masculine cultures and their experiences of STTUC.	PCT: Supported by Pearson correlations and HMR analyses. CRO: Not Supported. COP: Not Supported. CS: Supported by Pearson correlations and HMR analyses.

Note: PCT = Perceived Comparison Threat; COP = Concerned for Outperformed Person; CS = Concern for the Self; CRO = Concern for Relationship with Outperformed

6.1.3 Confirmed and unconfirmed relationships

Before discussing the findings, it is important to reiterate that the STTUC construct is in its infancy and that very little research on the construct has been published. Therefore, this study has extended the work of earlier researchers by including variables such as FWC, instrumental partner support, cultural orientation, gender role orientation, n-Aff, and masculine values in organisational culture as proposed antecedents of STTUC. Consequently, it is possible that some of the empirical

findings presented in the study may be the first empirical findings regarding the proposed relationships.

It is also equally important to highlight that, because of the complexity of the STTUC construct, it may be expected that the findings relating to the construct may be complex and, at times, surprising. The complexity of the construct presents itself in the way in which the construct is conceptualised and also in the ways that it is measured. For example, the nature of the construct and the way it is measured may imply that the construct is a suitable candidate for social desirability bias −, the tendencies to respond to survey questions in culturally appropriate and/or acceptable way (Crowne & Marlowe, 1960).

The STTUC construct is also shaped by the complex features of the outperformed individuals, the outperforming individual and the comparison domain. It has also been revealed that the actual threat experienced by the outperforming individual may intensify his/her experiences of STTUC. This was reflected in Henagan's (2006) study which revealed that empathic concern, perceived competitiveness of the environment, and actual threat experienced by coworkers intensified experiences of STTUC and impacted on the resulting strategies for dealing with STTUC experiences. Unfortunately, the design and scope of this study did not permit the capturing of actual threat experiences.

Theoretical arguments were advanced that STTUC may be related to variables at the four levels of analysis, that is, individual characteristics, cultural variables, family/work variables and organisational variables. Where applicable, the discussion of the results will be structured with reference to the four levels of analysis outlined. A general overview of the results that were and were not supported indicates a pattern regarding the four levels of analysis.

6.1.3.1 Relationships that were confirmed

In general, the research results provided support for the hypothesised relationships between STTUC and gender; STTUC and the family–work variables, as well as STTUC and some of the personality variables.

1. Gender Differences in Experiences of STTUC

Both the theory and the empirical research suggest that women may experience STTUC distress more frequently and more intensely than men (Exline & Geyer, 2003; Exline & Lobel, 1997; Exline & Lobel, 1999; Horner, 1972). These past findings and the related theoretical underpinnings led to the proposition that the historically subordinate status of Batswana women may predispose them to STTUC related distress when they outperform male significant others.

The results showed that the STTUC mean scores for females were consistently higher than those of males across the three components of STTUC, thus providing support for the hypotheses that, in scenarios of outperformance of the significant others, women are more likely to: 1) perceive others as being threatened (PCT); 2) be concerned about the outperformed persons (COP); and 3) be concerned about the relationship with the outperformed persons (CRO). The only hypothesis that was not supported was the hypotheses stating that women are more likely than men to be concerned about the self (CS) when they outperform significant others.

These findings regarding gender differences as regards STTUC distress are similar to the findings from past research. In one past study, the respondents anticipated greater emotion about outperformance to the extent that they were females (Exline & Geyer, 2003). In another study, after recalling a scenario in which they had outperformed another, more females than males indicated experiencing a greater degree of relationship strain (Exline & Lobel, 1997).

Other researchers have related these experiences to women's need to protect the self-esteem of others and to prevent interpersonally uncomfortable situations (Huguet & Monteil, 1995). Huguet and Monteil's (1995) study showed that the tendencies to protect the self-esteem of others and to avoid interpersonally uncomfortable situations may even be present in young girls as the girls in their study had performed more poorly than the boys when social comparison with a less fortunate other was anticipated.

Other researchers, in turn, have blamed the predisposition to the inherent restrictions in the roles of women, which appear to be present in every society (Cheung & Halpern, 2010). For example, it has been suggested that these restrictions may result in women behaving more modestly than men in anticipation of the negative consequences that may result for the violation of gender role norms and expectations (Wosinska, Dabul, Whetstone-Dion & Cialdini, 1996).

The self-presentation theory also provides another potential explanation for the study's findings. Self-presentation is a complex topic in social psychology and also a topic that will not be fully addressed in the context of this study. Goffman (1956) describes the process of self-presentation as a performance in which people may give certain signals, either intentionally or unintentionally, as part of a deliberate performance staging. The role of gender in self-presentation has been studied extensively, with the research findings suggesting that, relative to males, females tend both to underestimate their abilities and to underevaluate their performances (Brown, Uebelacker & Heatherington, 1998). A study conducted by Daubman, Heatherington and Ahn (1992) revealed that females may intentionally present lowered self-evaluations, especially as a function of public concern. For example, in their study, women downplayed their abilities in public. In general, these findings indicate that some women may view underperformance as socially acceptable and act accordingly in order to avoid the potential negative evaluations and/or alienation in respect of others.

2. Family-Work Variables

In general, the literature on work-family conflict has lacked focus on specific emotional responses to this seemingly prevalent conflict (Livingston & Judge, 2008) while even more lacking is research investigating the way in which family-work variables such as FWC and instrumental support from the spouse/partner may be linked to STTUC experiences. The reality is that the nature of work in the knowledge economies has blurred the boundaries between the time spent with family and the time spent at work. Consequently, the resulting pressures may act together with other sources of pressures and stressors to create feelings of psychological discomfort in the individuals concerned (Hoobler, Hu & Wilson, 2010) and, in the case of this study, in experiences of STTUC.

In an attempt to contribute to the existing body of research and based on the suggestion that social comparisons may characterise interpersonal relationships in which individuals are concerned with the way in which their performance may be judged by the close other (Exline & Lobel, 1999, 2001; Festinger, 1954; Tesser, 1988), this study investigated relationships between STTUC and FWC and between STTUC and instrumental support.

As in the case of other studies, the results from studies on family-work variables and STTUC may be understood from the perspective of the Conservation of Resources (COR) theory (Hobfoll, 1989). According to this theory, people strive both to obtain and to maintain resources that help them to attain goals (Hobfoll, 1989). Hobfoll (2001) further explained that, because resource loss is stressful, people may invest resources to offset further resource loss. In a study they conducted, Witt & Carlson (2006) argued that, while it may seem counterintuitive, to conserve resources, workers may accept a decrease in job performance, even if it is linked to compensation. In another study, Hoobler, Wayne, and Lemmon (2009) revealed what they referred to as a family-work conflict bias by the supervisors. In particular, they found that supervisors who had judged subordinates as experiencing a high degree of family-work conflict had also perceived those

subordinates as lower performers and these subordinates had, ultimately, received fewer promotions.

Greenhaus and Powell (2006) also suggested that the availability of resources within the family environment (which may include partner support) influences the extent to which family may be experienced as enriching work. For example, FWC has been posited to drain resources in terms of time, strain, and behaviour (Greenhaus & Beutell, 1985; Witt & Carlson, 2006) as the resources expended in fulfilling the family roles may reduce the resources available for the work role (Witt & Carlson, 2006). Moreover, Hoobler, *et al.* (2009), who also based their research on the COR theory, suggested that employees' experiences of conflict between the work and family domains may have implications for the evaluation of employees as well as the attitudinal outcome of career satisfaction. They further suggested that this experience of family-work conflict may even affect work performance and other career outcomes such as salary and the hierarchical level attained by the employees concerned.

Within the context of this study, the first set of discussions will focus on the FWC construct. This will be followed by the discussion on instrumental partner support.

FWC

As anticipated, positive relationships emerged between the variables of family-work conflict and the components of STTUC, thus providing strong support for the propositions stating that a direct positive relationship exists between the outperformers' experiences of FWC and their experiences of STTUC. These results were also confirmed in the multiple regression analysis as FWC consistently explained variances across all components of STTUC. Simplistically, these results suggest that employees who are experiencing some level of FWC are also more likely to be sensitive when they outperform their significant others.

These findings may be understood in light of Witt and Carlson's (2006) study which revealed that factors such as the time pressures, strain and behavioural constraints that characterise high levels of FWC may lead to either a loss of or the threat of a loss of personal resources. Lu, Kao, Chang, Wu, and Cooper (2011) also in their study, revealed that FWC was negatively correlated with job satisfaction and organisational commitment while, in their study, Hoobler, Hu and Wilson (2010) revealed that FWC was negatively related to both salary and career satisfaction (Hoobler, Hu & Wilson, 2010).

Instrumental Partner Support

The findings in this study also showed support for the stated hypotheses regarding instrumental partner support and experiences of STTUC. It would appear there is also a dearth of research evaluating the links between instrumental partner support and performance. Specifically, there seem to be virtually no studies directly investigating the link between instrumental partner support and STTUC experiences. In this study it was hypothesised that there would be a direct negative relationship between instrumental support and experiences of STTUC. The four hypotheses linking instrumental support to experiences of STTUC were all supported. In general, these findings suggest that being in a supportive relationship may minimise the experiences of STTUC.

Other studies have also revealed spousal support as a critical issue in the working lives and careers of individuals (Ezzedeen & Ritchey, 2008). In their study Ezzedeen and Ritchey (2008) found that women valued emotional support, esteem support, help with family members, career support and help within the household. These findings hint at the critical role played by partners in enabling women to achieve success. Others researchers have also shown that career commitment is positively related to partner support (Ülkü-Steiner, Kurtz-Costes & Kinlaw, 2000) and to work outcomes such as job satisfaction (King *et al*., 1995).

The Conservation of Resources theory (Hobfoll, 1989), which suggests that people strive to obtain and maintain resources that help attain goals, may also help to synthesise the findings from the abovementioned studies and to clarify the nature of the relationship between the family work variables, that is FWC and IS, and STTUC experiences. FWC may drain resources as the resources expended in fulfilling family roles may reduce the resources available for the work role (Greenhaus & Beutell, 1985; Witt & Carlson, 2006). This, in turn, helps to explain the way in which an individual's experiences of FWC may positively predict PCT experiences and the resulting concerns for the self, the outperformed individual and even the relationship with the outperformed individual. On the other hand, partner support was negatively related to the experiences of all four of the components of STTUC. However, this should not be surprising because, in view of the studies that provided evidence for the role of partners in buffering both the stressor-strain relationship (Ezzedeen &Ritchey, 2008) and work negativity (Fu & Shaffer, 2001), partner support may be perceived as a resource which may, ultimately, lead the outperforming partner to feel as if the supportive partner is encouraging him/her to perform better and/or to succeed.

6.1.3.2 Relationships with mixed results

1. Personality Variables

In view of the fact that personality characteristics have been found to be important predictors of work-related attitudes and outcomes (Hulin & Judge, 2003), an effort was also made to include certain relevant personality characteristics in this study. The personality variables investigated included n-Aff, competitiveness and a dimension of sociotropy termed interpersonal sensitivity. The findings pertaining to the personality variables were varied. These findings will be discussed below.

Sociotropy

It was expected that sociotropy would positively influence the experiences of STTUC of both male and female outperformers. The Pearson correlation findings presented in chapter five confirmed that there were direct positive relationships between sociotropy and the four components of STTUC. These findings, in turn, support the findings of other researchers to the effect that individuals who attain high scores on the interpersonal sensitivity dimension of sociotropy also attain high scores in respect of their STTUC experiences (Exline & Lobel, 1999; Exline *et al*., 2004; Henagan, 2006). These findings may be explained by the suggestion that people who score high in sociotropy may also place too much value on interpersonal interactions involving intimacy, empathy, social relatedness, affection, protection and the approval of others (Clark *et al*., 1995; Beck, 1987).

Competitiveness

The competitiveness trait has been associated with a greater expectation of negative responses from peers (Exline *et al*., 2004). The propositions in this study was in line with the thinking that competitive individuals may be likely to project their competitiveness onto other individuals, and therefore, anticipate hostile reactions in cases of outperformance (Exline *et al*., 2004). The findings of this study suggest that competitive individuals may be more likely to anticipate that others are experiencing comparison threat, be concerned about the self, and be concerned about the outperformed individual in cases of outperformance than their less competitive counterparts. The hypothesis that there is a direct positive relationship between competitiveness and COP was not supported by the findings of this study.

In addition, while a gender difference was not anticipated, further analysis revealed that the relationships between PCT and CRO and competitiveness were significant for female outperformers only, and not for the male outperformers.

Research does recognise that male and females may engage in competition for different reasons. For example, Benenson, Roy, Waite, Goldbaum, Linders & Simpson (2002) suggest that males may engage in competition in pursuit either of resources or status, whereas females tend to focus primarily on the egalitarian nature of their relationships and, hence, the positive relationship between competitiveness and concern for the relationship with the outperformed person in the case of females. It was revealed in another study that depressive symptoms were strongly and consistently associated with competitiveness to win for females but only moderately for men. In the same study, loneliness was strongly associated with competitiveness to win among females but unrelated for males (Hibbard & Buhrmester, 2010). Hibbard and Buhrmester's (2010) findings suggest that the impact of competitiveness may depend on both the type of competitiveness and on gender. This study, however, did not investigate the different types of competitiveness. However, the results do indicate that, in cases of outperformance, the competitiveness trait may produce different outcomes for males and females.

N-Aff

While to the knowledge of the author, there has not been any research that directly links n-Aff to STTUC, the theoretical arguments provided in this study suggested that n-Aff may be one of the personality characteristics that may predispose individuals to experiencing STTUC.

Firstly, the description of the n-Aff trait as a fundamental human need to establish and sustain positive social interactions and as a force affecting people's cognitions and emotions (Baumeister & Leary, 1995) show how possessing this trait may predispose the individual concerned to experiences of STTUC. Secondly, individuals with strong n-Aff have been shown to be sensitive to the availability of social support and to be deeply concerned about separation from others.

It has also been suggested that, for people who desire social connection, when the attainment of social bonds is frustrated in some way, or when such individuals experience the threat of rejection, they may respond with extreme emotion and/or lose their ability to self-regulate. They may even experience neural reactions similar to those involved in actual physical pain (MacDonald & Leary, 2005; Williams, 2007). Goffman (1956) argued that, when individuals violate social norms, their display of embarrassment may signal their concern over the norms that underlie social relations. Such individuals have been shown to have a greater need to share inner states with others and to feel as if they understand and experience some aspect of the world as others do (Higgins & Pittman, 2008). Such experiences may be so powerful that research has suggested that people may even pre-emptively absorb the mood of someone who elicits the affiliative motivations, even when doing so may lead to negative feelings (Huntsinger, Lun, Sinclair & Clore, 2009).

It was, therefore, deemed plausible that individuals high in n-Aff may be more likely to be sensitive to the needs of others and, as a result, to be more likely to perceive threat for the outperformed individual than individuals low in n-Aff. However, the data in this study failed to confirm the hypothesised relationships.

Nonetheless, there are several reasons why the proposed relationships may not have been confirmed, including the types of sub-scales which were used to measure n-Aff and n-Aff_perceived. These sub-scales failed to meet the acceptable levels of reliability – see sections 5.3.8 and 5.3.16 for more details. It is, thus, essential that the analyses involving n-Aff be interpreted with caution.

Furthermore, before suggesting that the proposed relationships may not exist, more research needs to be conducted using more reliable measurement instruments as the reliability of the sub-scales used in this study rendered the conclusions debatable.

2. Masculine Values in an Organisational Culture

Organisational climate has been related to work outcomes for both women and men (Heslin, 2005). In this study it was hypothesised that a direct negative relationship exists between the perceptions of male outperformers that their employer organisation is characterised by MOC and their experiences of PCT, COP, CS and CRO. As regards to the women, it was hypothesised that direct positive relationships exists between the female outperformers' perceptions that their employer organisation is characterised by MOC and and their experiences of PCT, COP, CS and CRO.

As regards the men, the findings confirmed that a direct negative relationship does, indeed, exist between the perceptions of the male outperformers that their employer organisation is characterised by MOC and their experiences of PCT and CS. The relationships were however not confirmed for COP and CRO. These results suggest that, when male outperformers perceive that the organisational culture is masculine in orientation, they are less likely to perceive that their significant other will be threatened by outperformance. The findings further suggest that, if the male outperformers perceive that the organisational culture prevailing in their employer organisation is masculine in orientation; they are also less likely to be concerned about the self in cases of outperformance.

It was hypothesised that the relationships for men and women would be in inverse directions. While not significant, the results show that, for females, the relationships for PCT, COP and CRO were in the hypothesised directions (i.e. positive correlations) while the only relationship that was not in the hypothesised direction for the female sample was that of CS.

These findings are consistent with the notion that competition may force individuals to make social comparisons (Mitchell, 1996) and to perceive a threat (Henagan, 2010). For example, in another study, Exline *et al*. (2004) found that individuals in

competitive situations did not desire public forms of recognition. In yet another study, competitive psychological climate was found to have significant, positive correlations with the comparison target of discomfort and was also a positive predictor of comparison target discomfort (Henagan, 2010). These two studies suggest that the competitiveness of the comparison domain does impact on the individual's experiences of STTUC distress.

The findings of this study also support past findings that competitive environments may yield different outcomes for males and females. Such findings support the suggestion that men and women may differ in their appraisal of similar features within their employer organisation (James, James & Ashe, 1990). They may also provide support for those findings which indicate that organisational climate influences the way in which women managers perceive and explain their work projects and experiences (Phillips, Little & Goodine, 1996).

6.1.3.3 Relationships that were not confirmed

The number of hypotheses that could not be supported renders the findings of this study quite remarkable. At a glance, this is concerning because, in the words of as Gerber, Green, and Nickerson (2001), "Editors and referees look askance at papers that report insignificant findings" (p. 385). Mills and Woo (n.d.) also raised similar concerns that there is a general tendency on the part of researchers and publishers to believe that nonsignificant findings render a particular study insignificant. Mills and Woo further argued that the implications of nonsignificant findings may be as meaningful as those of significant findings since they may also affect scientific conclusions and impact on the direction of future research.

Other researchers have advocated that an evaluation be conducted of the reasons why the nonsignificant findings are, indeed, nonsignificant. For example, Pagell, Kristal and Blackmon (2009) suggested that, while some manuscripts revealing nonsignificant findings may be flawed, some may be theoretically motivated and

methodologically sound. This leads to the assumption that theoretically motivated and methodologically sound studies may be unpublished only because the results do not support accepted theory.

Peter (2010) summarised these arguments by stating:

> At the very least, negative results provide more information on which future scientific research can be based. For every study that didn't work or didn't produce positive results, there may very well be a planned study somewhere else in the academic world that can take this information on board to inform and direct the research that will be conducted. In my opinion, making these results hard to find hinders the scientific process in the end and could lead to inefficient research.

In light of the above discussions, the following sections will discuss those relationships that were not confirmed.

1. Cultural Variables

The cultural variables investigated in this study included collectivistic cultural orientations and traditional gender role orientation. There has been a considerable amount of theory advanced linking the constructs of culture to general achievement in recent years. For example, specific to STTUC experiences, the studies of Exline and Lobel (1999), Markus and Kitayama (1991), and Triandis (1994) all argued that cultural values, norms, beliefs and traditions may regulate interpersonal relations and the likelihood that autonomous and/or interdependent achievements are punished or rewarded.

In this study, the hypotheses linking cultural factors, that is both collectivistic cultural orientation and traditional gender role orientation and STTUC were, in the main, not confirmed at the correlational level and regression levels. The SEM results only indicated that both TRSO and CCO were significant predictors of STTUC for males but not for the females. However the robustness of the SEM analysis may imply that these findings, which were not revealed using other, less robust, statistical

analysis, could suggest some moderation or mediation effects. Other studies have also revealed similar conflicting results. For example, Firestone, Harris, and Lambert (1999) showed that traditional gender role ideologies impacted negatively on earnings for both males and females, with a slightly larger effect for male workers. Another study by Fortin (2005) revealed a significant negative association between traditional gender role attitudes and the employment status of women.

In addition, while past research has discussed the role of culture in predicting STTUC (Exline & Lobel, 1999), these studies were insufficient because they merely offered theoretical arguments without providing empirical findings to support the arguments. In general, it would appear that the outcomes of this study contradict the views presented. Nevertheless, the findings may produce further insights into the understanding of culture and the way in which it may relate to outperformance within organisational contexts.

Firstly, while is it commonly agreed that working women with traditional gender role orientations may be likely to believe their true devotion should not be to their work, but to the home (Judge & Livingston, 2008), there are many factors that may influence gender role attitudes. The relationship between STTUC and an individual's cultural orientation and/or gender role orientation may be affected by the individual concerned's gender, work experience, education, marital status, tenure as well as numerous other variables. For example, the results of Willets-Bloom and Nock's (1994) study revealed that maternal employment may have an effect on gender role attitudes such that the individual's age when his/her mother began working strongly predicts his/her gender role attitudes regarding the suitability of mothers working.

Secondly, the way in which cultural orientation and gender role orientation impact on STTUC experiences may also be influenced by the comparison domain − in the

case of this study, the workplace. For example, the world of work has its own clear rules, guidelines and expectations within which individuals must operate. Some jobs are assigned for focal individuals and, in many instances; employees may be forced to be individually accountable through individualised performance reviews. This system may enforce individual accountability as well as compel individuals to adapt their traditional gender role orientation and collectivistic cultural orientation to work expectations. Accordingly, the relationships between STTUC and these two cultural variables may have been altered by the expectations and accepted rules of the workplace.

Thirdly, while achievement motivation may be viewed as primarily cognitive in nature, that is attributing the sources of motivation to individual goals (Trumbull & Rothstein-Fisch, 2011), in the context of work, this motivation may also be linked to organisational goals.

A fourth potential interpretation of the unexpected result regarding the relationship between cultural variables and STTUC is that it is possible that, in collectivistic societies, outperformance may be perceived as sacrificing oneself for the family, and ensuring the financial security of the family (Cheung & Halpern, 2010; Yang *et al*., 2000). Such a view of outperformance may act as a buffer against STTUC experiences.

Cheung and Halpern (2010) also explain that, while culture might prescribe certain expectations for gender roles and behaviours, there may be differences within the culture in the way in which individuals play out the prescribed roles. Furthermore, it is also possible that occupational status may also influence both cultural orientation and gender role orientation. For example, as individual climb the corporate ladder, they may begin to become more acculturated into the organisational culture. Morahan, Rosen, Richman and Gleason (2011) argued that existing organisational cultures were established centuries ago by upper middle class, white, Euro-American men. Consequently, for workers, acculturation in the form of cultural

imperialism may be inevitable. Cultural imperialism may be loosely defined as a way of promoting the dominant culture in others (Alexander, 2003). In organisations, this usually happens through formal induction programmes, training and development interventions, formal policies and the organisations rewarding acceptable behaviours and attitudes.

This acculturation may result in the coexistence of both the work and the national cultural values within the same individual. However, a potential consequence of this acculturation may be what Nandi and Fernandez (1994) refer to as the compartmentalisation of family and working lives. In terms of this view, women may pursue employment outside the home and accept the principle of equal opportunity within the workplace, while still adhering to the traditional sex roles within the home. Nandi and Fernandez further explain that women may use this coping and/or compensating strategy to minimise the trauma of adjustment. If this is the case, a female employee may, for example, expect the husband to be the head of the household, but adjust accordingly in situations in which she has to manage her male counterparts.

Marital Status

The propositions that married women would report higher levels of STTUC than unmarried women were also not supported across all four of the components of STTUC. This relationship was proposed because, given the Botswana culture; it was assumed that marital status, together with traditional gender role orientation, may predict the STTUC experiences of the female outperformer. It has been suggested that marriage clearly articulates role expectations for both the wives and husbands. The findings of certain studies have also revealed that married women are less likely to make upward career moves than non-cohabiting and unmarried, cohabiting women (Verbakel & de Graaf, 2008).

The findings of this study clearly revealed that, in general, women are more likely to be PCT, CRO, and COP than men. However, it appeared that marital status had no

bearing on the married females' experiences of STTUC. Given the theoretical arguments presented, these insignificant findings begged the question: Why were the hypothesised relationships not supported by the data?

One possible explanation of these nonsignificant findings may be that the image of the traditional family which views the husband as the breadwinner and the wife as the homemaker (Bartley, Blanton & Gilliard, 2005) is changing radically. This view might be replaced by an acceptance of both husband and wife being employed outside of the home (Wu *et al*., 2010) as well as an acceptance of the dynamics of such as situation.

A second explanation for the findings may be that the relationships between the outperformed individuals and the outperformers may have been satisfying relationships. However, in this study, there was no effort made to inquire into the quality of the relationships. Exline and Lobel's (2001) two studies revealed that, when a relationship is close and satisfying, the outperformer anticipated a more positive response from the outperformed individual than in a relationship that was not close and satisfying. Thus, these findings suggest that a close and satisfying relationship may play a buffering role against potential experiences of STTUC.

Tesser's (1988) SEM model may also be used to offer a third explanation for the results pertaining to the marital status hypotheses. According to Tesser (1988), individuals may be motivated to evaluate the self by engaging in reflection or comparison processes with a close other. He further explained that outperformance on the part of a close other may strengthen self-evaluation through either reflection or threatened self-evaluations through comparison processes. According to Tesser, engaging in reflection or comparison may also, ultimately, affect the couple concerned's emotional reactions, behavioural responses, and even interaction behaviours. The Extended Self-Evaluation Maintenance Model predicts that individuals will feel negative about outperformance if their romantic partners are, or

are perceived to be, suffering negative comparison and/or if they are not benefitting from the outperformance (Beach & Tesser as cited in Exline & Lobel, 1999; 2001).

Mendolia, Beach, and Tesser (1996) used the SEM to assess the way in which personal differences in the motivation to maintain the SEM needs of the significant other may predict the couple's problem-solving discussion behaviours. In their study, it was revealed that the participants' responsiveness to their partners' SEM needs was associated with more positive interaction behaviour. It was further revealed that, when a spouse responds more to his/her own SEM needs, unfavourable interaction behaviour resulted. As a result, Mendolia *et al*. (1996) suggested that an individual is more likely to feel threatened by comparison with a spouse if the spouse outperforms the individual concerned on a dimension that is relevant to the individual than if the dimension is low in relevance. Unfortunately, in this study, the comparison processes only were examined. It is, therefore, plausible that the married outperformers may perhaps have engaged more in reflection processes than in comparison processes, thus rendering them less likely to experience STTUC in cases of outperformance. The relevance of the competitiveness dimension to the outperforming spouses was also not directly measured; thus making it difficult to judge whether the outperformers' outperformances may have been in respect of dimensions low in relevance for their significant others.

The fifth explanation of the findings is offered in the backdrop to Orbuch & Eyster's (1997) findings and in Exline and Lobel (1999)'s suggestions. Exline and Lobel (1999) have explained that it is possible for STTUC distress to coexist alongside other positive reactions to outperformance such as feelings of superiority, happiness and pride. Orbuch and Eyster (1997) argued that it is essential that the explanation of gender inequity review to integrate both cultural and structural circumstances. Orbuch and Eyster's (1997) findings revealed that black wives were more likely than white wives to expect their husbands' assistance with home labour. They explained these findings by suggesting that this may occur because of a

greater dependence on the incomes of both spouses in minority families. In the context of Orbuch & Eyster's (1997) findings and Exline and Lobel (1999)'s suggestions, and also knowledge about the economic needs of most Botswana households, the married woman's outperformance could have been appraised more positively than negatively, thus leading the married women neither to anticipate nor to perceive a negative reaction from the significant other.

6.1.4 Discussions on the statistical analyses techniques used.

Three different statistical analysis techniques, namely, Pearson's Product Moment Correlations, Hierarchical Multiple Regression and Structural Equation Modelling, were used to test the relationships between the study variables. These techniques have different applications. For example, unlike multiple regressions, correlation analysis does not assume that any construct is dependent on the other(s) and it is also not concerned with the relationship between variables. In essence, correlation techniques examine the strength and direction of the relationships between two variables, while ignoring the existence of all other variables (Tabachnick & Fidel, 2001).

In predictive studies, multiple regression analysis addresses the limitation of the correlation analysis by taking the existence of all other variables into consideration. However, in the context of this study, the multiple regression technique was also regarded as somewhat limited as it did not allow for the simultaneous investigation of the four dependent variables of interest. Consequently, SEM, which is regarded as second generation multivariate technique (Chin, 1998), was used as a third step in data analysis as it allowed for the simultaneous analysis of the multiple independent and the four dependent constructs (Gerbing & Anderson, 1988).

In general, the outcomes of the correlation and HMR analyses revealed similar findings as most of the variables that were shown as having relationships with the STTUC variables, as assessed by the correlation analyses, also explained variances in STTUC when assessed using the HMR technique. It was also revealed

that those relationships that yielded higher *r* and and higher beta weights were also significant when analysed by SEM, for example, the family-work variables − partner support and family-work conflict.

One surprising finding was that the male structural model produced better fit than the female sub-sample structural model. This finding was not consistent with the HMR analyses which showed mostly that the selected variables explained more variance in STTUC when the female sub-sample was considered. Another surprising finding was that the traditional gender role orientation and collectivistic cultural orientation relationships were not supported by both the correlation and HMR analyses and were supported by the SEM analyses only. However, these seemingly surprising results may be explained by the fact that the SEM technique tests the relationships simultaneously and, thus, the results yielded by the technique may also take the complete conceptual model and all possible interactions into account.

Furthermore, as regards the supported relationships, not all of the t-values, Beta weights and correlation coefficients for the significant relationships were very strong. At a high level, this may indicate some consistencies between the statistical techniques used. Nevertheless, despite the fact that the results of the study revealed that, while all the hypothesised relationships were not supported by the results, the objectives of the study were achieved.

6.1.5 Limitations of the study

The results of the study are informative, particularly in view of the infancy of STTUC research. However, while the results will also undoubtedly be used to build foundations for future research in this domain; the study is not without limitations.

Firstly, because of cost constraints, convenience sampling was used, thus precluding the possibility of generalising the results to a broader population.

Secondly, all the data was obtained through the use of self-report instruments and this, in turn, could have created the problem of common method bias (Spector, 1994). While the measurement instruments used were characterised by acceptable reliability and validity, they could have been vulnerable to possible distortions and response biases. One of the biases noted earlier may have been the social desirability bias (see section 6.1.3).

Another limitation is that the study used a cross-sectional design. This may be in view of the fact that a single survey also encompasses the problem of common method bias.

A fourth limitation of this study may be attributed to some of the instruments used to measure some of the study variables. As far as the researcher is aware, this study was the first attempt to assess the way in which some of the variables relate to the STTUC construct. Accordingly, more studies are needed using, for example, context specific measures and/or using varying measures if the findings pertaining to specific relationships are to be regarded as conclusive. For example, a comprehensive study of the relationship between culture and STTUC using more measures − both context specific and general culture measurement instruments − could be carried out.

Fifthly, both the individual characteristics and the perceptions of the outperformed individuals were assessed using reports from the same individuals. It is, therefore, inherently possible that some of the proposed relationships (especially those relating to the perceptions of the outperformed person's individual characteristics) may have been either artificially inflated or deflated by common method variance (Spector, 1994), particularly the same source method variance.

Another limitation of the current study stems from assuming that STTUC reactions would be relatively stable and consistent across situations. Although this

conceptualisation was inspired by both family work literatures, the Self-evaluation Maintenance Model (Tesser, 1988; Beach *et al*., 1996) and career success/personal failure phenomenon (Korman and Korman's (1980), it is still necessary to ascertain if STTUC is a motive, a cultural stereotype or a personality characteristic.

Finally, the data was collected from a variety of organisations in Botswana. However, the study design did not control the variances of variables such as the type of industry and/or organisation and it is possible that such variables may have covariated with the outcome variables.

6.1.6 Theoretical implications of the study

This study may be regarded as important because there are only a few existing studies which have elevated the importance of the STTUC construct within organisations. Neverheless, important research suggesting that STTUC experiences may have an impact on organisational outcomes is accumulating (Henagan, 2006; 2010; Henagan & Bedeian, 2010). Accordingly, should the findings reported here be corroborated by future research, they will have implications for understanding those factors that may offer insights into STTUC experiences within organisational contexts.

In some instances, this study provides the first empirical evidence regarding the way in which some variables may relate to STTUC experiences within organisational contexts. Accordingly, the findings from the study have helped to test some of the theoretical arguments offered by other researchers and, in some instances, to replicate some of their findings. For example, as with other studies, the research findings revealed that females experienced STTUC reactions more often than their male counterparts.

In addition, to the knowledge of the researcher, the relationship between CCO and STTUC, TRSO and STTUC, n-Aff and STTUC, FWC and STTUC, and partner support and STTUC have not been empirically investigated. The findings in this study consistently indicated that both FWC and PS were related to the experiences of STTUC, therefore offering new insights into STTUC research.

Furthermore, despite the fact that it would appear that STTUC research is gaining momentum among researchers, the existing, limited studies have been conducted in the developed Western countries, primarily in the United States. Consequently, because gender differences in relation to STTUC experiences have been found both by researchers in the USA and now in Botswana, one may begin to argue conclusively that there may be something in relation to the female gender that exposes outperformers to STTUC experiences.

Moreover, it was indicated in preceding sections that many researchers have been arguing theoretically that cultural orientations may relate to STTUC reactions, although without offering concrete empirical evidence. However, this study took some steps to test the links between the cultural variables and STTUC experiences empirically and, in the main, nonsignificant findings emerged. While the data from this study did not provide support for the hypotheses resulting from the theoretical arguments it is, nevertheless, premature to suggest that the relationships between culture and experiences of STTUC may not exist. More research is still needed to render the findings of this study conclusive.

6.1.7 Managerial implications

It is generally accepted that, in work settings, individuals are constantly placed in positions in which it is incumbent on them to present both their abilities and their achievements. Brown *et al*. (1998) argue that it may happen that the some

individuals in these situations may be confident and/or selfaggrandise, whereas others may be less confident or even selfdeprecating. The findings of this study suggest that women might experience STTUC to a greater degree than their male counterparts. So, what does this mean?

Other related studies have revealed that, when individuals experience STTUC, they may engage in strategies such as, inter alia, avoiding the outperformed person, avoiding the appearance of one-upmanship (Exline & Lobel, 2001; Exline *et al*. 2004; Juola-Exline, 1998), appeasement (Exline & Lobel, 2001; Geyer & Exline, 2004; Henagan, 2006), self-depreciation, and/ or socially motivated underachievement (Henagan, 2006; Henagan & Bedeian, 2010). This study did not investigate the consequences of STTUC experiences. Nevertheless, if the female participants in this study were engaging in anyone of the strategies listed above in order to to deal with their STTUC experiences, the arguments that STTUC may be one of the factors impeding the career development and advancement of women will appear more plausible.

Individuals in the workplace may also be sensitive to what Eisenberger, Lieberman, and Williams (2003) and MacDonald and Leary (2005) refer to as *social pain*. Social pain may include reactions to the perception that one is being excluded from desired relationships, or that one is being devalued by respected relationship partners (MacDonald & Leary, 2005). Accordingly, in light of the findings of this study, it is essential that, ultimately, organisations that seek to empower women, that is create an enabling environment for the inclusion, development, retention and advancement of women (Pheko & Selemogwe, 2008) effect some changes to ensure that STTUC experiences do not remain a stumbling block to the advancement of women.

Most organisational leaders also prefer to have a large number of high performers within their ranks. However, similar to Henagan's (2006; 2010) studies, this study provides some insights into the ways in which personal achievements may be perceived as either costly or threatening to some individuals. Such negative

reactions to outperformance may, eventually, impact negatively on the performance of the employer organisations; thus necessitating preventative interventions.

If women are, indeed, more likely to experience STTUC as a reaction to being the targets of upward comparison, organisations must institute proper interventions that will facilitate the empowerment and development of women. Most of the research conducted has overemphasised structural issues such as removing the glass ceiling and revamping organisational cultures. However, the findings from this study suggest that more changes may be needed at both the organisational and the individual levels.

At the organisational level, such changes may target organisational policies on gender equality and gender development. Organisations could also revamp organisational cultures, succession plans, training and human resources development policies and programmes, and general management/leadership development programmes. For example, succession plans and general management/leadership development programmes may need to highlight STTUC as a challenge and also provide solutions to ensure that, when women are promoted into leadership and/or managerial positions, STTUC is no longer an inhibitor.

After taking care of the structural issues, changes targeting the individuals may also include more person centred interventions including counselling, coaching and mentoring for women and other individuals prone to experiencing STTUC. This may also include equipping them with tools with which to deal with the STTUC experiences. However, care may need to be taken because the research posits that people are unlikely to admit to painful feelings (Smith & Kim, 2007), thus causing them to refuse to acknowledge the need for requisite interventions. Accordingly, if the succession plans and management/leadership development programmes do not include tools with which to address STTUC sensitivities, it is likely that other efforts included in such programmes may also not succeed.

6.1.8 Contributions of the study

Both the theoretical and empirical contributions of the study were presented in section 1.7. In this section, the contributions will be discussed in light of the relationships observed.

One of the objectives of this study was to compile a comprehensive and reliable STTUC scale. This objective was achieved as the evidence provided by the item analysis, EFA, and CFA analyses revealed that the scale compiled was both reliable and valid. Yet another unique contribution of the study is to be found in the fact that PCT, COP, CS, and CRO were all investigated in the same study.

Furthermore, some of the empirical findings presented in the study may represent the first empirical findings regarding the relationships investigated. As far as it could be ascertained, this study is the first study to test empirically the relationships between STTUC and FWC, instrumental partner support, collectivistic cultural orientation, traditional gender role orientation, n-Aff, and masculine values in organisational culture. The results pertaining to family-work variables and STTUC are enlightening and necessitate further research into this link.

The most important contribution of this study was the investigation of the STTUC construct within the work-family context in Botswana with this work representing a starting point in the understanding of the STTUC experiences of Batswana employees. In general, the findings suggested that Batswana women may be experiencing STTUC to a greater degree than their male counterparts. Thus, based on these findings, it is recommended that policymakers at both organisational and national levels take STTUC experiences into consideration when designing programmes for the inclusion, development, retention and advancement of women as regards decision-making positions.

From a global perspective, this study has contributed to the general understanding of those factors that may contribute to the challenges that women face in career

advancement by revealing that, for some women, this challenge may be STTUC. If these findings are replicated in other contexts, the study may also contribute to the research into female gender development and empowerment.

6.1.9 Recommendations for future research

Firstly, although this study used a comprehensive measure of STTUC, the construct has, to date, been conceptually and empirically underdeveloped. Accordingly, more and, perhaps, different studies using various measures of STTUC may be required to capture fully the complex STTUC process.

Secondly, while the results from this study helped to elucidate the suggestion that females are more likely to experience STTUC than their male counterparts, it was difficult, even from the data, to answer the question: What is it about the female gender that makes women more likely to experience STTUC? This was made even more difficult by the findings that marital status, traditional gender role orientation and collectivistic cultural orientations were in no way linked to the experiences of STTUC. Although surprising, others researchers such as Willetts-Bloom and Nock (1994) have warned that, while the traditional gender role stereotypes may be related to gender, the two are not the same. Accordingly, more research, including research into other variables, is needed to try to establish the way which the female gender predisposes females to STTUC experiences.

This study offers preliminary findings that suggest that family-work variables may help to explain the variances in STTUC experiences. However, in view of the fact that the interplay between family and work variables is complex, the findings of the study do necessitate continued research into the reasons why the relationships between the family-work variables and STTUC relationships were, indeed, observed.

STTUC research may also benefit from longitudinal studies that evaluate the way in which individuals who are likely to experience STTUC may progress in their careers

as compared to those who are less likely to experience STTUC. This would help in the understanding of how the consequences of STTUC are related to career progress, especially as regards the career progress of women, who are more likely to experience STTUC.

Other researchers have also shown that, when individuals experience STTUC, they may engage in strategies such as appeasement, self-depreciation, avoiding the outperformed person, avoiding the appearance of one-upmanship and/or socially motivated underachievement. Further research is, thus, recommended to explore the strategies used to compound STTUC reactions in the Botswana context.

It is evident that empirical research into STTUC is only just crystallising. Studies have consistently shown that outperformance may constitute a challenge for some individuals with the STTUC framework offering insights into the reasons for this. It is, therefore, recommended that other researchers continue to investigate the STTUC construct within organisational contexts to elevate the importance of the STTUC construct within organisations. For example, the current study used significant others as the targets of comparison. However, based on the fact that employees also develop relationships at work, it is recommend that future research may also use colleagues as comparison targets as outperforming colleagues may also experience some STTUC distress if they perceive that the outperformed colleagues may be threatened by the outperformance.

The findings pertaining to gender differences could also lead to the idea that some of the antecedents may act as mediators of the gender effect. Therefore, future research may also investigate the role of the measured antecedents as mediators of the gender effect.

It is also essential to emphasise that it is not necessary that the focus/debates of the discussions on STTUC experiences be only on whether the STTUC experience stems from social, cultural, or psychological causes, as has been the case with other similar constructs. In view of the fact that there is evidence that personal

achievements may be viewed as threatening, it is recommended that both researchers and practitioners explore the causes and consequences of such threats and then devise appropriate interventions.

6.1.10 Conclusion

The research findings give rise to the following questions: Are the gender differences commonly reported in labour market outcomes solely a result of gender discrimination, the so called glass-ceiling, gender stereotypes, and/or gender prejudice? Do the gender differences partially reflect women's own attitudes and preferences? Any answers to these questions render the results of the study important for policy makers at both organisational levels and national levels.

In conclusion, the findings from this study should, however, not be misused to stereotype, prejudice, misjudge, discriminate or characterise the experiences of any one group, for example, females, as normative. This was the first study conducted which assessed the STTUC construct within the context of corporate Botswana. Accordingly, more research is needed in different organisational settings, and with varying research designs, before rendering the findings conclusive.

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APPENDICES

Appendix A: Survey Instruments with Participant Information Letter

REACTIONS TO UPWARD COMPARISON: A STUDY OF EMPLOYEES IN BOTSWANA

Questionnaire #: _____ **Interviewer initials: M.M.P Date:_____**

The questionnaire is to be completed by employees in Botswana. The questionnaire includes the following 5 sections:

I. *Questions about reactions to outperformance;*
II. *Questions about yourself and your significant other's life orientation;*
III. *Questions about family support;*
IV. *Questions about the organisation for which you work for and*
V. *Questions about yourself (Demographic questions).*

PARTICIPANT INFORMATION FORM

The study is being conducted by Ms Mpho M. Pheko, a PhD candidate at the University of Cape Town, South Africa. The aim of the study is to learn about employees' reaction to outperformance.

All your responses will be completely confidential and anonymous. You will not be asked for your name, and the answers to these questions will never be associated with you in any away. **PLEASE DO NOT PUT YOUR NAME ANYWHERE.**

This study has been approved by the Botswanan Ministry of Labour and Home Affairs **REF: CHA 1/17/2 XVII (77)** and the University of Cape Town, Faculty of Commerce Ethics in Research Committee.

Participation in this study is strictly voluntary, and you are not obliged to complete the questionnaires. You may discontinue at any time without any prejudice on the part of the investigator. If you decide to answer the questionnaire, after you have finished, the researchers will collect the questionnaire from you. **By completing the questionnaire, you will be indicating your wiliness to participate in this study.** If you choose not to answer, you may also forward the blank questionnaire to the researcher.

Any questions about the study may be addressed to Ms M. Pheko at +26772345555 or email: mphopheko@live.com or else her supervisor who may be contacted at anton.schlechter@uct.ac.za

SURVEY INSTRUCTIONS

- Please read through instructions first before attempting to complete the questions.
- Please do not discuss your responses with anyone because I am more interested in your personal views.
- Please try to answer all the questions as incomplete questionnaires will be disregarded.
- Complete all sections of the survey by ticking the most appropriate response.
- Do not tick more than one response unless where specified.
- Please be extremely honest in your opinions and, in return, I guarantee complete confidentiality

Thank you for your support

QUESTIONS ABOUT REACTIONS TO OUTPERFORMANCE

If **ENGAGED, DATING, MARRIED, DIVORCED OR WIDOWED**, recall a situation where you performed better than your **SPOUSE/PARTNER /EX-SPOUSE** in a specific situation.
The person you are comparing yourself with will be referred to as a **significant other** throughout this survey.
I. The situation will have to be one that has actually happened, or currently happening
II. Both yourself and your significant other know or know about the situation and both will agree that you came ahead
III. The situation should be important (to either yourself or your significant other)

If **SINGLE**, recall a situation where you performed better than someone you consider as a significant other in a specific situation *(Please specify the person you are comparing yourself with by circling one of the following options*.
For Females [EX-BOYFRIEND / MALE COLLEAGUE / BROTHER]
For males [EX-GIRLFRIEND / FEMALE COLLEAGUE / SISTER]
The person you are comparing yourself with will be referred to as a **significant other** throughout this survey.
I. The situation will have to be one that has actually happened, or currently happening
II. Both yourself and your significant other know or know about the situation and both will agree that you came ahead
III. The situation should be important (to either yourself or your significant other)

	Still thinking about the situation where you outperformed your significant other, please respond to the following statements by ticking a number from 1 to 5 (1= Not at all, 2= To a Small Extent, 3= To a Moderate Extent, 4= To a Great Extent, 5= To an Extreme Extent) to indicate if the statement reflect how <u>you think</u> your significant other might have reacted or felt as a result of the outperformance.	Not at all	To a Small Extent	To a Moderate Extent	To a Great Extent	To an Extreme Extent
1	Felt embarrassed becaused you performed better	1	2	3	4	5
2	Felt dissapointed becaused you performed better	1	2	3	4	5
3	Felt irritated becaused you performed better	1	2	3	4	5
4	Felt anxious becaused you performed better	1	2	3	4	5
5	Felt frustrated becaused you performed better	1	2	3	4	5
6	Felt awkward being around you	1	2	3	4	5
7	Felt intimidated by you	1	2	3	4	5
8	Felt vengeful toward you	1	2	3	4	5
9	Acted rejecting toward you	1	2	3	4	5
10	Wished you would fail next time	1	2	3	4	5

	Still thinking about the situation where you outperformed your significant other, please respond to the following statements by ticking a number from 1 to 5 (1= Not at all, 2= To a Small Extent, 3= To a Moderate Extent, 4= To a Great Extent, 5= To an Extreme Extent) to indicate the extent to which you may have engaged in the following:	Not at all	To a Small Extent	To a Moderate Extent	To a Great Extent	To an Extreme Extent
11	Worry that you may become so knowledgeable that your significant other will not like you.	1	2	3	4	5
12	Worry that you may push away your significant other if your work is of superior quality.	1	2	3	4	5
13	Worry that your significant other may become jealous because you were very good at something.	1	2	3	4	5
14	Done less than your very best so that your significant other will not be threatened.	1	2	3	4	5

Still thinking about the situation where you outperformed your significant other, please respond to the following statements by ticking a number from 1 to 5 (1= Not at all, 2= To a Small Extent, 3= To a Moderate Extent, 4= To a Great Extent, 5= To an Extreme Extent) to indicate the extent to which you may have engaged in the following:		Not at all	To a Small Extent	To a Moderate Extent	To a Great Extent	To an Extreme Extent
15	Became embarrassed if others compliment you on your work in presence of your significant other.	1	2	3	4	5
16	Became worried that others will think you are a show-off.	1	2	3	4	5
17	Gotten the feeling that it just can't last, when you notice that things have been going particularly well for you.	1	2	3	4	5
18	Gotten worried that you may become so knowledgeable that your significant other will not like you.	1	2	3	4	5
19	When things seemed to be going really well for you, gotten uneasy that you will do something to ruin it.	1	2	3	4	5
20	Became worried about the possibility of being criticized by your friends or associates for being too involved with your work.	1	2	3	4	5
21	Believed that you have gotten by at work because of good luck and carelessness of supervisors.	1	2	3	4	5
22	Believed that successful people are often sad and lonely.	1	2	3	4	5
23	Found it nerve-wrecking to be regarded as one of the best in your field	1	2	3	4	5

Still thinking about the situation where you outperformed your significant other, Please respond to the following statements by ticking a number from 1 to 5 (1= Not at all Concerned , 2= Unconcerned 3= Moderately Concerned, 4=Concerned 4= Very Concerned) to indicate how concerned you were that your significant other may have reacted the following:		Not at all Concerned	Unconcerned	Moderately Concerned	Concerned	Very Concerned
24	Felt embarrased becaused you performed better	1	2	3	4	5
25	Felt dissapointed becaused you performed better	1	2	3	4	5
26	Felt irritated becaused you performed better	1	2	3	4	5
27	Felt anxious becaused you performed better	1	2	3	4	5
28	Felt frustrated becaused you performed better	1	2	3	4	5
29	Felt awkward being around you	1	2	3	4	5
30	Felt intimidated by you	1	2	3	4	5
31	Felt vengeful toward you	1	2	3	4	5
32	Acted rejecting toward you	1	2	3	4	5
33	Wished you would fail next time	1	2	3	4	5

Please Turn Over

QUESTIONS ABOUT YOURSELF AND YOUR SIGNIFICANT OTHER'S LIFE ORIENTATION

For items 34 through 61 Please use the column titled SELF to record your own responses to the statements. Use the column titled SIGNIFICANT OTHER to respond how you think your significant other would have responded to the items.

	Please respond to the following statements by ticking a number from 1 to 4 (1= Strongly Disagree, 2= Disagree, 3= Agree, 4= Strongly Agree)	Self				Significant Other			
		Strongly Disagree	Disagree	Agree	Strongly Agree	Strongly Disagree	Disagree	Agree	Strongly Agree
34	Parents and children must stay together as much as possible.	1	2	3	4	1	2	3	4
35	It is my duty to take care of my family, even when I have to sacrifice what I want.	1	2	3	4	1	2	3	4
36	Family members should stick together, no matter what sacrifices are required.	1	2	3	4	1	2	3	4
37	It is important to me that I respect the decisions made by my groups.	1	2	3	4	1	2	3	4
38	It is important that men feel in charge of their families.	1	2	3	4	1	2	3	4
39	One of the main jobs of a husband is to protect his wife.	1	2	3	4	1	2	3	4
40	One of the main tasks of a wife is to serve her husband.	1	2	3	4	1	2	3	4
41	A wife should make a special effort to love her husband.	1	2	3	4	1	2	3	4

	The following scale contains statements that may describe you and the types of things you may like to do. Please respond to the following statements by ticking a number from 1 to 4 (1= Strongly Disagree , 2= Disagree, 3= Agree, 4= Strongly Agree)	Self				Significant Other			
		Strongly Disagree	Disagree	Agree	Strongly Agree	Strongly Disagree	Disagree	Agree	Strongly Agree
42	I perform better when I am competing against someone rather than when I am the only one striving for a goal.	1	2	3	4	1	2	3	4
43	I feel that winning is important in both *work* and games.	1	2	3	4	1	2	3	4
44	When I win an award or game it means that I am the best compared to everyone else that was playing. It is only fair that the best person win the game.	1	2	3	4	1	2	3	4
45	In school, I always liked to be the first one finished *with* a test.	1	2	3	4	1	2	3	4
46	I have always wanted to be better than others.	1	2	3	4	1	2	3	4
47	When nominated for an award, I focus on how much better or worse the other candidates' qualifications are as compared to mine.	1	2	3	4	1	2	3	4
48	I would want an A Grade because that means that I did better than other people.	1	2	3	4	1	2	3	4
49	Because it is important that a winner is decided, I do not like to leave a game unfinished.	1	2	3	4	1	2	3	4

	The following scale contains statements that may describe you and the types of things you may like to do. Please respond to the following statements by ticking a number from 1 to 4 (1= Strongly Disagree , 2= Disagree, 3= Agree, 4= Strongly Agree)	Self					Significant Other			
		Strongly Disagree	Disagree	Agree	Strongly Agree		Strongly Disagree	Disagree	Agree	Strongly Agree
50	I spend a lot of time talking to other people.	1	2	3	4		1	2	3	4
51	When I have a choice, I try to work in a group instead of by myself.	1	2	3	4		1	2	3	4
52	I prefer to do my own work and let others do theirs.	1	2	3	4		1	2	3	4
53	I try my best to work alone on work assignments.	1	2	3	4		1	2	3	4
54	I am a "people" person.	1	2	3	4		1	2	3	4

	Please indicate how much you agree or disagree with each of the following statements by ticking a number from 1 to 4 (1= Never, 2= Sometimes 3= Most of the Times 4= All the Time)	Self					Significant Other			
		Never	Some times	Most of the times	Always		Never	Some times	Most of the times	Always
55	I am afraid of hurting other people's feelings.	1	2	3	4		1	2	3	4
56	I do things that are not in my best interest in order to please others.	1	2	3	4		1	2	3	4
57	I censor what I say because I am concerned that the other person may disapprove or disagree.	1	2	3	4		1	2	3	4
58	I am more apologetic to others than I need to be.	1	2	3	4		1	2	3	4
59	If I think somebody may be upset at me, I want to apologize.	1	2	3	4		1	2	3	4
60	I find it difficult to say "no" to people.	1	2	3	4		1	2	3	4
61	I feel I have to be nice to other people.	1	2	3	4		1	2	3	4

Please Turn Over

QUESTIONS ABOUT FAMILY SUPPORT

	Please respond to the following statements by ticking a number from 1 to 5 (1= Never, 2= Almost Never, 3= Some Times, 4= Very Often, 5= Always)	Never	Almost Never	Sometimes	Very Often	Always
62	My significant other helps me with the household chores.	1	2	3	4	5
63	My significant other is there for me when I need him/her.	1	2	3	4	5
64	My significant other makes me feel that I can count on him/her if I need help.	1	2	3	4	5
65	My significant other provides me with companionship to do different things.	1	2	3	4	5
66	My significant other provides me with opportunities to do things for myself.	1	2	3	4	5
67	My significant other helps me take care of family activities.	1	2	3	4	5

	Please indicate how much you agree or disagree with each of the following statements by ticking a number from 1 to 4 (1= Strongly Disagree, 2= Disagree, 3= Agree, 4= Strongly Agree)	Strongly Disagree	Disagree	Agree	Strongly Agree
68	The demands of my family or significant other interfere with work-related activities	1	2	3	4
69	I have to put off doing things at work because of demands on my time at home	1	2	3	4
70	Things I want to do at work don't get done because of the demands of my family or significant other.	1	2	3	4
71	My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.	1	2	3	4
72	Family-related strain interferes with my ability to perform job-related duties.	1	2	3	4

QUESTIONS ABOUT THE ORGANIZATION YOU WORK FOR

	Please indicate if the following statements are true about the organization in which you work for by ticking numbers 1 to 4 (1= Not at all True, 2= Somewhat True, 3= True, 4= Very True)	Not at all True	Somewhat True	TRUE	Very True
73	In my organization, it is important that **employees** hold ambitious career aspirations.	1	2	3	4
74	In my organization, it is important that **managers** stress on performance.	1	2	3	4
75	In my organization, it is important that **employees** are assertive.	1	2	3	4
76	In my organization, it is important that **employees** are competitive.	1	2	3	4
77	In my organization, it is important that **managers** are firm.	1	2	3	4

QUESTIONS ABOUT YOURSELF

78. What is your gender?	[Circle one]
Male	1
Female	2

79. What is your age?	

80. What is your relationship status? *[Circle one]*

Single	Dating	Married	Separated	Divorced	Widowed

81. How long have you been on a relationship with the person in Ques. 73? *(if single skip to Ques.82*	__ __ *years*

82. How many children do you have?	__ __

83. What is the highest level of education that you have completed?	[Circle one]
Secondary School	1
Post secondary qualification (non-university)	2
Bachelors Degree	3
Post Graduate Degree	4
Other	

84. What is the highest level of education that your significant other have completed?	[Circle one]
Secondary School	1
Post secondary qualification (non-university)	2
Bachelors Degree	3
Post Graduate Degree	4
Other _____ (specify)	

85. What is your current level of responsibility at work?	[Circle one]
Non-supervisory/non-management	1
Supervisor	2
Middle management	3
Senior management	4
Executive management	5
Other _____ (specify)	

86. What is your significant other's current level of responsibility at work?	[Circle one]
Non-supervisory/non-management	1
Supervisor	2
Middle management	3
Senior management	4
Executive management	5
Other _____ (specify)	

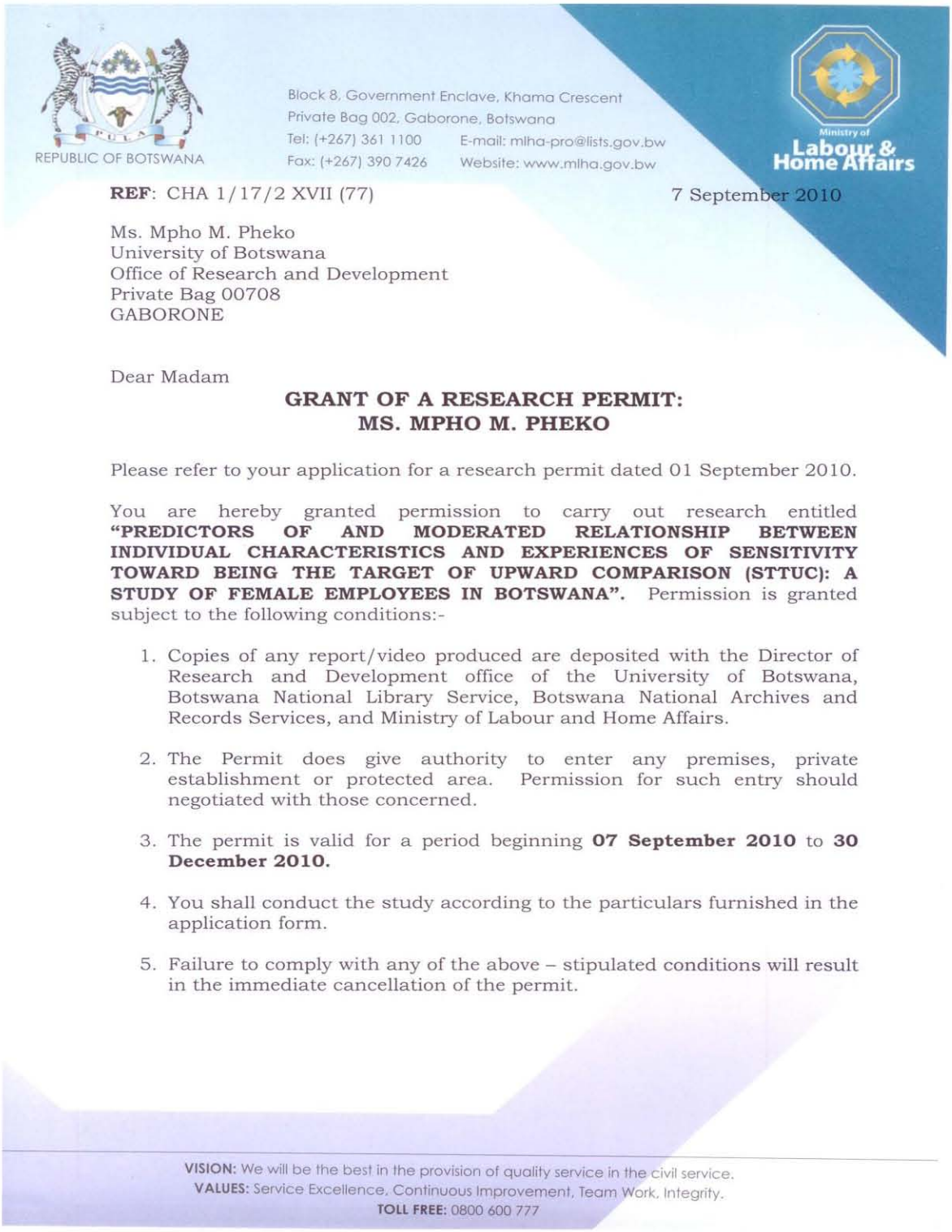
87. How long have you been formally employed?	__ __ *years*

88. How long have you been working for your current employer?	__ __ *years*

89. Does your spouse/partner earn more income than you do?	[Circle one]
Yes	1
No	2
The same	3
I do not know	4

90. Where were you raised up?	[Circle one]
City	1
Town	2
Village	3
Other (specify)	

Appendix B: Research Permits



REPUBLIC OF BOTSWANA

Block 8, Government Enclave, Khama Crescent
Private Bag 002, Gaborone, Botswana
Tel: (+267) 361 1100 E-mail: mlha-pro@lists.gov.bw
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Ministry of Labour & Home Affairs

REF: CHA 1/17/2 XVII (77) 7 September 2010

Ms. Mpho M. Pheko
University of Botswana
Office of Research and Development
Private Bag 00708
GABORONE

Dear Madam

GRANT OF A RESEARCH PERMIT:
MS. MPHO M. PHEKO

Please refer to your application for a research permit dated 01 September 2010.

You are hereby granted permission to carry out research entitled **"PREDICTORS OF AND MODERATED RELATIONSHIP BETWEEN INDIVIDUAL CHARACTERISTICS AND EXPERIENCES OF SENSITIVITY TOWARD BEING THE TARGET OF UPWARD COMPARISON (STTUC): A STUDY OF FEMALE EMPLOYEES IN BOTSWANA".** Permission is granted subject to the following conditions:-

1. Copies of any report/video produced are deposited with the Director of Research and Development office of the University of Botswana, Botswana National Library Service, Botswana National Archives and Records Services, and Ministry of Labour and Home Affairs.
2. The Permit does give authority to enter any premises, private establishment or protected area. Permission for such entry should negotiated with those concerned.
3. The permit is valid for a period beginning **07 September 2010** to **30 December 2010.**
4. You shall conduct the study according to the particulars furnished in the application form.
5. Failure to comply with any of the above – stipulated conditions will result in the immediate cancellation of the permit.

VISION: We will be the best in the provision of quality service in the civil service.
VALUES: Service Excellence, Continuous Improvement, Team Work, Integrity.
TOLL FREE: 0800 600 777

Appendix Aii: Research Permit from the University of CapeTown

UNIVERSITY OF CAPE TOWN

Faculty of Commerce
Ethics in Research Committee

Courier: Room 2.21 Leslie Commerce Building Upper Campus University of Cape Town
Post: University of Cape Town • Private Bag • Rondebosch 7701
Email: Irwin.brown@uct.ac.za
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17 September 2010

Mr Mpho Pheko
School of Management Studies
University of Cape Town
mphopheko@live.com

Dear Mr Pheko

Project title: Predictors of and moderated relationships between individual characteristics and experiences of sensitivity toward being the target of upward comparison (STTUC): A study of employees in Botswana

This letter serves to confirm that the project entitled: **"Predictors of and moderated relationships between individual characteristics and experiences of sensitivity toward being the target of upward comparison (STTUC): A study of employees in Botswana"**, as described in your final submitted protocol dated 16 September 2010, has been approved subject to final confirmation by the Commerce Faculty Ethics in Research Committee. You may proceed with the research subject to the following condition:

HR approval at each organization targeted, which is the researcher's institution.

Please note that if you make any substantial change in your research procedure that could affect the experiences of the participants, you must submit a revised protocol to the Committee for approval.

Best wishes for great success with your research.

Regards,

IRWIN BROWN

A/Prof Irwin Brown
Commerce Faculty Ethics in Research Committee

Appendix C: List of Abbreviations

STTUC	Sensitivity Towards being the Target of Upward Comparison
PCT	Perceived Comparison Threat
COP	Concerned for Outperformed Person
CS	Concern for the Self
CRO	Concern for Relationship with Outperformed
SEM	Structural Equation Modelling
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
FWC	Family-Work-Conflict
WFC	Work-Family-Conflict
CCO	Collectivistic Cultural Orientation
TSRO	Traditional Sex Role Orientation
IS	Interpersonal Sensitivity
COMP	Competitiveness
nAff	Need for Affiliation
SOC	Sociotropy
PS	Partner Support
MOCI	Masculine Organisational Culture Index
CCO_P	Collectivistic Cultural Orientation_Perceived
TSRO_P	Traditional Sex Role Orientation_ Perceived
nAff_P	Need for Affiliation_Perceived
IS_P	Interpersonal Sensitivity_Perceived
COMP_P	Competitiveness_Perceived
COR	Conservation of Resources