

https://dspace.org/

The relationship between the five-factor model and individualism/collectivism among South African students

Vogt, Liesl Therese

2008-10-03T08:32:54Z
http://hdl.handle.net/10539/5715

Downloaded from a DSpace repository. https://dspace.org/

The relationship between the Five-Factor Model and Individualism/Collectivism among South African students

Ms. Liesl Therése Vogt

A dissertation submitted to the Faculty of Humanities
University of the Witwatersrand

In partial fulfillment of the requirements for the degree
Masters of Arts in Clinical Psychology

March 2007

ABSTRACT

The Five-Factor Model (FFM) of personality is one of the prominent models in contemporary psychology and defines personality in terms of five broad factors, namely, Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Recent research, however, questions the applicability of the FFM in non-Western cultures, suggesting that it is not exhaustive enough and that it does not account for some other personality factors, most notably Individualism/Collectivism. Therefore, this study investigated whether the FFM of personality is related to Individualism/Collectivism in a sample of South African students. A total of 176 questionnaires were completed by students from the University of the Witwatersrand. The questionnaire contained the individualism/collectivism (INDCOL) scales and the Basic Traits Inventory (BTI) which is a South African instrument based on the FFM. Results indicate that there were no significant relationships between the five factors and Individualism/Collectivism. In addition no significant difference was found between race and the five factors and Individualism/Collectivism. There were also no significant differences between home language and the five factors and Individualism/Collectivism.

DECLARATION

I declare that this dissertation is my own unaided work. It is being submitted as part of the requirements for the degree of Masters of Arts in Clinical Psychology, at the University of the Witwatersrand, Johannesburg. This dissertation has not been submitted to any other university for the purposes of any other degree or examination.

_____

Liesl Therése Vogt

____ day of _____ 2007

ACKNOWLEDGEMENTS

Firstly, I wish to dedicate this research project to the memory of my late brother, Charl. The influence he had on my life and his memory were the impetus for embarking on a journey that has lead to a career in psychology.

Secondly, I wish to express my gratitude to the following people whose assistance was invaluable in the completion of this study:

- My parents, who have always believed in me, even when I did not; who remained supportive and whose proof-reading services and financial assistance have always made my studies possible.

- My supervisor, Ms. Sumaya Laher, whose patience, support, insight and continued prompting kept me inspired, motivated and working.

- Mr. Mike Greyling who was always prepared to answer my questions and was an invaluable font of statistical knowledge and technical know-how.

- J. P. van Rooyen and Partners, South Africa, Ms. Nicola Taylor and Professor Gideon de Bruin for the use of the Basic Traits Inventory in this study.

- Professor Kathy Munroe and the staff at Wits Plus who were willing to permit me the opportunity of approaching their students for assistance with this project.

- All the students from Wits Plus, Microbiology and Cell Biology, and Psychology who sacrificed their valuable time to complete the questionnaires.

TABLE OF CONTENTS

ABSTRACT i

DECLARATION ii

ACKNOWLEDGEMENTS iii

TABLE OF CONTENTS iv

LIST OF TABLES vi

CHAPTER 1 –LITERATURE REVIEW 1

1.1. Introduction 1

1.2. The FFM within the trait tradition 2

1.3. The Five Factors 4

1.4. Individualism & Collectivism 9

1.5. Culture and Personality in South Africa 13

1.6. Conclusion 17

CHAPTER 2 – METHODS 18

2.1. Rationale for this study 18

2.2. Research Aims 18

2.3. Research Questions 19

2.4. Hypotheses 19

2.5. Sample 19

2.6. Research Design 21

2.7. Instruments 21

2.7.1. Basic Traits Inventory (BTI) 21

2.7.2. Individualism-Collectivism Scale 22

2.8. Procedure 22

2.9. Ethical considerations 22

2.10. Data Analysis 23

2.10.1. Descriptive Statistics 23

2.10.2. Reliability Analysis 23

2.10.3. Correlations 24

2.10.4. ANOVA's 24

CHAPTER 3 – RESULTS & DISCUSSION 25

3.1. Descriptive Statistics 25

3.2. Reliability Analysis 27

3.3. Correlations of the BTI factors and Individualism/Collectivism 28

3.4. Race, the BTI factors and Individualism/Collectivism 29

3.5. Home language, the BTI factors and Individualism/Collectivism 31

3.6. Conclusion 32

CHAPTER 4 - LIMITATIONS, RECOMMENDATIONS & CONCLUSING COMMENTS 33

4.1. Limitations 33

4.1.1. Conceptual limitations 33

4.1.2. Methodological limitations 35

4.2. Recommendations for future research 40

4.3. Concluding comments 41

REFERENCE LIST 42

APPENDICES 51

Appendix A: Description of the NEO-PI-R and 51

Appendix B: BTI factors and facets 53

Appendix C: Ethics approval certificate 55

Appendix D: Cover letter to students 56

Appendix E: Questionnaire used in this study 57

LIST OF TABLES

Table 2.1: Demographic information for the sample 20

Table 3.1: Descriptive statistics for the BTI domain scales and INDCOL 25

Table 3.2: Cronbach's Alpha co-efficients for the BTI scales and INDCOL 27

Table 3.3: Correlations of the BTI factors and Individualism/Collectivism 28

Table 3.4: ANOVA results for race, BTI domains & Individualism/Collectivism 29

Table 3.5: ANOVA results for home language, BTI domains & Individualism/Collectivism 31

CHAPTER 1 –LITERATURE REVIEW

1.1. Introduction

Long before the advent of psychology, human beings sought to characterise the variety of observed behaviours in others. Astrology was an attempt to describe the characteristics of the individual according to the positions of planets. Physiognomy was based on the assumption that a person's character could be derived from the resemblance of their facial features to that of certain animals. So the search for an accurate method of assessment for human attributes continued with Humorology, Phrenology, Chirology, and Graphology (Foxcroft & Roodt, 2001). In essence this search continues today in the study of what we now refer to as the construct of personality. The word is derived from the Latin word *persona*, which was the name given to a theatrical mask used in ancient Rome to signify the behaviour of an actor throughout a performance (Larsen & Buss, 2005).

Personality as a construct has been defined by Funder (2001) as the individual's characteristic patterns of behaviours, cognitions and emotions, which are viewed in the light of the psychological mechanisms underlying those patterns. Yet, all theorists would not agree on this single definition of personality, even though most would emphasize the uniqueness of the individual, as demonstrated by an interplay of the characteristics of the individual with others and with the environment (Triandis & Suh, 2002). What is useful about Funder's definition is that it recognises the notion of individual differences. In other words, people are to a certain extent similar, yet it is the differences between people and the reasons behind those differences that are of interest (McCann & Sato, 2000). The psychological assessment of personality is an attempt to quantify these differences.

In terms of quantification, the trait theory of personality has been the most influential. Within this paradigm, the Five-Factor Model (FFM) of personality is currently the most influential approach, due in part to the vast body of research that supports its universality (Rolland, 2002; McCrae & Terracciano, 2005). However, literature exists that suggests that the FFM is

not necessarily a complete description of personality outside of Western contexts and that a potential sixth factor, viz. Individualism/Collectivism, exists that is not accounted for by the FFM (Cheung, Leung, Zhang, Sun, Gan, Song, et al., 2001). Thus this study sought to explore the relationship between the FFM and Individualism/ Collectivism. In the discussion that follows, the trait approach and the FFM are discussed followed by a discussion of the five factors and their operationalisation in this study. Individualism/Collectivism is introduced and the discussion concludes with the cross-cultural implications of the FFM and Individualism/Collectivism for a country like South Africa.

1.2. The FFM within the trait tradition

According to Goldberg (1995) a truly scientific model of individual differences requires both a representative set of attributes as well as a model which categorizes these attributes. This view of studying personality is called the trait approach and is based on the assumption that descriptions of people, in implicitly specified situations, can be used as a means of predicting their behaviour (Funder, 2001). Therefore, trait theorists consider an individual's personality to be composed of a characteristic set of fundamental personality traits that were derived from analyses of the natural-language terms people use to describe themselves. This is also known as the lexical approach as early trait theorists used a lexicon to find all the terms that were related to personality traits (Digman, 1990; Goldberg, 1995).

Among the first studies into the structure of personality that employed the lexical approach were conducted by two German psychologists, Klages and Baumgarten in 1926 and 1933 respectively (John & Srivastava, 1999). In keeping with this line of investigation, Allport and Odbert compiled a list of approximately 18 000 terms which could be used to distinguish an individual's behaviour. In an effort to impose some structure on their results, Allport and Odbert divided the list of terms into four categories of what they termed personality descriptors. The four categories were defined as follows: i) personality traits; ii) temporary states, mood and activities; iii) evaluative judgements of personal conduct; and iv) physical

characteristics, capacities and talents. This list and form of categorisation formed the basis for future studies from the trait perspective (John & Srivastava, 1999).

Raymond Cattell used Allport and Odbert's list as a starting point for his own research into the structure of personality, by creating a reduced list of 4 500 terms which represented only the stable personality traits. Cattell then used semantic and empirical clustering techniques for reducing his original list to only 35 variables (John & Srivastava, 1999). These variables were then subjected to several oblique factor analyses from which 12 factors were extracted. These 12 factors formed the basis of Cattell's 16-Factor Personality questionnaire (16 PF) which is still in use to this day. Later studies have failed to replicate Cattell's factor structure, which has in part lead to the diminished popularity of this model in personality research (Larsen & Buss, 2005).

Hans Eysenck, in contrast to Cattell, employed deductive rather than inductive reasoning to his understanding of personality structure, because he felt that factors are meaningless unless they made sense from a theoretical point of view (Larsen & Buss, 2005). Eysenck used a sample of 700 "neurotic" male soldiers for a large-scale factorial study of personality traits. Initially, he identified two factors, namely extraversion (E) and neuroticism (N), which formed the basis of the Maudsley Personality Inventory (MPI) (Eysenck, 1955). With further research and revision of the MPI, Eysenck uncovered a third super factor, psychotism (P) which was included in the Eysenck's Personality Inventory. As a result Eysenck advocated the existence of only these three super factors which formed the highest level of his theorised hierarchical organisation of personality structure. However, Eysenck did not preclude the possibility of further personality dimensions being added to this model in the future (Larsen & Buss, 2005).

Two years after Eysenck's 1947 publication, "Dimensions of Personality", detailing his findings of two super factors, Fiske derived a five-factor structure. Fiske used 22 of Cattell's variables to construct a list of simplified descriptors which were subjected to self-ratings,

rating by peers and ratings by psychological staff (John & Srivastava, 1999). Tupes and Christal (1961) used Fiske's descriptors in a study which involved the re-analysis of correlation matrices from eight different samples, and again five factors emerged (Tupes & Christal, 1992). Subsequent studies by Norman, Borgatta, and Digman and Takemoto-Chock used lists derived from Cattell's 35 variables and all replicated Tupes and Christal's five factor structure. These five factors are what have become known in later years as the "Big Five" (Goldberg, 1995).

According to John and Srivastava (1999), the late 1970's and early 1980's was a period of latency for research on the "Big Five". However, the mid-1980's brought about a period of renewed interest in this line of investigation and several studies uncovered factor structures resembling the five factors. A number of these studies were based on Cattell's variables, which raised concern as to the comprehensiveness of the uncovered factors (Goldberg, 1995). To rectify possible mistakes introduced by Cattell's reduction steps, Norman used Allport and Odbert's original list to compile an exhaustive list of descriptive terms and sorted these terms into 75 semantic categories. Goldberg then used the list that Norman had constructed in a series of three studies (see Goldberg, 1990; 1995). Since then research into the five factors has been located in two traditions, the psycholexical led primarily by Goldberg and the questionnaire tradition lead by McCrae and Costa's work on the NEO-PI-R (De Raad & Perugini, 2002). The NEO- Personality Inventory –Revised (NEO-PI-R) is at present the most commonly used operationalisation of the FFM (Costa & McCrae, 1992; McCrae & Allik, 2002; McCrae & Terracciano, 2005). The most widely accepted nomenclature for the five factors, following that of the NEO-PI-R, at present is: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness (Costa & McCrae, 1995).

1.3. The Five Factors

Neuroticism is envisaged as a trait of normal personality, falling along a continuum with emotional stability as the opposite pole. Neuroticism can be defined as a universal predisposition to experience negative emotions such as fear, sadness, embarrassment, guilt, anger, and distrust (Costa & McCrae, 1992). Higher scores on the Neuroticism scale indicate

that an individual is prone to irrational ideas, has lowered impulse control, and is poor at coping with stress; whereas a lower score reflects emotional stability. In general, all people with psychiatric problems do have high Neuroticism scores. Yet, it is important to note that a high Neuroticism score should not be interpreted as a measure of psychopathology, even though it may indicate a certain level of risk for developing psychiatric problems (Costa & McCrae, 1995). Individuals with low Neuroticism scores on the other hand, are considered to be emotionally tempered, relaxed and able to calmly handle stressful situations. According to Costa and McCrae (1992), Neuroticism consists of six facets, viz. anxiety, anger, depression, hostility, impulsiveness, self-consciousness and vulnerability[1].

The domain of Extraversion, also called Positive Emotionality or Surgency, explores an individual's propensity for sociability, assertiveness, activity and talkativeness. Typically, extroverts are described as assertive, active, talkative, warm and friendly, while introverts are more reserved, independent of others, and even-paced (Costa & McCrae, 1992). People scoring high on Extraversion are those who enjoy being around people, especially large gatherings, and tend to be assertive, active and talkative. Extroverts like stimulation and excitement, and are generally cheerful and optimistic. The facets of the Extraversion domain according to the NEO-PI-R are: activity, assertiveness, excitement-seeking, gregariousness and positive emotions (Costa & McCrae, 1992)[1].

Openness to Experience entails active imagination, aesthetic sensitivity, attentiveness to inner feelings, a preference for variety, intellectual curiosity, and independence of judgment. Therefore, an individual scoring higher on this scale is portrayed as "open" tending to be unconventional, willing to question authority, to entertain new ideas and values, and experience their emotions keenly. Lower scoring individuals are likely to be conservative in their outlook and stick to conventional behaviours and norms (Costa & McCrae, 1992). The

[1] All facets described in detail in Appendix A

facets of Openness to Experience are actions, aesthetics, fantasy, feelings, ideas and values (Costa & McCrae, 1992)[1].

Agreeableness refers primarily to the extent to which a person displays altruistic tendencies towards others. Therefore, high scores reflect the ability to be sympathetic and an eagerness to help others, while believing that others are trustworthy in return. Lower scores are suggestive of an ego-centric individual, sceptical of others intentions and competitive rather than co-operative (Costa & McCrae, 1992). Adjectives, such as sympathy, co-operativeness and helpfulness toward others' are often used in relation to this domain. Agreeableness is measured by six facets on the NEO-PI-R, which have been labelled, altruism, compliance, modesty, tender-mindedness, and trust (Costa & McCrae, 1992; McCrae, Costa, Del Pilar, Rolland & Parker, 1998)[1].

Lastly, Conscientiousness concerns self-control and skills involved in planning, organizing and performing tasks. The conscientious individual is seen as purposeful, strong-willed and determined. This trait becomes apparent through achievements, dependability and orderliness; and more negatively can result in annoying attention to detail and compulsive neatness (Costa & McCrae, 1992). The other side of the spectrum applies to individuals described as lazy and lacking in self-control, however this may simply reflect a less fastidious attitude toward a given task (Rothman & Coetzer, 2003). Individuals scoring high on Conscientiousness, have been found to achieve academically and occupationally, but could at the same time be seen as meticulous, compulsive workaholics. Low Conscientiousness scores are associated with individuals who are less exacting and goal-oriented (McCrae et al., 1998). The NEO-PI-R facet scales for this domain are achievement-striving, competence, deliberation, dutifulness, and self-discipline (Costa & McCrae, 1992; McCrae et al., 1998)[1].

[1] All facets described in detail in Appendix A

As mentioned at the outset, the NEO- Personality Inventory –Revised (NEO-PI-R) is at present the most commonly used measure of personality, as based on the FFM in international personality assessment and research, and would be the instrument of choice in this study (De Raad & Perugini, 2002; Larsen & Buss, 2005; McCrae & Allik, 2002; McCrae & Terracciano, 2005). However, due to financial constraints the research could not secure the use of the NEO-PI-R in this study. Hence, the Basic Traits Inventory (BTI) was used to operationalise the FFM. The BTI has been developed in South Africa on the basis of the FFM and like the NEO-PI-R, the BTI measures personality in terms of five broad domains, namely: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness (Taylor, 2004)[2].

Openness to Experience involves Aesthetics, Ideas, Actions, Values, and Imagination. Conscientiousness is subdivided into Effort, Order, Prudence, Self-Discipline, and Dutifulness. Extraversion's five facets include Ascendance, Gregariousness, Excitement-Seeking, Activity, and Positive Affectivity. Agreeableness is composed of Straightforwardness, Compliance, Tendermindedness, Prosocial Tendencies, and Modesty. Lastly, Neuroticism's four facets are Depression, Anxiety, Affective Instability, and Self-Consciousness (Taylor, 2004; Taylor & De Bruin, 2005)[2].

The items of the BTI have been constructed so as to take into account the language of the target population, broadly South Africans, but are at present only available in English (Taylor & De Bruin, 2005). The BTI is assumed to be more culturally valid in the current South African context than other instruments developed in Western countries, such as the NEO Personality Inventory-Revised. Therefore, the use of the BTI has advantages for this study in terms of the etic versus emic arguments. The emic approach in personality assessment has led to the development of culture-specific inventories such as the BTI. In the case of the BTI, the FFM as used in this instrument has been based on international literature. It can thus be argued that the construct of personality as measured by the BTI is not truly culture-specific.

[2] All the factors and facet scales of the BTI are described in Appendix B

According to Katigbak, Church, Guanzon-Lapena, Carlota and Del Pilar (2002) the use of common literature sources for the selection of the constructs that can be incorporated in an inventory, has in fact led to the convergence in meaning of these constructs across cultures.

The imposed etic or pseudo-etic approach to personality research and assessment assumes the universality of constructs and allows for cross-cultural comparison. This is the reasoning behind the use of instruments such as the NEO-PI-R in cross-cultural research and personality assessment. There is concern about an exclusively etic approach to personality in a multi-cultural society such as South Africa, as emic or culture-specific constructs could remain untapped. In other words, the use of imported measures based on Western constructs of personality could limit users as they may not be relevant in diverse cultures (Katigbak et al., 2002). An examination of research suggests the universality of the FFM (Allik & McCrae, 2004; McCrae & Terracciano, 2005), but evidence also exists that the FFM is not wholly applicable in non-Western contexts (Cheung, 2004; Cheung et al., 2001; Katigbak et al, 2002). Studies on the NEO-PI-R in cross-cultural situations found variations in the five factor structure between Western and Asian cultures. McCrae, the developer of the NEO-PI-R, has interpreted this as the likely consequence of the differences between the individualistic societies of the West and the collectivist societies of Asia (Rolland, Parker & Stumpf, 1998; McCrae, 2004). Church (2000) has proposed a model of culture and personality which posits that traits exist in all cultures, but that they account for behaviour less in collectivist than in individualist cultures.

Research in the Chinese context sought to establish the universality and sufficiency of the FFM. Both the NEO-PI-R and the Chinese Personality Assessment Inventory (CPAI), a personality inventory developed specifically for the Chinese context that also takes cultural factors into account, were used in this study. Through factor analysis, four factors from the CPAI were found that are similar to those of the NEO-PI-R. A unique factor that did not have factor loadings on any of the facets of the NEO-PI-R was obtained from the CPAI scales. This factor has been called Interpersonal Relatedness, which emphasizes the concern of

interdependence in Chinese personality (Cheung et al., 2001). The issue then became whether the Interpersonal Relatedness factor was unique to Chinese societies, or whether in fact this domain of personality pertained to other cultures as well. The authors have replicated this study on a culturally diverse group of Hawaiian students and it was found that the Interpersonal Relatedness factor could be identified in this group (Cheung et al., 2001). In addition, the English version of the CPAI has produced similar results (Cheung, Cheung, Leung, Ward & Leong, 2003). This international research supports the inclusion of this factor into a model of personality that comprises six domains, rather than the five proposed by the FFM. Thus Individualism/Collectivism is commonly cited in the literature as a possible sixth domain of personality (Cheung et al., 2001).

1.4. Individualism & Collectivism

Individualism and Collectivism are at present amongst the most widely used constructs in research about cultural differences (Green, Deschamps & Páez, 2005; Oyserman, Coon & Kemmelmeier, 2002; Schimmack, Oishi & Diener, 2005; Triandis, 2001; Triandis & Suh, 2002). These constructs, together with "power-distance", "masculinity-femininity" and "uncertainty- avoidance" were first described as over-arching patterns of cultural variation in the workplace by Geert Hofstede in 1980 (Earley & Gibson, 1998; Oyserman et al., 2002; Shulruf, Hattie & Dixon, 2003). According to Hofstede's model, derived through factor analysis, Individualism-Collectivism can be viewed as opposite poles representing an independent stance from groups on the one hand to a dependence on groups on the other (Gouveia & Ros, 2000). However, Individualism and Collectivism are complex constructs which have been subject to differing interpretations and hence have several different definitions.

Broadly, constructs such as Individualism and Collectivism have been defined in terms of the attributes possessed by the people within a given culture reflecting either position (Triandis, McCusker & Hui, 1990). Within an individualist society, people are viewed as independent from the group. Consequently, priority is given to personal goals over those of the group and

behaviour tends to be based on personal attitudes rather than group norms (Green et al, 2005; Triandis, 2001). Conversely, collectivist societies emphasize people's interdependence within the group, group goals are given priority and people's behaviour is largely regulated by group norms rather than personal attitudes. Therefore, people in a collectivist society are mainly interested in maintaining relationships with others and avoiding conflict (Green et al., 2005; Triandis, 2001).

After an extensive review of current research, Triandis and Suh (2002) found evidence that Individualists and Collectivists differ in terms of their cognitions, the motivation for their behaviour, emotions, patterns of social behaviour, communication styles and ethical codes. With regard to cognitions, Collectivists tend to view the norms, obligations and duties within a society as fixed, whereas they see their own attitudes and personality as changeable (Triandis & Suh, 2002). Individualists have a greater need for freedom of choice and for being seen as unique and they tend to become more motivated with the attainment of success. Collectivists are rather prompted by failure and are concerned with changing and improving themselves in order to meet the demands of the environment (Barret, Wosinska, Butner, Petrova, Gornik-Durose & Cialdini, 2004; Triandis & Suh, 2001). Emotions reported by Individualists are disengaged while Collectivists are more interpersonally engaged. Generally Individualists report more positive emotions which are strong predictors of life-satisfaction and place greater emphasis on their emotions as the basis for making major personal decisions. Collectivists base their sense of satisfaction with life on the approval of other and base decisions on social norms rather than emotions (Schimmack, Radhakrishnan, Oishi, Dzokoto & Ahadi, 2003; Triandis & Suh, 2002).

Individualism and Collectivism as constructs have been criticised for being overly inclusive. According to Poortinga and Van Hemert (2001) this has occurred to the extent that any differences that are observed between countries from the East and West are attributed to these constructs. Therefore, the operationalisation of Individualism and Collectivism has proved to be challenging. Research has continued into the improvement of available

instruments as well as the creation of new measures (Earley & Gibson, 1998). There are two major approaches to the quantitative measurement of Individualism and Collectivism. The first approach involves the application of Hofstede's methods. All four of his measures have been replicated, but the Individualism-Collectivism dimension has had the greatest impact on cross-cultural research (Schimmack et al., 2005; Merrit, 2000).

One of the commonly used operationalisations of Hofstede's dimensions is the Value Survey Module 1994 (VSM-94). However, Kruger & Roodt (2003) have found that the VSM-94 is neither valid nor reliable, as the majority of the items on the VSM-94 cannot be used in the South African context. The second approach, initiated in the late 1980's, involved the development of new measures for Individualism and Collectivism. The appeal of the latter approach was independence from the use of Hofstede's norms, shifting the use of these constructs from the workplace to the broader cultural context, and providing a means for assessing these constructs at the level of the individual (Oyserman et al., 2002; Schimmack et al., 2005).

Following on from the second approach, the meta-analysis of 83 studies conducted by Oyserman et al. (2002) found that the three most commonly used tools for assessing Individualism and Collectivism were the Independent-Interdependent Self-Construal (SCS) scale, the Horizontal-Vertical Collectivism-Individualism scale and the Individualism-Collectivism (INDCOL) scale. The INDCOL scale was used in this study as it was readily available and has been used in a study in the South African context (Patel, 2002). Although Patel (2002) reported reliability for this instrument as 0.47, it should be noted that Individualism and Collectivism were calculated separately, rather than as a single score, using the reverse scoring method suggested by Hui (1988).

The INDCOL scale is a paper-and pencil instrument consisting of 63 items divided into six sub-scales (Hui, 1988; Shulruf et al., 2003). These scales are based on the notion that Collectivism can vary inter- and intra-personally, which theoretically implies that different

forms of Collectivism are possible (Hui, 1988). Therefore an individual is hypothesised to behave in either a Collectivist or Individualist manner towards people who form different groups in relation to the individual, viz. spouse, parents, kin, neighbours, friends, and colleagues. These groups then were also the names assigned to each of the six subscales, which had been identified through factor analytic methods (Hui, 1988; Hui & Yee, 1994). The subscales were not included in this study, as the internal consistency reliability reported for the subscales ranged between 0.46 and 0.76 (Hui, 1988). An investigation of the subscale reliability by the researcher found reliabilities ranging between 0.27 and 0.71. In addition, subsequent research by Hui and Yee (1994) suggests that the subscales may need revision.

Individualism is generally used to describe the predominant cultures of Western Europe, North America, Australia and New Zealand. African, Middle Eastern and East Asian countries are characterized primarily by Collectivism (Green et al., 2005; Rhee, Uleman & Lee, 1996; Triandis et al., 1990; Triandis, 2001). However, as Fiske (2002) argues, one of the greatest limitations of the research conducted on Individualism and Collectivism is that nations are treated as if they are cultures. This is evident when studies comparing Individualism and Collectivism internationally fail to include information on the ethnic composition of their samples. According to Fiske (2002) therefore, the cultural differences within the nations being compared are ignored. In a country as culturally diverse as South Africa, erroneous conclusions could be reached with regards to the Individualistic and Collectivistic nature of its people if the research fails to recognise ethnic differences. For this reason, this study sought to explore cultural differences in terms of race and home language. The next section discusses the concepts of culture and personality in the South African context.

1.5.Culture and Personality in South Africa

The term culture has been applied to include nation-states, ethnic and religious groups, and even schools and corporations (Dalton, Elias & Wanderman, 2002). The construct of culture is so broad that it becomes difficult to define and relate to social and psychological phenomena. It would be naïve to assume that culture as a concept is purely scientific, since it is also often used synonymously with terms such as race, ethnicity and nationality. Race in particular has been afforded a pseudo-biological status in the past, which has been discredited as race is not a biological variable. Biologically, race groups are more similar than different. Yet, it is the psychological and social meaning of this term in many societies that maintains its relevance, since as a socially constructed classification system, race is largely related to inequalities of status and power (Dalton et al., 2002).

In the South African context the issue of race is a particularly sensitive one due to the country's history of Apartheid. In terms of education, the inequalities imposed by this system are most apparent. All so-called "non-Whites" were subjected to an inferior quality of education, with the black African race group being the most disadvantaged (Laher, 2001). Therefore, studies investigating the cross-cultural applicability of personality instruments in the South African context have had to take the variable of race into account. A study on the cross-cultural applicability of the 16PF, showed that the scores obtained were strongly influenced by race (Abrahams, 1996). Abrahams (1996) found significant differences in the means, unacceptable reliability co-efficients and different factor structures for the different race groups, most notably the Black and White race groups. In addition there were significant differences in the way that the items were answered by the different race sub samples and 18% of the items failed to attain significant item-total correlations. These results led Abrahams (1996) to conclude that race had the greatest influence on the manner in which the test items were dealt with.

Studies of the NEO-PI-R in South Africa have similarly found differences related to race. Cross-cultural replicability has not always been found for the FFM in terms of both the

number and structure of the factors. In fact, replicability of the FFM in South Africa has in some studies resulted in three and at the most four factor solutions (Horn, 2000; Matsimbi, 1997; Taylor, 2000). Factor analysis typically has shown that the five-factor structure emerges for White participants, but that different factor patterns and a lack of fit emerge for black participants (Taylor, 2004). Taylor (2000) examined the construct validity of the NEO-PI-R in the workplace. The Openness to Experience factor could not be extracted from the Black group, but the complete five-factor structure was found for the White group. Another study examining the FFM in South Africa administered the NEO-PI-R to 408 college students. Through factor analysis with Varimax rotation at the facet level the five factor structure was replicated. Although personality structure was found to be equivalent for the different race groups, the mean scores for some of the domains and facets differed. Black individuals scored lower in Openness to Experience than either White or Indian individuals, while White individuals scored higher on Extraversion and Agreeableness (Heuchert, Parker, Stumpf & Myburgh, 2000).

Another study testing the validity and reliability of the FFM among a sample of 368 South African students, from four different universities, found that the majority of items in the NEO-PI-R were valid for assessing personality (Zhang & Akande, 2002). Both studies concluded that differences found between the race groups were related to race in terms of educational level, socio-economic status and cultural differences, but were not a direct product of race itself (Heutchert et al., 2000; Zhang & Akande, 2002). The BTI has been developed and compared across the racial groups in South Africa. Although the five factor structure has been replicated in all race groups, it is notable that the reliability co-efficients reported for the White and Black groups differed. Also, the BTI factor solution for the White group accounted for 62.09% of the variation in the correlation matrix versus the 58.56% accounted for by the factor solution for the Black group, representing a difference of approximately 3.5% (Taylor & De Bruin, 2005). Apart from race, language has also been cited as a cultural variable notable for its influence as a powerful moderator of test performance (Foxcroft, 1997; Heaven & Pretorius, 1998).

The dimensions of the FFM are derived from descriptive adjectives in the English language which then raises the issue of whether inventories using these adjectives do in fact relate to the same constructs across cultures. Considerable disagreement in the literature exists between researchers whose studies either continue to support the universality of the FFM and those which raise questions as to its validity in cross-cultural applications (Allik & McCrae, 2004; Ashton et al., 2004; McCrae & Terracciano, 2005). It would appear that language plays a big role in whether or not the FFM is replicable cross-culturally (Ashton et al., 2004). Studies in the South African context have consistently demonstrated the effects of taking tests in a second language on test item responses (Bedell, Van Eeden, & Van Staden, 1999; Foxcroft, 1997; Van de Vijver & Leung, 2001; Van de Vijver & Rothmann, 2004). Heaven and Pretorius (1998) conducted a study to investigate whether the language descriptors of the FFM were adequate when used by a non-English-speaking group. The instrument was translated into the participants' native languages, namely Sotho and Afrikaans respectively by means of back-translation. It was found that though the traditional five-component taxonomy was the best fit for the Afrikaans-speaking group, a different pattern of components with significant loadings emerged for the Sotho-speaking group (Heaven & Pretorius, 1998).

According to Meiring, Van de Vijver, Rothman & Barrick (2005) issues of language in South African psychometry have only truly been considered since the 1980's. Concerns regarding test fairness, bias and discriminatory practices led to the development of separate psychological tests for English and Afrikaans-speaking groups, and eventually for speakers of African languages (Meiring et al., 2005; Van de Vijver & Rothman, 2004). The construction of separate, but structurally equivalent, tests for the different language groups in South Africa should theoretically prevent construct bias. However, empirical support for the structural equivalence approach toward personality assessment in South Africa has been poor. Matsimbi (1997) assessed a sample of South African white collar workers using the NEO-PI-R and found that only the Extraversion, Conscientiousness and Agreeableness factors could be extracted through factor analysis. An unpublished dissertation by Horn

(2000) found that the translation of items on the NEO-PI-R from English to Xhosa was impeded by the lack of equivalent terms in Xhosa (Meiring et al., 2005).

An international study by Allik and McCrae (2004) examined personality traits across 36 cultures, including a sample of Black and White South Africans. Multidimensional scaling procedures showed that Black South Africans, in line with other African and Asian cultures, were lower on Extraversion and Openness to Experience, and higher in Agreeableness. Similar results have been found in other African studies. Teferi (2004) translated the NEO-PI-R into the Tigrigna language to explore the utility of the FFM in the Eritrean context. Using factor analytic methods Teferi (2004) could only extract the Neuroticism, Agreeableness and Conscientiousness factors. Piedmont, Bain, McCrae and Costa (2002) conducted a study in Zimbabwe using a Shona translation of the NEO-PI-R and found similar results. The five factor structure was obtained, but Extraversion and Agreeableness did not replicate as well as Neuroticism, and Conscientiousness and Openness to Experience replicated poorly.

McCrae and Terracciano (2005) found that the five-factor structure could be extracted when NEO-PI-R data from Botswana, Nigeria, Burkina Faso, Ethiopia and Uganda was analysed. The five factors replicated poorly in their African sample compared to the American normative structure. Also notable, was that the non-Western cultures had poorer data quality scores and internal consistency than the Western nations in this study. Botswana, Nigeria, Ethiopia, Uganda and Morocco had markedly lower data quality than Burkina Faso where the French version of the NEO-PI-R had been administered, instead of the English version as in the formerly named African cultures, where no translations in African languages were available. McCrae and Terracciano (2005) ascribe the differences in data quality between the Western and non-Western cultures to the lack of availability of African translations of the NEO-PI-R.

1.6.Conclusion

In the light of the above evidence it becomes apparent that several issues complicate the use of Western theories and instruments in non-Western cultures (Bedell et al., 1999; Cheung, 2004). Sadly, the research impetus into the cross-cultural applicability of instruments in South Africa has focused to a larger extent on cognitive tests than personality tests (Bedell et al., 1999; Van de Vijver & Rothman, 2004). At present there is an emphasis in the literature on promoting an ethos of fair and unbiased testing practices in a multi-cultural society like South Africa. This however, requires that the instruments used for the clinical and occupational assessment of personality are both valid and reliable; which can only be achieved through research on the instrument (Van de Vijver & Rothman, 2004).

Bedell et al. (1999) have suggested that culture may be one of the moderator variables of test performance. As has been discussed earlier, cultural variables of difference such as Individualism and Collectivism are associated with differences in the behaviours, cognitions, emotions, communication styles, patterns of social relationships and personality traits of individuals located within a given culture (Triandis & Suh, 2002). Broadly speaking, African and Asian cultures are defined in terms of the Collectivist nature of their respective cultures, while American and European cultures are said to be premised on Individualism (Shulruf et al., 2003). Differences along these lines have been found in research on the cross-cultural applicability of the FFM and it is an important area of research that has been sorely neglected in personality assessment within the South African context. In addition, few studies have been published on Individualism and Collectivism as these variables pertain to the current socio-political context in South Africa (Eaton & Louw, 2000; Van Dyk & De Kock, 2004). On the basis of all the above-mentioned, the aim of the present study was to investigate the relationship between the FFM and Individualism/Collectivism in South Africa.

CHAPTER 2 – METHODS

2.1. Rationale for this study

At present there is very little theory pertaining to, or describing, personality theory and assessment in South Africa. The issue then is whether the personality profiles of different South African population groups would conform to Western theories of personality, since instruments based on these theories are widely used in the country. The Five-Factor Model (FFM) is at present the most dominant theory of personality and has as result been widely applied cross-culturally (McCrae & Terracciano, 2005). Research into the cross-cultural applicability of the FFM has shown differences between western and Asian cultures (Cheung et al., 2001). Western cultures are described as primarily Individualist in nature, whereas African and Asian cultures are predominantly Collectivist (Church, 2000; Piedmont et al., 2002). Studies using the FFM in China, in particular, indicate that Individualism/Collectivism can be regarded as an additional sixth domain in Asian personality (Cheung et al., 2001). Therefore, this study investigated whether the FFM of personality is related to Individualism/Collectivism in a sample of South African students.

2.2. Research Aims

The study sought to determine whether a statistically significant relationship exists between the five factors of personality, as measured by the Basic Traits Inventory (BTI) and Individualism/Collectivism. This study also investigated whether race and home language, influenced the five factors of personality and Individualism/Collectivism, respectively. Lastly, this study sought to establish whether race and home language were associated with patterns of difference in the five factors of personality or Individualism/Collectivism.

2.3. Research Questions

1. Does a relationship exist between the five factors of the BTI and Individualism/Collectivism respectively?
2. Does race have an influence on responses to the BTI?
3. Does race have an influence on Individualism/Collectivism?
4. Does language have an influence on the responses to the BTI?
5. Does language have an influence on Individualism/Collectivism?

2.4. Hypotheses

1. There is a relationship between Five Factors as measured by the BTI and Individualism/Collectivism.
2. Race has an influence on the responses to the BTI.
3. Race has an influence on Individualism/Collectivism.
4. Language has an influence on the responses to the BTI.
5. Language has an influence on Individualism/Collectivism.

2.5. Sample

Non-probability convenience sampling was used. This method of sampling has been defined as comprising suitable individuals who are both readily available and prepared to respond to the research (Rosenthal & Rosnow, 1991).

A total of 700 questionnaires were distributed to the undergraduate students attending Wits Plus (University of the Witwatersrand part time studies program), as well as the postgraduate students in Psychology and the Biological Sciences. The questionnaires were completed at the participants' own convenience. Out of the 700 questionnaires distributed, only 180 were returned, which represents a response rate of 25.7%. This concurs with literature that found that the response rate in student surveys is 21% (Dey, 1997). Only 176 questionnaires were complete and could be used for analysis and therefore comprised the total for the final sample.

The participants' ages ranged from 19 to 52 years ($\overline{X}$ = 26.55, SD= 6.72). The demographic information, as presented in Table 2.1, show that 69.32% of the sample was female and 30.68% was male. With regards to race, 51.14% were White, while 48.86% fell into the Non-White group. This latter classification was made necessary due to too few individuals of other races being represented in this sample. In this study, the "Non-White" group included individuals of African (n = 49), Indian (n = 20), Coloured (n = 14) and Chinese (n = 3) descent. Lastly, 65.91% of the participants reported their Home Language as English. The Non-English group represented 30.09% of the sample and included the other 10 official languages of South Africa, namely: Afrikaans (n = 11), Ndebele (n= 1), Pedi (n = 4), Siswati (n = 5), Sotho (n = 8), Tsonga (n = 3), Tswana (n = 2), Venda (n = 1), Xhosa (n = 4) and Zulu (n = 11) as well as the "Other" category. The category "Other" (n = 11) included Bosnian (n = 1), Bulgarian (n = 2), Dutch (n = 1), French (n = 1), German (n = 1), Ibo (n = 1), Kikuyu (n = 1), Mandarin (n = 1) Shona (n = 1), and Tamil (n = 1).

Variable		**Frequency**	**%**	**Cumulative %**
GENDER	Female	122	69.32	69.32
	Male	54	30.68	100.00
RACE	Non - White	86	48.86	48.86
	White	90	51.14	100.00
HOME LANGUAGE	English	116	65.91	65.91
	Non – English	60	34.09	100.00

Table 2.1: Demographic information for the sample

2.6. Research Design

The study was conducted on campus at the University of the Witwatersrand. The students were approached in their lecture venues by the researcher. Questionnaires were circulated to all students who indicated their interest and as a result the variable under investigation, namely personality, was measured in a natural environment. There was no randomization, control group, or manipulation of any variable by the researcher in this study. Therefore, this study is classified under the category of non-experimental research design (Rosenthal & Rosnow, 1991).

2.7. Instruments

A questionnaire consisting of three sections was used in this study. The first section of the questionnaire was designed for the purposes of obtaining demographic information, namely gender, age, race and home language.

2.7.1. The Basic Traits Inventory

The Basic Traits Inventory (BTI) was developed in South Africa for the measurement of personality according to the Five Factor Model. The BTI is suitable for administration to individuals with a minimum educational level of grade ten. The questionnaire takes approximately thirty to forty minutes to complete and consists of 193 items (Taylor, 2004; Taylor & De Bruin, 2005). The internal reliability, as calculated using Cronbach's Alpha, for the five scales of the BTI, were found to be 0.89 for Extraversion, 0.94 for Neuroticism and Conscientiousness respectively, 0.90 for Openness to Experience and 0.88 for Agreeableness (Taylor, 2004). The factor analysis, for determining the construct validity of the BTI, demonstrated a satisfactory fit with the FFM of personality (Taylor, 2004). However, the BTI scale is still being developed, and not much work has been done at the facet level. As a result the facets have not been used in this study.

2.7.2. The Individualism/Collectivism Scale

The Individualism/Collectivism (INDCOL) Scale consists of 63 forced choice items, divided into six sub-scales, namely, spouse, parent, kin, neighbour, friend, and co-worker (Shulruf et al., 2003). The items have a six-point rating, ranging from *strongly agree* (0) to *strongly disagree* (5). Internal consistency reliability for the INDCOL scale on average lies in the region of 0.60. Test-retest reliabilities are between 0.62 and 0.79. The internal consistency reliabilities for the subscales are 0.46 for spouse, 0.76 for parent, 0.72 for kin, 0.70 for neighbour, 0.46 for friend and 0.58 for co-worker (Hui, 1988). As some of these reliabilities were poor and research into the subscales is lacking, the subscales were not included as a sub-level of analysis in this study. Hui and Yee (1994) report that the INDCOL scale has proven construct validity, but no further information on the validity of this instrument could be located.

2.8. Procedure

The researcher approached all students. The questionnaires were distributed to willing participants to complete at their convenience. The students were asked to return the completed questionnaires in self-addressed envelopes via internal mail to the researcher.

2.9. Ethical considerations

Ethics clearance was obtained from the Committee for Research on Human Subjects at the University of the Witwatersrand prior to data collection (Protocol Number 50804)[3]. All individuals who participated in this research did so voluntarily. A letter was attached to each questionnaire that briefly stated the purpose of the study and provided a statement that guaranteed anonymity. At no stage in the research were individuals required to identify themselves, as the purpose of the research was to establish group trends. It was stated that any respondent who completed and submitted a questionnaire had thereby given their consent for the information to be used in the research. However, it was stipulated that non-participation would bear no negative consequences for the individual. It was emphasized that

[3] See Appendix C for the ethics clearance certificate

their decision as to whether to participate or not, did in no way affect their academic evaluation. The letter also provided contact details, should any individual require further information. Feedback was given in terms of a brief summary of the study on the Discipline of Psychology website: http://www.wits.ac.za/Humanities/Umthombo/Psychology/index.html.

2.10. Data Analysis

The study involved the use of descriptive statistics, reliability co-efficients, correlations and ANOVA's. All the statistics were generated using the SAS statistical computer package (SAS Institute, 1996).

2.10.1. Descriptive Statistics

The categorical variables, namely, gender, race and language were examined using frequencies. For the interval variables, namely, age, scores on the BTI domain scales and Individualism/Collectivism; means, standard deviations, minimum and maximum values and skewness co-efficients were calculated.

2.10.2. Reliability Analysis

Internal consistency reliability is derived from the number of items in the test and the average inter-item correlations. As a result, the reliability co-efficient can be interpreted as the proportion of variance in the observed test scores as accounted for by the variance in the true scores (Murphy & Davidshofer, 2001). Cronbach Alpha co-efficients were examined for the BTI domain scales and Individualism/Collectivism in order to obtain a measure of the internal consistency reliability of these scales.

2.10.3. Correlations

A correlation between two variables may be defined as the sum of the standardised scores of those two variables divided by the number of pairs of standardised scores (Howell, 2002). To determine whether a relationship existed between Individualism/Collectivism and the domains of the BTI, correlations were used. Pearson's correlation co-efficients were used as all the variables in this study were found to be normally distributed (Howell, 2002).

2.10.4. ANOVA's

The Analysis of Variance (ANOVA) is a technique used to determine the possibility of group means equating to population means. This is achieved by comparing the estimated population variances both within and between the groups (Howell, 2002). ANOVA's were used to find the differences between the categorical variables, race and home language, and the domains of the BTI and Individualism/Collectivism. The dependent variables, namely the domains of the BTI, Individualism/Collectivism, were found to be normally distributed. In addition, homogeneity of variance was established with the use of Levene's test for equality of variance. Therefore, parametric one-way ANOVA's were used.

CHAPTER 3 – RESULTS & DISCUSSION

This chapter will present the results together with a discussion of the results obtained in this study. Descriptive statistics are presented first, followed by reliability co-efficients, the results for the correlations between the BTI domains and Individualism/Collectivism and finally, the results for the one-way ANOVA's between race and the BTI domains and Individualism/Collectivism, and home language and the BTI domains and Individualism/ Collectivism.

3.1. Descriptive Statistics

Scale	Subscale	N	Min	Max	$\overline{X}$	SD	Skewness
INDCOL	I/C Total	174	76	197	144.09	21.53	-0.147
BTI	Extraversion	176	76	169	115.47	17.14	0.464
	Neuroticism	176	46	148	91.96	22.18	0.274
	Conscientiousness	176	87	199	150.27	18.82	0.106
	Openness to Experience	176	84	151	121.80	13.10	0.022
	Agreeableness	176	77	174	130.26	15.75	-0.152

Significance at $p < 0.01$

Table 3.1: Descriptive statistics for the BTI domain scales and INDCOL

The results in Table 3.1 show the descriptive statistics for the BTI domain scales and the INDCOL scale. Scores for Individualism/Collectivism scale (I/C Total) ranged between 76 and 197 ($\overline{X}$ = 144.09, SD = 21.53). The scores for Extraversion ranged between 76 and 169, with a mean of 115.47 (SD = 17.14). Neuroticism ($\overline{X}$ = 91.96, SD = 22.18) was found to have a minimum of 46, a maximum of 148. The score range for Conscientiousness lay between 87 and 199 ($\overline{X}$ = 150.27, SD = 18.82). Openness to Experience scores ranged between 84 and 151, with a mean of 121.80 (SD = 13.10). Lastly, the scores for the domain

Agreeableness ranged between 77 and 174 ($\overline{X}$ = 130.26, SD = 15.75). All scores were normally distributed as indicated by the skewness co-efficients.

The size and nature of a sample impact on the extent to which the results in a study of this nature may be interpreted. As a result, it is important that the descriptive statistics pertaining to the sample are discussed. The overall response rate to a questionnaire has an effect on the representativeness of the sample. In this study, a total of 700 questionnaires were distributed and 180 were returned, which represents a response rate of 25.7%. According to Babbie and Mouton (2001), a general rule of thumb with regards to the response rate in a survey, is that 50% is considered adequate for analysis and reporting. This is, however, a preliminary study and several factors known to affect the response rate to a questionnaire could have contributed to this outcome. Most pertinent of these include the respondents' willingness to answer and the length of the questionnaire (Porter, 2004). With regards to the former, respondents may have felt offended when asked to provide information on their race group, given the political history of this form of classification in South Africa. The latter issue on the other hand, concerns the fact that the respondents were asked to complete the questionnaire at their own convenience. This means that approximately an hour of the respondents own time needed to be sacrificed in order to complete the questionnaire of 260 items in total. Of the above-mentioned, 180 returned questionnaires, four were incomplete. Therefore, the final sample was comprised of 176 participants from the University of the Witwatersrand. Of note is the fact that the sample was comprised solely of students, where research has indicated that the current student response rate is 21% (Dey, 1997).

In addition it is important to note that this sample is unlikely to be representative of the population of South African students. The proportion of males to females is disproportionate, with approximately a third of the sample being male. The age distribution of the sample is positively skewed, which implies a predominance of individuals of a younger age in this sample. Since, the study was specifically geared towards the student population this result was to be expected. With regards to racial distribution, just over half of the sample was made

up of White individuals. This is not typically characteristic of the South African population, where White individuals are in fact a minority. In addition, two-thirds of the sample was English-speaking, while only a third consisted of other language groups. Historically, English has been a minority language in South Africa and is currently spoken as a first language only by 3.6 million people out of a population of 42 million as shown by the results of the 1996 national Census (Crystal, 1997). English-speakers represent only approximately 8.57% of the total South African population.

3.2. Reliability

The internal consistency reliability for Individualism/Collectivism and the domains of the BTI were calculated using Cronbach-Alpha (CA) reliability co-efficients.

Scale	Subscale	Number of items	Cronbach's Alpha
INDCOL	I/C Total	63	0.73
BTI	Extraversion	36	0.89
	Neuroticism	34	0.95
	Conscientiousness	41	0.92
	Openness to Experience	32	0.87
	Agreeableness	37	0.90

Table 3.2: Cronbach's Alpha reliability co-efficients for INDCOL and BTI domain scales

As indicated by the results in Table 3.2, the reliability co-efficient for the INDCOL scale was 0.73. The reliability of the INDCOL scale appears relatively high if as Huysamen (1996 cited in Foxcroft & Roodt, 2001) suggests, reliabilities of 0.65 or higher are sufficient for making decisions about groups. Furthermore, this result is in keeping with the reported internal consistency reliability for the INDCOL scale, which on average lies in the region of 0.60 (Hui, 1988).

With regards to the BTI domains, the Cronbach's Alpha co-efficients were 0.89 for Extraversion, 0.95 for Neuroticism, 0.92 for Conscientiousness, 0.87 for Openness to Experience, and 0.90 for Agreeableness. The results of this study closely parallels those found by the developers of the BTI. The reported reliabilities for both Neuroticism and Conscientiousness were 0.93. Agreeableness has an alpha co-efficient of 0.89, while for both Extraversion and Openness to Experience it is 0.87 (Taylor & De Bruin, 2005). Thus both the INDCOL and BTI scales were reliable instruments for use in this study

3.3. Correlations of the BTI factors and Individualism/Collectivism

	Pearson's Correlation	Extraversion	Neuroticism	Conscientious - ness	Openness to Experience	Agreeable - ness
I/C Total	r	-0.15	0.13	0.02	-0.05	-0.14
	p	0.05	0.08	0.81	0.50	0.06

n = 176

Table 3.3: Correlations of the BTI factors and Individualism/Collectivism

As indicated in Table 3.3, no significant correlations were found between Individualism/Collectivism (I/C total) and any of the five factors. Therefore, there is no evidence to suggest that any relationship exists between any of the five factors, as measured by the BTI, and Individualism/Collectivism suggesting that arguments to include Individualism/Collectivism as a potential sixth factor may be valid. These findings concur with research conducted in the Chinese context, which lead to the discovery that the Interpersonal Relatedness Factor was defined only by the CPAI and not by any of the five factors (Cheung et al., 2001). The interpersonal relatedness factor is described as being a measure of interdependence, which has an important role in models of Chinese Personality that is not measured by the FFM (Cheung et al., 2001; Cheung et al., 2003). However, in order to fully explore the FFM and Individualism/Collectivism one needs to consider whether the differences were observed across race and for home language.

3.4. Race, the BTI factors and Individualism/Collectivism

Variable		I/C Total	Extraversion	Neuroticism	Conscientious - ness	Openness to Experience	Agreeable - ness
Race	**F**	0.24	1.07	0.99	0.01	1.87	0.87
	p	0.63	0.30	0.32	0.90	0.17	0.35

Bold values indicate significance at $p < 0.05$, DF (1, 173)

Table 3.4: ANOVA results for race, BTI domains & Individualism/Collectivism

Table 3.4 shows the results for the one-way analysis of variance (ANOVA) for race with the BTI domain scales and the INDCOL scale. No significant differences were found for either the INDCOL or BTI domain scales with race. It is surprising that no significant differences were found for the White or Non-White groups on either the INDCOL scale or BTI factors, as racial differences in terms of personality measures have been reported previously (Abrahams, 1996). In support of the view that race does not influence Individualism was a study by Van Dyk and De Kock (2004) in the South African National Defence Force (SANDF). The new SANDF which includes members from: the SANDF prior to 1994; the homeland armies of Transkei, Ciskei, Bophuthatswana, and Venda; the ANC's Umkhonto we Sizwe (MK) force; and the PAC's Azanian People's Liberation Army (APLA). There was some concern as to the extent that the cultural backgrounds of the students in the Military Academy would differ; and whether they would differ to such an extent as to result in conflict among the diverse groups. Van Dyk and De Kock (2004) hypothesised that White and Coloured officers in the national defence force would tend to be more individualistic, while Black officers would be more collectivistic. No significant differences in Individualism and Collectivism were found between the Black, Coloured or White groups studied. It is important to find explanations for changes in cultural variation as illustrated by Van Dyk and De Kock's (2004) study, if the constructs used to study culture, are to be valid.

Race has typically been used as a means of differentiating between ethnic groups in South Africa. Van Dyk and De Kock (2004) found no differences in terms of Individualism and Collectivism between White, Coloured and Black students in the SANDF. The first explanation for these findings could be the fact that student populations have been found to be more individualist in nature, due in part to their shared exposure to similar education (Van Dyk & De Kock, 2004). In a sense this argument supports the effect of acculturation, which has been theorized to occur whenever different cultural groups come into close contact with one another.

Cheung et al., (2003) have argued that current theories regarding Western culture ignore the interpersonal nature of human behaviour that occurs in relational contexts. Cheung et al., (2003) blame this trend on the prominence of individualist-collectivistic distinctions in cross-cultural personality research. As a result, Individualism is emphasised in Western cultures, while inter-dependence has been de-emphasised over the past few decades. Though a valid hypothesis, the role of acculturation as an agent of change within societies is more widely acknowledged. Mpofu (2001) has spoken of what is referred to as the "African modernity trend" which represents a shift toward Western Individualism. This ideological shift has been greatly influenced by Africa's participation in the global economy where Western, free-market economies emphasize individualist values. Studies of acculturation have shown that overt behaviours become oriented to those of the dominant culture, but that the "invisible" elements of the individual's traditional culture remains intact (Mpofu, 2001).

The grouping together of Black, Indian and Coloured groups to create comparative samples in terms of magnitude, could also have influenced the results significantly. The study by De Kock and Van Dyk (2004) in fact supports the view that the Coloured group lies somewhere between the White and the Black groups with regards to some aspects of Individualism and Collectivism. Also important is that Green et al., (2005) found that even in homogeneous student groups, Individualism and Collectivism varied. Although the aim of this study was to explore group trends, the influence of individual differences was more marked due to the

small sample size. Also, differences in Individualism and Collectivism within a given culture may differ (Mpofu, 2001). Furthermore, factors such as age, gender and socio-economic status have been shown to have as great, if not more of an influence on personality traits than culture (Green et al., 2005; Costa, Terracciano & McCrae, 2001; McCrae et al, 1998).

3.5. Home language, the BTI factors and Individualism/Collectivism

Variable		I/C Total	Extraversion	Neuroticism	Conscientious - ness	Openness to Experience	Agreeable - ness
Home Language	**F**	0.02	2.46	1.88	0.85	0.73	0.60
	p	0.88	0.12	0.17	0.36	0.39	0.44

Bold values indicate significance at $p < 0.05$, DF (1, 173)

Table 3.5: ANOVA results for home language, BTI domains & Individualism/Collectivism

Similarly, as shown in Table 3.5, no significant differences in the one-way ANOVA were found between home language, the BTI domains and Individualism/Collectivism. Home language is a variable that has often been used in South African studies as a rough guide to the ethnicity and cultural background of the participants in a study (Eaton & Louw, 2000). Due to the fact that the FFM was derived from lexical analysis, difference in the expression of the FFM according to language groups might be expected. However, arguments supporting the universality of the FFM suggest that trait descriptions are similarly universal. Ashton et al., (2004) have discussed variations in the FFM as based on languages in Europe, which would be assumed to be more similar to each other than to the African languages.

The issue then, is whether language could be considered to reflect culture and personality. If we just examine the English language, which is the official language of countries such as the United States, the United Kingdom, Australia, New Zealand and Mauritius for example, it is unlikely that language alone reflects culture. A possible explanation could be that the use of a language in a given country or by an ethnic group is in fact influenced by the prevailing

socio-historical and cultural context. If the sample in this study is considered, a student population within the current South African context, all attending the same tertiary institution, it might be argued that they in fact share a similar language of discourse. Given the fact that the BTI and INDCOL scales were both tested English this could show a convergence in the participants' thinking. Studies on the trends of acculturation in people who form an ethnic minority in a given culture, have shown that they tend to espouse the ideals and values of the dominant culture (Mpofu, 2001).

3.6. Conclusion

This study has shown the FFM does not account for Individualism/Collectivism in the South African context. Therefore, it can be concluded that there is evidence to suggest that the FFM, as measured by the BTI, would be a more comprehensive description of personality in the South African, if Individualism/Collectivism were included. Furthermore, neither race nor home language differed significantly from either the five factors or Individualism/Collectivism. Therefore it can be concluded that race and home language may not be sufficiently indicative of cultural difference among South African students. In keeping with the exploratory nature of this study, this latter conclusion can be identified as an area that requires further research and will be expanded on, in the limitations of this study and recommendations for future research in the following chapter.

CHAPTER 4 - LIMITATIONS, RECOMMENDATIONS & CONCLUDING COMMENTS

The aim of this chapter is to identify the limitations of this study, by discussing both the conceptual and methodological issues in this regard. Thereafter, suggestions for possible future research are discussed and followed by the concluding comments.

4.1. Limitations

4.1.1. Conceptual limitations

Personality is a complex construct with many different definitions and operationalisations. For the purposes of this study, personality was defined according to the trait approach, which aims at establishing universal laws for describing and predicting an individual's personality (McCrae & Allik, 2002). At present the FFM which is located within the trait perspective is arguably the most popular research approach in studies on personality. In part this popularity is due to the fact that the FFM provides a useful taxonomy for organising and classifying personality without representing any particular theoretical perspective (McCrae & Terracciano, 2005). However, this seeming advantage is also an often cited criticism of the FFM. As the FFM was derived purely through statistical analysis it has been labelled as being merely a descriptive taxonomy which lacks a true theoretical foundation (Larsen & Buss, 2005). John & Srivastava, (1999) argue that the FFM does not represent a theory to replace all other theories, but should rather be seen as serving an integrative function for other more theoretically orientated perspectives.

More recently, McCrae (2004) has been working on a theory of personality that supplements the FFM, referred to as the Five Factory Theory (FFT). The FFT posits that personality traits, which are biologically based, together with culture influence what are called characteristic adaptations (Larsen & Buss, 2005). Characteristic adaptations refer to the acquired personality structures that are developed as a form of adaptation to the environment that directly influences an individual's behaviour (Larsen & Buss, 2005). As the characteristic adaptations are influenced by both traits and culture, the expression of traits can according to McCrae (2004) vary across cultures. According to the FFT, differences in the FFM across

cultures are due to the shared genetic ancestry of people living in a country (McCrae, 2004). The FFT is useful as an explanation for the geographical variation in trait expression, as the FFT proposes that culture is affected by personality traits. Hence, individualistic cultures have in general been found to be associated with higher mean scores in Extraversion and Openness to experience (McCrae, 2001). However, McCrae and Allik (2002) acknowledge that the relationship between culture and personality may in fact be reciprocal, which implies revision of the FFT. The issue of cultural variation, however, in terms of the definitions and operationalisations of these constructs also introduces complications.

Similar to the construct of personality, culture has no universal definition and is a complex construct to define and operationalise. Individualism and Collectivism currently represent the most significant dimensions of cultural difference (Triandis, 2001). These constructs define cultural difference at a broad level of abstraction, which is suggested by Poortinga and Van Hemert (2001) to diminish the explanatory value of these concepts. Therefore, it may indeed be the case that consensus on how to define cultural variation would lead to a clearer picture of the relationship between culture and personality.

One approach to the analysis of cultural variation has been to distinguish between the levels of analysis at which Individualism and Collectivism are applied in a study. Triandis and Suh (2002) discuss the difference between Individualism and Collectivism as applied at the national-level or individual-level. Therefore, for the sake of making a distinction for these dimensions when measuring personality attributes within cultures, the terms idiocentricism and allocentrism are used to correspond to Individualism and Collectivism respectively (Triandis & Suh, 2002). This difference in nomenclature allows for a discussion of a person who is an allocentric living in an individualist culture or vice versa. However, the same defining attributes classifying Individualism and Collectivism apply to both idocentrism and allocentrism (Triandis et al., 1990).

Although Individualism and Collectivism are useful in terms of analysis, it would be gross stereotyping to assume that every individual within a certain culture would have all the characteristics of that culture (Triandis, 2001). As a result, a distinction can be drawn between different types of individualist and collectivist societies. This difference is due to the degree of emphasis placed on what have been termed horizontal and vertical social relationships. The former, describes equality amongst individuals and the latter, a hierarchical structure where individuals differ in status. Using these two dimensions, four distinct patterns within cultures have been identified, namely, horizontal Individualism, vertical Individualism, horizontal Collectivism and vertical Collectivism (Triandis & Gelfand, 1998). Horizontal Individualism describes a society with people who want to be distinct from the group, are highly self-reliant, but not interested in the acquisition of status. With vertical Individualism, people are competitive with others for the purpose of acquiring status. In societies operating from the horizontal collectivist position, equality, interdependence, sociability and common goals are emphasized, while people may not necessarily submit to authority. Lastly, vertical Collectivism is typified by people who will subjugate their goals for that of the group, especially if it is for the sake of the group's integrity, and ultimately these individuals will submit to authority (Triandis, 2001; Triandis & Gelfand, 1998).

These levels of analysis were not used in this study and therefore represent a limitation. Following an extensive meta-analysis Oyserman, et al. (2002) have concluded that a broadly inclusive approach to Individualism and Collectivism should be employed as each of the approaches to these constructs have their limitations and not one single approach as yet dominates in the field. In addition, multicultural societies such as South Africa introduce another level of complexity. Firstly, the cross-cultural research and literature often erroneously equate the concepts of nation and culture. In South Africa, a variety of cultures are contained within a single political border, which vary in terms of Individualism and Collectivism. As Allik and McCrae (2004) state, "the primacy of human groups over

geophysical locations is illustrated by the fact that Black and White South Africans had very different personality profiles, despite living in the same country for many generations" (p23).

Secondly, culture is a dynamic construct open to change in response to changes in the environment such as shifts in the socio-historical and socio-political context. Therefore, out-dated, stereotypical categorisations of ethnic groups in South Africa as strictly Collectivist or Individualist that possibly applied during the Apartheid era, may no longer be relevant. In particular, the abolition of racial segregation has brought individuals from different cultural and ethnic backgrounds into closer contact with one another. Therefore, acculturation, which can be occurring at both the individual and community level, could be influencing the extent to which cultural differences are expressed or even in fact exist (Eaton & Louw, 2000).

4.1.2. Methodological limitations

Quantitative research design methods were employed in this study. Consequently the study is affected by the inherent disadvantages associated with this form of research design. Trait approaches to personality research are aimed at the discovery of laws governing behaviour that are universally applicable (Funder, 2001; Larsen & Buss, 2005). Therefore, large samples are needed which can be achieved through quantitative research methods; but this is attained at the expense of the depth of information (Rosenthal & Rosnow, 1991). In this study for example, respondents were required to answer a questionnaire that had a forced-response choice format. No open-ended questions or interviews were included in this study, which could have facilitated an exploration of the respondents' attitudes, feelings or the reasons behind their responses. As is evident, the researcher's interaction with the participants in this study was limited, which contributes to the objectivity of the obtained results (Rosenthal & Rosnow, 1991).

The research design in this study can be further classified as non-experimental as no randomization occurred, there was no assigned control group, and no variables were manipulated. Non-experimental research designs have several disadvantages. The absence of

randomization into experimental and control groups introduces the confounding influence of extraneous variables. Furthermore, no causal inferences can be inferred from the research as there is no variable manipulation. Yet, non-experimental research designs do allow the discovery of trends, consistent with the exploratory nature of this study that lay the foundation for future research (Rosenthal & Rosnow, 1991). The participants for this study were obtained through non-probability, volunteer sampling. Though time efficient and cost effective, the absence of random selection from the population with this sampling technique, limits the extent to which the researcher may safely generalize the findings of this study to the broader population (Babbie & Mouton, 2001; Rosenthal & Rosnow, 1991).

The size of the sample in this study was small when considering the complexity of the constructs of personality, Individualism and Collectivism that were being investigated. In this study the sample size was mainly affected by a failure to complete or return the distributed questionnaires. Response rates to questionnaires and surveys, particularly in student populations, have been found to be decreasing over the last decade (Dey, 1997; Porter & Umbach, 2006; Porter & Whitcomb, 2005). The response rate in this study was found to agree with research on response rates in student populations, which is currently 21% (Dey, 1997). More recently, it has been found that student response can even be as low as 14% (Porter & Umbach, 2005). Questionnaire response rates affect not only the validity of the study and the use of the results, but also have an impact on non-response error (Achenreiner & Brokaw, 2005).

In general questionnaires have a very low response rate, due in part, to a lack of motivation for completing a questionnaire that has no personal relevance to the respondent (McClelland, 1994). Other reasons may be that the questionnaire is too long and difficult to complete or that respondents are afraid of what will happen to the data. Questionnaires, by their very nature seek information by asking questions, to which it is assumed that the respondents have ready answers. This may not always be the case and therefore, people are likely to select an answer or fail to respond. In respect to posted questionnaires, there is also a lack of control

over the context by the researcher in which questions are answered and respondents are free to discuss their responses with others. Therefore, it is similarly impossible to determine or control the honesty of the answers and the seriousness with which a questionnaire is completed (Gillham, 2000).

As a result of poor response rates, non-response bias and volunteer bias could be limitations in this study, in that respondents who did participate, could differ to those that did not (Porter & Whitcomb, 2005; Rosenthal & Rosnow, 1991). Achenreiner and Brokaw (2005) found that survey studies conducted by students were more likely to elicit participation from participants of 51 years and older. In addition, Porter and Whitcomb (2005) found that respondents in student populations are more likely to be White, female, socially engaged, high achievers academically and of higher socio-economic status. With regards to ethnicity, research on student participants also found that the respondents tend to be White rather than Non-White (Porter & Whitcomb, 2005). Besides these demographic variables, differences in the personality types of participant versus non-participant respondents have also been found (Aviv, Zelenski, Rollo & Larsen, 2002; Porter & Whitcomb, 2005). As personality was one of the variables in this study, this could pose an additional limitation on the validity of the results.

Also, of important consideration with regards to the nature of the sample, was that the entire sample was composed of student volunteers. Students may also vary from the general population in ways that would affect the results. Cross-cultural research studies of both the NEO-PI-R and INDCOL scales have used student samples extensively, with the latter even being developed from data obtained using a student sample exclusively (Green et 2005; Hui, 1988; Katigbak et al., 2002; McCrae & Terracciano, 2005; Van Dyk & De Kock, 2004). Similarly, the BTI that was used in this study was initially developed using a sample that was largely comprised of university students (Taylor, 2004). Several studies also cite the use of results as obtained from university students as a limitation. In particular in relation to Individualism and Collectivism, as students are thought to be more exposed to Individualism

than are members of the general public (Eaton & Louw, 2000; Van Dyk & De Kock, 2004). In support of this view Oyserman et al. (2002) have argued that the demands of an academic environment fosters Individualism, since the focus is on individual striving, competition and the realisation of one's potential. In addition, unequal sample sizes resulted in the race and home language groups being combined, which has in turn reduced the explanatory power of the findings.

Following on from this discussion, it is important to recognise the limitations that were introduced into this study by the instruments themselves. It is assumed that the BTI, which has been developed in the South African context, will be more culturally relevant (Taylor & De Bruin, 2005). However, the test is as yet still only available in English, which still introduces the problems associated with whether second-language English-speakers can understand the items. It is important to note that although the BTI has been constructed according to the FFM. Yet, the FFM remains a theory of Western origin in spite of support for its universality. However, one advantage of using the BTI in this study was that it was normed on a sample of the South African population and the INDCOL has not.

Similarly it can also be argued that the INDCOL was constructed according to Asian constructs of Individualism and Collectivism which may not fully apply to the African culture and context. It is also important to recognise the lack of support in the literature for any single measure of Individualism and Collectivism (Earley & Gibson, 1998; Oyserman et al., 2002). Earley and Gibson (1998) speak of the fact that Hui's INDCOL scale in fact taps more into issues of family and lifestyle. Therefore it has been suggested that the most effective method of assessing this construct at present would be to use a multi-method approach (Earley & Gibson, 1998). Hence, the use of a single instrument for the measurement of Individualism and Collectivism presents another limitation in relation to the instruments employed in this study.

4.2. Recommendations for future research

Regardless of the limitations there is much to be gained from the findings in this study in terms of avenues for future research.

Replication of this with a larger and more representative sample, would allow for a lesser influence of individual differences and greater representation of different language and race groups. In addition, it may be useful to use the NEO-PI-R to enhance the study's comparability to other cross-cultural studies of the FFM. Also of importance would be to include a measure of acculturation which could determine the extent to which this shift in culture has an effect on the results.

The use of several measures of Individualism and Collectivism or at least a composite measure that integrates the different perspectives would be important as, the literature has shown that the use of a single measure provides too simplistic a view of these complex variables. One area for future research could focus on finding a typology of Individualism and Collectivism that is valid for South Africa.

One direction that may prove successful in South Africa is the development of assessment tools that use an emic approach similar to that employed by the CPAI, in order to provide instruments that are valid for the current South African population. Alternatively a mixed emic-etic approach which would encourage the use of western-developed theories and instruments in conjunction with locally derived theories and instruments.

The effects of urban versus rural differences, differences in socio-economic status and education play a role in the extent to which individuals either hold with the traditional values of their culture or have adopted more Western, individualistic ideals. In addition race and home language alone do not appear to provide a good enough guide as to the culture of individuals in South Africa.

4.3. Concluding comments

This study was exploratory in nature and by no means can be considered conclusive on the subject. However, the study has indicated that Individualism and Collectivism are important variables of cultural difference which may not be accounted for by the FFM. Also of importance is that any exploration of these variables in the South African context needs to take both the broad cultural and lower level individual differences of Individualism and Collectivism into account.

REFERENCES

Abrahams, F. (1996). The cross-cultural applicability of the 16 Personality Factors Inventory (16PF). Unpublished doctoral thesis, University of South Africa, Pretoria, South Africa.

Achenreiner, G., & Brokaw, S. (2005). Impact of source on response rates: Are student studies viewed as less important by respondents. *Marketing Education Review, 15,* 55 – 65.

Allik, J., & McCrae, R. R. (2004). Toward a geography of personality traits. Patterns of profiles across 36 cultures. *Journal of Cross-Cultural Psychology, 35*, 13 – 28.

Ashton, M. C., Lee, K., Perugini, M., Szarota, P., De Vries., R. E., Di Blas, L., Boies, K., & De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology, 86*, 356 – 366.

Aviv, A. L., Zelenski, J. M., Rollo, L., & Larsen, R. J. (2002). Who comes when: Personality differences and later participation in a university subject pool. *Personality and Individual Differences, 33*, 487 – 496.

Babbie, E., & Mouton, J. (2001). *The practice of social research*. Cape Town, Oxford University Press, Southern Africa.

Barret, D. W., Wosinska, W., Butner, J., Petrova, P., Gornik-Durose, M., & Cialdini, R. B. (2004). Individual differences in the motivation to comply across cultures: the impact of social obligation. *Personality and Individual Differences, 37*, 19 – 31.

Bedell, B., Van Eeden, R., & Van Staden, F. (1999). Culture as a moderator variable in psychological test performance: Issues and trends in South Africa. *South African Journal of Industrial Psychology, 25,* 1 -7.

Cheung, F. M. (2004). Use of Western and indigenously developed tests in Asia. *Applied Psychology: An international review, 53,* 173 – 191.

Cheung, F. M., Cheung, S. F., Leung, K., Ward, C., & Leong, F. (2003). The English version of the Chinese Personality Assessment Inventory. *Journal of Cross-Cultural Psychology, 34,* 433 – 452.

Cheung, F. M., Leung, K., Zhang, J. X., Sun, H. F., Gan, Y. G., Song, W. Z., et al. (2001). Indigenous Chinese personality construct: Is the Five-Factor Model complete? *Journal of Cross-Cultural Psychology, 32*, 407 – 433.

Church, A. T. (2000). Culture and personality: Toward an integrated cultural trait psychology. *Journal of Personality, 68*(4), 651-704.

Costa, P. T., Jr., & McCrae, R. R. (1995). Domains and facets: Hierarchical personality assessment using the Revised NEO Personality Inventory. *Journal of Personality Assessment, 64*, 21 – 50.

Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory & NEO Five Factor Inventory: Professional Manual.* Florida: Psychological Assessment Resources, Inc.

Costa, P. T., Jr., Terracciano, A., & McCrae, R. R. (2001). Gender differences in Personality Traits across cultures: Robust and surprising findings. *Journal of Personality and Social Psychology, 81,* 332 – 331.

Crystal, D. (1997). *English as a global language*. Cambridge: Cambridge University Press.

Dalton, J. H., Elias, M. J., & Wanderman, A. (2002). *Community Psychology: Linking individuals and communities*. Belmont: Wadsworth.

De Raad, B., & Perugini, M. (2002). *Big five assessment.* Seattle, W. A.: Hogrefe & Huber.

Dey, E. (1997). Working with low survey response rates: The efficacy of weighting adjustments. *Research in Higher Education, 38*, 215 – 227.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41,* 417 – 440.

Earley, P. C., & Gibson, C. B. (1998). Taking stock in our progress on Individualism Collectivism: 100 years of community solidarity. *Journal of Management, 24,* 265 – 304.

Eaton, L., & Louw, L. (2000). Culture and self in South Africa: Individualism/Collectivism predictions. *Journal of Social Psychology, 140,* 210 – 218.

Eysenck, H. J. (1955). *Dimensions of personality.* London: Routledge & Kegan Paul.

Fiske, A. P. (2002). Using Individualism and Collectivism to compare cultures – A critique of the validity and measurement of constructs: Comment on Oyserman et al. (2002). *Psychological Bulletin, 128*, 78 – 88.

Foxcroft, C. (1997). Psychological testing in South Africa: Perspectives regarding ethical and fair practices. *South African Journal of Psychology, 13*, 229 – 235.

Foxcroft, C., & Roodt, G. (2001). *An introduction to psychological assessment in the South African context*. Cape Town: Oxford University Press, Southern Africa.

Funder, D. C. (2001). Personality. *Annual Review, **52**,* 197 – 221.

Gillham, B. (2000). *Developing a questionnaire*. London: Continuum

Green, E. G. T., Deschamps, J-L., & Páez, D. (2005). Variation of Individualism and Collectivism within and between 20 countries: A typological analysis. *Journal of Cross Cultural Psychology, 36,* 321 – 339.

Goldberg, L. R. (1990). An alternative "description of personality": The Big Five factor structure. *Journal of Personality and Social Psychology, 59,* 1216 – 1229.

Goldberg, L. R. (1995). What the hell took so long? Donald W. Fiske and the Big- Five factor structure (pp. 29 – 43). In P.E. Shrout & S.T. Fiske (Eds.). *Personality research, methods, and theory: A Festschrift honouring Donald W. Fiske.* New Jersey: Lawrence Erlbaum Associates, Publishers.

Gouveia, V.V., & Ros, M. (2000). Hofstede and Schwartz's models for classifying Individualism at the cultural level: their relation to macro-social and macro-economic variables. *Psicothema, 12, Supl.* 25-33.

Heaven, P. C. L., & Pretorius, A. (1998). Personality structure among black and white South Africans. *The Journal of Social Psychology, 138*, 664 – 667.

Heutchert, J. W. P., Parker, W. D., Stumpf, H., & Myburgh, C. P. H. (2000). The five-factor model of personality in South African College Students. *American Behavioral Scientist, 44*, 112 – 125.

Horn, B. S. (2000). *A Xhosa translation of the NEO-PI-R: A pilot study.* Unpublished Masters Dissertation: University of Port Elizabeth, South Africa

Howell, D. C. (2002). *Statistical methods for psychology* (Fifth ed.). Pacific Grove: Thomson Learning.

Hui, C. H. (1988). Measurement of Individualism-Collectivism. *Journal of Research in Personality, 22,* 17 – 36.

Hui, C. H., & Yee, C. (1994). The shortened Individualism-Collectivism scale: It's relationship to demographic and work-related variables. *Journal of Research in Personality, 28,* 409 – 424.

John, O. P., & Srivastava, S. (1999). The Big-Five Trait Taxonomy: History, Measurement & Theoretical Perspectives (pp. 102 – 138). In L.A. Pervin & O.P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed.). New York, Guilford.

Katigbak, M. S., Church, A. T., Guanzon-Lapena, M. A., Carlota, A.J., & Del Pilar, G. H. (2002). Are indigenous personality dimensions culture specific? Philippine inventories and the Five Factor Model. *Journal of Personality & Social Psychology, 82*, 89 – 101.

Kruger, T., & Roodt, G. (2003). Hofstede's VSM-94 revisited: Is it reliable and valid? *South African Journal of Industrial Psychology, 29,* 75-82.

Laher, S. (2001). *The utility of the MIPS in the South African context – An exploratory study.* Unpublished Masters Dissertation, Johannesburg:

Larsen, R. J. & Buss, D. M. (2005). *Personality psychology: domains of knowledge about human nature.* Boston: McGraw-Hill

Matsimbi, W.E. (1997). Cross-cultural generalisability of the Five Factor model: A study on South African white collar males. Unpublished Masters Dissertation. University of the Witwatersrand, Johannesburg.

McCann, D., & Sato, T. (2000). Personality, Cognition and the self. *European Journal of Personality, 14*, 449 – 461.

McClelland, S. B. (1994). Training needs assessment data-gathering methods: Part 1, Survey questionnaires. *Journal of European Industrial training*, 18 (1), 22 – 26.

McCrae, R. R. (2001). Trait psychology and culture: exploring intercultural comparisons. *Journal of Personality, 69,* 819 -846.

McCrae, R. R. (2004). Human nature and culture: A trait perspective. *Journal of Research in Personality, 38*, 3 – 14.

McCrae, R. R., & Allik, J. (Eds). (2002). *The Five-Factor Model of personality across cultures.* New York: Kluwer Academic.

McCrae, R. R., Costa, P. T., Del Pilar, G. H., Rolland, J. P., & Parker, W. D. (1998). Cross cultural assessment of the Five-Factor model. *Journal of Cross-Cultural Psychology, 29,* 171 – 188.

McCrae, R. R., & Terracciano, A. (2005). Universal features of personality traits from the observer's perspective: Data from 50 Cultures. *Journal of Personality and Social Psychology, 88*, 547 – 561.

Meiring, D., Van de Vijver, A. J. R., Rothmann, S., & Barrick, M.R. (2005). Construct, item, and method bias of cognitive and personality tests in South Africa. *South African Journal of Industrial Psychology, 31,* 1 – 8.

Merrit, A. (2000). Culture in the cockpit: Do Hofstede's dimensions replicate? *Journal of Cross-Cultural Psychology, 31*, 283 – 301.

Mpofu, E. (2001). Exploring self-concept in an African culture. *The Journal of Genetic Psychology, 155,* 341 – 354.

Murphy, K. R., & Davidshofer, C. O. (2001). *Psychological Testing: Principles and applications* (5th ed.). Upper Saddle River, N.J.: Prentice-Hall.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking Individualism and Collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin, 128,* 3 – 72.

Patel, A.B. (2002). *The relationship between the Individualism/Collectivism personality dimensions and the achievement and affiliation motivational needs amongst South African workers*. Unpublished Honours Dissertation, Johannesburg, University of the Witwatersrand.

Piedmont, R. L., Bain, E., McCrae, R. R., & Costa, P. T., Jr. (2002). The Applicability of the Five Factor model in a sub-Saharan culture: The NEO-PI-R in Shona (pp. 155-175). In R. R. McCrae & J. Allik (Eds). *The Five-Factor Model of personality across cultures*. New York: Kluwer Academic.

Poortinga, Y. H., & Van Hemert, D. A. (2001). Personality and culture: Demarcating between the common and the unique. *Journal of Personality, 69,* 1033 – 1060.

Porter, S. R. (2004). Raising response rates: What works? *New Directions for Institutional Research, 121,* 5 – 21.

Porter, S. R., & Umbach, P. D. (2006). Student survey response rates across institutions: Why do they vary? *Research in Higher Education, 47,* 229 – 247.

Porter, S. R., & Whitcomb, M. E. (2005). Non-response in student surveys: The role of demographics, engagement & personality. *Research in Higher Education, 46,* 127 – 152.

Rhee, E., Uleman, J. S., & Lee, H. K. (1996). Variations in Collectivism and Individualism by ingroup and culture: confirmatory factor analyses. *Journal of Personality and Social Psychology, 71,* 1037 – 1054.

Rolland, J. P. (2002). Cross-cultural generalisability of the Five Factor model of personality (pp. 7-29). In R. R. McCrae & J. Allik (Eds*). The Five-Factor Model of personality across cultures*. New York: Kluwer Academic.

Rolland, J. P., Parker, W. D., & Stumpf, H. (1998). A psychometric examination of the French translation of the NEO-PI-R and NEO-FFI. *Journal of Personality Assessment, 71*, 269 – 291.

Rosenthal, R., & Rosnow, R. L. (1991). *Essentials of behavioural research: Methods and data analysis.* New York: McGraw Hill.

Rothmann, S., & Coetzer, E. P. (2003). The Big Five personality dimensions and job performance. *SA Journal of Industrial Psychology, 29*, 68 – 74.
SAS Institute. (1996). SAS Users Guide: Basics (6th ed.). Cary, NC: SAS Institute.

Schimmack, U, Oishi, S. & Diener, E. (2005). Individualism: A valid and important dimension of cultural differences between nations. *Personality and Social Psychology Review, 9*, 17 – 31.

Schimmack, U., Radhakrishnan, P., Oishi, S., Dzokoto, V., & Ahadi, S. (2002). Culture, personality, and subjective well-being: integrating process models of life satisfaction. *Journal of Personality and Social Psychology, 82*, 582 – 593.

Shulruf, B., Hattie, J., & Dixon, R. (2003). *Development of a new measurement tool for Individualism and Collectivism.* Paper presented at the NZARE/AARE Joint Conference 2003, Auckland, New Zealand.

Taylor, I. A. (2000). *The construct comparability of the NEO-PI-R questionnaire for Black and white employees.* Unpublished doctoral dissertation. University of the Orange Free State, South Africa

Taylor, N. (2004). *The construction of a South African Five Factor Personality questionnaire.* Unpublished Masters Dissertation, Johannesburg: Rand Afrikaans University.

Taylor, N., & De Bruin, G. P. (2005). *Basic Traits Inventory: Technical Manual.* Johannesburg: J.P. van Rooyen & Partners SA.

Teferi, T. B. (2004). *The application of the NEO-PI-R in the Eritrean context*. Unpublished Masters Dissertation, Johannesburg: University of the Witwatersrand.

Triandis, H. C. (2001). Individualism-Collectivism and personality. *Journal of Personality, 69*, 907-924.

Triandis, H.C., & Gelfand, M.J. (1998). Converging measurement of horizontal and vertical Individualism and Collectivism. *Journal of Personality and Social Psychology, 74*, 118 – 128.

Triandis, H. C., McCusker, C., & Hui, C. H. (1990). Multimethod probes of Individualism and Collectivism. *Journal of Personality & Social Psychology, 59*, 1006 – 1020.

Triandis, H. C., & Suh, E. M. (2002). Cultural influences on personality. *Annual Review of Psychology, 53*, 133 – 160.

Tupes, E. C., & Christal, R. C. (1992). Recurrent personality factors based on trait ratings. *Journal of Personality, 60,* 225 – 251 (Special edition).

Van de Vijver, F. J. R., & Leung, K. (2001). Personality in cultural context: methodological issues. *Journal of Personality, 69*, 1007 – 1031.

Van de Vijver, A.J.R. & Rothman, S. (2004). Assessment in multicultural groups: The South African case. *South African Journal of Industrial Psychology, 30*, 1 – 7.

Van Dyk, G. A. J. & De Kock, F. S. (2004). The relevance of the Individualism-Collectivism (IC) factor for the management of diversity in the South African National Defence Force. *South African Journal of Industrial Psychology, 30,* 90-95.

Zhang, L-F., & Akande, A. (2002). What relates to the big five among South African university students? *Ife PsychlogIA: an international journal, 10,* 49 – 74.

APPENDICES

Appendix A: Description of the NEO-PI-R facets

NEO-PI-R

Adapted from Costa & McCrae (1992), pp.16 – 18:

Neuroticism

N1: Anxiety - anxious individuals are apprehensive, fearful, prone to worry, nervous, tense and jittery

N2: Angry hostility - tendency to express anger and related states such as frustration and bitterness

N3: Depression - measures normal individual differences in the tendency to experience depressive affect.

N4: Self-Consciousness - the emotions of shame and embarrassment form the core of this facet of N. Self-conscious individuals are uncomfortable around others, sensitive to ridicule, and prone to feelings of inferiority.

N5: Impulsiveness - in the NEO-PI-R, impulsiveness refers to the inability to control urges and cravings.

N6: Vulnerability - high scores on this facet are relating to the feeling that one is unable to cope with stress, becoming dependent, hopeless, or panicked when facing emergency situations.

Extraversion

E1: Warmth – the facet most relevant to issues of interpersonal intimacy. Warm people are affectionate and friendly; they genuinely like people and form close attachments to others.

E2: Gregariousness - The preference for other people's company.

E3: Assertiveness – high scorers on this scale are dominant, forceful, and socially ascendant.

E4: Activity – high scores are seen in rapid tempo, vigorous movement, in a sense of energy and a need to keep busy.

E5: Excitement-seeking – individuals crave excitement and stimulation, bright colours and noisy environments.

E6: Positive Emotions – tendency to experience positive emotions such as joy, happiness, love and excitement.

Openness

O1: Fantasy - individuals who are open to fantasy have a vivid imagination and active fantasy life; day-dreaming is a way of creating for themselves an interesting inner world.

O2: Aesthetics – have a deep appreciation for art and beauty, they are moved by poetry and absorbed in music.

O3: Feelings – receptivity to one's own inner feelings and emotions and the evaluation of emotion as important part of life.

O4: Actions – openness is seen behaviourally as the willingness to try different activities, go new places or eat unusual foods.

O5: Ideas – active pursuit of intellectual interests, and a willingness to consider new, perhaps unconventional ideas.

O6: Values – open individuals have a readiness to re-examine social, political, and religious values.

Agreeableness

A1: Trust – High scorers have disposition to believe that others are honest and well-intentioned.

A2: Straightforwardness – high scorers tend to be frank, sincere, and ingenuous.

A3: Altruism – individuals with high scores tend to have active concern for others' welfare as shown in generosity, consideration of others, and a willingness to assist others in need of help.

A4: Compliance – concerns characteristic reactions to interpersonal conflict. High scorers tend to defer to others, inhibit aggression, and to forgive and forget.

A5: Modesty – humble, self-effacing, though not lacking in self-confidence or self-esteem.

A6: Tender-mindedness – measures attitudes of sympathy and concern for others. High scorers are moved by others needs and emphasise the human side of social policies.

Conscientiousness

C1: Competence – refers to the sense that one is capable, sensible, prudent, and effective. People with high scores on this facet tend to feel well-prepared to deal with life.

C2: Order – high scorers are neat, tidy, and well-organised.

C3: Dutifulness – high scorers adhere strictly to their ethical principles and scrupulously fulfill their moral obligations.

C4: Achievement – high achievers have high aspiration levels and work hard to achieve their goals; they are diligent, purposeful and have a sense of direction in life.

C5: Self-discipline – the ability to begin tasks and carry them through to completion despite boredom and other distractions; high scorers have the ability to motivate themselves and get the job done.

C6: Deliberation – the tendency to think carefully before acting.

Appendix B: Description of the Basic Traits Inventory factors and facets

BTI

The definitions for the factors and facets of the Basic Traits Inventory are given below, as adapted from Taylor & De Bruin (2005). For a more detailed description of the factors and their facets, please consult Taylor (2004).

Neuroticism (N)

Neuroticism refers to a person's emotional stability, and the general tendency to experience negative affect in response to their environment. Neuroticism is subdivided into four facets.

Affective instability - The tendency to be easily upset, have feelings of anger or bitterness and be emotionally volatile.

Depression - A tendency to experience guilt, sadness, and hopelessness, and to feel discouraged and dejected.

Anxiety - The tendency to experience worry, nervousness, apprehensiveness, and tension.

Self-consciousness - The degree to which a person is sensitive to criticism, and has frequent feelings of shame and embarrassment.

Extraversion (E)

Extraversion refers to the degree to which an individual enjoys being around other people, likes excitement and stimulation and is cheerful in disposition. Extraversion is subdivided into five facets.

Ascendance - The degree to which a person enjoys entertaining and leading or dominating large groups of people.

Liveliness - The degree to which a person is bubbly, lively and energetic.

Positive affectivity - The tendency to frequently experience emotions such as joy, happiness, love, and be enthusiastic, optimistic and cheerful.

Gregariousness - The tendency to have a need for frequent social interaction and a preference for being surrounded by people as opposed to being alone.

Excitement-seeking - A need for adrenaline-pumping experiences and stimulation from noisy places, bright colours or other such intense sensations.

Openness to Experience (O)

This construct deals with the extent to which people are willing to experience new or different things and are curious about themselves and the world. Openness to Experience is subdivided into five facets.

Aesthetics - The tendency to have an appreciation for art, music, poetry and beauty, without necessarily having artistic talent.

Actions - The degree to which a person is willing to try new and different activities.

Values - The degree to which a person is willing to re-examine social, political and religious values as opposed to accepting authority and honouring tradition.

Ideas - Has intellectual curiosity, enjoys considering new or unconventional ideas, and relishes philosophy and brain-teasers.

Imagination - A vivid imagination, enjoying fantasies, and being creative-thinking.

Agreeableness (A)

Agreeableness relates to the degree to which an individual is able to get along with other people, and has compassion for others. Agreeableness is subdivided into five facets.

Straightforwardness - The tendency to be frank and sincere, as opposed to deceitful and manipulative.

Compliance - The degree, to which a person defers to others, inhibits aggression and is able to "forgive and forget".

Modesty - The degree to which a person is humble and self-effacing.

Prosocial tendencies - The degree to which a person has the propensity to be kind, generous, helpful and considerate.

Tendermindedness - The tendency to have sympathy and concern for others.

Conscientiousness (C)

Conscientiousness is the degree of effectiveness and efficiency with which a person plans, organises and carries out tasks. Conscientiousness is subdivided into five facets.

Order - The tendency to keep everything neat and tidy and in its proper place, and to be methodical.

Self-discipline - The tendency to start tasks immediately and carry them through to completion, and to be able to motivate oneself to complete unpleasant tasks.

Dutifulness - The tendency to stick to principles, fulfil moral obligations and be reliable and dependable.

Effort - Setting ambitious goals and working hard to meet them, and being diligent and purposeful.

Prudence - The tendency to think things through carefully, check the facts and have good sense as opposed to being impulsive and making rash decisions.

Appendix C: Ethics approval certificate

NIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Vogt

CLEARANCE CERTIFICATE **PROTOCOL NUMBER 50804**

PROJECT The Relationship Between
Individualism/Coolectivism and the Five

INVESTIGATORS Miss LT Vogt

DEPARTMENT Human & Comm Development/Psychology

DATE CONSIDERED 05.08.02

DECISION OF THE COMMITTEE* Approved unconditionally

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

DATE 05.08.04 **CHAIRPERSON** .....
(Professor C Penn)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Ms S Laher
Human & Comm Development

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

This ethical clearance will expire on 1 February 2005

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix D: Letter addressed to students

Dear Student,

My name is Liesl Vogt. I am currently completing my Masters at the University of the Witwatersrand in Clinical psychology and I am conducting research into personality theory and personality assessment. As part of this research I would like to request your responses to the attached questionnaire. Your responses would be valuable, as they will contribute to a South African understanding of personality. I would like to invite you to participate in this research. It should take you half an hour to forty-five minutes to complete the questionnaire. You may do so at your own convenience. If you do decide to fill in the questionnaire, please fill in all parts of it so as to make your response usable in the collection of data. At no time will I be able to link an individual to their responses, as no specifically personally identifying information is required from you in filling out the questionnaire.

Completion and return of the questionnaire will be considered to indicate permission for me to use your responses for the research project. Should you choose not to participate, this will not be held against you in any way and will not affect your academic assessment at all. If you have any further questions or require feedback on the progress of the research, feel free to contact me. My contact details appear below my signature. As I am only interested in group trends, and have no way of linking any individual's identity to a particular questionnaire, I will not be able to give you individual feedback. Please return your questionnaires in the pre-addressed envelopes provided by placing them in internal mail or the sealed box in the Commerce library.

Thank you for considering taking part in the research project.

_____

Ms. L. Vogt

011 717 4509

lieslltherese@yahoo.co.uk

Appendix D: Questionnaire used in this study

The Basic Traits Inventory has been excluded, as inclusion would result in the infringement of copy-right laws protecting this instrument.

Demographic Information

(Please cross the option that applies to you, where appropriate)

Age: _____

Gender: MALE FEMALE

Race:

(This specific response is required for purposes of this research and is not meant to offend any research participant)

BLACK WHITE INDIAN COLOURED OTHER

If other, please specify _____

Home language (s):

AFRIKAANS ENGLISH isiNDEBELE sePEDI

sISWATI seSOTHO xiTSONGA seTWANA

tshiVENDA isiXHOSA isiZULU OTHER

If other, please specify: _____

INDCOL Scale

Please complete the following section by filling in the number relating to your response to each of the following statements.						
0 = Strongly Agree 1 = Agree 2 = Slightly Agree			3 = Slightly Disagree 4 = Disagree 5 = Strongly disagree			
	0	**1**	**2**	**3**	**4**	**5**
1. If a husband is a sports fan, a wife should also cultivate an interest in sports. If the husband is a stock broker, the wife should also be aware of the current market situation.						
2. A marriage becomes a model for us when the husband loves what the wife loves, and hates what the wife hates.						
3. Married people should have some time to spend alone from each other everyday, undisturbed by their spouse.						
4. If one is interested in a job about which the spouse is not very enthusiastic, one should apply for it anyway.						
5. Even if my spouse were of a different religion, there would not be any interpersonal conflict between us.						
6. It is better for a husband and wife to have their own bank accounts rather than to have a joint account						
7. The decision of where one is to work should be jointly made with one's spouse, if one is married.						
8. It is desirable that a husband and wife have their own sets of friends, instead of having only a common set of friends.						
9. My musical interests are extremely different from my parents.						
10. In these days parents are too stringent with their kids, stunting the development of initiative.						
11. When making important decisions, I seldom consider the positive and negative effects my decisions have on my father.						
12. Teenagers should listen to their parent's advice on dating.						
13. Even if the child won a Nobel Prize, the parents should not feel honoured in any way.						
14. It is reasonable for a son to continue his father's business.						
15. I would not share my ideas and newly acquired knowledge with my parents.						
16. I practice the religion of my parents.						
17. I would not let my needy mother use the money that I have saved by living a less than luxurious life.						
18. I would not let my parents use my car (if I have one), whether they are good drivers or not.						
19. Children should not feel honoured even if the father were highly praised and given an award by a government official for his contribution and service to the community.						
20. Success and failure in my academic work and career are closely tied to the nurture provided by my parents.						
21. Young people should take into consideration their parents' advice when making education/career plans						

	0	1	2	3	4	5
22. The bigger the family the more problems there are.						
23. I have never told my parents the number of sons I want to have.						
24. The number of sons my parents would like me to have differs by (0/1/2/3/4 or more/ I don't know) from the number I personally would like to have.						
25. I would help, within my means, if a relative told me that he/she is in financial difficulty.						
26. If I met a person whose last name was the same as mine, I would start wondering whether we were, at least remotely, related by blood.						
27. Whether one spends an income extravagantly or stingily is of no concern to one's relatives.						
28. I would not let my cousin use my car.						
29. When deciding what kind of work to do, I would definitely pay attention to the views of relatives of my generation.						
30. When deciding what kind of education to have, I would pay absolutely no attention to my uncles' advice						
31. Each family has its own problems unique to itself. It does not help to tell relatives about one's problems.						
32. I can count on my relatives for help if I find myself in any kind of trouble						
33. I have never chatted with my neighbours about the political future of this state.						
34. I am often influenced by the moods of my neighbours.						
35. My neighbours always tell me interesting stories that have happened around them.						
36. I am not interested in knowing what my neighbours are really like.						
37. One need not worry about what the neighbours say about whom one should marry.						
38. I enjoy meeting and talking to my neighbours every day.						
39. In the past my neighbours have never borrowed anything from me or my family.						
40. One needs to be cautious in talking with neighbours, otherwise others might think you are nosy.						
41. I don't really know how to befriend my neighbours.						
42. I feel uneasy when my neighbours do not greet me when we come across each other.						
43. I would rather struggle through a personal problem by myself than discuss it with my friends.						
44. If possible, I would like co-owning a car with my close friends, so that it wouldn't be necessary for them to spend much money to buy their own cars.						
45. I like to live close to my good friends.						
46. My good friends agree on the best places to shop.						
47. I would pay absolutely no attention to my close friends' views when deciding what kind of work to do						
48. To go on a trip with friends makes one less free and mobile. As a result there is less fun.						
49. It is a personal matter whether I worship money or not. Therefore it is not necessary for my friends to give any counsel.						

	0	1	2	3	4	5
50. The motto "sharing in both blessing and calamity" is still applicable even if one's friend is clumsy, dumb, and causes a lot of trouble.						
51. There are approximately (0/1/2/3/4 or more than 4) of my friends who know how much my family as a whole earns each month.						
52. On average, my friends' ideal number of children differs from my own ideal by (0/1/2/3/4 or more/I don't know my friends ideal).						
53. It is inappropriate for a supervisor to ask subordinates about their personal life (such as where one plans to go for the next vacation).						
54. When I am among my colleagues/classmates, I do my own thing without minding about them.						
55. One needs to return a favour if a colleague lends a helping hand.						
56. I have never loaned my camera/coat to any colleagues/classmates.						
57. We ought to develop the character of independence among students, so that they do not rely upon other students' help in their schoolwork.						
58. A group of people at their workplace was discussing where to eat. A popular choice was a restaurant which had recently opened. However, someone in the group had discovered that the food there was unpalatable. Yet the group disregarded this person's objection, and insisted on trying it out. There were only two alternatives for the person who objected: either to go or not to go with the others. In this situation, not going with the others is a better choice.						
59. There is everything to gain and nothing to lose for classmates to group themselves for study and discussion.						
60. Classmates' assistance is indispensable to getting a good mark at school.						
61. I would help if a colleague at work told me he/she needed money to pay utility bills.						
62. In most cases, to co-operate with someone whose ability is lower than one's own is not as desirable as doing the thing alone.						
63. Do you agree with the proverb "too many cooks spoil the broth?"						

Thank you for your co-operation!