

**CONSTRUCT VALIDATION OF A PRELIMINARY RELATIONSHIP HARMONY  
SCALE WITHIN THE SOUTH AFRICAN PERSONALITY INVENTORY**

**by**

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## ABSTRACT

The South African Personality Inventory (SAPI) was developed with the aim of producing a personality measurement that is valid, reliable, fair, and unbiased, as required by the South African legislation. The Relationship Harmony cluster is one of the nine identified personality clusters in the SAPI. The objectives of this study were to investigate the construct validity of the Relationship Harmony cluster by (1) exploring the factor structure of the preliminary developed Relationship Harmony Scale, (2) determining whether the Relationship Harmony Scale can be correlated with or distinguished from the popular Five Factor Model (FFM) factors, and (3) determining whether the Relationship Harmony cluster can act as a valid predictor for Prosociality. A Relationship Harmony questionnaire developed for the South African Personality Inventory (SAPI), the shortened version of the Basic Traits Inventory (BTI-S), and the Prosocialness Scale were utilised. The sample consisted of ( $N=435$ ) students from tertiary institutions within the Gauteng and North-West provinces of South Africa. The results indicate that the Relationship Harmony measuring instrument represents five reliable factors. Furthermore, the results suggest that Agreeableness from the FFM and the Relationship Harmony cluster converge. Lastly, Relationship Harmony proved to be a valid predictor of Prosociality with three factors of the Relationship Harmony Scale playing an important role in predicting Prosociality.

*Key words: Relationship Harmony, South African Personality Inventory (SAPI), Five Factor Model (FFM), Basic Trait Inventory (BTI), Prosocialness, South Africa.*

## TABLE OF CONTENTS

	<b>Page</b>
ACKNOWLEDGEMENTS	ii
AFFIDAVIT	iii
ABSTRACT	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1: INTRODUCTION	1
1.1 Introduction	1
1.2 Problem statement	1
1.3 Objectives of the study	3
1.4 Conclusion	4
CHAPTER 2: LITERATURE STUDY	5
2.1 Introduction	5
2.2 Personality	5
2.3 Five Factor Model (FFM)	6
2.4 South African Personality Inventory	11
2.5 Relationship Harmony	14
2.6 Validating the Relationship Harmony Scale	15
2.7 Research questions	17
2.8 Conclusion	17
CHAPTER 3: METHODOLOGY	18
3.1 Introduction	18
3.2 Research Design	18
3.3 Research Methodology	18

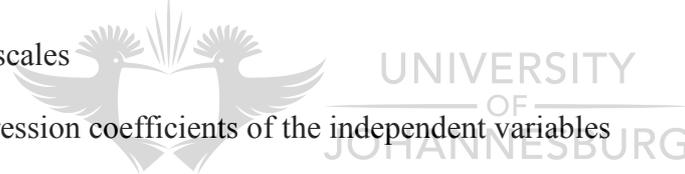
3.3.1 Sampling procedures	18
3.3.2 Participants	19
3.3.3 Measuring battery	20
3.3.3.1 Relationship Harmony Scale	20
3.3.3.2 Basic Traits Inventory	20
3.3.3.3 Prosocialness Scale	21
3.3.4 Research procedure	21
3.3.5 Ethical considerations	21
3.3.6 Statistical Analysis	22
3.3.6.1 Descriptive statistics	22
3.3.6.2 Unidimensionality of the Relationship Harmony Scale	22
3.3.6.3 Factor analysis of the Relationship Harmony Scale	22
3.3.6.4 Reliability and correlations	23
3.3.6.5 Factor analysis of the Relationship Harmony and BTI scales	24
3.3.6.6 Regression analysis	25
3.4 Conclusion	26
CHAPTER 4: RESULTS	27
4.1 Introduction	27
4.2 Results	27
4.2.1 Descriptive statistics and unidimensionality of the Relationship Harmony Scale	27
4.2.2 Factor analysis	29
4.2.3 Reliability and correlations	31
4.2.4 Factor analysis of the Relationship Harmony and BTI scales	34
4.2.5 Regression analysis	36

4.3 Conclusion	37
CHAPTER 5: DISCUSSION	38
5.1 Introduction	38
5.2 Discussion	38
5.2.1 Validating the factors in the Relationship Harmony Scale	38
5.2.2 Relationship Harmony cluster as a distinguishable factor from the factors in the FFM	41
5.2.3 Relationship Harmony as a valid predictor of Prosociality	41
5.3 Conclusion	42
CHAPTER 6: CONCLUSION AND RECOMMENDATIONS	43
6.1 Introduction	43
6.2 Conclusions	43
6.3 Limitations	44
6.4 Suggestions for future research	44
6.5 Practical implications	44
6.6 Conclusion	45
REFERENCES	46



## LIST OF TABLES

<b>Table</b>	<b>Description</b>	<b>Page</b>
Table 1	Characteristics of participants ( $N=435$ )	19
Table 2	Descriptive statistics, skewness, kurtosis, and component matrix of the Relationship Harmony Scale	27
Table 3	Oblique Pattern Matrix of the Relationship Harmony Scale	30
Table 4	Descriptive statistics, Cronbach alpha coefficients and correlations between the Relationship Harmony Scale and the BTI Scale	32
Table 5	Pattern matrix for the Relationship Harmony Scale and BTI sub-scales	35
Table 6	Factor correlation matrix of the Relationship Harmony Scale and BTI sub-scales	36
Table 7	Regression coefficients of the independent variables	36



## LIST OF FIGURES

<b>Figure</b>	<b>Description</b>	<b>Page</b>
Figure 1	Scree plot and Parallel analysis	29
Figure 2	Scree plot relating to the factor structures	34





## **CHAPTER 1: INTRODUCTION**

### **1.1 Introduction**

The minor dissertation will focus on the construct validation of a preliminary Relationship Harmony Scale within the South African Personality Inventory (SAPI). The minor dissertation forms a critical part in the progress of the SAPI-project. The first chapter will provide a brief overview of the problem statement with regards to the study and consequently conclude with the general and specific objectives of the minor dissertation.

### **1.2 Problem Statement**

The development of a comprehensive taxonomy of personality traits was a significant development in personality psychology during the twentieth century (Yamagata et al., 2006). Scientific taxonomies allow researchers to study the specified domains of personality, rather than examining thousands of attributes that make each human being unique (John & Srivastava, 1999).

Over the last five decades several personality models that contribute to the taxonomy of personality have been developed. These personality models include the Big Three (Eysenck & Eysenck, 1975), the Five Factor Model (FFM; McCrae & Costa, 1987), the Big Seven Model (Benet & Waller, 1995), Chinese Personality Assessment Inventory (CPAI; Cheung, Kwong, & Zhang, 2003), and more recently the HEXACO model (Lee & Ashton, 2008). Each of these models contains a different number of personality factors. Within these models the psycholexical approach (cf. Goldberg, 1993; McCrae & Costa, 1997) and the traditional questionnaire approach (cf. Costa & McCrae, 1992; McCrae & John, 1992) have continuously converged, revealing a recurrent five factor personality structure (cf. John & Srivastava, 1999). The FFM can be seen as one of the most profound personality models in contemporary psychology since it can be used to identify the most prominent dimensions with regards to the personality of individuals. The five factors contained within the FFM are

Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness (Judge, Heller, & Mount, 2002; Vogt & Laher, 2009).

Although the FFM has previously been used within the South African context it has not provided consistent results (De Bruin, 2005). According to Van de Vijver and Rothmann (2004) most of the psychological tests in use in South Africa were developed for the Afrikaans and English language groups and did not take the African language groups sufficiently into account. Following the abolishment of Apartheid, the shortcomings of psychological testing were investigated and the South African government subsequently implemented the Employment Equity Act (EEA) No. 55 of 1998 (Government Gazette, 1998). This act states that: “Psychological testing and other similar assessments are prohibited unless the test or assessment being used (a) has been scientifically shown to be valid and reliable, (b) can be applied fairly to all employees, and (c) is not biased against any employee or group” (Government Gazette, 1998, p. 7).

According to Visser and Viviers (2010), within a diverse cultural context such as South Africa it is imperative that measuring instruments be assessed in terms of bias and equivalence in score comparisons between these diverse groups in order to eradicate any form of discrimination during personality assessments. Although this is a daunting task, Van de Vijver and Rothmann (2004) maintained that much more research needs to be conducted regarding the equivalence and bias of assessment tools used within South Africa before psychology as a profession can claim to have adhered to the demands outlined in the EEA.

A large project aimed at developing an indigenous personality model for South Africa commenced in 2005. The objective of the project was to develop an indigenous personality measure that represents all of South Africa’s eleven official languages. This project came to

be known as the South African Personality Inventory<sup>1</sup> (SAPI) project (Cheung, Van de Vijver, & Leong, 2011; Nel, 2008; Nel et al., in press). The project aims to produce a personality measurement that is valid, reliable, fair, and unbiased (Nel, 2008).

The first phase of the SAPI project involved a qualitative investigation where culturally and linguistically adequate descriptive terms for the languages were identified using an emic approach (Cheung et al., 2011). These descriptive terms were reduced using an etic approach and as a result nine personality clusters were identified. These personality clusters were labelled Extraversion, Soft-heartedness, Conscientiousness, Emotional Stability, Intellect, Openness, Integrity, Relationship Harmony, and Facilitating (Cheung et al., 2011; Nel, 2008; Nel et al., in press). The current study focused on the construct validation of the Relationship Harmony personality cluster. *Relationship Harmony* is defined as a “state in which a person believes in keeping good relationships with others, keeping the peace, maintaining relationships on good terms, and being open to understanding and tolerance” (Nel, 2008, p. 125). It is theorised that this cluster is likely to correlate strongly with the Agreeableness factor in the Five Factor model, Big Seven model and the HEXACO model (Nel, 2008). In addition, Nel (2008) suggested that Relationship Harmony might have a strong relationship with the Interpersonal Relatedness construct that is a unique cluster in the CPAI.

### **1.3 Objectives of the study**

The objective of this study was to determine the construct validity of a preliminary Relationship Harmony Scale developed for the SAPI. This study aimed to investigate the construct validity of the Relationship Harmony cluster by (1) exploring the factor structure of

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<sup>1</sup> The SAPI, an acronym for South African Personality Inventory, is a project that aims to develop an indigenous personality measure for all 11 official languages in South Africa. Participants are Byron Adams (University of Tilburg), Deon de Bruin (University of Johannesburg), Karina de Bruin (University of Johannesburg), Carin Hill (University of Johannesburg), Leon Jackson (North-West University), Deon Meiring (University of Pretoria and University of Stellenbosch), Alewyn Nel (North-West University), Ian Rothmann (North-West University), Michael Temane (North-West University), Velichko Valchev (Tilburg University, the Netherlands), and Fons van de Vijver (North-West University and Tilburg University, the Netherlands).

the preliminary developed Relationship Harmony Scale, (2) determining whether the Relationship Harmony Scale can be correlated with or distinguished from the popular FFM factors, and (3) determining whether the Relationship Harmony cluster can act as a valid predictor for Prosociality.

#### **1.4 Conclusion**

In conclusion, this chapter has provided the problems statement of the minor dissertation. The chapter also identified the objectives of the study which will form the focal point of the minor dissertation. With regards to the next chapter, issues with regards to personality, the different personality models as well as the SAPI will be discussed in the literature study.



## **CHAPTER 2: LITERATURE STUDY**

### **2.1 Introduction**

Chapter two will present literature on the important aspects of personality that will include the different personality models. The chapter will also provide background information on the SAPI with the focus on the Relationship Harmony cluster that is one of the personality clusters within the SAPI. Lastly, this chapter will conclude with the specific research questions within the study.

### **2.2 Personality**

Personality has been a topic of discussion within psychology for a long period of time and there has been continuous debate regarding its definition and meaning (Marsella, Dubanoski, Hamada, & Morse, 2000). Various views and theories regarding personality have developed. These theories include the psychodynamic viewpoint of Freud, which views personality as forged out of conflict resolution; the biological viewpoint, which incorporates behavioural genetics and psycho-physiological perspectives on personality; the evolutionary viewpoint, which states that personality is an adaptive process; and the trait viewpoint, which focuses on the psychological dispositions of personality (Carducci, 2009). The current study defines and discusses personality within the boundaries of trait theory. Traits can be described as "... a dimension of personality used to categorize people according to the degree to which they manifest a particular characteristic" (Burger, 2008, p. 155). The major advantage of the trait approach is that it allows researchers to easily make personality comparisons between people by placing people on a personality continuum relative to other people (Burger, 2008).

The trait approach also defines personality as "... the dynamic organisation within the individual of those psychophysical systems that determine his unique adjustment to his

environment” (Allport, 1937 as cited in Rothbart, Ahadi, & Evans, 2000, p. 122). In a similar manner Ryckman (2008, p. 4) defined personality as “... the dynamic and organised set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviours in various situations”.

Personality can therefore be identified as those dynamic characteristics that influence the behavioural, thought, and emotional patterns of an individual in various situations. These characteristics can be divided into higher-order traits (also known as broad traits) and lower order traits (John & Srivastava, 1999). Lower order traits are those characteristics that are specific to the individual’s behaviour, such as being talkative, and energetic; while higher order traits are a representative summary of the lower order traits (Lay, 1997). Large numbers of lower order traits are therefore combined in order to form a few higher order personality traits (Livesley, 2001).

This comprehensive ordering of lower order traits into higher order factors has contributed to the development of several personality models (e.g. FFM, Big Three, Big Seven model, HEXACO model, and CPAI) that help identify the important dimensions along which people differ, as this is one of the most important tasks in personality research (Biesanz & West, 2004). Many researchers believe that individual differences can be usefully organised in terms of five broad, bipolar dimensions. These dimensions are widely known in the professional field as the Big Five and are derived from the FFM (Cervone & Pervin, 2008).

### **2.3 Five Factor Model (FFM)**

Development of the FFM began in the early twentieth century when lists of some 4500 trait terms were identified from the English-language dictionaries (McCrae & Costa, 1997; McCrae & John, 1992). Cervone and Pervin (2008, p. 269) described this process as “put[ting] faith in one aspect of the natural language: individual words that describe persons”.

During the 1960s and 1970s the five factors were not widely acknowledged and most personality psychologists made use of Cattell's theory of the 16 personality factors (John & Srivastava, 1999; Laher, 2008). However, during the mid- 1980s research concerning the Big Five and personality structures became more prominent (John & Srivastava, 1999; Laher, 2008). The FFM was further developed by Costa and McCrae on the basis of findings from lexical studies of personality structure, resulting in the development of an inventory commonly known as the NEO Personality Inventory (NEO-PI; Ashton & Lee, 2005). The NEO P-I is an inventory that was developed to operationalise the FFM (McCrae & Costa, 1997).

Researchers from various traditions have concluded that the five factors in the FFM represent fundamental dimensions of personality (Lee & Ashton, 2004; McCrae & John, 1992). Empirical research methods have been utilised to investigate these five factors and various research studies have consistently confirmed the presence of Neuroticism versus Emotional stability (N), Extraversion versus Surgency (E), Openness to Experience versus Intellect, Imagination, or Culture (O), Agreeableness versus Antagonism (A), and Conscientiousness versus Will to Achieve (C) (Furnham, Monsen, & Ahmetoglu, 2009; Goldberg, 1993; Laher, 2008; McAdams, 1992; McCrae & Costa, 1997; Migliore, 2011; Saucier & Goldberg, 1998; Taher, Chen, & Yao, 2011). The names of these five personality dimensions differ across various literature studies although the general definition of these factors remain the same (see Furnham et al., 2009, Goldberg, 1993, McAdams, 1992).

*Neuroticism* indicates the degree to which a person is "... calm and self-confident as opposed to being anxious and insecure" (Laher, 2008, p. 76). *Extraversion* is the extent to which a person is "... sociable, leader-like and assertive as opposed to withdrawn, quiet and reserved" (Laher, 2008, p. 76). *Openness to Experience* can be defined as "...one's range of interests and fascination with novelty" (Robbins, 2009, p. 94). *Agreeableness* can be seen as

the dimension that refers to “... an individual’s propensity to defer to others” (Robbins, 2009, p. 94). Finally, *Conscientiousness* can be described as the degree to which a person is “... persevering, responsible and organised as opposed to lazy, irresponsible and impulsive” (Laher, 2008, p. 76). The existence of the Big Five structure does not mean that personality can be reduced to only five traits, but does indicate that these five traits represent personality at the broadest level of abstraction (John & Srivastava, 1999). Although the FFM has varied somewhat over time as well as across studies the overall robustness of the model has been remarkable (Simms, 2006). Additionally, cross-cultural studies have identified the presence of the Big Five personality traits in six vastly different languages: English, German, Japanese, Chinese, Tagalog [Filipino], and modern Hebrew (McAdams, 1992).

The FFM is universally acceptable and the usefulness of the Big Five as a hierarchical representation of personality attributes has gained international recognition (cf. McCrae, 2002; McCrae & Costa, 1997; Saucier & Goldberg, 1998; Yamagata et al., 2006). Various studies have linked the FFM to vastly different applications, including investigating the relationship between the FFM and self-esteem (Aluja, Rolland, Garcia, & Rossier, 2007; cf. Robins, Tracy, Trzesniewski, Potter, & Gosling, 2001), job satisfaction (Judge et al., 2002), employees’ absence (Judge, Martocchio, & Thoresen, 1997), personality disorders (Rossier & Rigozzi, 2008), and burnout (Morgan & De Bruin, 2010). Another study investigated the relationship between HIV risk and the FFM and found that the FFM can contribute to the understanding of problem behaviours (Trobst et al., 2000).

However, some reservations do exist regarding the FFM, particularly in relation to the model’s cross-cultural applicability as the FFM was developed by American researchers using American samples and instruments based on English-language trait terms (see McCrae, 2002). The cross-cultural validity of the FFM model has therefore been questioned. If personality traits are shaped by culture, then different personality traits may be found in

different cultures (McCrae & Costa, 1997). Another reservation regarding the FFM relates to the model's comprehensiveness. It is possible that the model excludes some important person descriptors (Cervone & Pervin, 2008; Saucier & Goldberg, 1998). Various researchers have argued that the FFM consists of either too few or too many factors (see Benet & Waller, 1995; Lee & Ashton, 2004; McCrae & John, 1992; Simms, 2006; Zuckerman, Kuhlman, & Camac, 1988).

Several studies across different languages (Dutch, Italian, Hungarian, Korean, French, Polish) have identified the existence of six personality factors (Ashton & Lee, 2005; Lee & Ashton, 2004). The sixth factor that emerged in these studies has been labelled Honesty-Humility and is defined by terms such as sincere, fair, and unassuming versus sly, greedy, and pretentious (Ashton & Lee, 2005). The introduction of the Honesty-Humility factor led to the emergence of the HEXACO model of personality (Ashton, Lee, Marcus, & De Vries, 2007). The six dimensions that form the HEXACO model are Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O) (Ashton et al., 2007; De Vries & Van Kampen, 2010; Lee, Ashton, Morrison, Cordery, & Dunlop, 2008). Research has shown that the Honesty-Humility factor has no direct relationship with any of the factors in the Big Five model (Ashton & Lee, 2005; Lee, Ashton, & De Vries, 2005; Lee et al., 2008; Lee & Ashton, 2004).

Tellegen and Waller identified seven factors of personality using a stratified sampling method in which 400 personality descriptors were sampled without the restrictive exclusionary criteria that characterised previous natural language studies of personality from the *American Heritage Dictionary of the English Language* (1985) (Tellegen & Waller, 1987 as cited in Benet & Waller, 1995; Simms, 2006). The seven factors that represent the Big Seven are Positive Emotionality, Negative Emotionality, Conventionality, Conscientiousness, Agreeableness, Positive Valence, and Negative Valence (Benet & Waller, 1995). These

factors have been labelled the 'Big Seven' (Simms, 2006) and contain two additional evaluative dimensions; Positive Valence and Negative Valence (Benet & Waller, 1995; Simms, 2006). Simms (2006) indicated that *Positive Valence* refers to how individuals describe themselves as being exceptional, important, and smart. In contrast, *Negative Valence* indicates how individuals describe themselves as being evil, immoral, and disgusting. Thus, Positive-and Negative Valence explain the positive and negative dimensions of self-evaluation. According to Waller and Zavala (1993), the inclusion of these two dimensions provides a more complete description of personality variability and clinical emotional states than the FFM.

In contrast, McCrae and John (1992) established that a number of researchers believe that some of the five factors present in the FFM are not required. According to Eysenck's hierarchical trait theory, only three personality traits are necessary to describe the dynamics of personality and its expression. These dimensions are Extraversion-Introversion (E), Neuroticism-Emotional Stability (N), and Psychoticism-Impulse control (P) (Carducci, 2009; McRorie, Sneddon, De Sevin, Bevacqua, & Pelachaud, 2009; Ruch, 1994). Zuckerman et al. (1988) found that Eysenck's three factors explained a large portion of personality, thus indicating that any additional factors of personality are not necessary. Eysenck's model is based on the critical premise that the Big Five traits of personality are correlated with each other and therefore more general personality dimensions can be built from the combinations of the Big Five (Biesanz & West, 2004). However, a study by Eysenck, Barrett, Wilson, and Jackson (1992) found that tough-mindedness did not fit well into the P-E-N theory and John and Srivastava (1999) found that the P-E-N theory differs significantly from the FFM.

McAdams (1992) critiqued the FFM for not having the ability to deal with the core constructs of personality functioning beyond the level of traits. In addition, the model cannot predict specific behaviour or provide a sufficient description of individuals' lives. The model

fails to provide causal explanations for human behaviour and experience and does not provide a good program for studying personality organisation and integration (McAdams, 1992). According to McAdams (1992) the FFM relies only on basic and implicitly comparative statements about people, disregarding the contextual nature of the human experience. The South African Personality Inventory (SAPI) was developed partially in response to these limitations. The SAPI is based on the experiences of everyday conceptualisations of personality among South Africans from all the eleven official languages (Nel, 2008).

#### **2.4 South African Personality Inventory (SAPI)**

The overall aim of the SAPI is to develop a comprehensive personality inventory that will help to overcome the current problems facing personality measurement in South Africa (Nel et al., in press). The SAPI incorporates both universal (etic) and unique (emic) personality factors found across the diverse cultures within South Africa (Laher, 2008; Nel, 2008). The emic approach relates to measures that a particular culture will consider meaningful, whereas the etic approach makes generalisations across various cultures (Herche, Swenson, & Verbeke, 1996). According to Nel et al. (in press), the etic approach is able to identify commonalities in personality across cultures. However, the approach can also lead to underrepresentation of culturally unique aspects. However, the strengths and weaknesses of the emic approach are opposite to those of the etic approach (Nel et al., in press).

The development of the SAPI consisted of two stages, a qualitative stage and a quantitative stage. During the qualitative stage an indigenous approach was used to identify culturally and linguistically adequate personality descriptive terms for all the eleven languages (Cheung et al., 2011). Semi-structured interviews were held with a sample of about 120 first-language speakers per language group (Cheung et al., 2011; Nel, 2008). The semi-structured interview consisted of ten questions aimed at gaining relevant personality-

descriptive terms (Nel, 2008). Some of the questions were: “Please describe the following people to me by telling me what kind of person he or she is/was”; “Can you describe typical aspects of this person?”; and “Can you describe the behaviour or habits that are characteristics of this person?” (Nel, 2008). These questions allowed the participants to provide personality descriptions of the various people in their lives.

According to Nel et al. (in press) approximately 49 818 personality descriptive terms were identified throughout this information gathering process. The information gathered from the participants was integrated by experts in the respective languages in order to translate all the information successfully. These personality descriptive terms were reduced to 188 facets (e.g. assertive, friendly, competitive, attention-seeking, artistic, dreamer, loyal, and advising). The 188 facets were then grouped into 37 sub-clusters based on shared content and patterns of co-occurrence (e.g. Dominance, Egoism, Dedication, Emotional Sensitivity, Skilfulness, Materialism, Integrity, and Guidance; Nel et al., in press). Nine personality clusters were identified based on these 37 sub-clusters. These personality clusters are Extraversion, Soft-heartedness, Conscientiousness, Emotional Stability, Intellect, Openness, Integrity, Relationship Harmony, and Facilitation (Cheung et al., 2011; Nel, 2008; Nel et al., in press). The findings of the qualitative study suggest that although the FFM is well represented, the South African clusters are more elaborated due to the social and relational aspects of personality (Cheung et al., 2011).

The SAPI followed a similar approach to the one used in the development of the Chinese Personality Assessment Inventory (CPAI). The CPAI was constructed in China and was designed to be relevant to the local Chinese culture and at the same time retain high standards of validity and reliability (Cheung et al., 2003). These high standards were ensured through the use of different sources of data to access personality descriptor terms, including contemporary Chinese novels, surveys of people in the street, descriptions provided by

professionals and a review of psychological literature (Cheung et al., 2003). The personality constructs included in the CPAI were also derived from personality adjectives or person descriptions used in everyday life (Cheung et al., 2003; Cheung, Cheung, & Zhang, 2004; Nel, 2008). The CPAI includes a unique factor known as Interpersonal Relatedness, which indicates the importance of social values within the Chinese culture (Cheung et al., 2011; Nel, 2008).

The quantitative stage of the SAPI project aims to develop and test instruments for each of the language groups based on the taxonomy derived in the first stage of the projects (Nel, 2008). The initial SAPI questionnaire was developed by transforming the initial responses gathered from the eleven language groups into appropriate items (cf. Flattery, 2010; Janse van Rensburg, 2009; Labuschagne, 2010; Lötter, 2009). A pilot study was performed using the pool of developed items in order to investigate the statistical functioning of these items and to eliminate problematic items (cf. Flattery, 2010; Janse van Rensburg, 2009; Labuschagne, 2010; Lötter, 2009). Language experts investigated the remaining items to determine whether they could be understood, translated, and culturally appropriate within all eleven languages.

Nel (2008) compared the nine clusters of the SAPI with the factors of other personality models and suggested that six of the nine clusters corresponded well to the factors found in the FFM, Eysenck's Giant Three, the Big Seven model and the HEXACO personality model. These six clusters were Extraversion, Soft-heartedness, Intellect, Emotional Stability, Openness, and Conscientiousness. The remaining three clusters (Integrity, Relationship Harmony, and Facilitating) of the SAPI are less correlated to existing personality models (Nel, 2008). However, Nel (2008) speculated that the Relationship Harmony cluster would be likely to correspond moderately with the Interpersonal Relatedness and the Accommodation factors of the CPAI. Similarly, Nel et al. (in press)

suggested that Relationship Harmony may include elements that traditionally form part of Agreeableness.

The next step in the SAPI process involves validating the various scales as well as the instrument as a whole.

## **2.5 Relationship Harmony**

The Relationship Harmony cluster of the SAPI is defined as “a state in which a person believes in keeping good relationships with others, keeping the peace, maintaining relationships on good terms, and being open to understanding and tolerance” (Nel, 2008, p. 125). The qualitative stage of the SAPI project identified four sub-clusters and 23 facets within the Relationship Harmony cluster. These four sub-clusters were labelled Approachability, Conflict-seeking, Interpersonal Relatedness, and Meddlesome.

Approachability consists of being approachable and accessible for others on an interpersonal level versus placing oneself above others. The sub-cluster includes the facets Accommodating, Approachable, Arrogant, Flexible, Humble, Open for others, Proud, Stubborn, Tolerant, and Welcoming. Conflict-seeking is described as being disruptive, causing conflicts, and provoking others. This sub-cluster consists of three facets, namely Argumentative, Provoking, and Troublesome. Interpersonal Relatedness refers to the ability to be constructive in one’s relationships and maintaining relationships. Interpersonal Relatedness consists of the Appeasing, Constructive, Cooperative, Forgiving, Good relations with others, Peaceful, Peacekeeping, and Well-mannered facets. Lastly, Meddlesome involves interfering in others’ lives by actively gossiping and meddling and includes two facets, namely Gossiping and Interfering (see Cheung et al., 2011; Nel, 2008).

Nel (2008) suggested that Relationship Harmony might be closely related to the SAPI’s Soft-heartedness cluster, although there is a clear difference between the two clusters. Whereas Soft-heartedness describes the interpersonal understanding and consideration of a

person towards others, Relationship Harmony focuses on the building and maintaining of constructive relationships with others (Nel, 2008). In addition, some of the sub-constructs of Relationship Harmony are similar to the Agreeableness factor included in all major personality models as well as to the Interpersonal Relatedness cluster of the CPAI (Nel, 2008). Lun and Bond (2006) found that agreeable people are more socially accommodating and as a result achieve a higher level of harmony within their relationships. Also, forgiving occurs when an individual acts in a way that is personally costly for him or her in order to contribute to the welfare of a relationship, and thus forgiving is an important aspect that promotes Relationship Harmony (McCullough, 2000).

Kwan, Bond, and Singelis (1997) indicated that Relationship Harmony focuses on the relationship between self and other, especially in relation to achieving harmony in individuals' most significant relationships. In addition, Kwan et al. (1997, p. 1042) suggested that Relationship Harmony is "a measure of interpersonal accomplishment". The study by Kwan et al. (1997) demonstrated the positive effects of Relationship Harmony on an individual's psychological well-being, particularly in relation to self-esteem. The study also found that as a result of cultural collectivism the importance of Relationship Harmony to self-esteem and life satisfaction was greater in Hong Kong than in the United States (Kwan et al., 1997). It is thus possible that the impact would also be different in South Africa.

## **2.6 Validating the Relationship Harmony Scale**

In order to validate the Relationship Harmony Scale it was necessary to investigate the validity of the construct. West and Finch (1997, p. 150) defined validity as "the degree to which empirical evidence and theoretical rationales support the adequacy of interpretations based on test scores or other measures". Construct validity focuses on the response-data variation among items to determine whether the proposed content categories reflect the constructs (Gable & Wolf, 1993). Construct validity therefore includes issues relating to

convergent and discriminant validity, generalisability, and the tests of hypotheses on means of constructs (Bagozzi & Edwards, 1998). The first step in determining the construct validity of the Relationship Harmony Scale involved examining the factor structure of the preliminary Relationship Harmony Scale. The study investigated whether the factor structure is similar to the structure proposed by Nel (2008), which includes four sub-clusters (Approachability, Conflict-seeking, Interpersonal Relatedness, and Meddlesome).

The Relationship Harmony Scale was further validated to determine the scale's convergent, discriminant, and predictive validity (see Trochim, 2000). Convergent validity can be defined as the correlation between test scores and behaviour indicators that are aligned theoretically with the cluster (Flippo & Caverly, 2009); while discriminant validity distinguishes correlations between test scores and behaviour indicators from opposing clusters (Flippo & Caverly, 2009). In this study the construct validity of the preliminary Relationship Harmony Scale was determined using a FFM measurement. The study investigated whether the preliminary Relationship Harmony Scale converges or discriminates from the factors within the FFM. Convergence with the FFM measurement would indicate that Relationship Harmony as a construct is not unique and is similar to the FFM. Conversely, divergence from the FFM would indicate that Relationship Harmony can be identified as a unique construct within the SAPI.

Predictive validity refers to the degree to which characteristics that define a factor predict and can be used to control for random variations in the outcome measure (Bloom, 2005). The Prosocialness Scale was used to verify the Relationship Harmony Scale's predictive validity. According to Penner, Fritzsche, Craiger, and Freifeld (1995) prosocial actions have long been a focus on research in personality and social psychology. Prosocial behaviours are those behaviours through which people benefit others through their voluntary actions. The Prosocialness trait refers to a person who is cooperative, helpful, willing to

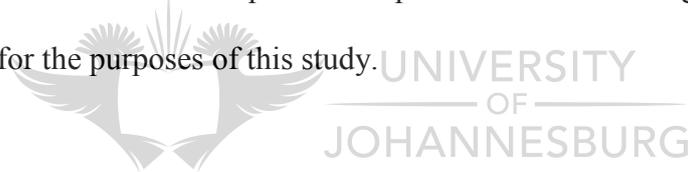
share, and empathetic (Caprara, Allessandri, Di Giunta, Panerai, & Eisenberg, 2010; Caprara, Barbanelli, Pastorelli, Bandura, & Zimbardo, 2000).

## **2.7 Research questions**

- What is the factor structure of the preliminary Relationship Harmony Scale?
- Can the Relationship Harmony Scale be correlated with the popular FFM factors?
- Can the Relationship Harmony cluster act as a valid predictor for Prosociality?

## **2.8 Conclusion**

This chapter has presented literature in relation to the critical aspects of personality that also included the different personality models such as the FFM, HEXACO model and the Big Seven model. Furthermore, the chapter also provided background information on the SAPI with the focus on the Relationship Harmony cluster that is one of the personality clusters within the SAPI. The next chapter will explain the research design together with the research procedure for the purposes of this study.



## **CHAPTER 3: RESEARCH DESIGN**

### **3.1 Introduction**

Chapter three will explain the research design together with the research procedure that will be necessary for the purpose of this study. This chapter will further illustrate the research methodology of the study and provide an overview of characteristics of the statistical analysis that will be critical to analyse the data accurately. It is important to note that similar studies have been conducted on some of the other personality clusters within the SAPI project (e.g. Soft-heartedness). This study therefore made use of the standard statistical procedures used in previous SAPI cluster validation studies (see Flattery, 2010; Janse van Rensburg, 2009; Labuschagne, 2010; Lötter, 2009).

### **3.2 Research design**

The research design assists in the planning and structuring of a research project in order to achieve maximum validity (Mouton & Marais, 1996). The present study made use of a quantitative cross-sectional research design. In this research design the questionnaires were completed by the respondents at one point in time and this data was then subjected to quantitative analysis (Rindfleisch, Malter, Ganesan, & Moorman, 2007).

### **3.3 Research Methodology**

#### **3.3.1 Sampling procedure**

Convenience sampling was used as it allowed for the selection of the most accessible participants. Convenience sampling is a low cost sampling method with regards to time, effort, and money (Marshall, 1996). The participants in the current study were all students from various South African tertiary institutions in the Gauteng and North West provinces ( $N = 435$ ).

### 3.3.2 Participants

Biographical information regarding the participants is displayed in table 1.

Table 1  
*Characteristics of participants (N=435)*

Item	Category	Frequency	Percentage
<b>Age</b>	18-19 years	36	8.2
	20-21 years	303	69.7
	22-23 years	56	12.9
	24-25 years	11	2.5
	Other	10	2.3
	Missing values	19	4.4
<b>Education</b>	Grade 12	370	85.1
	Certificate	10	2.3
	Diploma	10	2.3
	Bachelors	31	7.1
	Other	3	0.7
	Missing values	11	2.5
<b>Gender</b>	Male	155	35.6
	Female	274	63.0
	Missing values	3	0.7
<b>First language</b>	Afrikaans	331	76.1
	English	49	11.3
	IsiXhosa	5	1.1
	IsiNdebele	0	0
	IsiZulu	8	1.8
	Sepedi	5	1.1
	Sesotho	4	0.9
	Setswana	14	3.2
	Siswati	2	0.5
	Tshivenda	4	0.9
	Xitsonga	0	0
	Other	4	0.9
	Missing values	9	2.1
	<b>Race</b>	White	326
Black		48	11.0
Indian		10	2.3
Coloured		42	9.7
Missing values		8	1.8
<b>English reading ability</b>	Very poor	3	0.7
	Poor	11	2.5
	Good	233	53.6
	Very good	183	42.1
	Missing values	5	1.1

Table 1 indicates that the majority of the sample ( $n = 131$ ) consisted of white Afrikaans speaking females between the ages of 20 and 21 with a minimum qualification of Grade 12. The three remaining races (Black, Indian, and Coloured) constituted 23% of the

sample. The participants rated their English reading ability as “Good” (53.6%) to “Very Good” (42.1%).

### **3.3.3 Measuring battery**

Biographical information was gathered from the participants regarding their age, educational level, gender, language, race, and English reading ability.

#### ***3.3.3.1 Relationship Harmony Scale***

The preliminary SAPI Relationship Harmony Scale used in this study consisted of 76 items (e.g. “I let people talk to me as a friend”; “I accept change”; “I take revenge on people who have hurt me” and “I accept the advice from others”). Items were rated on a five-point Likert-type scale, with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). As this is a preliminary scale in the process of being refined, no reliability coefficients could be provided.

#### ***3.3.3.2 Basic Traits Inventory***

The Basic Traits Inventory (Short Form: Research Version; BTI-S) (Taylor & De Bruin, 2005), which measures the FFM of personality within the South African context, was used to measure the FFM. The research version of the BTI-S consists of a single list of 60 items that are grouped according to their facets and presented together for each factor (Taylor, 2004). Items in the BTI-S are rated on a five-point Likert-type scale, with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The reliability of the complete version of the BTI has been shown to be satisfactory, with the following internal consistency reliability scores for the five factors: Extraversion ( $\alpha = .89$ ); Neuroticism ( $\alpha = .94$ ); Openness to Experience ( $\alpha = .90$ ); Agreeableness ( $\alpha = .88$ ); and Conscientiousness ( $\alpha = .94$ ). The BTI’s reliability has also been shown to be satisfactory when measured across comparison groups (Taylor, 2004). A study by Morgan (2008) also reported reliable coefficients for the BTI-S:

Extraversion ( $\alpha = .84$ ); Neuroticism ( $\alpha = .88$ ); Conscientiousness ( $\alpha = .88$ ); Openness to Experience ( $\alpha = .85$ ); and Agreeableness ( $\alpha = .81$ ).

### **3.3.3.3 Prosocialness Scale**

The Prosocialness Scale is a 16 item questionnaire that aims to measure the Prosociality of individuals in relation to behaviours such as sharing, helping and feeling empathetic (Caprara, Steca, Zelli, & Capanna, 2005). The items in the Prosocialness Scale are measured on a five point Likert type scale ranging from 1 (Never True) to 5 (Always True) (Caprara et al., 2005). The questionnaire includes items such as “I share the things that I have with my friends”, “I intensely feel what others feel”, and “I try to be close to and take care of those who are in need” (Caprara et al., 2005). According to Caprara et al. (2005) the Prosocialness Scale has an acceptable internal consistency of  $\alpha = .95$ .

### **3.3.4 Research procedure**

The researcher distributed paper-and-pencil questionnaires to all the participants in order to obtain the data. The purpose of the study was explained to the participants and the participants were assured that all the information would be kept confidential and would only be used for the purposes of the research. Participants received instructions regarding the completion of the questionnaire and they were also allowed to ask any questions regarding the research and research process. The participants also completed a consent form indicating voluntary participation and providing their consent for their results to be used for research purposes. The entire data collection process was supervised by a registered psychologist, thus ensuring that a standardised procedure was followed throughout the completion of the data gathering phase of the research project.

### **3.3.5 Ethical considerations**

All the participants in the study were treated courteously, respectfully and fairly. All the information that was gathered from the participants was held confidential (and

anonymous). This information was only used for the purposes of this particular study. The psychologists that were administering the process of the study had adequate communication skills that allowed them to clearly inform the participants regarding the instructions and purpose of this study. Therefore, the participants of the study were fully informed with regards to the purpose and nature of the study. Furthermore, all the participants within the study were not forced to participate within the study that allowed the participants with the decision to refuse to participate within the study.

### **3.3.6 Statistical Analysis**

The statistical analysis of the present study was conducted through the use of the SPSS program (SPSS Inc., 2010).

#### ***3.3.6.1 Descriptive statistics***

The data of the three questionnaires was inspected for missing and/or unexpected values. The minimum and maximum values and the means and standard deviations were inspected to determine their plausibility. The skewness and the kurtosis coefficients of the items from the questionnaires were then investigated. Items with skewness of  $> 2$  and kurtosis of  $> 4$  were identified. These items were excluded from further analyses as they were unsuitable for factor analysis.

#### ***3.3.6.2 Unidimensionality of Relationship Harmony Scale***

A principle component analysis of the items was performed on the Relationship Harmony Scale. One component was requested and the component matrix was inspected in order to identify any items with loadings of  $< .20$ . Items that did not meet this criterion did not load sufficiently on the Relationship Harmony cluster and were also excluded from further analyses.

#### ***3.3.6.3 Factor analysis of Relationship Harmony Scale***

Exploratory Factor Analysis (EFA) was used to determine the number of factors contained within the Relationship Harmony cluster as there was limited supporting evidence for the proposed factor structure (see Norris & Lecavalier, 2010). EFA is an effective tool for refining measures, evaluating construct validity, and testing hypotheses (Conway & Huffcutt, 2003). EFA specifically explores the number of factors that occur among a set of variables as well as the degree to which the variables are related to the factors (Kahn, 2006).

In order to determine the number of factors within the scale a simple principal component analysis was conducted on the Relationship Harmony Scale and the eigenvalues  $>1$  and scree plot were investigated. Parallel analysis was also applied in order to generate eigenvalues from a random set of data based on the same number of variables and cases. This random data was then compared to the sample data. The parallel analysis represents the eigenvalues that would exist if no common factors existed within the data, which means that the correlations between the variables are due to sampling error (Netemeyer, Bearden, & Sharma, 2003). Finally, analysis was conducted on the final factor solution in order to determine whether the final factors that were extracted from the data were both statistically and theoretically acceptable.

Maximum likelihood (ML) with an oblique rotation (the factors are allowed to correlate; Field, 2005) was used to investigate the construct validity of the Relationship Harmony Scale. ML is important as it aids the researcher in gathering statistical measures of the goodness-of-fit of the factor solution and also explains the proportion of variance explained by the factor solution (Field, 2005). The pattern matrix was investigated in order to determine how many items loaded on a single factor. Items with loadings lower than .30 on all the factors and items that loaded on two or more factors were identified and removed from the analysis.

#### ***3.3.6.4 Reliability and correlations***

The Cronbach alpha coefficients for the Relationship Harmony Scale, the BTI and the Prosocialness Scale were inspected to determine the reliability of the factors. The calculation of reliability coefficients was based on the assumption of unidimensionality within each factor. Reliability score of .95 or above are considered satisfactory when important decisions are made based on specific test scores of individuals (see Nunnally & Bernstein, 1994). However, reliability coefficients of .70 or more are considered acceptable in this preliminary test development stage.

The correlations between the Relationship Harmony Scale, the BTI, and the Prosocialness Scale were obtained on the factor level in order to determine the different relationships that exist between the different factors and to identify similar factors in different scales.

#### ***3.3.6.5 Factor analysis of Relationship Harmony and BTI scales***

EFA was then used to determine whether the Relationship Harmony cluster can be identified as a unique personality facet over and above the BTI's five factors. However, EFA for all the Relationship Harmony and BTI items requires more participants than the number included in the current study's sample. When the sample size is insufficient for EFA item parcels are used to create one general factor based on the assumption that the items represent and measure the different factors (Abedi, 1997). According to Hau and Marsch (2004) item parcels should be used in confirmatory factor analysis for non-normal data when the sample size is small. Item parcelling has several advantages, including "increased reliability of item parcel responses, more definitive rotational results, less violation of normality assumptions, closer approximations to normal theory-based estimation, fewer parameters to be estimated, more stable parameter estimates, reduction in idiosyncratic characteristics of items, and simplification of model interpretation" (Hau & Marsh, 2004, p. 328).

The item scores for the BTI were therefore obtained through the creation of sub-scales within the BTI. This resulted in the creation of 15 sub-scales consisting of three items each. As there were more items within the Relationship Harmony factors than in the BTI sub-scales, the standard deviations of the Relationship Harmony factors were expected to be far greater than those of the BTI sub-scales. Standardised scores were therefore calculated for each of the Relationship Harmony factors and BTI sub-scales in order to compare residuals from different scales and to derive universal guidelines regarding acceptable values (Field, 2005).

A simple principal component analysis was conducted and the eigenvalues and scree plot were inspected in order to determine the number of factors to extract. Maximum likelihood with a Direct Oblimin rotation was used to analyse the factor solution and the pattern matrix was inspected to determine whether each of the factors was well defined with loadings  $> .30$ . When inspecting the factor correlation matrix it was expected that correlations  $> .20$  would be found between factors that are very similar. Within the factor correlation matrix the correlations express the degree of the relationship between the various factors (Rummel, 1970). According to Rummel (1970) the relationship is tenuous when the correlation is close to zero, while a correlation of close to 1 indicates a strong relationship between the two factors.

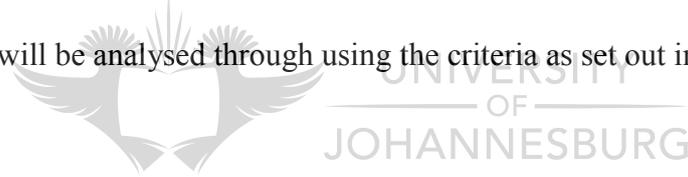
#### ***3.3.6.6 Regression analysis***

Multiple regression analysis was used to analyse the amount of variance in Prosocialness explained and predicted by the Relationship Harmony Scales. Before the relationship between the variables was inspected the assumption of linearity was analysed in order to determine whether there were any outliers within the data. The boxplot, histogram, mahalanobis distances, multicollinearity, and linearity were analysed in order to identify outliers within the data of the Relationship Harmony Scale (see Field, 2005). The coefficients

table together with the model summary was inspected in order to determine the individual contributions of the Relationship Harmony factors towards the Prosocialness Scale as well as the significance of each of these factors (see Field, 2005). The contribution was specified through inspecting the  $R^2$ , which indicates how much of the proportion of variance of the dependent variable is explained by the independent variables (i.e. Relationship Harmony factors) (Welkowitz, Cohen, & Ewen, 2010). The  $F$  test was used to test whether the partial regression coefficients in the multiple regression equation were equal to zero (Allen, 1997).

### **3.4 Conclusion**

Chapter three explained the research design of the study and also outlined the research procedure that was executed throughout the study. This chapter also illustrated the research methodology of the study and provided an overview in relation to the characteristics of the statistical analysis that were critical to analyse the data accurately. In the next chapter, the results of the study will be analysed through using the criteria as set out in the statistical analysis.



## CHAPTER 4: RESULTS

### 4.1 Introduction

In chapter four, the chapter will include different tables that are indicative of the results that were obtained by performing the SPSS program. These results pertaining to the study will be analysed through using the criteria that was set out in the statistical analysis in chapter three.

### 4.2 Results

#### 4.2.1 Descriptive statistics and unidimensionality of Relationship Harmony Scale

The descriptive statistics and component matrix results are presented in table 2.

Table 2

*Descriptive statistics, skewness, kurtosis, and component matrix of the Relationship Harmony Scale (N=435)*

Item label	Mean	SD	Skewness	Kurtosis	Component
i009APPaccRH	3.93	0.79	-0.97	1.84	.43
i009APPappRH	4.22	0.76	-0.97	1.50	.54
i010APPappRH	4.32	0.67	-0.81	1.07	.61
i013APPappRH	4.25	0.65	-0.55	0.42	.55
i018APPappRH	4.29	0.64	-0.56	0.33	.55
i023APPappRH	4.31	0.72	-1.13	2.20	.58
i025APPappRH	4.19	0.79	-1.28	2.98	.44
i001APParrRH	2.02	0.99	0.95	0.70	-.40
i002APParrRH	1.93	0.98	0.90	0.13	-.47
i005APParrRH	2.71	1.13	0.10	-0.85	-.33
i006APParrRH	2.05	1.05	0.73	-0.28	-.35
i021APParrRH	1.82	0.92	1.21	1.43	-.46
i025APParrRH	1.63	0.79	1.26	1.58	-.54
i036APParrRH	2.04	0.94	0.46	-0.75	-.51
i037APParrRH	1.70	0.86	1.38	1.96	-.50
i003APPflxRH	3.63	0.97	-0.44	-0.02	.27
i008APPflxRH	3.83	0.82	-0.69	0.97	.33
i012APPflxRH	3.90	0.81	-0.76	1.21	.39
i008APPhumRH	4.05	0.75	-0.77	1.18	.54
i002APPopoRH	4.00	0.68	-0.45	0.82	.58
i004APPopoRH	4.00	0.67	-0.66	1.85	.59
i007APPopoRH	3.90	0.71	-0.50	0.93	.56
i008APPopoRH	3.94	0.84	-1.22	2.37	.49
i010APPprdRH	1.95	0.96	0.91	0.28	-.37
i007APPstbRH	1.59	0.92	1.98	4.05	-.38
i009APPstbRH	1.75	0.82	1.00	0.93	-.47
i021APPstbRH	1.88	0.88	0.95	0.74	-.35
i008APPtolRH	3.47	0.94	-0.60	0.14	.34
i002APPwlcRH	3.99	0.68	-0.86	2.20	.59

i007APPwlcRH	4.09	0.64	-0.40	0.64	.65
i009APPwlcRH	4.15	0.64	-0.40	0.50	.65
i005IRappRH	4.12	0.76	-0.83	1.16	.53
i007IRappRH	4.26	0.65	-0.82	2.37	.55
i005IRconsRH	4.12	0.64	-0.70	2.39	.54
i008IRconsRH	4.17	0.62	-0.30	0.27	.57
i010IRconsRH	4.02	0.65	-0.28	0.23	.39
i001IRcoopRH	3.97	0.73	-0.46	0.43	.60
i010IRcoopRH	3.90	0.80	-0.61	0.71	.45
i012IRcoopRH	3.96	0.75	-0.74	1.51	.49
i001IRforgRH	4.06	0.78	-0.95	1.89	.54
i002IRforgRH	4.11	0.74	-0.80	1.55	.56
i003IRforgRH	3.54	1.00	-0.45	-0.14	.44
i005IRforgRH	3.88	0.78	-0.92	1.95	.43
i010IRforgRH	3.83	1.02	-0.65	-0.10	-.35
i015IRforgRH	2.38	0.97	0.48	-0.13	-.27
i003IRgoodrRH	3.84	0.66	-0.42	0.50	.51
i006IRgoodrRH	4.12	0.67	-0.61	1.25	.56
i011IRgoodrRH	4.15	0.72	-0.57	0.44	.44
i015IRgoodrRH	4.02	0.69	-0.82	2.24	.53
i004IRpeaceRH	4.18	0.68	-0.55	0.68	.61
i015IRpeaceRH	4.29	0.68	-0.60	-0.03	.53
i018IRpeaceRH	3.85	0.81	-0.36	-0.15	.52
i020IRpeaceRH	3.76	0.98	-0.53	-0.12	.40
i022IRpeaceRH	3.97	0.93	-0.78	0.39	.43
i001IRpkRH	3.83	0.77	-0.50	0.60	.47
i003IRpkRH	3.94	0.72	-0.69	1.30	.50
i004IRpkRH	3.75	0.78	-0.63	0.95	.43
i018IRpkRH	3.70	0.86	-0.53	0.32	.48
i001IRwmRH	3.99	0.70	-0.79	2.19	.50
i002IRwmRH	4.09	0.74	-1.23	3.56	.45
i017IRwmRH	4.18	0.85	-1.43	2.97	.37
i001CSprovRH	2.27	1.09	0.54	-0.54	-.37
i006CSprovRH	2.18	1.01	0.62	-0.22	-.48
i007CSprovRH	2.08	0.97	0.68	-0.11	-.53
i005CStrblRH	2.13	0.98	0.60	-0.27	-.44
i006CStrblRH	1.83	0.81	0.90	0.67	-.58
i009CStrblRH	1.64	0.73	1.16	1.64	-.59
i011CStrblRH	1.69	0.76	1.08	1.24	-.58
i003MEDgosRH	2.47	1.04	0.02	-0.94	-.33
i005MEDgosRH	2.16	0.96	0.49	-0.33	-.39
i008MEDgosRH	1.66	0.78	1.14	1.15	-.46
i012MEDgosRH	2.34	1.07	0.34	-0.73	-.39
i019MEDgosRH	1.96	0.90	0.68	-0.15	-.45
i003MEDintfRH	2.17	0.94	0.45	-0.38	-.29
i004MEDintfRH	1.95	0.83	0.70	0.43	-.42
i011MEDintfRH	2.08	0.96	0.67	-0.05	-.31

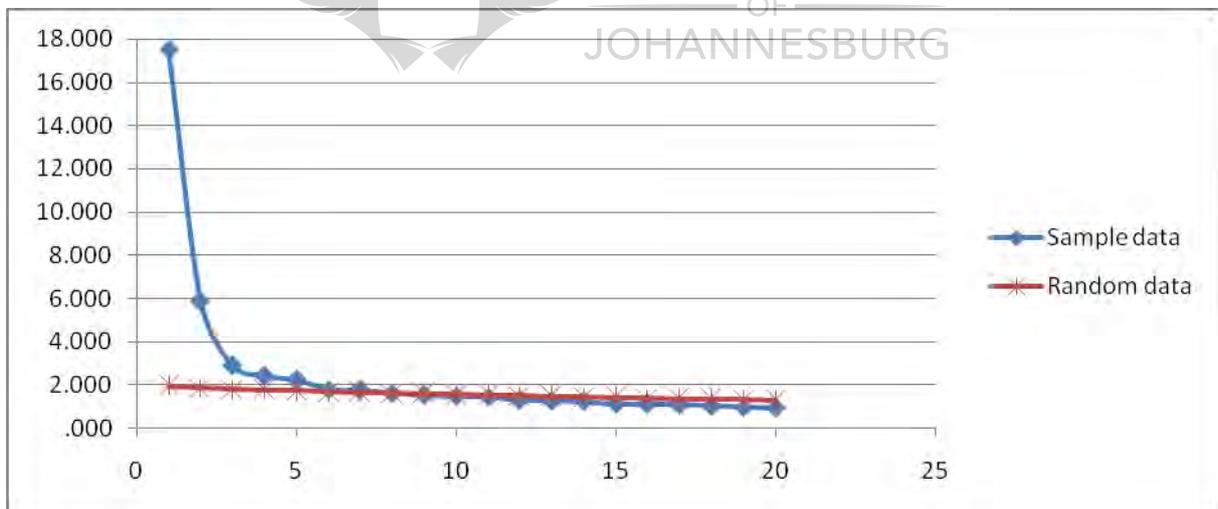
The results in table 2 indicate that most of the items in the Relationship Harmony Scale were normally distributed. However, one item (i007APPstbRH) was skew and also displayed a form of kurtosis. This item was removed from further analysis. The inter-item correlations of the items were all  $> .2$ .

The descriptive statistics of the BTI and the Prosocialness Scale were also investigated. All the items in these scales were normally distributed with skewness values lower than 2 and kurtosis values lower than 4. These items were all consequently included in further statistical analysis.

#### 4.2.2 Factor analysis

A simple principle component analysis was conducted to determine how many factors to extract. Although the scree plot and the parallel analysis suggested that seven factors should be extracted (see figure 1), a seven and a six factor structure both yielded unsatisfactory factor loadings. A five factor structure yielded reliable and satisfactory results. Each of the five factors explained more than 3% of the variance above and beyond that explained by the other factors. These five factors explained 41% of the total variance.

Figure 1 Scree plot and parallel analysis



The results for the pattern matrix of the Relationship Harmony Scale are presented in table 3.

Table 3  
*Oblique Pattern Matrix of the Relationship Harmony Scale (N=435)*

Item	F1	F2	F3	F4	F5	h <sup>2</sup>
i003APPflxRH	<u>.59</u>	.03	.10	.10	.01	.29
i008APPflxRH	<u>.59</u>	.02	.02	.10	.01	.31
i012APPflxRH	<u>.60</u>	.00	.02	-.02	.08	.33
i008APPPhumRH	<u>.47</u>	-.07	-.04	-.14	-.04	.35
i002APPPopoRH	<u>.43</u>	-.11	-.03	.00	-.27	.42
i004APPPopoRH	<u>.42</u>	-.07	-.10	-.02	-.23	.42
i007APPPopoRH	<u>.32</u>	-.01	-.06	-.27	-.15	.34
i008APPPopoRH	<u>.30</u>	-.10	-.09	-.06	-.14	.25
i008APPtoIRH	<u>.34</u>	-.01	-.06	-.11	.05	.16
i002APPwlcRH	<u>.31</u>	-.11	-.12	-.07	-.26	.37
i009APPwlcRH	<u>.33</u>	-.16	-.11	-.09	-.27	.44
i005IRappRH	<u>.35</u>	-.03	-.12	-.10	-.15	.31
i007IRappRH	<u>.32</u>	-.02	-.26	-.07	-.10	.33
i005IRconsRH	<u>.49</u>	.05	-.14	-.01	-.16	.41
i008IRconsRH	<u>.42</u>	.01	-.25	-.03	-.08	.40
i010IRconsRH	<u>.37</u>	.05	-.12	.04	-.13	.24
i001IRcoopRH	<u>.44</u>	-.13	-.09	.09	-.29	.47
i010IRcoopRH	<u>.34</u>	-.14	-.05	.17	-.28	.31
i012IRcoopRH	<u>.34</u>	-.05	-.15	.05	-.20	.30
i001IRforgRH	<u>.43</u>	-.04	-.15	-.08	-.05	.34
i003IRgoodrRH	<u>.31</u>	-.08	-.24	.13	-.20	.35
i006CSprovRH	-.02	<u>.43</u>	.21	.24	-.18	.44
i005CStrblRH	-.05	<u>.44</u>	.12	.21	-.15	.37
i006CStrblRH	-.11	<u>.54</u>	.06	.24	-.05	.54
i011CStrblRH	-.14	<u>.43</u>	.06	.28	-.02	.47
i003MEDgosRH	.05	<u>.71</u>	.03	-.21	.05	.42
i005MEDgosRH	.02	<u>.69</u>	-.01	-.07	.03	.44
i008MEDgosRH	-.08	<u>.66</u>	-.07	-.04	.10	.45
i012MEDgosRH	.04	<u>.64</u>	.03	.07	-.07	.44
i019MEDgosRH	.00	<u>.72</u>	.01	-.05	.03	.50
i003MEDintfRH	.06	<u>.68</u>	-.07	-.01	-.06	.41
i004MEDintfRH	-.06	<u>.57</u>	-.06	.07	.02	.37
i011MEDintfRH	.10	<u>.43</u>	-.03	.15	.05	.25
i005IRforgRH	.17	.08	<u>-.39</u>	-.03	-.07	.26
i006IRgoodrRH	.20	.03	<u>-.33</u>	-.05	-.23	.36
i011IRgoodrRH	.09	-.01	<u>-.33</u>	.02	-.21	.25
i015IRgoodrRH	.09	-.09	<u>-.37</u>	.04	-.23	.33
i004IRpeaceRH	.11	-.02	<u>-.51</u>	-.09	-.11	.44
i015IRpeaceRH	.11	.03	<u>-.46</u>	-.13	-.06	.34
i018IRpeaceRH	.17	-.04	<u>-.38</u>	-.04	-.07	.30
i020IRpeaceRH	.05	-.01	<u>-.47</u>	-.10	.10	.25
i022IRpeaceRH	.00	.00	<u>-.57</u>	-.08	.08	.33
i001IRpkRH	-.18	.01	<u>-.88</u>	.08	-.02	.65
i003IRpkRH	-.12	.00	<u>-.85</u>	.10	-.04	.63
i004IRpkRH	-.07	.02	<u>-.81</u>	.18	-.01	.57
i018IRpkRH	.06	-.12	<u>-.48</u>	.02	-.01	.31
i010IRforgRH	.23	-.04	.00	<u>-.43</u>	.20	.29
i001APParrRH	.06	.02	.00	<u>.63</u>	.06	.40
i002APParrRH	.03	.04	.02	<u>.66</u>	.06	.48
i005APParrRH	.09	.13	.00	<u>.35</u>	.15	.20
i006APParrRH	.14	.00	.18	<u>.44</u>	.08	.25
i021APParrRH	.11	.11	-.08	<u>.66</u>	.18	.51
i025APParrRH	.13	.17	-.01	<u>.65</u>	.22	.59
i036APParrRH	.03	.28	.12	<u>.39</u>	.03	.39
i037APParrRH	.09	.14	.00	<u>.67</u>	.11	.56

i010APPprdRH	-.17	.01	-.04	<b><u>.40</u></b>	.03	.22
i009APPstbRH	-.23	.11	-.06	<b><u>.35</u></b>	.07	.28
i001CSprovRH	-.04	.16	.25	<b><u>.31</u></b>	-.24	.29
i009APPaccRH	.18	.00	.01	-.18	<b><u>-.30</u></b>	.22
i009APPappRH	.07	-.09	.01	-.04	<b><u>-.66</u></b>	.52
i010APPappRH	.03	-.06	-.01	-.14	<b><u>-.73</u></b>	.64
i013APPappRH	-.04	-.04	-.12	-.04	<b><u>-.71</u></b>	.58
i018APPappRH	.06	.10	-.13	-.15	<b><u>-.60</u></b>	.51
i023APPappRH	.06	.01	-.10	-.22	<b><u>-.51</u></b>	.44
i025APPappRH	.11	.08	-.07	-.13	<b><u>-.44</u></b>	.30
i007CSprovRH	-.02	<b><u>.34</u></b>	0.19	<b><u>.33</u></b>	-.09	.42
i021APPstbRH	-.19	.04	-.04	.29	.05	.17
i007APPwlcRH	<b><u>.34</u></b>	-.11	-.11	-.03	<b><u>-.38</u></b>	.50
i002IRforgRH	.28	-.07	-.29	-.07	-.06	.33
i003IRforgRH	.17	-.03	-.26	-.09	-.06	.20
i015IRforgRH	.17	.00	-.09	-.25	.13	.13
i001IRwmRH	.21	-.07	-.25	-.09	-.08	.25
i002IRwmRH	.22	-.09	-.19	-.05	-.06	.20
i017IRwmRH	.04	-.05	-.25	.04	-.21	.17
i009CStrblRH	-.15	<b><u>.45</u></b>	.06	<b><u>.36</u></b>	-.11	.56
<b>Total % variance</b>	23.38%	7.91%	3.87%	3.27%	3.04%	

Values in bold and underlined indicate are higher than the other values.  
h<sup>2</sup> denotes communalities of the items.

Table 3 shows that the five extracted factors were well represented with loadings > .30. Only 10 items were excluded from further analyses. These items either loaded on more than one factor (e.g. i007CSprovRH: “I challenge people in front of others” loaded on both factor 2 and factor 4) or did not have a loading of > .30 on any of the extracted factors (e.g. i021APPstbRH: “I refuse help from others”). These 10 items were thus identified as problematic items in the preliminary Relationship Harmony Scale.

The remaining items represented the five factors well with communalities ranging for the most part between average and high. The five factors were labelled Interpersonal Relatedness (factor 1; 21 items); Meddlesome (factor 2; 12 items); Mediating (factor 3; 13 items); Arrogant (factor 4; 12 items); and Approachable (factor 5; 6 items).

#### 4.2.3 Reliability and correlations

The results for the reliability analyses of the various scales are presented in table 4. The reliability for each of these scales was calculated in order to determine whether the score was consistent and free from random error (Streiner, 2003).

Table 4

*Descriptive statistics, Cronbach alpha coefficients and correlations between the Relationship Harmony Scale and the BTI Scale (N=435)*

Item	Mean	SD	$\alpha$	1	2	3	4	5	6	7	8	9	10
<b>Relationship Harmony</b>													
1. Interpersonal Relatedness	83.26	8.94	.90	1.00	-	-	-	-	-	-	-	-	-
2. Meddlesome	24.65	7.28	.88	-.34**	1.00	-	-	-	-	-	-	-	-
3. Mediating	51.43	6.34	.87	<u>.62**</u>	-.32**	1.00	-	-	-	-	-	-	-
4. Arrogant	24.03	7.09	.85	-.39**	<u>.59**</u>	-.36**	1.00	-	-	-	-	-	-
5. Approachable	25.57	3.24	.86	<u>.61**</u>	-.26**	.49**	-.36**	1.00	-	-	-	-	-
<b>BTI</b>													
6. Extraversion	49.50	6.91	.84	.35**	-.02	.22**	-.01	.34**	1.00	-	-	-	-
7. Neuroticism	31.30	8.87	.89	-.28**	.24**	-.19**	.25**	-.16**	-.19**	1.00	-	-	-
8. Conscientiousness	44.66	7.23	.87	-.29**	-.21**	.25**	-.16**	.24**	.34**	-.21**	1.00	-	-
9. Openness to Experience	46.57	6.76	.86	.44**	-.13**	.35**	-.13**	.37**	.48**	-.23**	.43**	1.00	-
10. Agreeableness	47.78	5.55	.81	<u>.56**</u>	-.33**	.46**	-.39**	<u>.52**</u>	.45**	-.33**	.42**	<u>.55**</u>	1.00
11. Prosocialness	63.70	8.62	.90	<u>.59**</u>	-.27**	<u>.52**</u>	-.38**	.48**	.34**	-.13**	.36**	.48**	<u>.57**</u>

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

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

Table 4 shows that the reliabilities from the Relationship Harmony Scale, the BTI, and the Prosocialness Scale were all satisfactory ranging from  $\alpha = .81$  to  $\alpha = .90$ .

According to table 4 statistically significant relationships exist between all the Relationship Harmony factors at the 0.01 level. According to the Cohen criteria, the following effect sizes were seen as acceptable and provided an objective measure (see Field, 2005):  $r > .10$  (small effect);  $r > .30$  (medium effect); and  $r > .50$  (large effect). The correlations vary between  $r = -.26$  (small effect) and  $r = .62$  (large effect). The BTI factors were also correlated significantly at the 0.01 level, ranging between  $r = -.19$  (small effect) and  $r = .55$  (large effect).

For the relationships between the Relationship Harmony Scale and the BTI-S, only the correlations between Extraversion and Meddlesome ( $r = -.02$ ), and Extraversion and Arrogant ( $r = -.01$ ) were statistically insignificant. The rest of the correlations were all statistically and practically significant, ranging from  $r = -.13$  (small effect) to  $r = .56$  (large effect). The strongest relationships were found between Meddlesome and Arrogant ( $r = .59$ ), Interpersonal Relatedness and Mediating ( $r = .62$ ), Interpersonal Relatedness and Approachable ( $r = .61$ ), Interpersonal Relatedness and Agreeableness ( $r = .56$ ), Agreeableness and Approachable ( $r = .52$ ), and Agreeableness and Openness to Experience ( $r = .55$ ).

The relationships between the Prosocialness Scale, the Relationship Harmony Scale and the BTI-S were statistically and practical significance, ranging between  $r = .13$  (small effect) and  $r = .59$  (large effect). The strongest relationships between the Relationship Harmony factors and the Prosocialness Scale were between Interpersonal Relatedness and Prosocialness ( $r = .59$ , large effect), and Mediating and Prosocialness ( $r = .52$ , large effect). In the BTI-S the strongest relationship was between Agreeableness and Prosocialness ( $r = .57$ , large effect).

#### 4.2.4 Factor analysis of Relationship Harmony and BTI scales

The results from scree plot generated by the principal component analysis suggested that five factors should be extracted when combining the Relationship Harmony Scale and BTI parcels (see figure 2). These five factors jointly account for 64% of the total variance of the combined scale.

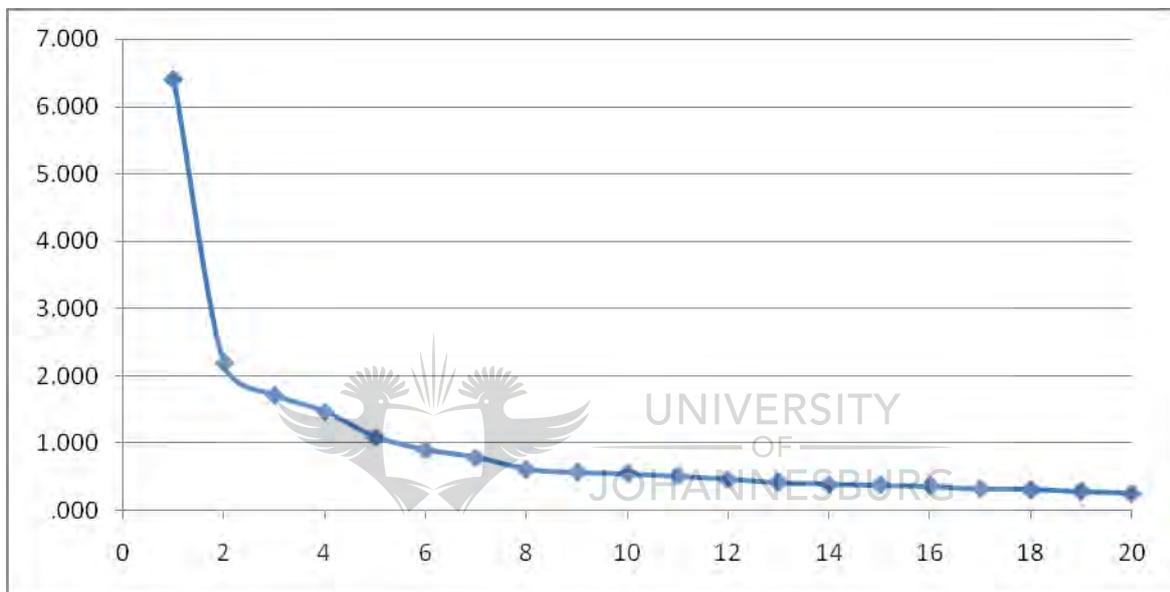


Figure 2 Scree plot relating to the factor structures

The pattern matrix from the maximum likelihood estimation with a direct Oblimin rotation is displayed in table 5.

Table 5

*Pattern matrix for the Relationship Harmony Scale and BTI sub-scales*

Factors	F1	F2	F3	F4	F5	$h^2$
Interpersonal Relatedness	<b><u>.67</u></b>	.00	-.13	.04	-.16	.60
Meddlesome	<b><u>-.58</u></b>	.13	-.14	.16	-.18	.42
Mediating	<b><u>.62</u></b>	.06	.01	.00	-.16	.45
Arrogant	<b><u>-.70</u></b>	.12	-.14	.06	-.16	.52
Approachable	<b><u>.64</u></b>	.08	-.19	.06	-.11	.51
Agreeableness1	<b><u>.37</u></b>	-.07	-.14	-.04	-.19	.33
Agreeableness2	<b><u>.36</u></b>	-.08	-.20	-.16	-.15	.43
Agreeableness3	<b><u>.47</u></b>	-.07	-.13	-.03	-.23	.48
Neuroticism1	-.05	<b><u>.66</u></b>	-.10	-.01	.11	.48
Neuroticism2	.00	<b><u>.89</u></b>	.06	-.01	-.05	.79
Neuroticism3	.05	<b><u>.70</u></b>	.09	-.01	.01	.48
Extraversion1	-.16	-.06	<b><u>-.67</u></b>	-.07	.00	.47
Extraversion2	.11	.01	<b><u>-.77</u></b>	-.11	.05	.66
Extraversion3	.21	-.07	<b><u>-.65</u></b>	.05	-.10	.61
Conscientiousness1	.05	.04	-.19	<b><u>-.54</u></b>	-.07	.44
Conscientiousness2	-.06	.04	.07	<b><u>-.85</u></b>	-.06	.69
Conscientiousness3	.03	-.04	-.03	<b><u>-.69</u></b>	-.01	.53
Openness1	.07	-.06	.02	-.10	<b><u>-.64</u></b>	.52
Openness2	.09	-.03	.08	-.07	<b><u>-.75</u></b>	.62
Openness3	-.08	-.06	-.10	-.07	<b><u>-.74</u></b>	.66

Values in bold and underlined are higher than the other values.  
 $h^2$  denotes communalities of the items.

Table 5 displays the five general factors that were extracted from the Relationship Harmony Scale and the BTI parcels. The Relationship Harmony factors and the Agreeableness factor merged to form the first factor, while the rest of the BTI factors remained the same. The five factors were labelled Relationship Harmony (factor 1), Neuroticism (factor 2), Extraversion (factor 3), Conscientiousness (factor 4), and Open to Experience (factor 5). The scales were well represented by the five factors with communalities ranging between average and high.

The factor correlation matrix is presented in table 6.

Table 6

*Factor correlation matrix of the Relationship Harmony Scale and BTI sub-scales*

Factor	1	2	3	4	5
1.Relationship Harmony	1.00	-	-	-	-
2. Neuroticism	<b><u>-.34</u></b>	1.00	-	-	-
3. Extraversion	-.18	.13	1.00	-	-
4. Conscientiousness	<b><u>-.33</u></b>	.26	.27	1.00	-
5. Open to Experience	<b><u>-.37</u></b>	.18	<b><u>.52</u></b>	<b><u>.37</u></b>	1.00

Table 6 shows the correlations between the five factors identified within the pattern matrix. Relationship Harmony has moderate negative correlations with Neuroticism ( $r = -.34$ ), Conscientiousness ( $r = -.33$ ), and Open to Experience ( $r = -.37$ ). These moderate relationships indicate that each relationship accounts for about 9% of the total variance (see Field, 2005). Table 6 reveals that Extraversion has a strong positive correlation with Open to Experience ( $r = .52$ ) where the effect accounts for 25% of the total variance (see Field, 2005). Lastly, Conscientiousness displays a moderate positive relationship with Open to Experience ( $r = .37$ ).

#### 4.2.5 Regression analysis

In order to meet all the assumptions of normal distribution, homoscedasticity and linearity, 4 cases were removed prior to the regression analysis. The results for the multiple regression analysis with Prosocialness as dependent variable are presented in table 7.

Table 7

*Regression coefficients of the independent variables*

Model	Unstandardized Coefficients		Standardized Coefficients	F	Sig.
	B	Std. Error	Beta		
(Constant)	18.1	4.56			.00
1.Interpersonal Relatedness	0.33	0.05	0.34	226.74	.00
2.Meddlesome	0.04	0.06	0.04	3.62	.44
3.Mediating	0.27	0.07	0.20	22.48	.00
4.Arrogant	-0.20	0.06	-0.16	14.03	.00

5.Approachable	0.31	0.13	0.12	5.91	.02
Model 1: $R^2 = .35; p = .000$					
Model 2: $R^2 = .01; p = .058$					
Model 3: $R^2 = .03; p = .000$					
Model 4: $R^2 = .02; p = .000$					
Model 5: $R^2 = .01; p = .015$					

Table 7 indicates that there is a positive relationship between Prosocialness and Interpersonal Relatedness, Meddlesome, Mediating, and Approachable. This suggests that an increase in the experience of any of these four Relationship Harmony factors is likely to lead to an increase in Prosocialness. However, Prosocialness has a negative relationship with Arrogant. Thus, an increase in Arrogant is likely to lead to a decrease in Prosocialness. Table 7 shows that Interpersonal Relatedness ( $F(1,429)= 226.74, p < .00$ ), Mediating ( $F(1,427)= 22.48, p < .00$ ), and Arrogant ( $F(1,426)= 14.03, p < .00$ ) are all significant predictors of Prosocialness.

Relationship Harmony predicts only 42% of the total variance explained by Prosocialness. The Interpersonal Relatedness, Mediating, and Arrogant factors contributed significantly ( $p < .01$ ) to predicting Prosocialness. Interpersonal Relatedness explained the highest percentage of variance in Prosocialness (35%), while Mediating explained an additional 3% of the total variance in Prosocialness.

### 4.3 Conclusion

This chapter included different tables that were indicative of the results that were obtained by performing the SPSS program. These results pertaining to the study were analysed through using the criteria that was set out in the statistical analysis in chapter three. The following chapter will provide a discussion through comparing the findings from this particular study with those findings from other studies.

## **CHAPTER 5: DISCUSSION**

### **5.1 Introduction**

Chapter five will include a discussion through comparing the findings from this particular study with those findings from other studies. This discussion will provide the necessary information that is needed to determine whether the general and specific objectives of this study have been achieved.

### **5.2 Discussion**

The general objective of this study was to validate the preliminary Relationship Harmony Scale within the South African Personality Inventory. The specific objectives were to determine whether the Relationship Harmony cluster (1) has a valid factor structure that represents the Relationship Harmony cluster, (2) can be correlated or distinguished from the popular FFM factors, and (3) can act as a valid predictor for Prosocialness.

#### **5.2.1 Validating the factors in the Relationship Harmony Scale**

In order to determine whether the first specific objective of the study was achieved, the items were inspected and items that could have influenced the reliability and validity of the Relationship Harmony Scale were identified. The skewness, kurtosis and inter-item correlations clearly showed that one item (i007APPstbRH ) within the Relationship Harmony Scale needed to be eliminated from the scale. This indicates that only one item within the preliminary Relationship Harmony Scale was not well suited to measure the Relationship Harmony cluster.

The BTI-S and the Prosocialness Scale did not have any problematic items. This was an expected finding as these scales have already been shown to be valid and reliable (Caprara et al., 2005; Taylor & De Bruin, 2005). In addition, the BTI-S was developed specifically for

the South African population (Taylor & De Bruin, 2005) and therefore it was expected to perform well within the current study.

Although Nel (2008) suggested a four factor solution for the Relationship Harmony Scale, the results from the current study clearly indicated that a five factor structure yielded reliable and satisfactory results for the Relationship Harmony construct. The four factors identified by Nel (2008) were labelled Approachability, Conflict-seeking, Interpersonal Relatedness, and Meddlesome. The five factors identified within this study were labelled Interpersonal Relatedness, Meddlesome, Mediating, Arrogant, and Approachable. In the five factor structure for the Relationship Harmony Scale, the Approachable factor contains items from both the original Approachability and Interpersonal Relatedness sub-clusters. The construct name “Approachable” was retained since all the items included in this factor referred to a person that is easy to approach and talk to about feelings and problems.

Conflict-seeking did not emerge as a distinct factor but instead merged with the Meddlesome factor. The Meddlesome was re-defined as a person who tends to gossip about other people, creates conflict with others, and intrudes in the lives of other people.

The Interpersonal Relatedness factor also retained its original name since all the items representing this factor were focused on the notion of Interpersonal Relatedness. However, the cluster also includes items that are representative of the original Approachability construct. The newly developed Interpersonal Relatedness sub-cluster is thus different from the sub-cluster identified by Nel (2008). Interpersonal Relatedness includes facets such as welcoming, being appeasing, constructive, and cooperative. The new Interpersonal Relatedness sub-cluster describes a person who is constructive, flexible, cooperative, and accepting of others’ opinions within relationships.

The two new factors identified in the study were labelled Arrogant and Mediating. The Arrogant factor refers to a person that strives to be better than others by ignoring people

and constantly believing that he or she is more important than other people. This factor mostly includes items from the Arrogant facet of the Approachability sub-cluster proposed by Nel (2008). It also includes items from the proud - and stubborn facet within the Approachability sub-cluster and one item from the provoking facet within the Conflict-seeking sub-cluster.

Lastly, the Mediating factor refers to a person who strives to find harmony, keeps good relations with other people, and ensures peace in conflicting relationships. This factor contains items from the original Interpersonal Relatedness sub-cluster's good relations, peacemaker, and peaceful facets (see Nel, 2008).

Ten items were excluded from further analyses as these items either loaded on more than one factor or did not have a sufficient loading on any of the extracted factors.

All the Relationship Harmony factors had relatively strong inter-correlations. The Interpersonal Relatedness, Mediating, and Approachable factors correlated strongly with each other, while the Meddlesome and Arrogant factors displayed a strong correlation. This finding confirms Nel et al.'s (in press) theory that the Relationship Harmony cluster contains two opposite poles. Nel et al. (in press, p. 15) described the positive pole as "being approachable and accessible for others (versus placing oneself above others), being constructive in one's relationships, and actively maintaining them by being forgiving, peaceful, and cooperative". The positive pole in this study can be described as being easy to approach in order to discuss problems and feelings, finding harmony and keeping good relations with other people, and being constructive and cooperative within relationships.

Nel et al. (in press, p. 16) describes the negative pole as "being disruptive, causing (and enjoying) conflicts, and provoking others, as well as interfering in others' lives by gossiping or meddling". Within this study the negative pole can be described as striving to

be better than others by ignoring people and thriving on creating conflict with others and interfering with the lives of other people.

The final Relationship Harmony measuring instrument therefore consists of 65 items that represent five very reliable factors. These five factors represent two opposite features of Relationship Harmony.

### **5.2.2 Relationship Harmony cluster as a distinguishable factor from the factors in the FFM**

The next objective of the study involved determining whether the Relationship Harmony cluster could be distinguished from the five factors within the BTI-S, which measures the universally acceptable FFM.

The strongest relationships between the five factors from each of the two scales existed between the Relationship Harmony factors and the Agreeableness factor within the FFM. It is therefore not surprising that the results from the factor analysis yielded a five factor structure in which the Relationship Harmony factors merged with the Agreeableness factor. This confirms Nel's (2008) suggestion that some of the sub-clusters of Relationship Harmony correspond with all the Agreeableness factors. Agreeableness is defined as "the degree to which an individual is able to get along with other people, and has compassion for others" (Taylor & De Bruin, 2006, p. 5), while Relationship Harmony refers to "a state in which a person believes in keeping good relationships with others, keeping the peace, maintaining relationships on good terms, and being open to understanding and tolerance" (Nel, 2008, p. 125). These two definitions show that both Agreeableness and Relationship Harmony are associated with forming and maintaining good relationships with others. It is therefore understandable that the Relationship Harmony cluster and the Agreeableness factor merged.

### **5.2.3 Relationship Harmony as a valid predictor of Prosociality**

The last objective of this study was to investigate whether Relationship Harmony, as an independent variable, is able to predict Prosociality. Relationship Harmony predicted approximately 42% of the total variance in Prosociality. Three factors seemed to play an important role in predicting Prosociality. These three factors were Interpersonal Relatedness, Mediating, and Arrogant.

The results from this study suggest that the people who act in a sharing, caring comforting and helping manner are likely to have high scores on the Interpersonal Relatedness and Mediating factors. Therefore, a person who tends to be cooperative, flexible, and accepting of others' opinions might behave in a prosocial manner through sharing, being cooperative and empathetic. Similarly, individuals who aim to keep peace and harmony within relationships, and ensure good relations with other people, are more likely to display helpful, caring and empathetic behaviour towards others. Finally, the more a person strives to be better than others by ignoring people and believing that they are more important than other people, the less likely they are to display prosocial behaviour.

### **5.3 Conclusion**

This chapter included a discussion through comparing the findings from this particular study with those findings from other studies. This discussion also provided the necessary information that was needed to determine whether the general and specific objectives of this study have been achieved. The last chapter of the minor dissertation will elaborate on the conclusions regarding the objectives of the study. Furthermore, the chapter will also point out the possible limitations of the study follow by suggestions for future research.

## **CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Introduction**

The last chapter of the minor dissertation will elaborate on the conclusions regarding the objectives of the study. Furthermore, the chapter will also point out the possible limitations that might have impacted on the results of the study. The limitations will then be followed by suggestions for future research.

### **6.2 Conclusions**

The results of this study suggest that 65 of the initial 76 items included in the preliminary Relationship Harmony Scale can be used to measure the Relationship Harmony cluster. The study also suggested that a five factor would be appropriate for the Relationship Harmony cluster, thus partially supporting Nel (2008) hypothesised factor structure. The five sub-clusters in the Relationship Harmony cluster were labelled Interpersonal Relatedness, Meddlesome, Mediating, Arrogant, and Approachable. The 65 item Relationship Harmony Scale thus provided valid and reliable results to represent the Relationship Harmony cluster, which consists of five sub-clusters.

In order to determine the scale's discriminant and convergent validity the Relationship Harmony Scale was compared with the BTI-S. The relationships between the Relationship Harmony cluster and the BTI-S factors were assessed. The results of the analysis provided some support for Nel's (2008) hypothesis that some of the sub-constructs of Relationship Harmony are similar to the Agreeableness factor. The results indicated that the Relationship Harmony Scale did converge with the Agreeableness factor of the BTI-S and was distinguishable from the other factors in the BTI-S. Lastly, the study found that the Relationship Harmony cluster does significantly predict Prosocialness as an independent

variable. Three of the Relationship Harmony sub-clusters (Interpersonal Relatedness, Mediating, and Arrogant) played an important role in the prediction of Prosocialness.

### **6.3 Limitations**

Although the results of this study are valid and reliable, the study did have possible limitations. Firstly, this was the first study conducted on the construct validation of the Relationship Harmony Scale and for this reason important aspects that might have influenced the results throughout the study might not have been taken into consideration. One of these aspects could include the present study's failure to use Rasch analysis to identify problematic items within the Relationship Harmony Scale. Rasch analysis measures item difficulty in accordance with the person's ability to understand those items and weighs the scores accordingly (Pesudovs, Garamendi, Keeves, & Elliott, 2003). Secondly, the sample used in this study consisted only of students from tertiary institutions within the Gauteng and North-West provinces in South Africa. Thirdly, the study did not make use of the Principal Axis Factor Analysis that would have been critical to identify the underlying structure of latent variables. Lastly, structural equation modelling could have provided comprehensive information within the study that could have provided evidence of both convergent and discriminant validity of the study.

### **6.4 Suggestions for future research**

It is recommended that future researchers replicate this study and include the Rasch analysis. If similar results are achieved in this future study this would indicate that the Relationship Harmony Scale can be seen as an established scale that is valid and reliable. It would be beneficial to conduct a study with a sample that is more representative of all the South African provinces. Future studies should make use of a larger and more representative sample.

### **6.5 Practical implications**

The practical implication of this study relate to the fact that the Relationship Harmony Scale proved to be valid and reliable within South Africa. This means the scale can be used to measure Relationship Harmony as a personality construct. The study also adds value in relation to the further development of a theory of personality within the diverse South Africa context. This study adds significant value towards the progress and development of the SAPI project, which aims to provide a personality inventory that will be valid, reliable, fair, and unbiased towards all South African cultures. Ultimately, the SAPI-project can become an effective personality inventory that can potentially help in decision-making in various aspects within the field of Industrial Psychology such as selection, training and development.

The present study represents a critical section of the development of the SAPI project as it found that the Relationship Harmony cluster is not a unique factor above and beyond the FFM factors. The Relationship Harmony cluster seems to represent a similar construct to the construct represented by the Agreeableness factor within the FFM.

## **6.6 Conclusion**

The last chapter of the minor dissertation elaborated on the conclusions regarding the objectives of the study. The general and specific objectives of the study have successfully been determined. Furthermore, the chapter also pointed out the possible limitations that might have impacted on the results of the study. Lastly, suggestions for future research together with the practical implications of the study have been specified.

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