

**EMOTION LEXICON IN THE SEPEDI, XITSONGA AND
TSHIVENDA LANGUAGE GROUPS IN SOUTH AFRICA:
THE IMPACT OF CULTURE ON EMOTION**

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COMMENTS

The reader should keep the following in mind:

- The editorial style as well as the references referred to in this mini-dissertation follow the format prescribed by the Publication Manual (5th edition) of the American Psychological Association (APA). This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University, Potchefstroom Campus, to use the APA style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of three (3) chapters, consisting of the following: an introductory chapter, a second chapter (having a research article as content), as well as a concluding chapter. Each chapter of the mini-dissertation has its own reference list.

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SUMMARY

Title: Emotion lexicon in the Sepedi, Xitsonga and Tshivenda Language groups in South Africa: The impact of culture on emotion.

Key Terms: Emotions, emotive, emotional intelligence, emotion lexicon, affect, prototype, dimensionality, prototypicality, feelings, language groups, cross-cultural, cultural diversity, Sepedi, Xitsonga and Tshivenda.

Emotions are seen as one of the basic functions of the human psyche and therefore play a central role in psychology (Salovey & Mayer, 1990), especially in work and organisational psychology, both in theoretical and applied settings. Moreover, studying emotions is also most relevant for applied psychology within the South-African context with cross-cultural assessments becoming more prominent since South Africa's first democratic elections held in April 1994, as well as with stronger demands for the cultural appropriateness of psychological tests. With its advanced legal regulations with respect to the use of psychological tests (Constitution of the Republic of South Africa (Act 108 of 1996), the Labour Relations Act (66 of 1995), and the Employment Equity Act (55 of 1998), and the Health Professions Act (56 of 1974)), it is essential to know at which point universal aspects of emotions turn culture-specific since only psychological tests that are restricted to the universal aspects can be used without bias across cultural groups.

The objectives of this research was to conceptualise emotion and culture according to a literature study, to identify the different emotion words within the Sepedi, Xitsonga and Tshivenda language groups, to determine prototypical emotion words and to determine the cognitive structure (different dimensions) of emotion concepts across these three language groups, as well as to do a comparison between the Sepedi, Xitsonga and Tshivenda emotion structure in order to determine how emotions manifest itself within these language groups.

A survey design with convenience sampling was used to achieve the research objectives in a series of three studies (phases). The study population for the first ($N=310$) and third ($N=550$) study consisted of entry level police applicants from the South African Police Services (SAPS). The study population of the second phase consisted of language experts ($N=30$). Free listing questionnaires, Prototypicality questionnaires and Similarity rating questionnaires

were administered. Statistical methods and procedures (Multidimensional Scaling and Descriptive Statistics) were used and Cronbach alpha coefficients were determined to analyse the results.

Results of the free listing task gave a strong indication that basic emotion concepts (love, joy, anger, sadness, fear, and surprise) readily came to mind within all three cultures. Emotion concepts listed (with higher frequency) by the Xitsonga group, more so than the other two groups, could be interpreted as emotion words associated with social, personality or environmental aspects and may be related to negative evaluation, dominance and/or aggression.

Large, practically significant differences were found with regards to the emotion concepts derived from the prototypicality results. Most prototypical concepts listed by the Sepedi speaking group were that of loneliness, emptiness, glumness, melancholy, moodiness, restlessness, unhappiness, displeasure and more. Most prototypical concepts as rated by the Xitsonga speaking group were that of shock, doubt, humiliation, shyness and other. The Tshivenda speaking group rated the following emotion concepts as most prototypical: upset, worry, troubled, aggression, revulsion, disgust, insecurity and more.

In order to determine the cognitive structure of emotion concepts a multi-dimensional scaling was performed where a three-dimensional structure (evaluation, arousal, and dominance) and a four factor loading (positive emotion, sadness, fear, and anger) were expected for each language group. With emotion categories being formed as a result of experiences within a specific social environment and organised around basic prototypes, similarities and differences was found.

Recommendations for future research were made.

OPSOMMING

Titel: Emosie terme van die Sepedi, Xitsonga en Tshivenda taalgroepe in Suid Afrika: Die impak van kultuur op emosie.

Sleutel terme: Emosie, emotiewe, emosionele intelligensie, emosie-terme, affek, prototipe, dimensionaliteit, prototipikaliteit, gevoelens, taalgroepe, kruis-kultureel, kulturele diversiteit, Sepedi, Xitsonga en Tshivenda.

Emosies word geag as een van die basiese funksies van die menslike psige en speel dus 'n sentrale rol in sielkunde (Salovey & Mayer, 1990), veral in bedryf- en organisasiesielkunde, beide in teoretiese verband en in die toepaslikheid daarvan. Die bestudering van emosies binne die Suid-Afrikaanse konteks is dus relevant; veral met die toename in kruiskulturele assessering sedert die eerste demokratiese verkiesing wat in April 1994 in Suid-Afrika gehou is, asook sedert daar 'n groter behoefte is aan die kulturele toepaslikheid van psigometriese toetse. Met Suid-Afrika se streng wetgewing rakende die gebruik van psigometriese toetse (Grondwet van die Republiek van Suid-Afrika (Wet, 108 van 1996), die Wet op Arbeidsverhoudinge (66 van 1995), die Wet op Billike Indiensneming (55 van 1998) en die Wet op Gesondheidsprofessies (56 van 1974)), is dit belangrik om te weet wanneer universele aspekte van emosies kultureel-spesifiek word; veral omdat slegs sielkundige toetse wat van toepassing is op universele aspekte sonder vooroordeel binne 'n kruis-kulturele konteks aangewend mag word.

Die doelstellings van hierdie studie was om emosie en kultuur te konseptualiseer deur 'n literatuurstudie te doen, om die verskillende emosie-terme binne die Sepedi, Xitsonga en Tshivenda taalgroepe te identifiseer, om te bepaal wat die prototipiese emosie-woorde binne hierdie drie taalgroepe is en om die kognitiewe struktuur vir emosie-konsepte te bepaal, asook om 'n vergelyking te tref tussen die kognitiewe struktuur vir emosie vir die Sepedi, Xitsonga en Tshivenda sprekendes en sodoende te bepaal hoe emosies binne hierdie drie taalgroepe manifesteer.

'n Vraelysontwerp met gerieflikheidssteekproeftrekking is gebruik om die navorsingsdoelstellings in 'n reeks van drie studies (fases) te bereik. Die studiepulasie vir

die eerste ($N=310$) en derde ($N=550$) studie bestaan uit kandidate wat aansoek gedoen het vir poste in die Suid-Afrikaanse Polisie (SAPD). Die studiepopulasie vir die tweede fase het bestaan uit taalkundiges ($N=30$). Vrye-lys-vraelyste, Prototipering-vraelyste asook Vergelykings-vraelyste is gebruik. Statistiese metodes en prosedures (Multidimensionele skalering, asook beskrywende statistiek) is gebruik. Cronbach alpha-koeffisiënte is bereken om resultate te analiseer.

Resultate verkry uit die vrye-lys-aktiwiteit gee 'n sterk aanduiding dat al drie die kultuurgroepe, die basiese emosie-konsepte (liefde, geluk, kwaad, hartseer, vrees en verrassing) redelik maklik herroep. Emosie-konsepte soos gelys (met hoër frekwensie) deur die Xitsonga groep, meer as in die ander twee groepe, mag geïnterpreteer word as emosies wat geassosieer word met sosiale, persoonlikheids of omgewings-aspekte en mag verder verband hou met negatiewe evaluasie, dominansie en/of aggressie.

Groot, prakties-beduidende verskille is gevind met betrekking tot prototipering van emosie-konsepte. Die mees prototipiese konsepte soos gelys deur die Sepedi spreekende kandidate is onder andere alleenheid, leegheid, buierigheid, rusteloosheid, ongelukkigheid en meer. Die mees prototipiese konsepte volgens die Xitsonga spreekende groep verwys na skok, ongeloof, vernedering, skaamheid en ander. Die Tshivenda spreekende groep lys onder andere die volgende as mees prototipies: ongelukkigheid, kommer, aggressie en onsekerheid.

Om die kognitiewe struktuur van emosie-konsepte te kon bepaal, moes 'n multi-dimensionele skaling gedoen word. Daar was verwag dat vir al drie taalgroepe 'n drie-dimensionele struktuur (evaluasie, opwekking, dominansie) en n vier-faktor-lading (positiewe emosie, ongelukkigheid, vrees, kwaad) verkry sou word. Ooreenkomste en verskille ten opsigte van emosie-kategorisering is gevind weens die feit dat emosie-kategorieë gevorm word as gevolg van ervarings binne 'n spesifieke sosiale raamwerk en georganiseer word rondom basiese prototipes.

Aanbevelings vir toekomstige navorsing is aan die hand gedoen.

CHAPTER 1

INTRODUCTION

This mini dissertation focuses on the cross-cultural comparability of emotion lexicon of the Sepedi, Xitsonga and Tshivenda language groups in South Africa.

Chapter 1 contains the problem statement and a discussion of the research objectives, in which the general objective and specific objectives are set out. The research method is explained and the division of chapters given.

1.1 PROBLEM STATEMENT

Emotions form one of the few cross-cutting topics of the social sciences and the humanities in general. In sociology, emotions are treated as symbolic goods which play an important role in social interaction and exchange (Feldman Barrett, 2001; Mayer, Salovey, & Caruso, 2004; Scherer, 2005; Shaver, Schwartz, Kirson, & O'Conner, 1987); in criminology emotions are considered very important in rehabilitating convicts (Proeve & Howells, 2006; Sherman, 2003); in justice emotions are seen as a qualifying element in judging cases (Zeidner, Matthews, & Roberts 2004); prominent philosophers, like Spinoza and Descartes, have focused on emotions; in literature, the experience of emotions forms the key focus (Frijda, 1987; Scherer, 1984). More than in any other social science, emotions play a central role in psychology, both in theoretical and applied settings (Salovey & Mayer, 1990).

Emotions are seen as one of the basic functions of the human psyche, next to motivation, cognition, and perception. Emotions play an essential role in clinical psychology, both in terms of diagnosing psychological problems (for instance about three quarter of the Manual of Mental Disorders (DSM) syndromes are defined in terms of one or another form of emotional disruption) and psychological treatment (Church, Katigbak, Reyes, & Jensen, 1998). Furthermore, emotions play a critical role in work and organisational psychology (Van Rooy & Viswesvaran, 2002). The stressful impact of the work context can be best conceptualized in terms of an emotion framework (Fontaine, Scherer, Roesch, & Ellsworth (2007); Russel, 2003; Shaver et al., 1987). With the recent advent of the concept of emotional

intelligence, emotions are permeating the whole domain of work and organisational psychology.

In terms of leadership and workplace performance, Van Rooy and Viswesvaran (2002) found that effective leaders demonstrate an ability to manage the emotional climate of their organisations, as well as that of resources and tasks (Goleman, 1995) but also the ability to display sincerity and concern for others (Chu & Murrmann, 2006). Emotional intelligence is therefore promoted and pursued as a key skill required by effective, future leaders (Barling, Slater, & Kelloway, 2000; Dulewicz, Higgs & Slaski, 2003; Gardner, & Stough, 2002; Shipper, Kincaid, Rotondo, & Hoffman, 2003). Moreover, the relevance of emotions is not limited to the social sciences; more recently emotions have become a major focus in the neurosciences, which studies its neurological underpinnings and development of human emotions (Fiddick, Spampinato, & Grafman, 2005; Reis et al., 2007; Salovey, 1997;).

While the study of emotions is of universal interest because of its central role in the social sciences and humanities, emotions are of special interest for South-Africa both for theoretical and applied reasons. On the one hand, there is a huge debate in the emotion literature between universalists and relativists (Russell, Lewicka, & Nitt, 1989). According to the universalists, emotions are biologically driven processes that are typical for the human species (at least as we know them, in general emotions are assumed in most mammals) and are therefore universal (Herrmann & Raybeck, 1981; Izard, 1994; Kitayama & Markus, 1991). According to the relativists, emotions are intimately tied with the social and cultural context in which they emerge, with the biological underpinnings playing at best a background role. While both universalists and relativists have each reported convincing data to justify their position (Herrmann & Raybeck, 1981; Izard, 1994; Mesquita, Frijda, & Scherer, 1997; Russell et al., 1989), the interesting scientific question is not any more whether one or the other is right, but at which stage universal aspects of emotions become culturally specific. Due to its tremendous cultural diversity, with eleven official languages, South-Africa therefore forms an ideal context within which to investigate the impact of culture on emotions.

To investigate the impact of culture on emotion, one has to first turn to emotions as they are encoded in the indigenous languages within a specific culture. Studying emotion lexicon and the meaning thereof within a specific culture, has both logical and theoretical importance. This will allow the meaningful characterisation of emotions in terms of basic emotion

prototypes through hierarchical classification of expressed emotion types (Shaver et al., 1987; Watson & Clark, 1997) within a South African multi-cultural domain.

Determining the meaning of emotion words across languages and cultural groups is of utmost importance, as well as whether there are universals and culture-specificities in the meaning of emotion words across cultures (Fontaine et al., 2006). With language being sensitive to cultural dynamics, the prototypicality of emotion words therefore need to be established in order to understand emotions represented in every day life within a specific cultural context (Church et al., 1998).

Moreover, studying emotions is also highly relevant for applied psychology within a South-African context. With its advanced legal regulations (the Labour Law of South Africa and the Employment Equity Act 1998, section 8), with respect to the use of psychological tests, it is essential to know at which point universal aspects of emotions turn culture-specific. Only psychological tests that are restricted to the universal aspects can be used without bias across the cultural groups. Typical Western, often Anglo-Saxon tests, might contain much typical Western culture-specific features (Church, Katigbak, Reyes, & Jensen, 1999; The Employment Equity Act No 55 of 1998 (section 8) Government Gazette, (1998); Meiring, van de Vijver, Rothman, & Barrick, 2005) and is thus not to be used in a South-African context. Moreover, many typical psychological interventions, often developed in the West, can only be successfully applied if they focus on universal processes and will not work or even have adverse effects if they focus on culture-specific aspects.

Previous assumptions and research based on emotions and emotional intelligence lead to the development of various emotional instruments, assessment tools and batteries. With research done by Mesquita et al., (1997) and Shipper et al., (2003), evidence indicates that cultural variations in emotions exist. It can be stated that emotion terms selected was not representative of cultural groups concerned. It is therefore of utmost importance to recognize the importance of emotions in communicating in a diverse society (Rowe, 2005). Without having a thorough understanding of emotions or having knowledge of emotion lexicon of different cultures, one can not attempt to regulate or manage one's emotions or the emotions of others (Salovey & Mayer, 1990). The cross-cultural comparability of emotional experiences and the idea of basic emotions have therefore been studied extensively by psychologists over the past few decades (Church et al., 1998, 1999; Claassen, 1997; Herrman

& Raybeck, 1981; Izard 1994; Mesquita et al., 1997; Russell 2003). In most studies, the prototype theory is used in describing the hierarchical status and cluster analysis of emotion terms in order to identify comparability of emotion experiences.

Based on the prototype theory (Shaver, Wu, & Schwartz, 1982), certain concerns present itself in the analysis of emotion lexicon within various cross cultural language groups within South Africa. If cultural variations in emotions therefore do exist within cultural groups, it can be stated that emotion terms selected for psychological tools and instruments are thus not representative of the specific cultural groups concerned.

Because emotions can be considered as a spin in the web of the social sciences, and of psychology in particular, focusing on the basic question of the universals and culture-specifics in emotions in a South-African context can have far-reaching consequences, such as a better view on the impact of culture on emotions; an empirically-based judgment about which psychological tests focusing on emotion can or cannot be used across the South-African cultures; a source of constructing new psychological instruments that do take into account the cultural diversity. So the central question is where psychological universals in the emotion domain turn culture-specific.

The focus of this study is *firstly* to identify the relevant and representative emotion words in the Sepedi, Xitsonga and Tshivenda language groups (three of the African non-Indo-European languages) based on free listing of emotions. *Secondly*, the prototypicality of emotion words needs to be established in order to understand emotions represented in every day life within a specific cultural context. Lastly, the study will look at the categorization of the emotion terms for these three languages in South Africa in order to establish an emotion structure.

The following broad research questions can be formulated based on the above-mentioned description of the research problem:

- How is the emotion and culture conceptualised in literature?
- What are the emotion words for the Sepedi, Xitsonga and Tshivenda language groups?
- What are the prototypical emotion words across the Sepedi, Xitsonga and Tshivenda language groups?

- What are the dimensionality and emotion structure for the Sepedi, Xitsonga and Tshivenda language groups?
- How do the different emotion terms compare with with one another and how do emotions manifest itself within the Sepedi, Xitsonga and Tshivenda language groups?
- What are the reliabilities of the measurement battery and dimensions of the emotion structure?

In order to answer the above research questions, the following research objectives are set.

1.2 RESEARCH OBJECTIVES

The research objectives are divided into general and specific objectives.

1.2.1 General Objective

The general objective of this research is to study the prototypicality and meaning of emotion lexicon encoded in the Sepedi, Xitsonga and Tshivenda language groups, so as to generate prototypical emotion words and to identify the manifestation of the emotions for these three languages in South Africa as well as the categorisation of emotion terms.

1.2.2 Specific Objectives

The specific objectives of this research are:

- To conceptualise emotion and culture according to a literature study.
- To identify the different emotion words within the Sepedi, Xitsonga and Tshivenda language groups in South Africa.
- To determine prototypical emotion words across the Sepedi, Xitsonga and Tshivenda language groups in South Africa.
- To determine the emotion structure (different dimensions) across the Sepedi, Xitsonga and Tshivenda language groups in South Africa.
- To do a comparison between the emotion terms for the Sepedi, Xitsonga and Tshivenda language groups and see how emotions manifest itself in South Africa for these language groups.

- To determine the reliability of the measurement instruments as well as the dimensions of the emotion structure

1.3. RESEARCH METHOD

This research, pertaining to the specific objectives, consists of two phases, namely a literature review and an empirical study. The results obtained from the research will be presented in an article format.

1.3.1 Literature Review

The literature review will focus on emotion, emotion lexicon and the prototypicality thereof and their application in the cross-cultural context.

1.3.2 Research Design

A survey design is used to achieve the research objectives (Kepple, Saufley, & Tokunaga, 1992). The survey design has the advantage of obtaining a large amount of information (free listing of emotion words) from a large population (Sepedi, Xitsonga and Tshivenda speaking South African Police Service recruits), it is economical and the research information can be regarded as accurate (within sampling error). Disadvantages of this design include that it is time and energy consuming (Kerlinger & Lee, 2000).

1.3.3 Participants

The study population of the first phase (Free listing of emotion terms) consists of a convenience sample of entry level police applicants ($N=310$) from the South African Police Services. The sample includes only black groups (100%) and consists of the following cultural groups: Sepedi ($n=110$), Xitsonga ($n=99$) and Tshivenda ($n=101$) speaking applicants. In terms of gender, 57,7% ($n=179$) are men and 42,3% ($n=131$) are women. Sixty-seven comma two per cent (67,2%) of the group are between the ages of 18 and 27, where 32,1% are between 28 and 37 years of age. The entry-level qualification for the police is grade 12, and for 59% of the group, this is their highest qualification, while 41% has further tertiary qualifications.

The study population of the second phase (Prototypicality ratings of the Extended English Emotion List) consists of a convenience sample of Language Experts in the specific indigenous languages ($N=30$). The sample includes only black groups (100%), consisting of the following cultural groups: Sepedi ($n=10$), Xitsonga ($n=10$) and Tshivenda ($n=10$) speaking language experts. In terms of gender, 53,3% ($n=14$) are men and 46,7% ($n=16$) are women. Twenty per cent (20%) of the group are between the ages of 20 and 29, while 40% are between 30 and 39 years of age. Forty per cent (40%) of the group are older than 40 years. Hundred per cent (100%) of the group has post graduate qualifications.

The study population of the third phase (Similarity Rating Task) consists of a convenience sample of entry level police applicants ($N=550$) from the South African Police Services. The sample includes only black groups (100%), consisting of the following cultural groups: Sepedi ($n=185$), Xitsonga ($n=202$) and Tshivenda ($n=163$) speaking applicants. In terms of gender, 54,5% ($n=300$) are men and 45,5% ($n=250$) are women. Ninety one comma five per cent (91,5%) of the group are between the ages of 18 and 29, while 8,5% are older than 29 years. The entry-level qualification for the police is grade 12, and for 85,5% of the group, this is their highest qualification, while 14,5% has further tertiary qualifications.

1.3.4 Measuring Instruments

Free Listing Questionnaire

The free listing questionnaire is utilised as the *first step* in this study. Respondents are asked to list as many emotion terms they can think of in ten (10) minutes. Terms mentioned at least five times during the Free Listing exercise are accepted and translated into English in order to construct a basic list of English emotion terms (Basic English Emotion List or BEEL) for each language group. It is necessary to clean the data set by eliminating redundancy. All but one of each set of words formed from the same root (e.g. hate and hatred) is removed. Furthermore, these words are converted into nouns. Terms terms that are clearly not an emotion term (e.g. terms that refer to antecedents like awake or the mere expressive behaviour like tears, crying etc.) are rejected.

In order to ensure a comprehensive coverage of the emotion domain the three lists of emotion terms are extended in the *second step* with terms translated from the emotion list reported by Shaver et al. (1987), the Indonesian and Dutch emotion lists reported by Fontaine et al

(2002), as well as the 24 prototypical emotion terms (emotion terms from the GRID instrument) commonly used in both emotion research and daily language as reported by Scherer (2005) to construct an Extended English Emotion List (EEEL), which could reasonably be considered emotion words. This representative set (24 GRID terms) is chosen on the basis of (1) frequent use in the emotion literature, (2) consistent appearance in cross-cultural free-listing and prototypicality rating tasks, and (3) self-reported emotion words from a large scale Swiss household study (Scherer, Wranik, Sangsue, Tran, & Scherer, 2004).

In the *third step* of this study, the EEEL is again translated into the three local languages in order for native speaking individuals to rate the prototypicality of each emotion term of the Extended Emotion List. In translating the terms, duplicate terms is removed. The final lists of emotion words are rated by native speaking experts on prototypicality for the concept of emotion.

Prototypicality Questionnaire

The Prototypicality Questionnaire is used within each language group to rate the emotion terms of the Extended Emotion List on prototypicality for the concept of emotion. Three versions of the prototypicality questionnaire are used where emotion terms are listed in randomised order. Respondents ten (10) language experts of each of the language groups) are asked to rate the terms on a 4-point scale. The scales were 1 (*certainly not an emotion*), 2 (*unlikely to be an emotion*), 3 (*likely to be an emotion*), and 4 (*certainly an emotion*). Experts were able to do this reliably.

Similarity Rating Questionnaire

The cognitive structure of emotions is investigated by means of similarity rating of the emotion words in order to conceptualise the cognitive representation of differences and similarity between various emotion terms (Shaver et al., 1987).

The list of prototypical emotion terms per language group are used to draft the Similarity Rating Questionnaire. Emotion terms with the highest average scores based on prototypicality ratings are included. A final list of 80 terms per language group are used to construct the Similarity Rating, largely following the method and procedure by Shaver et al. (1987) with the exception that terms are rated for statistical analysis. Similarity Rating Questionnaires for each language group furthermore had to contain the 24 emotion terms (GRID terms) as

reported by Scherer (2005) regardless of the average score ratings. Emotion terms are alphabetically listed and then transposed in Excel to combine the emotion terms into 3160 pairs of emotion terms. Using SPSS for Windows, these pairs of emotion terms are randomised. These pairs are then captured into eight (8) versions for the Similarity Rating Questionnaire, each containing 395 pairs of emotion terms. Respondents are asked to rate these combinations in terms of how closely related they are in meaning in their language. Respondents have to indicate the relationship in meaning between the emotion terms using an 8-point response scale. The scales were 1 (*completely opposite in meaning (antonyms)*), 2 (*very opposite in meaning*), 3 (*moderately opposite in meaning*), 4 (*slightly opposite in meaning*), 5 (*Slightly opposite in meaning*), 6 (*moderately similar in meaning*), 7 (*very similar in meaning*) and 8 (*completely similar in meaning (synonyms)*). The instructions furthermore mentioned that they need to remain concentrated and that every pair had to be rated.

1.4. RESEARCH PROCEDURE

The free-listing questionnaires are compiled. Ethical aspects of the research are discussed with the participants. The test battery is administered in English on three separate occasions at the Police College in Pretoria on Sepedi, Xitsonga and Tshivenda speaking groups which consists of police applicants who have been recruited for the basic training programme of the SAPS in January 2007. Respondents are able to respond (list emotion terms) in their mother tongue. Respondents are tested in groups consisting of a maximum of 300 recruits. A standardised procedure is followed by qualified psychologists and psychometrists in order to administer the test battery. Each respondent has his or her own desk, chair as well as the necessary stationary. The auditorium is properly lit and ventilated. The supervised and controlled test session lasts for 15 minutes.

Prototypical rating questionnaires are compiled. Ethical aspects of the research are discussed with the participants. The test battery is administered by native speaking language experts (respondents whom are in possession of a post graduate qualification in the respective indigenous languages and currently working at a University or other institutions as language expert) on various different occasions based on availability.

The similarity rating questionnaires are compiled. Ethical aspects of the research are discussed with the participants. The test battery is administered at the Police College in Pretoria on a group consisting of police applicants who have been recruited for the basic training programme of the SAPS 2008 entry level intake. Respondents of the various language groups are divided into smaller groups of approximately 25 each as several classrooms are used in order to administer the tests. A standardised procedure is followed by qualified psychologists and psychometrists in order to administer the test battery. The instructions to the test are given to each classroom individually. The Sepedi and Xitsonga speaking groups are accommodated during the first session which commenced at 09:00; with instructions firstly provided to the Sepedi speaking respondents and thereafter the Xitsonga speaking respondents. The Tshivenda speaking group is accommodated during the second session which commenced at 11:00. Each respondent has his or her own desk, chair as well as the necessary stationary to administer the test. The classrooms are properly lit and ventilated. The semi-controlled test session lasted for approximately 90 minutes.

1.5. DIVISION OF CHAPTERS

The chapters are presented as follows in the mini-dissertation:

Chapter 1: Introduction, problem statement and objectives.

Chapter 2: Research article: Emotion lexicon in the Sepedi, Xitsonga and Tshivenda language groups in South Africa: The impact of culture on emotion

Chapter 3: Conclusions, limitations and recommendations.

1.6. CHAPTER SUMMARY

This chapter discussed the problem statement and motivation for the research was discussed. The purpose of the research was formulated, the methodology of the research outlined and the methods used for the statistical analysis described. A brief overview of the chapters followed.

REFERENCES

- Barling, J., Slater, F., & Kelloway, E. K. (2000). Transformational leadership and emotional intelligence: An exploratory study. *Leadership & Organization Development Journal*, 23, 198-204.
- Chu, K. H. L., & Murrmann, S. K. (2006). Development and validation of the hospitality emotional labour scale. *Tourism Management*, 26, 1181-1191.
- Church, A. T., Katigbak, M. S., Reyes, J. A. S., & Jensen, S. M. (1998). Language and organisation of Filipino emotion concepts: Comparing emotion concepts and dimensions across cultures. *Cognition and Emotion*, 12, 63-92.
- Church, A. T., Katigbak, M. S., Reyes, J. A. S., & Jensen, S. M. (1999). The structure of affect in a non-western culture: Evidence for cross-cultural comparability. *Journal of Personality*, 67, 505-534.
- Claassen, N. C. W. (1997). Culture differences, politics and test bias in South Africa. *European Review of Applied Psychology*, 47, 297-307.
- Dulewicz, V., Higgs, M., & Slaski, M. (2003). Measuring emotional intelligence: Content, construct and criterion-related validity. *Journal of Managerial Psychology*, 8, 405-420.
- Feldman Barrett, L. (2001). Mental representations of affect knowledge. *Cognition and Emotion*, 15, 333-363.
- Fiddick, L., Spampinato, M. V., & Grafman, J. (2005). Social contracts and precautions activate different neurological systems: An fMRI investigation of deontic reasoning. *NeuroImage*, 28, 778-786.
- Fontaine, J. R. J., Luyten, P., de Boeck, P., Corveleyn, J., Fernandez, M., Herrera, D. et al., (2006). Untying the Gordian knot of guilt and shame: The structure of guilt and shame reactions based on situation and person variation in Belgium, Hungary and Peru. *Journal of Cross-Cultural Psychology*, 37, 273-292.
- Fontaine, J. R. J., & Poortinga, Y. H. (2002). Cognitive structure of emotion terms in Indonesia and the Netherlands. *Cognition and Emotion*, 16, 61-86.
- Fontaine, J. R., Scherer, K. R., Roesch, E. B., Ellsworth, P. (2007). The world of emotion is not two-dimensional. *Psychological Science* 13, 1050-1057.
- Frijda, N. H. (1987). Emotion, cognition, structure and action tendency. *Cognition and Emotion*, 1, 115-143.

- Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Organization Development Journal, 23*, 68-78.
- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.
- Government Gazette, Republic of South Africa, Vol. 400, no. 19370. Cape Town, 19 October 1998.
- Herrmann, D. J., & Raybeck, D. (1981). Similarities and differences in meaning in six cultures. *Journal of Cross-Cultural Psychology, 12*, 194-206.
- Izard, C. E. (1994). Innate and universal facial expressions: Evidence from developmental and cross-cultural research. *Psychological Bulletin, 115*, 288-299.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.). Fort Worth, TX: Harcourt College.
- Kepple, G., Saufley, W., Jr., & Tokunaga, H. (1992). *Introduction to design and analysis: A student's handbook* (2nd ed.). New York: W.H. Freeman and Company.
- Kitayama, S., & Markus, H. R. (1991). Culture and the self: Implications for cognition, emotion and motivation. *Psychological Review, 98*, 224-253.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings and implications. *Psychological Inquiry 15*, 197-215.
- 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)*, 1-8.
- Mesquita, B., Frijda, N. H., & Scherer, K. R. (1997). Culture and emotion. In J.W. Berry, P. R. Dasen, & T. S. Saraswathi (Eds.), *Handbook of cross-cultural psychology: Basic processes and human development* (pp. 255-297). Boston, MA: Allyn and Bacon.
- Proeve, M. J., & Howells, R. (2006). Effects of remorse and shame and criminal justice experience on judgements about a sex offender. *Psychology, Crime & Law, 12*, 145-161.
- Reis, D. L., Brackett, M. A., Shamosh, N. A., Kiehl, K. A., Salovey, P., & Gray, J.R. (2007). Emotional intelligence predicts individual differences in social exchange reasoning. *NeuroImage, 35*, 1385-1391.
- Rowe, D. (2005). The meaning of emotion. *Journal of Health Organization and Management, 19*, 290-296.
- Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review, 110*, 145-172.

- Russell, J. A., Lewicka, M., & Nitt, T. (1989). A cross-cultural study of a circumplex model of affect. *Journal of Personality and Social Psychology*, *57*, 848-856.
- Salovey, P. (1997). Emotional development and emotional intelligence. NY, New York: Basic Books.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, *9*, 185-211.
- Scherer, K. R. (1984). On the nature and function of emotion: a component process approach. In K.R. Scherer, P. Ekman, (Eds), *Approaches to emotion*, (pp. 293-317): Hillsdale: Erlbaum.
- Scherer, K. R. (2005). What are emotions? And how can they be measured? *Social Science Information*, *44*, 695-729.
- Scherer, K. R., Wranik, T., Sangsue, J., Tran, V., & Scherer U. (2004). Emotions in everyday life: Probability of occurrence, risk factors, appraisals and reaction patterns. *Social Science Information*, *43*, 499-570.
- Shaver, P., Schwartz, J., Kirson, D., & O'Conner, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology*, *52*, 1061-1086.
- Shaver, P., Wu, S., & Schwartz, J. C. (1982). Cross-cultural similarities and differences in emotion and its representation: A prototype approach. In M.S. Clark (Ed.), *Emotion: Review of personality and social psychology* (Vol. 13, pp. 175-212). Newbury Park, CA: Sage.
- Sherman, L. W. (2003). Reason for emotion: Reinventing justice with theories, innovation and research. *Criminology*, *41*, 1-38.
- Shipper, F. M., Kincaid, J. F., Rotondo, D. M., & Hoffman, R. C. (2003). A cross-cultural exploratory study of linkage between emotional intelligence and management effectiveness. *International Journal of Organizational Analysis*, *11*(3), 171-193.
- Van Rooy, D. L., & Viswesvaran, C. (2002). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, *65*, 71-95.
- Watson, D., & Clark, L. A. (1997). Measurement and mismeasurement of mood: Recurrent and emergent issues. *Journal of Personality Assessment*, *68*, 267-296.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2004). Emotional intelligence in the workplace: A critical review. *Applied Psychology: An International Review*, *53*, 371-399.

CHAPTER 2

RESEARCH ARTICLE

EMOTION LEXICON IN THE SEPEDI, XITSONGA AND TSHIVENDA LANGUAGE GROUPS IN SOUTH AFRICA: THE IMPACT OF CULTURE ON EMOTION

ABSTRACT

The objectives of this study were to explore the free-listing, prototypicality and similarity of emotion concepts within the Sepedi, Tshivenda and Xitsonga language groups. This study is relevant for cross-cultural emotion research, in terms of both methodology and results. A survey design was used to achieve the research objectives utilising availability samples in a series of three studies. Free-listing questionnaires, Prototypicality rating questionnaires as well as Similarity rating questionnaires were used as measuring instruments. The participants of the Free-listing ($N=310$) and Similarity questionnaires ($N=550$) consisted of native speaking language groups who had applied for jobs in the South African Police Services (SAPS) during 2007 and 2008. The participants of the Prototypicality consisted of native speaking language experts ($N=30$). From the multi-dimensional scaling a three-dimensional structure (evaluation, arousal, dominance) and a four factor loading (positive emotion, sadness, fear, anger) was extracted for the Sepedi speaking language group. With equivalent terms, a good fit of a common cognitive emotion structure was demonstrated in the language groups. These four factors were not as easily recognised in the other two language groups.

OPSOMMING

Die doelstelling van hierdie studie was om die vrye-lys, prototipe-emosie-terme en die soortgelykheid van emosie-konsepte binne die Sepedi, Tshivenda en Xitsonga taalgroepe te ondersoek. Hierdie studie is relevant vir kruis-kulturele emosie-navorsing in terme van metodologie en resultate. 'n Vraelysontwerp met gerieflikheidssteekproeftrekking is gebruik om die navorsings-doelstellings in 'n reeks van drie studies te bereik. Vrye-lys-vraelyste, Prototipering-vraelyste asook Vergelykings-vraelyste is gebruik as meet instrumente. Die ondersoekgroepe vir die Vrye-lys- ($N=310$) en Vergelykings-vraelyste ($N=550$) het bestaan uit 'n groep inheemse moedertaal-sprekers wat aansoek gedoen het vir 'n betrekking in die Suid-Afrikaanse Polisiediens (SAPD) gedurende 2007 en 2008. Die ondersoekgroepe vir Prototipering-vraelyste het bestaan uit moedertaal-sprekers wat as taalkundiges geag word ($N=30$). Uit die multi-dimensionele skaling kon daar vir die Sepedi groep 'n drie-dimensionele struktuur (evaluering, opwekking, dominansie) en 'n vier-faktor-lading (positiewe emosie, ongelukkigheid, vrees, kwaad) uit die vergelykings onttrek word. Met ekwivalente terme was 'n goeie passing van 'n algemene kognitiewe emosie struktuur gedemonstreer alhoewel die vier faktore nie noodwendig in die ander twee taalgroepe ewe gemaklik geïdentifiseer kon word nie.

Although most of us know what emotions are, a key research question is whether or not all emotions are experienced, expressed and represented similarly across cultural borders. According to the Dictionary (Sykes, 2000) and the Random House Unabridged Dictionary (Berg, & Stein, 1997), the concept emotion is defined as an affective sense or state of consciousness in which the basic human emotions of joy, sorrow, fear, hate, or the like is experienced. Furthermore, it is through interpersonal interaction and relationships that these emotions are brought into play. Researchers in the international research arena are focusing on emotion research. Scherer (1984) and Frijda (1987) is of the opinion that emotional experiences as particular type of cognitive structure, as well as complex phenomenon where the relationship between appraisal structures of the stimuli or situation, physiological component of activation or action readiness, play an essential role in understanding emotions. Accordingly, emotional responses are elicited by the subjective evaluation of an event.

The way in which an event is appraised will determine the emotion which will be experienced. Frijda and Mesquita (1994) argue that since emotions are social events, socially shared meaning in emotions is created. This therefore emphasises the necessity to ascertain whether or not all emotion words or concepts exist and or is expressed in similar ways within the various language or cultural groups within the culturally diverse South Africa. Research by Mesquita, Frijda, and Scherer (1997) and Shipper, Kincaid, Rotondo and Hoffman (2003) furthermore indicate that cultural variations in emotions exist.

It is therefore of utmost importance to recognize the role of emotions in communicating in a diverse society (Rowe, 2005) specifically in relation to the advanced legal regulations (the Labour Relations Act in 1996 and the Employment Equity Act No 55 of 1998, section 8), with respect to the use of psychological tests as well as discriminatory practices within the workplace within South-Africa. The Government Gazette, (1998) furthermore refers to psychological tests and assessment and states that: Psychological testing and other similar assessments are prohibited unless the test or assessment being used (a) has been scientifically shown to be valid and reliable, (b) can be applied fairly to all employees; and (c) is not biased against any employee or group.

Focusing on the basic question of the universals and culture-specifics in emotions in a South-African context will provide a better view on the impact of culture on emotions as well as an

empirically based judgment about which psychological tests focusing on emotion can or cannot be used across the South-African cultures taking into account the cultural diversity.

According to Scherer (1984) and Frijda (1987), emotional experiences are described as particular types of cognitive structures where the relationship between appraisal structure of the stimuli or situation, physiological component of activation or action readiness are essential in understanding emotions. Further studies done by Cacioppo (2002), emphasises the interrelation of emotion and cognition as well as the neurological underpinnings thereof. These studies reflect the interaction of these processes and therefore heighten the interest in understanding these concepts across cultures.

Cognitive structures of emotions within a specific cultural group present differences and similarities between emotion terms (Shaver, Schwartz, Kirson, & O'Connor, 1987). The similarity of emotion terms across different language groups does not imply that they are equivalent (Russell, 2003). In the event that terms are translation-equivalent also does not imply that there is evidence of cognitive equivalence. According to Shaver et al. (1987) and Russell (1991), evidence suggests cross-cultural equivalence at more abstract levels. This factor therefore impacts on translation of emotion terms across cultures

Frijda (1987) further states that the appraisal structures, resulting from how individuals perceive and appreciate events, elicit different action readiness modes. Responses to events elicit certain emotions and vice versa. The response and emotive experience is therefore intricately woven into the appraisal structure, action readiness and interpretation of the event (Fox & Spector, 2002). Since emotion experiences differ according to the circumstances under which it occurs or is examined and taking into consideration that cultural diversity exists, it can therefore be stated that distinct differences in appraisal structures will be evident, eliciting distinctly different sets of behaviour (Izard, 1994; Russell, 1994). Not only can it lead to misunderstanding, but it could potentially lead to incorrect diagnosis and classification of psychological and personality problems since the Diagnostic and Statistical Manual of Mental Disorders (DSM) defines syndromes in terms of emotional disruptions. Church, Katigbak, Reyes, and Jensen (1998) state that the best examples of emotion words are those that refer to internal processes also focussing on affect rather than behaviour or cognition. Herrmann and Raybeck (1981) as well as Fontaine et al., (2006), is therefore of the opinion that the richer cross-cultural aspects need to be considered in emotion studies.

In further studies conducted by Frijda (2005), it was found that emotion experiences represent a perspective on emotional reactions, as well as contribute to the constitution of those reactions. Componential appraisal models according to Scherer and Ellgring (2007) have been developed to capture the dynamic and complex nature of the emotion experienced by humans in all the subsystems of emotions (e.g., cognition, motivation, physiological reactions, and motor expressions). The componential emotion theory offers a comprehensive framework to study emotions. According to this theory, emotions are fairly synchronized processes consisting of relationships among various components, such as appraisals, psychophysiological changes, expressive behaviours, action–tendency, and subjective experiences that are elicited by specific and relevant situational antecedents (Frijda, 1986; Mesquita et al., 1997). The relationship, according to the componential emotion theory, between the function of emotions and the components thereof is listed in Table 1 below (adapted from Scherer, 2005).

Table 1

Relationship between the function and component of emotion

Emotion function	Emotion component
Evaluation of objects and events	Cognitive component (appraisal)
System regulation	Neurophysiological component (bodily symptoms)
Preparation and direction of action	Motivational components (action tendencies)
Communication of reaction and behavioural intention	Motor expression component (facial and vocal expression)
Monitoring of internal state and organism-environment interaction	Subjective feeling component (emotional experience)

Note: Relationship between organismic subsystems and the functions and components of emotion (from Scherer, 2005).

It has also been found that emotion experiences shape behaviour (Frijda, 2005). Emotion experiences therefore also result in individuals achieving coherence with the world. With the significant role emotions play in organising, motivating and directing human activity

(Salovey & Mayer, 1990), as well as establishing social coherence, cultural aspects need to be taken into consideration in perceiving and determining the level of emotional intelligence.

Taking into consideration that different appraisal patterns and action readiness modes across cultures exist, reference of emotion words across cultures should essentially differ (Fontaine et al., 2006; Frijda, Kuipers, & ter Schure, 1989). Izard (1994) states that interpreting emotion-labelling responses from different cultures, involves the problem of determining the semantic equivalence of terms in different languages. With studies done across Western cultures (Fontaine et al., Kitayama, Markus, & Kurokawa, 2000; Mesquita & Frijda, 1992; Mesquita et al., 1997), this therefore impacts on the perceived value of emotional intelligence within a South African multi-cultural perspective since emotional intelligence is defined as one's ability to recognise, use and regulate emotional, personal and social information in an adaptive and acceptable manner (Mayer, Caruso, & Salovey, 1999).

It is essential to determine the semantic equivalence for emotion lexicon across cultures. According to Fehr and Russell (1984), the concept of emotion has an internal structure and can be reliably ordered from better to poorer examples of emotion (prototypicality). This ranking indicates how readily these emotions will come to mind when asked to list emotions, as well as the likelihood of it being labelled as an emotion if confronted by the concept. According to Fehr, Russell and Ward (1982), prototypical emotions are verified as emotions faster than terms rated as poorer examples. According to Church, Katigbak, Reyes, and Jensen (1999), self-report structures are essential, especially within cross-cultural studies in investigating the conceptual organisation of emotions. Cross-cultural similarities as well as differences exist across all aspects and dimensions of emotions (Mesquita & Frijda, 1992). A multicultural approach is therefore more credible in establishing universalities, at the same time pinpointing cross-cultural differences that are indeed unique to the culture involved (Herrmann & Raybeck, 1981).

Mesquita et al., (1997) therefore also question the lack of providing a definition of culture in comparative research on emotions. Most studies are executed and associate differences and similarities with cultural differences across national boundaries with little attention given to subtle differences and similarities within nations and even subcultures. This aspect is to be considered in emotion studies conducted in South Africa across the eleven language groups.

According to Feldman Barret (2001), a large body of research has accumulated to suggest that people hold a general mental representation of affect in the form of a circular structure, or circumplex. A circumplex is an empirically derived dimensional structure which represents the conceptual, mental structure of a group of stimuli typically derived from a dimensional factor analysis of proximity ratings (e.g., similarity ratings) for a set of stimuli (e.g., affect terms) (Larsen & Diener, 1992). An example of a circumplex model is given in Figure 1 below. Here, eight variables are listed in a two-dimensional space where the horizontal dimension presents the pleasure-displeasure dimension and the vertical dimension, the arousal-sleep dimension. The remaining four variables aid in defining the quadrants of the space. Russell, Lewicka, and Nitt (1989) studied aspects of emotion, determining the commonality to all human beings as well as commonality to only particular cultures. According to Universalists, emotions are biologically driven and therefore universal to all human beings. Relativists on the other hand are of the opinion that emotions are intimately tied with the social and cultural context in which they emerge with biological aspects merely playing a background role (Fontaine & Poortinga, 2002).

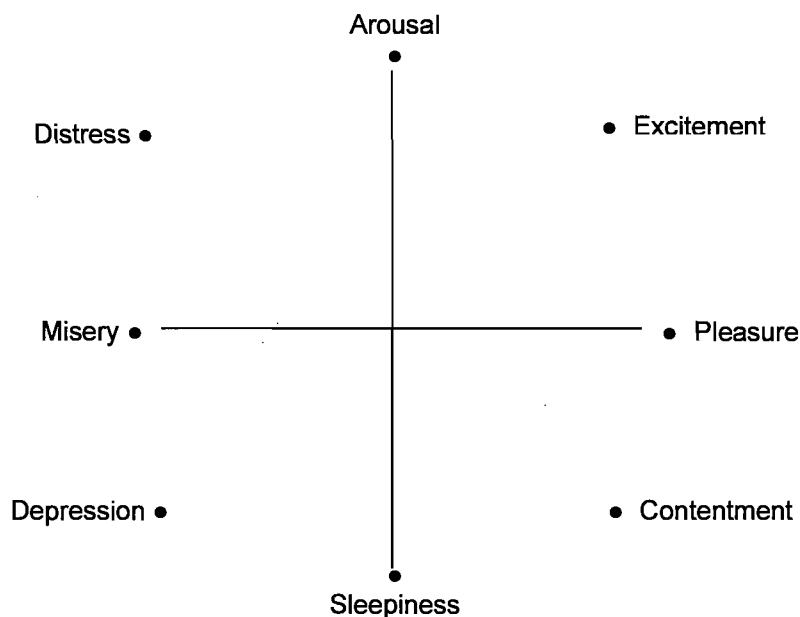


Figure 1. Eight affect concepts in a circular order

Although evidence suggests that the circumplex model can be applied across a broad range of cultures as the sole determinant of how humans conceptualize emotions, culture-specific aspects of South African language groups and sub-cultures were not taken into consideration

as these studies has been conducted within Western cultures. To investigate the impact of culture on emotion, one has to first turn to emotions as they are encoded in the indigenous languages within a specific culture (Church et al., 1998; Fontaine et al., 2006). It is therefore important to determine what emotion words mean across languages and cultural groups, and whether there are universals and culture-specificities in the meaning of emotion words (Fontaine et al.).

With language being sensitive to cultural dynamics, the prototypicality of emotion words needs to be established in order to understand emotions represented in everyday life within a specific cultural context (Church et al., 1998). Studying emotion lexicon and the meaning thereof, is both logical and has a theoretical importance as previously indicated. This will allow the meaningful characterisation of emotions in terms of basic emotion prototypes through hierarchical classification of expressed emotion types (Shaver et al., 1987; Watson & Clark 1997) within a South African multi-cultural domain. The conclusion can therefore be drawn that the psychological reality constructed within a South African specific cultural context will therefore be better represented due to the nature of this study and will result in enabling researchers in developing culturally relevant emotional competence instruments and assessment tools, as well as creating a new perspective on emotional intelligence through an in-depth understanding of the impact of culture on emotion within the South African context.

Drawing conclusions about cross-cultural comparability of emotions or emotional experiences and the idea of basic emotions and emotional intelligence (Church et al., 1998, 1999; Claassen, 1997; Herrmann & Raybeck 1981; Izard 1994; Mesquita et al., 1997; Russell 2003) requires careful attention especially with emotional intelligence being promoted and pursued as a key skill required by effective, future leaders within organisations as well as in respect to the role it plays in everyday social interaction (Barling, Slater, & Kelloway, 2000; Dulewicz, Higgs & Slaski, 2003; Gardner & Stough, 2002; Shaver et al., 1987; Shipper et al., 2003; Wong & Law, 2002). In understanding emotions one has to appreciate the aspect and role of emotional intelligence as emotion lexicon cannot be removed from its cultural specific context in which it is expressed.

Emotional Intelligence

The term *emotional intelligence* used in behavioural research was first referred to in the early 1960s. Two decades later, it was employed more extensively, with thorough research conducted in order to develop a theory as well as criteria to measure emotional intelligence (Mayer, Salovey, & Caruso, 2004).

Currently, different schools in research on emotional intelligence exist. The mixed approach of Bar-On (1996) where emotional intelligence is defined as the emotional, personal, social and survival dimensions of intelligence with personality variables such as empathy, self-awareness, assertiveness and optimism (Petrides & Furnham, 2000), and the ability approach of Mayer and Salovey (1997), are used to define the construct of emotions relevant to cross-cultural aspects as discussed in this study. One however has to create a clear understanding of exactly what constitutes the concept of intelligence and emotions and the interconnectivity of these concepts.

Intelligence is defined by Mayer et al. (2004) as the capacity to carry out abstract thought, as well as the ability to learn and adapt to various situations. It is categorised into different types of intelligence according to the information one has to respond and adapt to, for example academic intelligence, verbal intelligence, spatial intelligence, social intelligence and more. Due to the nature of dealing with emotions and emotional information as well as the complexity thereof, the term and concept *emotional intelligence* was conceived.

Emotional intelligence is therefore regarded as a measure of one's ability to recognise, use and regulate or manage one's own emotional, personal and social information in an adaptive way as well as regulate or manage emotions in others (Mayer et al., 1999; Mayer & Salovey, 1997). This set of abilities according to Van Rooy and Viswesvaran (2002) and Zeidner, Matthews, and Roberts (2004), enables a person to recognise and understand as well as evaluate emotions in order to decide upon an action appropriate to cope successfully to the environmental demands. As such, emotional intelligence is thus regarded as a key social skill (Mayer et al, 2004; Zeidner et al., 2004) and necessitates a high level of understanding and self-awareness of emotions within a diverse multi-cultural context such as in South Africa. Without having a thorough understanding of emotions or having knowledge of emotion lexicon of different cultures, one can not attempt to regulate or manage one's emotions or the

emotions of others (Salovey & Mayer, 1990). This fact has an impact on emotion and emotional intelligence studies in a multi-cultural context.

Understanding emotions and drawing conclusions about cross-cultural comparability of emotions or emotional experiences and the idea of basic emotions have therefore been studied extensively by psychologists over the past few decades (Church et al., 1998, 1999; Claassen, 1997; Herrmann & Raybeck, 1981; Izard 1994; Mesquita et al., 1997; Russell, 2003). According to Mayer, Solovey, and Caruso (2000), emotional intelligence can be depicted in three different concepts. The first concept, applicable in cross cultural emotion research, focuses on the representation of the current culture in emotions. Furthermore, the factor of emotional intelligence as a second concept and component of personality is evaluated. Emotional intelligence is described as both skill and capacity and constitutes the third concept of Mayer et al.'s research. In order to understand emotions, Mayer and Solovey (1997) therefore states that one has to have knowledge of emotional vocabulary and the representation thereof. According to Scherer (1984) and Frijda (1987), emotional experiences are described as particular types of cognitive structures where the relationship between appraisal structures of the stimuli or situation, physiological component of activation or action readiness are essential in understanding emotions and therefore goes beyond the definitions and vocabulary.

With language being sensitive to cultural dynamics, the prototypicality of emotion words needs to be established in order to understand emotions represented in everyday life within a specific cultural context. Studying emotion lexicon and the meaning thereof, is both logical and has a theoretical importance as previously indicated. This will allow the meaningful characterisation of emotions in terms of basic emotion prototypes through hierarchical classification of expressed emotion types (Shaver et al., 1987; Watson & Clark, 1997) within a South African multi-cultural domain.

Based on the prototype theory in describing the hierarchical status and cluster analysis of emotion terms, certain concerns presents itself in the analysis of emotion lexicon within various cross cultural language groups within South Africa. With the impact emotional intelligence has on workplace behaviours such as employee commitment, service delivery, quality mindedness etc (Zeidner et al., 2004), it furthermore raises concerns about emotional

intelligence testing as well as evaluating workplace performance within the given situation if a thorough understanding of emotions across cultural boundaries is not established.

Emotions in the work context

South African organisations face many challenges within the competitive global arena. One of which is employing competent employees whom will ensure sustained growth and an increased competitive edge (Hochschild, 1983). Pretorius (1996) as well as Tymon and Stumpf (2002) are of the opinion that leadership skills are a critical factor for prosperity and future growth within organisations. As such, heightened interest in developing leadership skills exist. It has been found that effective leaders demonstrate an ability to manage the emotional climate of their organisations, as well as that of resources and tasks (Goleman, 1995) but also for their ability to display sincerity and concern for others (Chu & Murrmann, 2006). Emotional intelligence as such, provides the basis for key skills required within organisations (Mayer et al., 2004).

Evidence therefore supports the role emotional intelligence plays in the occupational environment (Zeidner et al., 2004). Emotional intelligence is promoted and pursued as a key skill required by effective, future leaders and vital component of any organisation and subsequent success (Barling et al., 2000; Dulewicz et al., 2003; Gardner & Stough, 2002; Shipper et al., 2003; Wong & Law, 2002; Zeidner et al.) and therefore used as a screening requirement and selection criteria in recruitment and placement processes (Palmer, Gardner, & Stough, 2003a, 2003b).

The focus on emotional intelligence in recruitment and selection processes, as well as the importance thereof in managing talent and succession planning due to strict affirmative action and black equity empowerment (BEE) policies, raises some questions within a culturally diverse environment such as in South African organisations.

According to Claassen (1997) psychological testing cannot be separated from the country's political, economic and social history. The Employment Equity Act No 55 of 1998 (section 8) (Government Gazette, 1998) specifically refers to psychological tests and assessments being prohibited unless scientific results indicate validity and reliability, as well as non-bias across different cultural groups. With South Africa's advanced legal regulations relating to the use of psychological tests, it becomes essential to ensure that tests are culturally fair,

representative, reliable and valid and thus restricting the universal, Western culture-specific features and aspects thereof. This poses a challenge to the use of tests in South Africa. Meiring, D (2007) is of the opinion that this could however stimulate both developers and users of psychological tests to develop appropriate measures which are fair and unbiased, therefore beneficial for all cultural groups.

MacCann, Roberts, Matthews, and Zeidner (2004) have done extensive research on the utility, accuracy and consequences of emotional testing in an organisational setting. Specific attention is awarded to the measurement of selected dimensions which are deemed ideal in the selection of employees. Empirical errors may occur especially in relation to test items not being representative to the culture and other aspects of the person being tested.

With a growing body of research to the importance and the role of emotional intelligence in successful leadership and workplace performance (Carmeli, 2003; Zeidner et al., 2004), it is suggested that differences among cultural groups regarding the collective definition and construction of the self, as well as that of emotional experiences, regulation and control of emotions, the subjective evaluation of eliciting situations and the verbal and nonverbal reactions to emotional situations, be evaluated due to subtle differences across cultural groups (Kitayama & Markus, 1991; Scherer, Wallbott, Matsumoto, & Kudoh, 1988; Shipper et al., 2003). Kitayama et al., (2000) focus on the analysis of cross-culturally divergent modes of constructing the self through meaning and emotional experiences. It is argued that emotional conditioning does vary across cultures and should be accommodated for within occupational screening and testing scenarios. Miscommunication and or misunderstanding may arise due to a large emphasis placed on “rational” behaviour within organisations where emotional issues and a thorough understanding of cultural differences within the work environment is neglected (Höpfl & Linstead, 1997). The practical importance hereof relates therefore directly to social, personality and emotion psychology across cultures.

Emotions across cultures

A key research question remains whether or not all emotions are experienced, expressed and represented similarly across cultural boundaries. Moreover, it emphasises the necessity to ascertain whether or not all emotion words or concepts exist and or is expressed in similar ways within the various language or cultural groups. It is furthermore important to determine

what emotion words mean across languages and cultural groups, and whether there are universals and culture-specificities in the meaning of emotion words.

With language being sensitive to cultural dynamics, the prototypicality of emotion words needs to be established in order to understand emotions represented in every day life within a specific cultural context. Studying emotion lexicon and the meaning thereof, is both logical and has a theoretical importance as previously indicated. This will allow the meaningful characterisation of emotions in terms of basic emotion prototypes through hierarchical classification of expressed emotion types (Shaver et al., 1987; Watson & Clark, 1997) within a South African multi-cultural domain. The psychological reality constructed within a South African specific cultural context will therefore be better represented due to the nature of this study and will result in enabling researchers in developing culturally relevant emotional competence instruments and assessment tools, as well as creating a new perspective on emotional intelligence through an in-depth understanding of the impact of culture on emotion in South African.

In relation to the prototype theory, Alvarado (1998) indicates that the pile sort methodology appears to be inappropriate for determining prototypicality of emotion terms, as well as testing the prototype theory. Since previous studies (Fehr et al., 1982; Fehr & Russell 1984) relied solely on the emotion lexicon associated to judgement types presented as tasks or scripts to candidates, with the assumption that emotion terms are identical or similar across cultures, it can be presumed that implicit emotion lexicon has not been captured accurately within cultural language groups in South Africa (Church et al., 1999; Kitayama & Markus, 1991; Kitayama et al., 2000; Mesquita et al., 1997; Shipper et al., 2003).

Within an increasingly internationalising and globalising arena, determining and testing emotion lexicon and prototypes becomes essential if one can assume that descriptive emotion terms differ across cultures (Church et al., 1999; Kitayama & Markus, 1991; Kitayama et al., 2000; Mesquita et al., 1997; Shipper et al., 2003). It is therefore essential to determine the similarity and differences in emotion expression of the three language groups Sepedi, Xitsonga and Tshivenda in a scientific analysis. With research regarding the respective indigenous group being very limited, and in order to get an understanding of these groups, a conceptual overview of the three cultural groups is thus relevant.

Sepedi is one of the 11 official languages in South Africa. Sepedi, otherwise known as Northern Sotho or Sesotho sa Leboa, mostly spoken in the province of Limpopo, as well as in Gauteng and Mpumalanga, is one of South Africa's three Sotho languages, with different dialect clusters found in the Sepedi-speaking area. By 2001, 52,7% of the people in Limpopo had Sepedi as their home language (Statistics South Africa, 2001). Tshivenda is generally regarded as a language isolate. It is the language of the Venda people, who are culturally closer to the Shona people of Zimbabwe than to any other South African group. Spoken mainly in northern Limpopo, an area bordering the country of Zimbabwe, Tshivenda shares features with Shona and Sepedi, with some influence from Nguni languages. According to the 2001 Census, Tshivenda is spoken in the following areas: Limpopo 82,2%, Gauteng 15,1%, North West 1,7% and Mpumalanga 0,6% (Statistics South Africa, 2001). The Tsonga people came to South Africa long after most other African people, settling in the Limpopo River valley. Their language, Xitsonga, is spoken in eastern Limpopo and Mpumalanga, areas near the border of the country of Mozambique, as well as in southern Mozambique and south-eastern Zimbabwe (Statistics South Africa, 2001).

With cultural context playing an important role in respect to emotion processes and emotion states, and emotion being intrinsically related to an aspect of cultural context found only in the specific society in which the term is used (Lutz, 1988; Lutz & White, 1986), findings from this study will thus result in a more accurate reflection and representation of emotion lexicon, as well as it being applied without bias across all cultural groups in the development of future potential South African test batteries and instruments. Studying emotions is therefore highly relevant for applied psychology within the South African context as it is necessary to determine the true dimensionality and domain of emotion terms across designated ethnic or language groups (Oatley, 2004; O'Conner & Little, 2002).

METHOD

Research design

A survey design is used to achieve the research objectives (Kepple, Saufley, & Tokunaga, 1992). The survey design has the advantage of obtaining a large amount of information (free listing of emotion words as well as similarity sorting of emotion terms) from a large

population (Sepedi, Xitsonga and Tshivenda speaking South African Police Service recruits), it is economical and the research information can be regarded as accurate (within sampling error). Disadvantages of this design include that it is time and energy consuming (Kerlinger & Lee, 2000).

The research will now be presented in three (3) independent studies (e.g., freelisting, prototypicality rating, similarity sorting of emotion terms) for the Sepedi, Xitsonga and Tshivenda speaking groups.

Study 1: Freelisting

Participants

The study population for the first study consisted of a convenience sample of entry level police applicants ($N=310$) from the South African Police Service. Table 2, 3 and 4 presents some of the characteristics of the participants.

Table 2

Characteristics of the Sepedi speaking participants of the Free Listing Exercise

Item	Category	Frequency	Percentage
Language	Sepedi	110	100,0
Gender	Male	66	60,0
	Female	44	40,0
Age	18-27	74	67,3
	28-37	36	32,7
	38+	0	0,0
Education level	Grade 12	1	0,9
	Certificate / Short Diploma	40	36,4
	3 year Diploma / Degree	58	52,7
	Other	11	10,0

The sample included only black (100%) Sepedi speaking applicants ($n=110$). In terms of gender, 60% ($n=66$) were men and 40% ($n=44$) were women. Sixty seven comma three per cent (67,3%) of the group were between the ages of 18 and 27, where 32,7% were between 28 and 37 years of age. The entry-level qualification for the police is grade 12, and for 0,9%

of the group, this was their highest qualification, while 99,1% had further tertiary qualifications.

Table 3

Characteristics of the Xitsonga speaking participants of the Free Listing Exercise

Item	Category	Frequency	Percentage
Language	Xitsonga	99	100,0
Gender	Male	47	47,5
	Female	52	52,5
Age	18-27	64	65,6
	28-37	35	35,4
	38+	0	0,0
Education level	Grade 12	3	3,0
	Certificate / Short Diploma	33	33,3
	3 year Diploma / Degree	8	8,1
	Other	55	55,5

The sample included only black (100%), Xitsonga ($n=99$) speaking applicants. In terms of gender, 47,5% ($n=47$) were men and 52,5% ($n=52$) were women. Sixty four comma six per cent (64,6%) of the group were between the ages of 18 and 27, where 35,4% were between 28 and 37 years of age. The entry-level qualification for the police is grade 12, and for 3% of the group, this was their highest qualification, while 96,9% had further tertiary qualifications.

Table 4

Characteristics of the Tshivenda speaking participants of the Free Listing Exercise

Item	Category	Frequency	Percentage
Language	Tshivenda	101	100,0
Gender	Male	66	66,7
	Female	35	35,3
Age	18-27	71	70,3
	28-37	29	28,7
	38+	1	0,9
Education level	Grade 12	2	1,9
	Certificate / Short Diploma	30	29,7
	3 year Diploma / Degree	68	67,3
	Other	0	0,0

The sample included only black (100%) Tshivenda ($n=100$) speaking applicants. In terms of gender, 66,7% ($n=66$) were men and 35,3% ($n=35$) were women. Seventy comma three per cent (70,3%) of the group were between the ages of 18 and 27, where 28,7% were between 28 and 37 years of age. The entry-level qualification for the police is grade 12, and for 1,9% of the group, this was their highest qualification, while 97,1% had further tertiary qualifications.

Measuring Instrument

This study focused on identifying the relevant and representative emotion words in a specific indigenous language group, where future research needs to focus on the relevant and representative features for each emotion component (such as appraisals, action tendencies, subjective experiences, et cetera.) that are encoded in that language group. Free listing questionnaires were utilised where respondents were asked to list as many emotion terms they could think of in ten (10) minutes.

Procedure

For the Free-listing questionnaire, respondents were asked to list as many emotion terms they can think of in 10 minutes.

Statistical Analysis

Freelisting emotion words that were reported by the respondents were captured in Excel. A macro was developed for the Excel sheet, calculating the frequency of emotion words, number of participants that reported each emotion term, ranking of emotion terms per respondent and average number of emotion terms that were reported, as well as the median per emotion term.

Results

Emotion terms that were reported five times or more by respondents were selected in order to compile the Basic English Emotion List or BEEL. Table 5 reports the emotion terms that

were reported five times or more by respondents from the Sepedi, Xitsonga and Tshivenda groups. For the Sepedi group, 657 responses were captured resulting in a list of 824 words or phrases of which only 63 words or phrases having a frequency higher than five. Seven hundred and sixty one words or phrases had a frequency less than five and was deleted. For the Xitsonga group, 716 responses were captured with 361 responses (35 words or phrases) having a frequency higher than five. There were 355 deleted responses which had a frequency less than five. For the Tshivenda group, 551 responses were captured resulting in a total of 310 words or phrases of which only 49 words or phrases having had a frequency higher than five. 251 words or phrases had a frequency less than five and was deleted.

According to Table 5, the emotion words which most readily came to mind as examples of “emotion” by the Sepedi speaking participants were emotions of joy (happiness and excitement), emotions of anger (angry and hatred), emotions of love (love) and emotions of sadness (sad, hurt, pain). For the Tshivenda group, emotion words with highest frequencies more closely resembled the words listed by the Sepedi group. These were emotions of joy (happiness and laughter), emotions of anger, emotions of love and emotions of sadness (cry, worry, sadness, hurt and pain). For the Xitsonga group, words with the highest frequency were mainly emotions of anger and aggression (anger, hate, insult and to be laughed at) and emotions of sadness (cry and sorrow). The frequency of emotions of joy (happiness) and love were much lower than listed by the Sepedi and Tshivenda groups.

Table 5

Sepedi, Xitsonga and Tshivenda Emotion terms reported five or more times

Sepedi			Xitsonga			Tshivenda		
Original Sepedi Emotion Response	English	Frequency of Participants that Reported the Emotion	Original Xitsonga Emotion Response	English	Frequency of Participants that Reported the Emotion	Original Tshivenda Emotion Response	English	Frequency of Participants that Reported the Emotion
lehabong	happiness/excitement	41	rila	cry	46	takala	happy	49
befelwa	angry	25	kwata	be angry	22	lila	cry	33
lla	cry	25	hlundzukisiwa	to be angered	21	vhutungu	pain	33
manyami	sadness	25	rhuketeriwa	to be insulted	17	kwata	angry	32
thaba	happy	25	hlekiwa	to be laughed at	15	dinala	worried	27
nyama	sad	24	ntsako	happiness	14	sea	laugh	22
lerato	love	23	rifu	death	14	dakalo	happiness	17
rata	love	20	tsaka	be happy	14	fhumula	be silent	17
kwa bohloko	hurt/feeling the pain	18	rirhandzu	love	13	tanganedza	accept	14
kwata	angry	18	rivengo	hatred	12	funa	like	13
bohloko	pain/painful	17	vilela	complain	12	lufuno	love	13
lehloyo	hatred	17	gome	sorrow	11	sinyuwa	angry	11
sega	laugh	14	vava	hurt	11	vhenga	hate	11
amogela	accept	13	khunguvanyeka	be angry	10	vhilacla	complain	11
kgotlelelo	perseverance	13	xiphukuphuku	fool	10	neta	tired	10
lapa	tired	11	kariha	be angry	9	semana	quarrel	10
leboga	thank	11	penga	be mad	8	tshuwa	frighten	10
robala	sleep	11	tiyisela	persevere	8	tungufhala	sad	10
fela pelo	impatient	10	holova	quarrel	7	mutsiko	pressure	9
hlakahlakana	confused	10	mavondzo	jealousy	7	ofha	afraid	9
hlompho	respect	10	bihile	to be ugly	6	vhavha	bitter	9
tshoga	afraid/scared	10	rhurhumela	shiver	6	borea	bored	8

kwelobohloko	sympathy	9	vaviseka	be injured	6	shufha	jump	8
makala	surprised	9	vusiwana	poverty	6	kondelela	perservere	8
naganela	think for/consider	9	yimbelela	sing	6	lwala	sick	8
rapella	pray for others	9	amukela	accept	5	takalela	be glad	8
tenega	disgusted	9	ba	hit	5	vhaisala	be trouble	8
go lla	to cry	8	ehleketa	think	5	diphina	enjoy	7
hlompha	respect each other	8	hlongoriwa	to be chased away	5	khombo	accident	7
hlonama	sulk	8	mavun'wa	lies	5	livhuwa	thank	7
kgothatša	motivate/encourage	8	miyela	be quiet	5	mangala	surprised	7
thakgala	happy	8	nkani	aggressiveness	5	pfarelo	pardon	7
bina	dance	7	nyangatseka	be angry	5	takalesa	be glad	7
kgotsofatša	satisfy	7	rivalela	forgive	5	tambula	suffer	7
lenyatšo	disrespect	7	tsandzeka	fail	5	tetemela	shiver	7
letšhogo	fear/fright	7				edela	edela	6
mona	jealous	7				gungula	grumble	6
opela	sing	7				huvhala	injured	6
swaba	sad	7				nyama	discouraged	6
thabile	happy	7				thetshesesa	listen to	6
boifa	scared	6				vengo	hatred	6
homotšegang	be consoled	6				zhamba	shout	6
ikgantšha	self-exaltation	6				holedza	mock	5
kgopišega	offended	6				khuthadza	console	5
mahlatsa	luck	6				lufu	death	5
mahloko	grief	6				mbiti	temper	5
maikutlo	feelings	6				nala	sulk	5
maswabi	sadness	6				thonifha	respect	5
sello	cry	6				thusa	help	5
thuša	help	6						
bolela	talk	5						

botšiša	ask	5
iketla	relax	5
lehu	death	5
lešoboro ke wena	you are an uninitiated boy	5
lwala	sick/ill	5
mafolofolo	energetic	5
maitshwaro	behaviour	5
rogana	swear	5
setlatla ke wena	you fool	5
tlhompho	respect	5
tšhomišano	tšhomišano	5
tshwarelo	forgiveness	5

Study 2: Prototypicality Rating

Participants

The study population of the second study (Prototypicality ratings of the Extended English Emotion List) consisted of a convenience sample of Language Experts in the indigenous languages ($N=30$). Table 6 presents some of the characteristics of the participants.

Table 6

Characteristics of the participants of the Prototypicality Rating Exercise

Item	Category	Frequency	Percentage
Gender	Male	14	53,3
	Female	16	46,7
Age	20 – 29	6	20
	30 – 39	12	40
	40+	12	40

The sample included only black groups (100%) and consisted of the following cultural groups: Sepedi ($n=10$), Xitsonga ($n=10$) and Tshivenda ($n=10$) speaking language experts. In terms of gender, 53,3% ($n=14$) were men and 46,7% ($n=16$) were women. Twenty per cent (20%) of the group were between the ages of 20 and 29, while 40% were between 30 and 39 years of age. Forty per cent (40%) of the group were older than 40 years. 100% of the group had post graduate qualifications.

Measuring Instrument

Three different versions of the prototypicality questionnaires were used within each language group to rate the emotion terms of the Extended Emotion List on prototypicality for the concept of emotion. Three versions of the prototypicality questionnaire were used where emotion terms were listed in randomised order. Scales ranging from *certainly not an emotion* (1) to *certainly an emotion* (4) were used.

Procedure

For the prototypicality rating native speaking experts (n=30) rated the prototypicality for the concept of emotion word for the Sepedi (143 emotion words), Xitsonga (151 emotion words) and Tshivenda (155 emotion words) groups.

Statistical Analysis

Cronbach's alphas were computed for each of the emotion terms for the three (3) language groups. Participants who reported an alpha score less than 0,40 on the combined score were removed; these participants had some idiosyncratic understanding of the emotion words. The 80 emotion words with the highest average scores (inclusive of the 24 GRID terms as reported by Scherer, 2005) which remained were most prototypical and were retained.

Results

Table 7 presents the original list of the top 80 most prototypical Sepedi, Xitsonga and Tshivenda emotion words, as well as the English translations, and the average scores of the prototypicality rating of each term. This list was extended with the 24 terms used in the GRID instrument to yield 80 terms. As a result, for the Sepedi group, "gatelelega monaganong" (gloom), "homotšega" (to be consoled) and "ineela" (surrender) was excluded in order to include "hloka tshepo" (despair / hopelessness), "nyefola" (contempt / scorn) and "tena" / "šišimiša" (disgust) with average scores for prototypicality of 0,8; 0,6, and 1,4 respectively.

For the Xitsonga group, "ku tinyiketa" / "yingisa" (submission / surrender), "nkoka-mahlo" (attraction), "ntsako" / "ntsakelo", (enjoyment), "ku hlongoriwa" (to be chased away), "ku koka rinoko", (enthralment) and "gamdzelo" (adoration) was excluded in order to include "ntwela-vusiwana" (compassion / pityfulness / pity / sympathy), "vukari" (anger / wrath), "ku vavisa" (irritation), "mavondzo" (jealousy), "kuva ni nandzu" (guilt) and "rivengo" (hate / hostility / resentment / spite) with average scores for prototypicality of 3,1; 3,1; 3,0; 3,0; 2,7, and 2,5 respectively.

For the Tshivenda group, the following terms were excluded: “karusa” (arousal), “khoda” (flattered), “mafulufulu” (zeal), “manyanyuwo” (excitement), “shona” (horror), “takadzaho” (gloominess), “tambula” (torment), “vengo lihulu” (rapture), “dakalo” “lihulu” (ecstasy / jubilation), “dala” (exuberance) and “dina” / “thupha” (annoyance) in order to include the following terms: “mulandu” (guilt), “dakalo” (gladness / delight / elation / glee), “muhalifho” (irritation), “funa” (love / liking), “fushea” (contentment / satisfaction), “pfelovhutungu” (compassion), “vhenga” (hate), “vhutungu” (sadness / pain / grief / sorrow/ anguish / agitation / passion), “vivho” (jealousy), “thavhisa thoni” (shiver) and “dikukumusa” (pride) with average scores for prototypicality of 3.2; 3,1; 3.1; 3.0; 3.,0; 3.0; 3,0; 3.0; 2,8;2,7, and 2,4 respectively.

The final list of emotion words which was used for the similarity ranking task is presented in Appendix D. A Cronbach’s Alpha of 0,99 for the prototypicality data were obtained.

The emotion terms ranked as the ten (10) most prototypical words for the Sepedi group were “bodutwana” (loneliness / corny / emptiness / glumness / melancholy / moodiness), “bohlokakhutšo” (restlessness), “go hloka lethabo” (unhappiness / displeasure), “kwelobohloko” (compassion / moved / pityfulness / pity / sympathy), “lapile” (tired), “lerato” (love / adoration / affection / fondness / passion), “lethabo” (joy / happiness / calmness / cheerfulness / delight / ecstasy / elation / euphoria / excitement / exhilaration / gladness / glee / rapture / sentimentality), “letšhogo/tšhoga” (fear / alarm / fright / horror / nervousness / shock / terror), “makalo/tlabego” (astonishment), and “manyami/mahloko” (grief).

And the ten (10) least prototypical words from the list generated in the freelisting task (sub-study one) were: “segwera” (friendship), “lehu” (death), “mohlako” (suffering), “ba le nnete” (be sure), “tetelo” (anticipation), “madimabe” (woe), “leta ka letšhogo” (apprehension), “leratong” (in love), “kgatelelo” (oppression), and “hloka seriti” (inferiority).

Table 7

Mean prototypicality ratings of emotion words in the Sepedi, Xitsonga and Tshivenda groups

Sepedi	English	M	Xitsonga	English	M	Tshivenda	English	M
bodutwana	loneliness / corny / emptiness / glumness / melancholy / moodiness	4	ku hlamala/ku khomisa tingana	shock	4	dinalca	upset / worry / troubled / feel chagrined	4
bohlokakhutšo	restlessness	4	ku kanakana	doubt	4	khakhathi	aggression / revulsion	4
go hloka lethabo	unhappiness / displeasure	4	ku khomisa tingana/ku nyumisa	humiliation	4	nyala	disgust	4
kwelobohloko	compassion / moved / pitifulness / pity / sympathy	4	ku nyuma/nyumo	shyness	4	sa tsireledzca	insecurity	4
lapile	tired	4	ku tsaka swinene	exuberance	4	tambudzwa	fondness	4
lerato	love / adoration / affection / fondness / passion	4	ku tsekatekisa	agitation	4	tshimangadzo	sinfulness	4
lethabo	joy / happiness / calmness / cheerfulness / delight / ecstasy / elation / euphoria / excitement / exhilaration / gladness / glee / rapture / sentimentality	4	kuva ni ntsako lowukulu	ecstasy / elation / euphoria / exasperation / exhilaration	4	u sa fulufhela	suspicion	4
letšhogo/tšhoga	fear / alarm / fright / horror / nervousness / shock / terror	4	manyunyu	pride	4	vhuhali vhuhulu	wrath	4
makalo/tlabego	astonishment	4	nchavo	fear / anxiety / fright / nervousness / panic / tenseness	4	di netshedza	surrender	3.9
manyami/mahloko	grief	4	nkitsikitsi	confusion	4	fhelambilu	impatience	3.9
mona	jealousy	4	ntshikelelo	depression / melancholy / stress	4	humbula hayani	homesickness	3.9
tshwenyega	upset / worry	4	nyenya	dislike	4	khanganco	distress	3.9
kgatelelo ya monagano	stress / depression / gloominess	3.8	tingana/ku nyuma	shame	4	kwamaho	thrill	3.9

kgobogo	embarrassment / awkwardness	3.8	xinyanyu/matitwele	sentimentality	4	livhuwa	thankankful	3.9
manyami	sorrow	3.8	khombo	distress	3.9	mangala	astonishment / woe	3.9
selekega	irritation	3.8	ku nyumisa/nyumiso	embarrassment	3.9	nala	sulk	3.9
tlalelo	anxiety / desperation / distress / eagerness / resentment	3.8	ku phirheka	disgust	3.9	swiswi	rage	3.9
boipshino	pleasure / enjoyment / pleasantness / zest	3.6	ku nyanyula/nyanyulo	thrill	3.8	thulo	caring	3.9
go se rate	dislike	3.6	ku tsana/gome	sadness / disappointment	3.8	tshi songo khwathiswaho	startle	3.9
hloka kgahlego	indifference / reluctance	3.6	ntsakelo/ku tsakela ngopfu	fondness	3.8	tshitakadzi	surprise / amazement	3.9
hlonama	sulk / dejection	3.6	nyanyulo	arousal / gaiety	3.8	tungufhala	unhappiness / glumness	3.9
kgahlego	interest / admiration	3.6	xihlamariso	astonishment / fascination	3.8	u sa diphina	uneasiness	3.9
kgopišegile	offended	3.6	chavisa/tshukisa	startle	3.7	u shaya fulufhelo	diffidence	3.9
lehloyo	hate / aversion / loathing	3.6	gome/nhlomulo	despair	3.7	fhumula	quietness / calmness	3.8
lokologa	feel at home	3.6	ku hatla ku hlundzuka	grumpiness	3.7	litshedzela	neglect	3.8
makalo	amazement	3.6	ku hlamarisa/xihlamariso	surprise	3.7	nyofho khulu	terror	3.8
makatša	startle	3.6	ku nyama	pessimism / mortification	3.7	tetemela	acceptance	3.8
ngangego ya maikutlo	tenseness	3.6	ku nyamisa	upset	3.7	u pfela muthu vhutungu	sympathy	3.8
nyakalala	jolliness	3.6	ku pfumala ntsako/nhlomulo	unhappiness	3.7	u sa vha na maanda	groggy	3.8
poifo	dread	3.6	ku venga lokukulu	aversion	3.7	dinyadza	inferiority	3.7
amogela	accept	3.4	kuva ni gome/ku tsana endzhaku ka ku hluleka	feel chagrined	3.7	huvhala	hurt	3.7
belaela	doubt	3.4	mahlomulo/ku vaviseka	torment	3.7	lata fulufhelo	despair	3.7
dihlong	shyness	3.4	mukhosi/nkalanga	alarm	3.7	mulafo	peacefulness	3.7
gatelela pefelo	suppressed anger	3.4	nchavo lowukulu	terror	3.7	shoniswa	embarrassment / mortification	3.7
ikwa o selekegile	feel chagrined	3.4	nhlundzuko	aggression / aggressiveness / outrage	3.7	u dzumba mbiti	suppressed anger	3.7

itshola	regret / remorse	3.4	ntsako lowukulu	glee / rapture	3.7	u sa takala	displeasure	3.7
kgotsofalo	contentment / satisfaction	3.4	nxaniseko	anguish / misery / suffering	3.7	bvafha	reluctance	3.6
mahlomola	agony / misery	3.4	nyanyuko/nyanyulo	excitement	3.7	lwala	sick	3.6
makalo/makala	surprise	3.4	nyenyemuka/sandza/sola	scorn	3.7	mbili yo swifhalelwaho	melancholy	3.6
maswabi	sadness	3.4	rirhandzu	love / affection	3.7	mbiti	anger / fury / grumpiness	3.6
nyenyefatšo	mortification	3.4	swipfukelwa	moodiness	3.7	mudifho	zest	3.6
pefedišo	alienation	3.4	titwe u lahlekile	feel lost	3.7	sinyuwa	disappointment / discouraged / humiliation	3.6
pefelo	anger / aggravation / exasperation / fury / outrage / rage / wrath	3.4	titwe u ri ekaya	feel at home	3.7	tshenuwa	euphoria	3.6
pherekano	agitation	3.4	vukari lebyi tumbeleke	suppressed anger	3.7	vhaisa	corny	3.6
rata	liking	3.4	vukari lebyo leva	rage	3.7	vhidzelela	shout	3.6
tenega	annoyance	3.4	gome	grief / sorrow	3.6	vhukonani	friendship	3.6
tenega/selekega	fed up	3.4	ku swirheka	fed up / frustration	3.6	nyofoho	fear / apprehension	3.5
tlhonamo/bodutwana	grumpiness	3.4	ntsako	joy / jolliness / happiness / gladness / contentment / jubilation / pleasantness / pleasure	3.6	takalaho	joviality	3.5
tshwabo	disappointment / shame	3.4	khombo/xo chavisa ngopfu	horror	3.4	u sa funa	dislike	3.5
bobc	sinfulness / spite	3.2	ku hlundzuka hi xihatla	grouchiness	3.4	vhutungu vhuhulu	agony	3.5
fela pelo	panic	3.2	ku vava	pain	3.4	emula	affection	3.4
go tlaa letšhogo	dismay	3.2	ndzivaletlano/ku rivalela	forgiveness	3.4	lutamo	desire / fascination / longing / willingness	3.4
ipona molato	guilt	3.2	ntwisiso	apprehension	3.4	neta	tired / boredom / fed up	3.4
babja/lwala	sick	3	vurhena	courage	3.4	nyadza	contempt	3.4
bodutu	boredom	3	gome/ku pfamala ntshamiseko	uneasiness	3.3	tama	cheerfulness	3.4
boikgogomošo	pride	3	ku fumiwa hi nchumu wo karhi	overtaken	3.3	dzangalelo	interest	3.3
kgalefo	revulsion	3	ku hlayisa	caring	3.3	fulufhelo	confidence / hope / optimism	3.3
mahloko	anguish	3	ku tsan'wiwa	glumness	3.3	khuthadza	console	3.3

nyakalalo	bliss / gaiety	3	mabvibvi	indisposition	3.3	kondelela	perservering	3.3
nyefolo	humiliation	3	mikanakaniso/mivilelo	suspicion	3.3	kundelwa	miss	3.3
tlhakatlhakano	frustration	3	moya wo rihisela	vengefulness	3.3	mazhuluzhulu	anxiety	3.3
tšharakano	confusion	3	nhlomulo	agony / bitterness / woe	3.3	mukosi	alarm	3.3
tšhušumetšo/phišego	enthusiasm	3	nkowiso/ku kholwa	satisfaction	3.3	ndeme	impotence	3.3
go se dudišega	uneasiness	2.8	ntsakelo	interest / liking	3.3	nyala	loathing	3.3
iketla	relaxed	2.8	ntsakiso	cheerfulness / delight	3.3	sa fushea	dissatisfaction	3.3
thothomela ka letšhogo	groggy	2.8	nyangantseko	revulsion / dismay	3.3	sema	emptiness	3.3
amogela ntle le bothata	willingness	2.6	vavisa	hurt	3.3	u pfa u hayani	feel at home	3.3
boikokobetšo	submission	2.6	xiphukuphuku	fool	3.3	xelelwla	feel lost	3.3
duma	desire / envy / longing	2.6	xisandzo, ndzhukano	insult	3.3	dinetsshedza	submission	3.2
go ba le tebogo	thankful	2.6	xisolo	contempt	3.3	halifha zwituku	nervousness / exasperation	3.2
go ba le khutšo	quietness	2.6	xivundza/ku borheka	boredom	3.3	karusa	arousal	3.2
ikokobetša	resignation	2.6	xiyimo xa ntshikelelo	gloom	3.3	khoda	flattered	3.2
kgwathega maikutlo	touched	2.6	ku hluleka/tsandzeka	failure	3.2	mafulufulu	zeal	3.2
kwiša bohloko	hurt	2.6	ku landzuriwa	rejection / dejection	3.2	manyanyuwo	excitement	3.2
tshepo	hope	2.6	ku tinyiketa/yingisa	submission / surrender	3.2	mulandu	guilt	3.2
befetša	put out	2.4	nkoka-mahlo	attraction	3.2	shona	horror	3.2
boitefeletšo	vengefulness	2.4	ntsako/ntsakelo	enjoyment	3.2	takadzaho	gloominess	3.2
gatelelega monaganong	gloom	2.4	ku hlongoriwa	to be chased away	3.1	tambula	torment	3.2
homotšega	be consoled	2.4	ku koka rinoko	enthralment	3.1	vengo lihulu	rapture	3.2
ineela	surrender	2.4	ntwela-vusiwana	compassion / pityfulness / pity / sympathy	3.1	dakalo	gladness / delight / elation / glee	3.1

The emotion terms ranked as the ten (10) most prototypical words for the Xitsonga group were “ku hlamala/ku khomisa tingana” (shock), “ku kanakana” (doubt), “ku khomisa tingana/ku nyumisa” (humiliation), “ku nyuma/nyumo” (shyness), “ku tsaka swinene” (exuberance), “ku tsekatekisa” (agitation), “kuva ni ntsako lowukulu” (ecstasy / elation / euphoria / exasperation / exhilaration), “manyunyuni” (pride), “nchavo” (fear / anxiety / fright / nervousness / panic / tenseness), and “nkitsikitsi” (confusion).

And the ten (10) least prototypical words from the list generated in the freelisting task were: “maxuxu” (dread), “ku hlamala/xihlamariso” (amazement), “ku tshembheka” (honesty), “navelo-kaya” (homesickness), “susa/humesela handle” (put out), “ku engetelela xiyimo xo karhi” (aggravation), “amukela” (accept), “rivengo” (hate / hostility / resentment / spite), “ku hlula” (defeat / triumph), and “vulolo” (loathing).

The emotion terms ranked as the ten (10) most prototypical words for the Tshivenda group were “vhuhali vhuhulu” (wrath), “u sa fulufhela” (suspicion), “tshimangadzo” (sinfulness), “tambudzwa” (fondness), “sa tsireledzea” (insecurity), “nyala” (disgust), “khakhathi” (aggression / revulsion), “dinalea” (upset / worry / troubled / feel chagrined), “u shaya fulufhelo” (diffidence) and “u sa diphina” (uneasiness).

And the ten (10) least prototypical words from the list generated in the freelisting task were: “vhutungunyana” (indisposition), “dahefhala” (infatuation), “mudu” (moodiness), “nanisa” (aggravation), “takalela/tama” (exhilaration), “bvula” (put out), “dikhetha” (isolation), “dada” (confusion), “dikukumusa” (pride), and “kunga” (attraction).

Study 3: Similarity Rating Task

Participants

The study population of the third phase (Similarity Rating Task) consisted of a convenience sample of entry level police applicants ($N=550$) from the South African Police Service. Table 8, 9 and 10 presents some of the characteristics of the participants.

Table 8

Characteristics of the Sepedi speaking participants of the Similarity Rating Exercise

Item	Category	Frequency	Percentage
Language	Sepedi	185	100,0
Gender	Male	88	47,6
	Female	97	52,4
Age	18-28	174	94,1
	29+	11	5,9
Province	Free State	9	4,7
	Gauteng	78	42,2
	KxaZulu Natal	2	1,1
	Limpopo	89	48,1
	Mpumalanga	7	3,8
Education level	Grade 12	162	87,6
	Further tertiary education	23	12,4

The sample included only black (100%) Sepedi ($n=185$) speaking applicants. In terms of gender, 47,6% ($n=88$) were men and 52,4% ($n=97$) were women. Ninety four comma one per cent (94,1%) of the group were between the ages of 18 and 28, while 5,9% were older than 29 years. Four comma seven per cent (4,7%) of the group live in the Free State, 42,2% live in Gauteng and 48% of the group live in Limpopo where 4,9% live in Mpumalanga or KwaZulu Natal. The entry-level qualification for the police is grade 12, and for 87,6% of the group, this was their highest qualification, while 12,4% had further tertiary qualifications.

Table 9

Characteristics of the Xitsonga speaking participants of the Similarity Rating Exercise

Item	Category	Frequency	Percentage
Language	Xitsonga	202	100,0
Gender	Male	110	54,5
	Female	92	45,5
Age	18-28	180	89,1
	29+	22	10,1
Province	Gauteng	69	34,,2
	Limpopo	106	52,5
	Mpumalanga	26	12,9
	North West Province	1	0,5

Education level	Grade 12	180	89,1
	Further tertiary education	22	10,9

The sample included only black (100%) Sepedi ($n=202$) speaking applicants. In terms of gender, 54,5% ($n=202$) were men and 45,5% ($n=92$) were women. Ninety one comma five per cent (91,5%) of the group were between the ages of 18 and 28, while 8,5% were older than 29 years. The entry-level qualification for the police is grade 12, and for 89,1% of the group, this was their highest qualification, while 10,9% had further tertiary qualifications.

Table 10

Characteristics of the Tshivenda speaking participants of the Similarity Rating Exercise

Item	Category	Frequency	Percentage
Language	Tshivenda	163	100,0
Gender	Male	91	55,8
	Female	72	44,2
Age	18-28	149	91,4
	29+	14	8,6
Province	Free State	1	0,6
	Gauteng	59	36,2
	Limpopo	103	63,2
Education level	Grade 12	162	87,6
	Further tertiary education	23	12,4

The sample included only black (100%) Tshivenda ($n=163$) speaking applicants. In terms of gender, 55,8% ($n=91$) were men and 44,2% ($n=72$) were women. Ninety one comma four per cent (91,4%) of the group were between the ages of 18 and 29, while 8,6% were older than 29 years. The entry-level qualification for the police is grade 12, and for 87,6% of the group, this was their highest qualification, while 12,4% had further tertiary qualifications.

Measuring Instruments

The cognitive structure of emotions was investigated by means of similarity rating of the emotion words in order to conceptualise the cognitive representation of differences and similarities between various emotion terms (Shaver et al., 1987).

The list of prototypical emotion terms per language group were used to draft the Similarity Rating Questionnaire. Emotion terms with the highest average score ratings, based on prototypicality, were included to construct a final list of 80 terms per language group (as shown in Appendix D). These lists were used to construct the Similarity Rating Questionnaires for each language group which had to contain the 24 GRID terms as reported by Scherer (2005) regardless of the average score ratings.

Emotion terms were alphabetically listed and then transposed in Excel to combine the emotion terms into 3160 pairs of emotion terms. Using SPSS, these pairs of emotion terms were randomised. Pairs were then captured into eight (8) versions for the Similarity Rating Questionnaire, each containing 395 pairs of emotion terms. Respondents were asked to rate these combinations in terms of how closely related they are in meaning in their language. Respondents had to indicate the relationship in meaning between the emotion terms using an 8-point response scale. The scales were 1 (*completely opposite in meaning (antonyms)*), 2 (*very opposite in meaning*), 3 (*moderately opposite in meaning*), 4 (*slightly opposite in meaning*), 5 (*Slightly opposite in meaning*), 6 (*moderately similar in meaning*), 7 (*very similar in meaning*) and 8 (*completely similar in meaning (synonyms)*). The instructions mentioned that they need to remain concentrated and that every pair had to be rated.

Procedure

The test battery was administered at the Police College in Pretoria on a group which consisted of police applicants who had been recruited for the basic training programme of the SAPS 2008 entry level intake. Ethical aspects of the research were discussed with the participants. The tests were administered during two sessions of which the Sepedi and Xitsonga speaking groups were accommodated during the first session and the Tshivenda speaking participants during the second session. Respondents of the various language groups were divided into smaller groups of approximately 25 participants per group. Groups were divided into classrooms where the tests were administered in a semi-controlled fashion. A standardised procedure was followed by qualified psychologists and psychometrists in order to administer the test battery. The instructions to the test were given to each group individually. The first session commenced at 08:30 with instructions provided firstly to the classrooms with Sepedi speaking respondents and thereafter to the classrooms with Xitsonga speaking respondents. The second session commenced at approximately 10:30. Some of the

respondents only received their instructions well after 10:30. Respondents appeared to become agitated as lunch was served at 11:30. Each respondent had his or her own desk, chair as well as the necessary stationary to administer the test. The classrooms were properly lit and ventilated. The semi-controlled test session lasted for approximately 90 minutes.

Statistical Analysis

The first step in the analysis included calculating the reliability coefficients of the different participants who completed the eight (8) different versions of the similarity questionnaires for the three language groups. Based only on individuals who had an item total correlation above 0,30, the average similarity rating for each pair of emotion terms was computed. The second step included a Classical Multidimensional Scaling (CMDS) procedure which typically results in systematic ordering of emotion words around specific dimensions. According to Russell (1983, 1991), the first dimension is always on evaluation or pleasantness (positive to negative dimension). Other dimensions which often emerge (Osgood, May, & Miron, 1975) are power, potency or dominance (strong to weak emotions mainly related to anger, fear and sadness), arousal or activation (active-passive or high-low emotions which are mainly related to emotions of fear and anger to sadness) and lastly, a dimension related to emotions of unpredictability (surprise terms to other terms).

Multidimensional Scaling allows for the representation of emotion words as points in a space, with the distance between two points representing dissimilarity in sorting (Borg & Groenen, 1997; Davison, 1983; Kruskal & Wish 1978). These analyses were carried out with PROXSCAL of SPSS. By means of an iterative procedure PROXSCAL computes the coordinates in such a way that there are minimal deviations between the (optimally transformed) dissimilarities (= the ordinal information in the data) and the distances in the geometrical representation (= distances generated by the MDS). PROXSCAL minimizes the normalized raw stress, which is computed as the proportion of squared distances that are not accounted for by the observed dissimilarities. This badness of fit or stress measure ranges from 0 to 1, with 0 meaning that all observed dissimilarities are accounted for by the distances in the geometrical representation and 1 meaning that the observed dissimilarities are not accounted at all by the distances in the geometrical representation. The lower the normalized raw stress, the better.

Results

The reliabilities for the Sepedi group are reported in Table 11 on the eight (8) similarity questionnaires.

Table 11

Reliability table of the results of the eight Similarity Rating Questionnaires for the Sepedi Group

Similarity Questionnaire	Reliabilities with respondents with all item correlations of less than 0,30 (α)	Similarity Questionnaire	Reliabilities with respondents with all item correlations of at least 0,30 (α)
Similarity Questionnaire 1 (n=25)	0,92	Similarity Questionnaire 1 (n=20)	0,94
Similarity Questionnaire 2 (n=25)	0,90	Similarity Questionnaire 2 (n=19)	0,95
Similarity Questionnaire 3 (n=23)	0,91	Similarity Questionnaire 3 (n=19)	0,91
Similarity Questionnaire 4 (n=21)	0,85	Similarity Questionnaire 4 (n=16)	0,91
Similarity Questionnaire 5 (n=20)	0,91	Similarity Questionnaire 5 (n=16)	0,93
Similarity Questionnaire 6 (n=23)	0,85	Similarity Questionnaire 6 (n=14)	0,90
Similarity Questionnaire 7 (n=24)	0,87	Similarity Questionnaire 7 (n=21)	0,89
Similarity Questionnaire 8 (n=24)	0,89	Similarity Questionnaire 8 (n=22)	0,93

Inspection of Table 11 shows that acceptable Cronbach alpha coefficients were obtained for all the scales. All the alpha coefficients were higher than the guideline of $\alpha > 0,70$ (Nunnally & Bernstein, 1994). The scores on the Similarity Questionnaires are therefore normally distributed. It therefore appears that all the measuring instruments have acceptable levels of internal consistency. It should however be noted that respondents with item-total correlation lower than 0,30 have been removed. This resulted in five (5) participants being removed in

version 1, six (6) participants in version 2, four (4) participants in version 3, five (5) participants in version 4, five (5) participants in version 5, nine (9) participants in version 6, three (3) participants in version 7 and two (2) participants being removed in version 8.

The Classical Multidimensional Scaling (CMDS) procedure report normalized raw stress for the Sepedi group, with a solution in one up to four dimensions was respectively 0,16; 0,07; 0,04, and 0,03. The final dimensionality was decided upon on the basis of the interpretability of the representation. For the Sepedi group the full four dimensional representation could be well interpreted. An explanation of the different dimensions can be found in the footnote of Table 12.

Table 12

Coordinates of the Sepedi emotion terms on the four dimensions

Sepedi	English	Dimension			
		1	2	3	4
rata	liking	0,90	0,18	0,18	-0,23
lethabo	joy / happiness / calmness / cheerfulness / delight / ecstasy / elation / euphoria / excitement / exhilaration / gladness / glee / rapture / sentimentality	0,88	-0,03	-0,25	-0,27
lerato	love / adoration / affection / fondness / passion	0,87	0,14	-0,17	-0,27
iketla	relaxed	0,86	0,12	0,24	0,27
lokologa	feel at home	0,86	-0,31	-0,23	0,01
boipshino	pleasure / enjoyment / pleasantness / zest	0,85	-0,23	-0,06	-0,13
go ba le tebogo	thankful	0,85	-0,39	-0,26	0,010
go ba le khutšo	quietness	0,85	-0,23	0,05	0,19
kgotsofalo	contentment / satisfaction	0,84	0,07	0,04	0,04
kgahlego	interest / admiration	0,82	-0,19	0,07	-0,28
amogela ntle le bothata	willingness	0,77	-0,34	0,10	0,07
amogela	accept	0,76	-0,26	-0,31	-0,35
nyakalala	jolliness	0,66	-0,02	-0,05	-0,02
boikokobetšo	submission	0,54	0,24	0,09	0,16
ikokobetša	resignation	0,51	-0,12	-0,12	0,18
selekega	irritation	-0,55	0,22	-0,04	0,33

kgopišegile	offended	-0,54	0,32	0,10	-0,18
pefelo	anger / aggravation / exasperation / fury / outrage / rage / wrath	-0,49	-0,14	-0,12	-0,16
tenega	annoyance	-0,47	-0,08	0,03	0,25
befetša	put out	-0,45	-0,25	0,29	0,03
ikwa o selekegile	feel chagrined	-0,45	-0,02	0,03	-0,31
manyami	sorrow	-0,45	-0,05	0,01	-0,07
tenega/selekega	fed up	-0,45	-0,25	0,02	-0,12
pherekano	agitation	-0,43	0,02	-0,33	-0,04
tihakatlhakano	frustration	-0,43	0,35	0,02	0,46
tena/šišimiša	disgust	-0,40	0,22	-0,21	0,32
hloka kgahlego	indifference / reluctance	-0,39	-0,30	-0,04	0,03
tšharakano	confusion	-0,39	0,10	0,22	-0,04
kgatelelo ya monagano	stress / depression / gloominess	-0,39	-0,14	0,03	0,30
maswabi	sadness	-0,37	0,17	0,08	0,01
manyami/mahloko	grief	-0,35	-0,15	-0,32	-0,14
go hloka lethabo	unhappiness / displeasure	-0,34	-0,42	0,07	-0,27
hlonama	sulk / dejection	-0,34	0,42	0,25	0,35
ngangego ya maikutlo	tenseness	-0,22	0,28	0,01	0,14
boikgogomošo	pride	0,28	-0,74	-0,06	-0,28
mona	jealousy	-0,05	-0,67	0,07	0,31
lehloyo	hate / aversion / loathing	-0,28	-0,62	0,14	0,27
nyefola	contempt / scorn	-0,13	-0,57	-0,43	0,32
fela pelo	panic	-0,37	-0,54	-0,04	-0,19
boitefeletšo	vengefulness	-0,03	-0,54	0,50	0,26
kgalefo	revulsion	-0,28	-0,53	-0,02	-0,33
bobe	sinfulness / spite	-0,16	-0,51	0,42	-0,05
go se rate	dislike	-0,22	-0,37	0,33	-0,13
pefedišo	alienation	-0,32	-0,45	-0,13	0,08
thothomela ka letšhogo	groggy	-0,15	0,57	-0,16	-0,22
letšhogo/tšhoga	fear / alarm / fright / horror / nervousness / shock / terror	-0,25	0,49	-0,27	-0,19
go tlala letšhogo	dismay	-0,18	0,47	-0,14	-0,38
bodutu	boredom	-0,13	0,47	0,39	-0,32
mahlomola	agony / misery	-0,29	0,46	0,13	0,02
tihonamo/bodutwana	grumpiness	-0,21	0,43	0,26	-0,01
bodutwana	loneliness / corny / emptiness / glumness / melancholy / moodiness	-0,32	0,42	0,17	0,25
mahloko	anguish	-0,29	0,40	0,38	-0,01
poifo	dread	-0,01	0,61	-0,25	-0,09
tshwabo	disappointment / shame	-0,18	0,34	-0,20	0,27
tshwenyega	upset / worry	-0,23	0,27	0,20	0,01
lapile	tired	-0,04	0,10	0,79	-0,28

duma	desire / envy / longing	0,60	-0,27	0,58	0,10
kwelobohloko	compassion / moved / pitifulness / pity / sympathy	0,42	0,45	0,46	0,01
tšhušumetšo/phišego	enthusiasm	0,30	-0,10	0,43	-0,26
babja/lwala	sick	-0,38	0,39	0,40	-0,39
kwiša bohloko	hurt	-0,27	0,05	0,38	0,32
gatelela pefelo	suppressed anger	-0,23	-0,33	0,37	0,21
bohlokakhutšo	restlessness	-0,31	0,06	0,33	-0,22
kgwathega maikutlo	touched	-0,08	0,04	0,12	0,03
makalo/makala	surprise	-0,07	0,26	-0,75	-0,11
makalo	amazement	-0,03	0,13	-0,65	-0,30
makalo/tlabego	astonishment	-0,14	0,36	-0,53	-0,15
nyenyefatšo	mortification	-0,02	-0,33	-0,52	0,46
nyefolo	humiliation	-0,19	-0,47	-0,48	0,31
belaela	doubt	-0,38	0,22	-0,44	0,02
kgobogo	embarrassment / awkwardness	-0,12	-0,19	-0,22	0,60
dihlong	shyness	-0,01	0,44	-0,41	0,57
itshola	regret / remorse	-0,07	0,31	-0,10	0,52
hloka tshepo	despair / hopelessness	-0,21	0,29	0,07	0,51
ipona molato	guilt	0,11	0,29	0,07	0,49
makatša	startle	-0,06	0,03	-0,55	-0,56
tlalelo	anxiety / desperation / distress / eagerness / resentment	-0,25	-0,01	-0,17	-0,48
nyakalalo	bliss / gaiety	0,73	-0,09	-0,15	-0,43
go se dudišego	uneasiness	-0,15	0,04	-0,03	-0,42
tshepo	hope	0,69	-0,01	0,29	-0,42

Note: Dimension 1: pleasantness (or evaluation) dimension with pleasant emotions opposed to unpleasant emotion terms. Dimension 2: power (or potency) dimension with opposing emotions of anger/pride terms to sadness/fear terms. Dimension 3: unexpectedness dimension. Dimension 4: arousal (or activation) dimension with anxiety terms being opposed to sadness terms.

Findings indicate that for the Sepedi group, a four-factorial solution like in the GRID was extracted. The first dimension presented as a pleasantness (or evaluation) dimension opposing pleasant to unpleasant emotion terms. The second dimension presented as a power (or potency) dimension opposing anger/pride terms to sadness/fear terms. The third dimension presented as an unexpectedness dimension with all surprise items having negative coordinates with the fourth dimension presenting as an arousal (or activation) dimension. Here, anxiety terms were opposed to sadness terms.

The reliabilities for the Xitsonga group is reported in Table 13 on the eight (8) similarity questionnaires

Table 13

Reliability table of the results of the eight Similarity Rating Questionnaires for the Xitsonga Group

Similarity Questionnaire	Reliabilities with respondents with all item correlations of less than 0,30 (α)	Similarity Questionnaire	Reliabilities with respondents with all item correlations of at least 0,30 (α)
Similarity Questionnaire 1 (n=25)	0,90	Similarity Questionnaire 1 (n=23)	0,90
Similarity Questionnaire 2 (n=25)	0,83	Similarity Questionnaire 2 (n=15)	0,95
Similarity Questionnaire 3 (n=25)	0,91	Similarity Questionnaire 3 (n=22)	0,93
Similarity Questionnaire 4 (n=25)	0,90	Similarity Questionnaire 4 (n=22)	0,91
Similarity Questionnaire 5 (n=25)	0,90	Similarity Questionnaire 5 (n=19)	0,91
Similarity Questionnaire 6 (n=25)	0,86	Similarity Questionnaire 6 (n=18)	0,90
Similarity Questionnaire 7 (n=25)	0,92	Similarity Questionnaire 7 (n=25)	0,92
Similarity Questionnaire 8 (n=25)	0,85	Similarity Questionnaire 8 (n=16)	0,90

Inspection of Table 13 shows that acceptable Cronbach alpha coefficients were obtained for all the scales. All the alpha coefficients were higher than the guideline of $\alpha > 0,70$ (Nunnally & Bernstein, 1994). The scores on the Similarity Questionnaires are therefore normally distributed. It therefore appears that all the measuring instruments have acceptable levels of internal consistency. It should however be noted that respondents with item-total correlation lower than 0,30 have been removed. This resulted in two (2) participants being removed in version 1, ten (10) participants in version 2, three (3) participants in version 3, three (3)

participants in version 4, six (6) participants in version 5, seven (7) participants in version 6, zero participants in version 7 and nine (9) participants being removed in version 8.

The Classical Multidimensional Scaling (CMDS) procedure report normalized raw stress for the Xitsonga group, with a solution in one up to four dimensions was respectively 0,16, 0,07, 0,04, and 0,03. The final dimensionality was decided upon on the basis of the interpretability of the representation. For the Xitsonga group three of the four dimensional representation could be well interpreted.

Table 14

Coordinates of the Xitsonga emotion terms on the four dimensions

Xitsonga	English	Dimension			
		1	2	3	4
ntsako lowukulu	glee / rapture	0,89	-0,06	-0,06	-0,09
ku tsaka swinene	exuberance	0,87	0,13	-0,02	0,06
kuva ni ntsako lowukulu	ecstasy / eleation / euphoria / exasperation / exhilaration	0,87	0,10	0,01	-0,13
ntsakelo/ku tsakela ngopfu	fondness	0,86	-0,07	-0,16	0,06
ntsako	joy / jolliness / happiness / gladness / contentment / jubilation / pleasantness / pleasure	0,86	-0,16	0,08	-0,06
titwe u ri ekaya	feel at home	0,85	-0,25	-0,03	0,23
ntsakiso	cheerfulness / delight	0,84	0,07	0,06	0,12
rirhandzu	love / affection	0,84	-0,04	0,30	0,11
ntsakelo	interest / liking	0,83	-0,09	0,04	0,18
nyanyulo	arousal / gaiety	0,82	0,01	0,02	-0,31
ku nyanyula/nyanyulo	thrill	0,79	0,05	-0,27	-0,22
nyanyuko/nyanyulo	excitement	0,75	0,23	-0,12	-0,20
ntwisiso	apprehension	0,74	0,14	0,14	0,45
ku hlayisa	caring	0,69	-0,04	0,57	0,27
xinyanyu/matitwele	sentimentality	0,65	0,11	-0,35	0,07
ndzivalelano/ku rivalela	forgiveness	0,59	-0,28	0,25	0,56
nkorwiso/ku kholwa	satisfaction	0,48	-0,35	-0,44	0,16
ku fumiwa hi nchumu wo karhi	overtaken	0,36	0,41	-0,13	-0,34
ku vava	pain	-0,47	-0,09	0,32	0,17
mikanakaniso/mivilelo	suspicion	-0,47	0,07	0,01	-0,38

nyangantseko	revulsion / dismay	-0,45	0,25	-0,03	0,09
ntshikelelo	depression / melancholy / stress	-0,44	-0,01	0,21	0,01
mahlomulo/ku vaviseka	torment	-0,43	-0,23	0,12	0,13
khombo	distress	-0,42	-0,22	0,31	-0,20
ku nyama	pessimism / mortification	-0,41	-0,18	-0,20	0,11
gome	grief / sorrow	-0,40	-0,27	0,18	0,03
ku vavisa	irritation	-0,40	0,12	0,30	0,14
kuva ni gome/ku tsana	feel chagrined	-0,40	-0,26	-0,01	0,08
endzhaku ka ku hluleka					
gome/nhlomulo	despair	-0,36	-0,27	0,05	-0,01
gome/ku pfamala	uneasiness	-0,35	-0,24	0,04	0,21
ntshamiseko					
ku tsana/gome	sadness / disappointment	-0,35	-0,20	0,07	0,27
xiyimo xa ntshikelelo	gloom	-0,32	-0,08	0,05	-0,15
ku pfumala	unhappiness	-0,28	-0,11	0,13	0,27
ntsako/nhlomulo					
nhlundzuko	aggression / aggressiveness / outrage	-0,34	0,35	0,23	0,19
mabvibvi	indisposition	-0,21	0,38	0,18	0,38
moya wo rihisela	vengefulness	-0,22	0,49	0,46	0,06
ku venga lokukulu	aversion	-0,39	0,51	-0,10	0,03
ku hlundzuka hi xihatla	grouchiness	-0,21	0,53	0,20	0,18
vukari lebyi tumbeleke	suppressed anger	-0,05	0,54	0,34	-0,11
mavondzo	jealousy	-0,22	0,55	-0,40	0,000
rivengo	hate / hostility / resentment / spite	-0,34	0,55	-0,20	-0,04
vurhena	courage	0,29	0,55	0,46	0,08
ku hatla ku hlundzuka	grumpiness	-0,28	0,57	0,04	0,16
vukari	anger / wrath	-0,16	0,61	0,25	-0,15
swipfukelwa	moodiness	-0,09	0,63	-0,07	-0,10
vukari lebyo leva	rage	-0,19	0,65	0,10	-0,31
ntwela-vusiwana	compassion / pityfulness / pity / sympathy	0,39	-0,43	0,31	0,38
ku hluleka/tsandzeka	failure	-0,28	-0,44	-0,02	0,51
nchavo lowukulu	terror	-0,12	-0,45	0,42	-0,37
ku hlamala/ku khomisa	shock	-0,16	-0,46	-0,32	-0,28
tingana					
tingana/ku nyuma	shame	-0,21	-0,52	-0,39	0,13
ku nyuma/nyumo	shyness	-0,10	-0,56	-0,51	0,07
titwe u lahlekile	feel lost	-0,18	-0,60	0,18	0,22
kuva ni nandzu	guilt	-0,21	-0,63	-0,18	0,01
nhlomulo	agony / bitterness /woe	-0,27	-0,26	0,28	0,23
khombo/xo chavisa ngopfu	horror	-0,34	-0,19	0,35	-0,32
nxaniseko	anguish / misery / suffering	-0,31	-0,26	0,38	0,10

vavisa	hurt	-0,36	0,08	0,39	0,02
chavisa/tshukisa	startle	-0,13	-0,23	0,43	-0,41
nkitsikitsi	confusion	-0,08	0,14	0,49	-0,30
mukhosi/nkalanga	alarm	-0,05	-0,04	0,57	-0,29
ku nyamisa	upset	-0,37	-0,07	-0,39	0,05
ku khomisa tingana/ku nyumisa	humiliation	-0,34	-0,32	-0,40	-0,06
ku landzuriwa	rejection / dejection	-0,28	-0,06	-0,40	0,28
ku tsan'wiwa	glumness	-0,33	0,03	-0,42	0,33
xisolo	contempt	-0,28	0,12	-0,43	-0,29
nyenya	dislike	-0,19	0,35	-0,45	0,40
nyenyemuka/sandza / sola	scorn	-0,25	0,20	-0,53	-0,07
ku nyumisa/nyumiso	embarrassment	-0,17	-0,18	-0,57	-0,22
manyunyu	pride	0,45	0,41	-0,62	0,14
xiphukuphuku	fool	0,01	0,31	-0,74	-0,48
xivundza/ku borheka	boredom	-0,20	-0,15	-0,28	0,56
ku phirheka	disgust	-0,30	0,19	-0,01	0,47
ku swirheka	fed up / frustration	-0,38	0,18	-0,06	0,39
xisandzo, ndzhukano	insult	-0,37	0,15	-0,34	-0,40
nchavo	fear / anxiety / fright / nervousness / panic / tenseness	-0,10	-0,42	0,32	-0,46
ku hlamarisa/xihlamariso	surprise	0,25	-0,44	-0,11	-0,54
ku kanakana	doubt	-0,22	-0,44	-0,18	-0,55
ku tsekatsekisa	agitation	-0,17	0,07	0,18	-0,59
xihlamariso	astonishment / fascination	0,34	-0,18	0,18	-0,66

Note: Dimension 1: pleasantness (or evaluation) dimension. Dimension 2: power (or potency) dimension. Dimension 3: arousal dimension with opposing emotions of fear to sadness related terms. Dimension 4: unpredictability dimension.

Inspection of Table 14 indicates that for the Xitsonga group, the first two dimensions and the last dimension can readily be interpreted. Some difficulties present in interpreting the third dimension. The first dimension is clearly a pleasantness (or evaluation dimension). The second is clearly a power dimension. The third dimension, although not clear, shows similarity to an arousal dimension with opposing emotions of fear related terms to sadness related terms. There are however substantial deviations (e.g. pride has a negative coordinate and sadness has a positive coordinate). The fourth dimension can be interpreted as an unpredictability dimension. The coordinates justify this interpretation quite well.

The reliabilities for the Tshivenda group are reported in tables 15 on the eight (8) similarity questionnaires.

Table 15

Reliability table of the results of the 8 Similarity Rating Questionnaires for the Tshivenda Group

Similarity Questionnaire	Reliabilities with respondents with all item correlations of less than 0,30 (α)	Similarity Questionnaire	Reliabilities with respondents with all item correlations of at least 0,30 (α)
Similarity Questionnaire 1 (n=26)	0,89	Similarity Questionnaire 1 (n=20)	0,91
Similarity Questionnaire 2 (n=14)	0,88	Similarity Questionnaire 2 (n=14)	0,88
Similarity Questionnaire 3 (n=14)	0,79	Similarity Questionnaire 3 (n=10)	0,82
Similarity Questionnaire 4 (n=11)	0,87	Similarity Questionnaire 4 (n=11)	0,87
Similarity Questionnaire 5 (n=22)	0,85	Similarity Questionnaire 5 (n=18)	0,86
Similarity Questionnaire 6 (n=25)	0,88	Similarity Questionnaire 6 (n=20)	0,90
Similarity Questionnaire 7 (n=24)	0,86	Similarity Questionnaire 7 (n=18)	0,87
Similarity Questionnaire 8 (n=15)	0,98	Similarity Questionnaire 8 (n=15)	0,98

Inspection of Table 15 shows that acceptable Cronbach alpha coefficients were obtained for all the scales. All the alpha coefficients were higher than the guideline of $\alpha > 0,70$ (Nunnally & Bernstein, 1994). The scores on the Similarity Questionnaires are therefore normally distributed. It therefore appears that all the measuring instruments have acceptable levels of internal consistency. It should however be noted that respondents with item-total correlation lower than 0,30 have been removed. This resulted in six (6) participants being removed in version 1, zero participants in version 2, four (4) participants in version 3, zero participants in

version 4, four (4) participants in version 5, five (5) participants in version 6, six (6) participants in version 7 and zero participants being removed in version 8.

The Classical Multidimensional Scaling (CMDS) procedure report normalized raw stress for the Tshivenda with a solution in one up to four dimensions was respectively 0,23; 0,11; 0,06, and 0,04. The final dimensionality was decided upon on the basis of the interpretability of the representation. For the Tshivenda group three of the four dimensional representation could be well interpreted

Table 16

Coordinates of the Tshivenda emotion terms on the four dimensions

Tshivenda	English	Dimension			
		1	2	3	4
halifha zwituku	nervousness / exasperation	0,55	0,25	0,21	0,18
swiswi	gloominess	0,52	0,23	-0,19	0,34
fhelambilu	impatience	0,51	0,14	-0,11	-0,21
shoniswa	disappointment / discouraged / humiliation	0,51	-0,18	0,39	0,19
vhaisa	corny	0,51	0,06	0,22	0,03
khakhathi	aggression / revulsion	0,47	0,33	0,29	-0,16
lata fulufhelo	despair	0,47	-0,39	-0,13	0,12
u sa diphina	uneasiness	0,47	-0,01	-0,14	-0,07
sa tsiredzea	insecurity	0,45	-0,14	-0,31	0,29
khanganeo	distress	0,44	0,09	-0,40	0,20
dinalea	upset / worry / troubled / feel chagrined	0,41	0,10	0,15	-0,35
nala	sulk	0,39	-0,35	0,35	-0,28
vhutungu	sadness / pain / grief / sorrow / anguish / agitation / passion	0,30	0,22	-0,27	-0,42
u sa takala	displeasure	0,28	0,00	0,07	-0,09
ndeme	impotence	-0,47	0,23	0,18	-0,47
dinetshedza	submission	-0,50	-0,49	-0,08	0,13
emula	affection	-0,50	-0,34	0,40	-0,09
fushea	contentment / satisfaction	-0,55	-0,16	0,31	0,36
di netshedza	surrender	-0,58	0,19	-0,29	-0,14
lutamo	desire / fascination / longing / willingness	-0,59	-0,39	0,06	-0,24
takalaho	exhilaration	-0,61	-0,10	0,06	0,43

tama	fondness	-0,64	-0,25	0,39	-0,16
fulufhelo	confidence / hope / optimism	-0,66	0,17	-0,24	0,20
funa	love / liking	-0,66	0,12	-0,02	-0,28
dakalo	happiness / joy / pleasure / gladness / delight / elation / glee	-0,67	0,07	0,27	0,18
dzangalelo	interest	-0,67	-0,03	0,16	-0,29
tshitakadzi	amusement	-0,67	0,18	0,30	-0,01
vhukonani	friendship	-0,69	0,34	-0,01	-0,02
mudifho	zest	-0,69	0,21	0,06	0,28
mulalo	peacefulness	-0,73	-0,07	-0,28	-0,03
u pfa u hayani	feel at home	-0,73	0,29	0,22	-0,07
livhuwa	thankankful	-0,75	-0,29	0,01	0,26
mukosi	alarm	0,04	0,67	-0,02	-0,05
vhidzelela	shout	-0,22	0,64	-0,08	0,28
mulandu	guilt	0,28	0,60	-0,11	0,07
vhuhali vhuulu	wrath	0,32	0,51	0,18	-0,29
huvhala	hurt	0,27	0,45	-0,29	-0,29
bvatha	reluctance	0,19	-0,77	0,01	-0,15
dinyadza	inferiority	0,21	-0,64	-0,23	0,23
litshedzela	neglect	0,27	-0,64	0,10	0,06
nyadza	contempt	-0,01	-0,64	0,28	0,32
u shaya fulufhelo	diffidence	0,31	-0,49	-0,02	-0,21
sa fusha	dissatisfaction	0,13	-0,49	0,21	0,05
sinyuwa	rage	0,31	0,49	0,24	0,03
kundelwa	miss	0,10	-0,46	-0,31	-0,15
u sa fulufhela	suspicion	0,20	-0,44	0,11	0,41
vivho	jealousy	0,15	0,028	0,72	0,14
dikukumusa	pride	-0,18	0,30	0,67	0,20
vhenga	hate	0,26	-0,03	0,61	-0,33
nyala	disgust / loathing	0,37	-0,25	0,57	0,01
u sa funa	dislike	0,22	-0,29	0,55	0,00
sema	insult	0,31	0,33	0,51	0,23
muhalfho	irritation	0,31	0,36	0,49	0,09
lwala	sick	0,24	-0,10	-0,62	-0,10
kwamaho	thrill	-0,26	0,28	-0,57	0,08
khuthadza	console	-0,37	-0,16	-0,55	-0,17
pfelovhutungu	compassion	-0,19	-0,08	-0,52	-0,42
u pfela muthu vhutungu	sympathy	-0,10	0,30	-0,52	-0,40
tetemela	shiver	0,12	0,11	-0,51	0,44
u sa vha na maanda	groggy	0,29	-0,33	-0,42	0,02
vhutungu vhuulu	agony	0,20	0,29	-0,36	-0,18
kondelela	persevering	-0,31	0,31	-0,36	-0,20
mangala	astonishment / woe	-0,00	0,21	-0,27	0,70

tshimangadzo	surprise / amazement	-0,10	-0,15	-0,45	0,59
thavhisa thoni	shame	-0,21	-0,21	-0,15	0,57
tshi songo khwathiswaho	uncertainty	0,08	-0,50	-0,09	0,53
nyofho	fear / apprehension	0,33	0,06	-0,31	0,52
mazhuluzhulu	anxiety	-0,09	0,36	0,28	0,47
mbiti	anger / fury / grumpiness	0,29	0,21	0,35	0,44
tshenuwa	startle	0,13	0,40	-0,23	0,43
nyofho khulu	terror	0,27	0,35	-0,31	0,36
xelewiwa	feel lost	0,26	-0,10	-0,20	-0,62
humbula hayani	homesickness	-0,37	-0,14	-0,12	-0,57
thulo	relief	-0,19	-0,05	0,34	-0,56
neta	tired / boredom / fed up	0,35	-0,36	-0,30	-0,45
u dzumba mbiti	suppressed anger	0,04	0,30	0,42	-0,44
fhumula	quietness / calmness	-0,13	-0,39	-0,20	-0,44
tungufhala	unhappiness / glumness	0,25	-0,07	-0,37	-0,40
tambudzwa	torment	0,32	0,31	0,10	-0,37
mbili yo swifhalelwaho	melancholy	0,36	-0,09	0,10	-0,37

Note: Dimension 1: pleasantness (or evaluation) dimension. Dimension 2: cannot be accurately interpreted. Dimension 3: power dimension. Dimension 4: arousal (or activation) dimension with fear/surprise/anger terms being opposed to sadness terms.

Close inspection of Table 17 shows that for the Tsivenda group, only three of the four dimensions (dimension 1, 3 and 4) could be well interpreted. The first dimension is clearly a pleasantness (or evaluation dimension) with the third dimension being a power dimension (with anger emotions having positive coordinates). The fourth dimension is an arousal dimension (with fear/surprise/anger having positive coordinates and sadness having negative coordinates). The second dimension, although indicative of negative emotions (an element of evaluation), cannot be accurately interpreted.

DISCUSSION

The aim of this study was to identify the most typical emotion words or concepts within the Sepedi, Tshivenda and Xitsonga language groups as well as to investigate the manifestation of emotions within these language groups utilising convenience samples in a set of three studies.

According to Census 2001 (Statistics South Africa, 2003), South Africa is home of 11 official language groups and just as many cultural groups resulting in an environment rich in diversity and cultural differences. Therefore, in order to investigate the cognitive emotion structure within a cultural group, it is necessary to firstly select the emotion terms that present emotions in the group concerned. For the selection of such terms, the prototype approach was used (Fehr & Russell, 1984; Shaver et al., 1987) based on the highest frequency of terms listed during a free-listing task.

Words with the highest frequency, as listed during the free-listing task, by the Sepedi speaking participants were for example, happiness/excitement, anger, sadness, love, pain, hate, acceptance, perseverance, thankfulness, impatience, confusion, respect and fear. For the Xitsonga speaking participants emotion words with the highest frequency were sadness, anger, insult, humiliation, happiness, love, hate, hurt and perseverance. For the Tshivenda speaking participants, the following emotion words were listed: happiness, pain, anger, worry, acceptance, love, hate, fear and sadness.

The results for the free-listing task indicated that for more than 300 participants, basic emotions of happiness, anger, sadness, love, fear, and hate were emotions which most readily come to mind. This list of basic-level emotions corresponds roughly to emotion theorists' lists of basic or primary emotions (Bretherton & Beeghly, 1982; Izard, 1977; Ekman, 1984; Epstein, 1984).

The results of the prototypicality rating task yielded an ordering of terms where terms with high scores clearly belong to the emotion domain. For instance, the five most prototypical terms in Sepedi were “bodutwana” (loneliness / corny / emptiness / glumness / melancholy / moodiness), “bohlokakhutšo” (restlessness), “go hloka lethabo” (unhappiness / displeasure), “kwelobohloko” (compassion / moved / pitifulness / pity / sympathy) and “lapile” (tired).

Least prototypical words from the list were “segwera” (friendship), “lehu” (death), “mohlako” (suffering), “ba le nnete” (be sure), “tetelo” (anticipation).

According to literature, loneliness, emptiness and melancholy refers to emotional states experienced as a result of powerful feeling of isolation (Marano, 2003). This subjective sense of inner hollowness is furthermore associated with feelings of separation or alienation from the world (Gilman, 1985). According to Keedwell (2008) and Moss (1993), these emotions include feelings of low self-esteem, vulnerability, self-hatred and are generally referred to as symptoms of social or psychological problems as defined by the Manual of Mental Disorders. Moreover, the conclusion can be drawn that these emotions are therefore linked to several forms of depression, antisocial and self-destructive behaviour (Keedwell, 2008). It is not uncommon that with these strong negative emotions are linked to positive emotions of compassion and sympathy. This, according to Rinpoche and Cameron (2001), may be due to these feelings commonly giving rise to an active desire to alleviate another's suffering.

Results from the prototypicality rating task furthermore indicated that the five most prototypical words for the Xitsonga group were “ku hlamala/ku khomisa tingana” (shock), “ku kanakana” (doubt), “ku khomisa tingana/ku nyumisa” (humiliation), “ku nyuma/nyumo” (shyness), “ku tsaka swinene” (exuberance). The five least prototypical emotion concepts being “maxuxu” (dread), “ku hlamala/xihlamariso” (amazement), “ku tshembheka” (honesty), “navelo-kaya” (homesickness), “susa/humesela handle” (put out).

Shock, being a psychological condition (the mind's and body's response to feelings, both perceived and real) of intense helplessness arising in response to being a victim or witnessing as well as experiencing an extreme or terrifying event. Shock results in fear as well as stress. Symptoms, according to Emerson (1996) may include anxiety, impaired judgement, confusion, detachment and depression. Shock may furthermore result in feelings of fear and doubt. Doubt, according to David (2006), refers to a status between belief and disbelief. It involves uncertainty or distrust of a fact, an action, a motive, or hesitance when having to commit to a decision. The conclusion can be drawn that this may have particular importance as leading towards disbelief as well as being interpreted as a symptom of fear, shyness and low self-esteem (Baumeister & Boden, 1996).

Results from the prototypicality rating task indicated that the five most prototypical words for the Tshivenda group were “vhuhali vhuhulu” (wrath), “u sa fulufhela” (suspicion), “tshimangadzo” (sinfulness), “tambudzwa” (fondness), “sa tsireledzea” (insecurity), with the least prototypical being “vhutungunyana” (indisposition), “dahefhala” (infatuation), “mudu” (moodiness), “nanisa” (aggravation), “takalela/tama” (exhilaration).

Wrath, according to DiGiuseppe and Tafrate (2006) as well as Laux and Weber (1991) refer to strong vengeful anger or indignation. Such anger becomes the predominant feeling when a person makes the conscious choice to take immediate action to stop the threatening behaviour of another or outside force. This act pertains to self regulation in the social environment and may often be in direct violation of moral rules giving rise to feelings of guilt, shame and sinfulness as a result of a focus on the wrong-doing (Izard, 1977; Lindsay-Hartz, De Rivera, & Mascolo, 1995; Tangney, 1990). Sinfulness is a term used mainly in a religious context to describe an act that violates a moral rule, or the state of having committed such a violation. This may again result in doubt as well as insecurity and suspicion of others, events or information as well as impacting on self-esteem (David, 2006).

The conclusion can be drawn from the prototypicality rating that although the most prototypical words listed were not identical across the Sepedi, Xitsonga and Tshivenda language groups, similar “tones” can be drawn from these emotions such as doubt, anger, fear and lower levels of self-esteem. The level of severity and/or duration warrants clinical diagnosis.

The Classical Multidimensional Scaling (CMDS) procedure was used to compute the similarity between two emotion terms or emotion concepts. The resulting structures can be compared to determine what each reveals about the organisation of emotion knowledge within each language group. A three-dimensional structure (evaluation, arousal, dominance) and a four factor loading (positive emotion, sadness, fear, and anger) were expected for each language group.

Results for the Similarity Sorting and CMDS indicated that normalized raw stress for all the language groups concerned were reported. A four dimensional representation could be well interpreted for the Sepedi group and was decided upon on the basis of the interpretability of the representation. This four-factorial solution is similar to that of the GRID (Scherer, 2005)

with the first dimension being pleasantness (or evaluation) dimension opposing pleasant to unpleasant emotion terms. The second dimension being a power (dominance or potency) dimension opposing anger/pride terms to sadness/fear terms. The third dimension relates to an unexpectedness dimension with all surprise items having negative coordinates. The fourth dimension is clearly an arousal (or activation) dimension with anxiety terms being separated from sadness terms.

Taking the results at face value, the first dimension of all three language groups appears similar in nature. This dimension is a pleasantness (or evaluation) dimension opposing pleasant to unpleasant emotion terms. All three language groups presents with a power (or potency) dimension opposing anger/pride terms to sadness/fear terms. Expecting to extract four dimensions on all three language groups, this procedure was repeated on the Xitsonga and Tshivenda speaking groups.

For the Xitsonga group, the first two dimensions and the last dimension can readily be interpreted. Some difficulties present in interpreting the third dimension. The first dimension is clearly a pleasantness (or evaluation dimension). The second is clearly a power dimension. The third dimension, although not clear, shows similarity to an arousal dimension with opposing emotions of fear related terms to sadness related terms. There are however substantial deviations (e.g. pride has a negative coordinate and sadness has a positive coordinate). The fourth dimension can be interpreted as an unpredictability dimension. The coordinates justify this interpretation quite well.

For the Tshivenda group, only three of the four dimensions (dimension one, three and four) could be well interpreted. The first dimension is clearly a pleasantness (or evaluation dimension) with the third dimension being a power dimension (with anger emotions having positive coordinates). The fourth dimension is an arousal dimension (with fear/surprise/anger having positive coordinates and sadness having negative coordinates). The second dimension, although indicative of negative emotions (an element of evaluation), cannot be accurately interpreted.

The conclusion can be drawn that considering the results of the multidimensional scaling, close correspondences and differences is revealed, not only at a high level of inclusiveness

(dichotomy between positive and negative terms), but also at the basic level of categorisation (four clusters: positive emotion, sadness, fear, and anger). When looking at the average coordinates of the clusters on the respective dimensions for the three language groups, the similarity and differences is striking. Only at the level of sub clusters were cross-cultural differences found that are likely to have some significance. Moreover, conclusions can be drawn about the cross-cultural universality of the broad pleasantness and arousal dimensions of affect which have been replicated fairly well across several languages in studies conducted by Averill (1975), Bottenberg (1975), Bush (1973), Fillenbaum and Rapoport (1971), Gehm and Scherer (1988), Herrmann and Raybeck (1981), Lutz (1982), Russell (1983) as well as Storm and Storm (1987).

The interpretation of the uninterpretable dimension in the Xitonga and the Tsivenda group is unclear. A possible explanation indicates methodological bias which is however less motivated and supported due to the set-up of the study. It is best not to exclude a cultural explanation, namely that there are culture-specific principles that have an impact. It is certainly something to be found out in the future. It however became apparent that emotions plays an integral part in the way in which the Sepedi, Xitsonga and Tshivenda speaking South Africans interact and therefore indicates the relevance and impact of social context as well as the relevance and impact of culture on emotions. Culture-specific principles have an impact and need to be explored in more detail.

Although the sample size was relatively big and culturally relevant emotion terms were gathered in each cultural group without imposing prior ordering of emotion categories (limiting the risk of cultural imposition), the limitations of this study include that the results may not have been representative of all the Xitsonga and Tshivenda-speaking South Africans due to the likelihood that method bias may have negatively impacted on the results. Another limitation of this research is that very little scientific information of the culture of the three language groups concerned is available in the literature, as few studies have previously been done on these cultures. This implies that the researcher was unable to present a holistic view on these cultures. Cultural experts should be used in future research in order to give a clear indication of exactly what the cultural and personality differences between these language groups are and how it may impact on the manifestation of emotions within the cultures concerned.

RECOMMENDATIONS

Despite the limitations of this study, the present findings suggest that, future research on the culture of the Sepedi, Xitsonga and Tshivenda speaking groups are required, as very little information on the customs and traditions of these cultures are available in the literature. A more diverse population from different industries across South Africa should also be included in future research.

Results obtained from this study, as well as future studies on emotions across cultures within South Africa, can also be compared with European and other Western samples, as well as comparing it with results obtained from the GRID study in order to create a unique South African GRID. In addition, with emotions and emotion experiences impacting on personality, quantitative research in this field is required.

By utilising various existing personality measures, differences and similarity in the dimensions of personality across all the language/cultural groups in South Africa need to be explored and identified. This will enable researchers to identify universal emotion and personality concepts and constructs among these culture/language groups. By means of these universal constructs an emotion inventory as well as personality inventory may be developed that will produce unbiased results within the South African context across these language or cultural groups.

REFERENCES

- Alvarado, N. (1998). A reconsideration of the structure of the emotion lexicon. *Motivation and Emotion, 22*, 329-344.
- Averill, J.R. (1975). A semantic atlas of emotional concepts. *JSAS Catalogue of Selected Documents in Psychology, 5*, 330.
- Bar-On, R. (1996). *The EQ-i manual*. Toronto: Multi-Health Systems.
- Barling, J., Slater, F., & Kelloway, E. K. (2000). Transformational leadership and emotional intelligence: An exploratory study. *Leadership & Organization Development Journal, 23*, 198-204.
- Baumeister, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychology Review, 103*, 5-33.
- Berg, F. S., & Stein, J. (Eds.). (1997). *Random House Webster's Unabridged Dictionary*. New York: Random House
- Borg, I., & Groenen, P. (1997). *Modern multidimensional scaling: Theory and applications*. New York: Springer.
- Bottenberg, E.H. (1975). Phenomenological and operational characterization of factor analytically derived dimensions of emotion. *Psychological Reports, 37*, 1253-1254.
- Bretherton, I., & Beeghly, M. (1982). Talking about internal states: The acquisition of an explicit theory of mind. *Developmental Psychology, 18*, 906-912.
- Bush, L.E., II. (1973). Individual differences multidimensional scaling of adjectives denoting feelings. *Journal of Personality and Social Psychology, 25*, 50-57.
- Cacioppo, J. T. (2002). Social neuroscience: Understanding the pieces fosters understanding the whole and vice versa. *American Psychologist, 57*, 819-831.
- Carmeli, A. (2003). The relationship between emotional intelligence and work attitude, behavior and outcomes. *Journal of Managerial Psychology, 18*, 788-813.
- Chu, K. H. L., & Murrmann, S. K. (2006). Development and validation of the Hospitality Emotional Labour Scale. *Tourism Management, 26*, 1181-1191.
- Church, A. T., Katigbak, M. S., Reyes, J. A. S., & Jensen, S. M. (1998). Language and organization of Filipino emotion concepts: Comparing emotion concepts and dimensions across cultures. *Cognition and Emotion, 12*, 63-92.
- Church, A. T., Katigbak, M. S., Reyes, J. A. S., & Jensen, S. M. (1999). The structure of affect in a non-western culture: Evidence for cross-cultural comparability. *Journal of Personality, 67*, 505-534.

- Claassen, N. C. W. (1997). Culture differences, politics and test bias in South Africa. *European Review of Applied Psychology, 47*, 297-307.
- David, H. (2006). Faith and doubt in Rose Macaulay's "The Towers of Trebizond". *Anglican Theological Review, 88*, 47-68.
- Davison, M. L. (1983). *Multidimensional scaling*. New York: Wiley.
- DiGiuseppe, R., & Tafrate, R. C. (2006). *Understanding anger disorders*. London: Oxford University Press.
- Dulewicz, V., Higgs, M., & Slaski, M. (2003). Measuring emotional intelligence: Content, construct and criterion-related validity. *Journal of Managerial Psychology, 8*(5), 405-420.
- Ekman, P. (1984). Expression and the nature of emotion. In K. S. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp. 319-343). Hillsdale, NJ: Erlbaum.
- Emerson, W. R. (1996). The vulnerable pre-nate. *Pre- & Perinatal Psychology Journal, 10*(3), 125-142.
- Epstein, S. (1984). Controversial issues in emotion theory. In P. Shaver (Ed.), *Review of personality and social psychology* (Vol. 5, pp. 64-88). Beverly Hills, CA: Sage.
- Fehr, B., & Russell, J. A. (1984). Concept of emotion viewed from a prototype perspective. *Journal of Experimental Psychology: General, 113*, 468-486.
- Fehr, B., Russell, J. A., & Ward, L. M. (1982). Prototypicality of emotions: A reaction of time study. *Bulletin of the Psychonomic Society, 20*, 253-254.
- Feldman Barrett, L. (2001). Mental representations of affect knowledge. *Cognition and Emotion, 15*, 333-363.
- Fillenbaum, S., & Rapoport, A. (1971). *Structures in the subjective lexicon*. New York: Academic Press.
- Fox, S., & Spector, P. E. (2002). Emotions in the workplace. The neglected side of organizational life (Editorial). *Human Resource Management Review, 12*, 167-171.
- Fontaine, J. R. J., Luyten, P., de Boeck, P., Corveleyn, J., Fernandez, M., Herrera, D. et al. (2006). Untying the Gordian knot of guilt and shame: The structure of guilt and shame reactions based on situation and person variation in Belgium, Hungary and Peru. *Journal of Cross-Cultural Psychology, 37*, 273-292.
- Fontaine, J. R. J., & Poortinga, Y. H. (2002). Cognitive structure of emotion terms in Indonesia and the Netherlands. *Cognition and Emotion, 16*, 61-86.
- Frijda, N. H. (1986). *The emotions*. Cambridge, MA: University Press.

- Frijda, N. H. (1987). Emotion, cognition, structure and action tendency. *Cognition and Emotion*, 1, 115-143.
- Frijda, N. H. (2005). Emotion experience. *Cognition and Emotion*, 19, 473-497.
- Frijda, N. H., Kuipers, P., & ter Schure, E. (1989). Relations among emotion, appraisal, and emotional action readiness. *Journal of Personality and Social Psychology*, 57, 212-228.
- Frijda, N. H., & Mesquita, B. (1994). The social roles and functions of emotions. In S. Kitayama & H. Markus (Eds.), *Emotion and culture: Empirical studies of mutual influence* (pp. 51-88). Washington, DC: American Psychological Association.
- Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Organization Development Journal*, 23(2), 68-78.
- Gehm, T.L., & Scherer, K.R. (1988). Factors determining the dimensions of subjective emotional space. In K.R. Scherer (Ed.), *Facets of emotion: Recent research*. (pp. 99-114). Hillsdale, NJ: Lawrence Erlbaum Associates Inc.
- Gilman, S. L. (1985). *Difference and pathology: Stereotypes of sexuality, race and madness*. Ithaca, NY: Cornell University Press
- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.
- Government Gazette, Republic of South Africa, Vol. 400, no 19370. Cape Town 19 October 1998.
- Herrmann, D. J., & Raybeck, D. (1981). Similarities and differences in meaning in six cultures. *Journal of Cross-Cultural Psychology*, 12, 194-206.
- Hochschild, A. R. (1983). *The managed heart: The commercialisation of human feeling*. Berkeley, CA: University of California Press.
- Höpfel, H., & Linstead, S. (1997). Learning to feel and feeling to learn: Emotion and learning in organisations. *Management Learning*, 28(1), 5-12.
- Izard, C. E. (1977). *Human emotions*. London: Plenum
- Izard, C. E. (1994). Innate and universal facial expressions: Evidence from developmental and cross-cultural research. *Psychological Bulletin*, 115, 288-299.
- Keedwell, P. (2008). *How sadness survived: The evolutionary bias of depression*. UK: Radcliffe Publishing.
- Keppel, G., Saufley W., Jr., & Tokunaga, H. (1992). *Introduction to design and analysis: A student's handbook* (2nd ed.). New York: W.H. Freeman and Company.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioural research* (4th ed.). Fort Worth, TX: Harcourt College.

- Kitayama, S., & Markus, H. R. (1991). Culture and the self: Implications for cognition, emotion and motivation. *Psychological Review*, 98(2), 224-253.
- Kitayama, S., Markus, H. R. & Kurokawa, M. (2000). Culture, Emotion, and Well-being: Good Feelings in Japan and the United States. *Cognition and Emotion*, 14, 93-124.
- Kruskal, J. B., & Wish, M. (1978). *Multidimensional scaling*. London: Sage
- Larsen, R. J., & Diener, E. (1992). Promises and problems with the circumplex model of emotion. In M.S. Clark (Ed.), *Emotion: Review of personality and social psychology* (pp 25-59). Newbury Park, CA: Sage.
- Laux, L., & Weber, H. (1991). Presentation of self in coping with anger and anxiety: An international approach. *Anxiety Res.*, 3(4), 233-255.
- Lindsay-Hartz, J., De Rivera, J., & Mascolo, M.F. (1995). Differentiating guilt and shame and their effects on motivation. In J.P. Tangney & K.W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 274–300). New York: Guilford Press.
- Lutz, C. (1982). The domain of emotion words on Ifaluk. *American Ethnologist*, 9, 113-128.
- Lutz, C., & White, G. M. (1986). The anthropology of emotions. *Annual Review of Anthropology*, 15, 405-436.
- MacCann, C., Roberts, R. D., Matthews, G., & Zeidner, M. (2004). Consensus scoring and empirical option weighting of performance-based emotional intelligence (EI) tests. *Personality and Individual Differences*, 36, 645-662.
- Marano, H. E. (2003) The dangers of loneliness. *Psychology Today*. Retrieved June 9, 2008, from the World Wide Web: <http://www.psychologytoday.com/articles>
- Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27, 267-298.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, & D. Sluyter, (Eds.), *Emotional development and emotional intelligence: Implications for educator* (pp. 3-31). New York: Basic Books.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Emotional intelligence as zeitgeist, as personality, and as a mental ability. In R. Bar-On, & J.D.A. Parker, (Eds.), *Handbook of emotional intelligence theory, development, assessment, and application at home, school, and in the workplace*. (pp. 92-117). San Francisco, CA: Jossey-Bass.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings and implications. *Psychological Inquiry* 15(3), 197-215.

- Meiring, D. (2007). Bias and equivalence of psychological measures in South Africa. The Netherlands: Labyrinth Publication.
- Mesquita, B., & Frijda, N. H. (1992). Cultural variations in emotions: A review. *Psychological Bulletin*, *112*, 179-204.
- Mesquita, B., Frijda, N. H., & Scherer, K. R. (1997). Culture and emotion. In J.W. Berry, P. R. Dasen, & T. S. Saraswathi (Eds.), *Handbook of cross-cultural psychology: Basic processes and human development* (pp255-297). Boston, MA: Allyn and Bacon.
- Moss, R. A. (1993). *Understanding emptiness: The think/feel conflict*. Greenville, SC: Centre for Emotional Restructuring.
- Nunnally, J. C., & Bernstein, I. P. (1994). *Psychometric theory* (3rd ed.). New York: McGraw Hill.
- Oatley, K. (2004). Emotional intelligence and the intelligence of emotions. *Psychological Inquiry*, *1*, 216-238.
- O'Connor, R. M., & Little, I. S. (2002). Revisiting the predictive validity of emotional intelligence: Self report versus ability-based measures. *Personality and Individual Differences*, *35*, 1893-1902.
- Osgood, C. E., May, W. H., & Miron, M. S. (1975). *Cross-cultural universals of affective meaning*. Champaign: University of Illinois Press.
- Palmer, B. R., Gardner, L., & Stough, C. (2003a). The relationship between emotional intelligence, personality and leadership. *Australian Journal of Psychology*, *55*, 140-145.
- Palmer, B. R., Garner, L., & Stough, C. (2003b). Measuring emotional intelligence in the workplace. : ICCM ISBN: 0-86396828-7.
- Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, *29*, 313-320.
- Pretorius, B. (1996, May). The future and effective leadership. *Human Resource Management*, 12-13.
- Rinpoche, L. Z., & Cameron, A. (2001). *Ultimate healing: The power of compassion*. Boston, MA: Wisdom Publications.
- Rowe, D. (2005). The meaning of emotion. *Journal of Health Organization and Management*, *19*, 290-296.
- Russell, J. A. (1983). Pancultural aspects of the human conceptual organization of emotions. *Journal of Personality and Social Psychology*, *45*, 1281-1288.
- Russell, J. A. (1991). Culture and the categorization of emotions. *Psychological Bulletin*, *110*, 426-450.

- Russell, J. A. (1994). Is there universal recognition of emotion from facial expression? A review of the cross-cultural studies. *Psychological Bulletin*, *115*, 102-141.
- Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, *110*(1), 145-172.
- Russell, J. A., Lewicka, M., & Nitt, T. (1989). A cross-cultural study of a circumplex model of affect. *Journal of Personality and Social Psychology*, *57*, 848-856.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, *9*, 185-211.
- Scherer, K. R. (1984). On the nature and function of emotion: A component process approach. In K. R. Scherer, & P. Ekman (Eds), *Approaches to emotion*, (pp.293-318): Hillsdale, NJ: Erlbaum.
- Scherer, K. R. (2005). What are emotions? And how can they be measured? *Social Science Information*, *44*, 695-729.
- Scherer, K. R., & Ellgring, H. (2007). Multimodal expression of emotion: Affect programs or componential appraisal patterns? *Emotion*, *7*(1), 158-177.
- Scherer, K. R., Wallbott, H. G., Matsumo, D., & Kudoh, T. (1988). Antecedents of and reactions to emotions in the United States and Japan. *Journal of Cross-Cultural Psychology*, *19*, 267-286.
- Shaver, P., Schwartz, J., Kirson, D., & O'Conner, C. (1987). Emotional knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology*, *52*, 1061-1086.
- Shipper, F. M., Kincaid, J. F., Rotondo, D. M., & Hoffman, R. C. (2003). A cross-cultural exploratory study of linkage between emotional intelligence and management effectiveness. *International Journal of Organizational Analysis*, *11*, 171-193.
- Statistics South Africa (2001). *Census 2001: Key results*. Retrieved October 30, 2007, from the World Wide Web: <http://www.statssa.org.za>.
- Statistics South Africa (2003). *Census 2001: Key results*. Retrieved March 20, 2008, from the World Wide Web: <http://www.statssa.org.za>.
- Storm, C., & Storm, T. (1987). A taxonomic study of the vocabulary of emotions. *Journal of Personality and Social Psychology*, *53*, 805-816.
- Sykes, J. B. (Ed). (2000). *Oxford Dictionary* (7th ed.). Hinsdale, IL: Penguin Press.
- Tangney, J. P. (1990). Assessing individual differences in proneness to shame and guilt: Development of the Self-Conscious Affect and Attribution Inventory. *Journal of Personality and Social Psychology*, *59*, 102-111.

- Tymon, W. G., & Stumpf, S. A. (2002). Social capital in the success of knowledge workers. *Career Development International*, 8, 12-20.
- Van Rooy, D.L., & Viswesvaran, C. (2002). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, 65, 71-95.
- Watson, D., & Clark, L. A. (1997). Measurement and mismeasurement of mood: Recurrent and emergent issues. *Journal of Personality Assessment*, 68, 267-296.
- Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly*, 13, 243-274.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2004). Emotional intelligence in the workplace: A critical review. *Applied Psychology: An International Review*, 53, 371-399.

CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter comprises of conclusions regarding the literature review and the empirical study according to the specific objectives. The limitations of the research are discussed and recommendations made for the organisation and future research.

3.1 CONCLUSIONS

The first objective of this research was to investigate the conceptualisation of emotion and culture in literature.

The word “emotion” is defined by the Oxford Dictionary (Sykes, 2000) and the Random House Unabridged Dictionary (Berg, & Stein, 1997) as an affective sense or state of consciousness in which the basic human emotions of joy, sorrow, fear, hate, or the like is experienced. The appraisals of emotions, according to Frijda and Mesquita (1994), will determine the emotions which will be experienced. These appraisals as well as the emotions itself are a social event and have socially shared meaning. Emotions furthermore play an important role in social interaction and exchange (Feldman Barrett, 2001; Mayer, Salovey, & Caruso, 2004; Scherer, 2005; Shaver, Schwartz, Kirson, & O’Conner, 1987; Wong & Law, 2002). To some extent this already indicates that differences as well as similarities in emotion words or concepts exist and that these may be expressed in similar or different ways in various language or cultural groups (Mesquita, Frijda & Scherer, 1997; Shipper, Kincaid, Rotondo, & Hoffman, 2003).

The relationship between culture and emotions as well as the manifestation of emotions therefore continue to intrigue many researchers (e.g., Kitayama & Markus, 1994). Research on the impact of culture on emotions as well as on which stage universal aspects of emotions become culturally specific, is especially relevant due to the focus during the last decade being on the multicultural nature of populations (Van de Vijver & Rothmann, 2004). Emphasis is placed on the similarity or cross-cultural differences or cross-cultural variation of emotion

terms (Poortinga, 1998) and continues to spark debate on the structure of emotions across cultures.

The second objective of this research was to identify the different emotion words within the Sepedi, Xitsonga and Tshivenda language groups.

With language being sensitive to cultural dynamics, one needs to understand emotions as they are represented in every day life within a specific cultural context (Church, Katigbak, Reyes, & Jensen, 1998). A sample population ($N=310$) from the South African Police Service completed free listing questionnaires to list as many emotions respondents in the indigenous language groups, Sepedi, Xitsonga and Tshivenda could think of in ten (10) minutes.

Words with the highest frequency, as listed during the free-listing task, by the Sepedi speaking participants were for example, happiness/excitement, anger, sadness, love, pain, hate, acceptance, perseverance, thankfulness, impatience, confusion, respect and fear. For the Xitsonga speaking participants, emotion words with the highest frequency were sadness, anger, insult, humiliation, happiness, love, hate, hurt and perseverance. For the Tshivenda speaking participants, the following emotion words were listed: happiness, pain, anger, worry, acceptance, love, hate, fear and sadness.

The results for the free-listing task indicated that basic emotions of happiness, anger, sadness, love, fear, and hate were emotions which most readily come to mind. This list of basic-level emotions corresponds roughly to emotion theorists' lists of basic or primary emotions (Bretherton & Beeghly, 1982; Izard, 1977; Ekman, 1984; Epstein, 1984).

Most frequently listed emotions for all three languages could be interpreted as emotions impacted by social or psychological aspects and relates to emotional states such as self-esteem as well as anti-social and self-destructive behaviours.

The third objective of this research was to determine the prototypical emotion words across the Sepedi, Xitsonga and Tshivenda language groups.

The prototype approach to emotion knowledge promises to contribute in several ways to the understanding of emotion representation in everyday life and has therefore been used in this

study. The prototype approach furthermore provides a means of integrating findings concerning cross-cultural similarities and differences in emotion concepts in order to determine what the most typical emotion words are, as well as, what the similarity between various pairs of terms are.

The results of the prototypicality rating task yielded an ordering of terms where terms with high scores clearly belong to the emotion domain. For instance, the five most prototypical terms in Sepedi were “bodutwana” (loneliness / corny / emptiness / glumness / melancholy / moodiness), “bohlokakhutšo” (restlessness), “go hloka lethabo” (unhappiness / displeasure), “kwelobohloko” (compassion / moved / pitifulness / pity / sympathy) and “lapile” (tired). For the Xitsonga group, these were “ku hlamala/ku khomisa tingana” (shock), “ku kanakana” (doubt), “ku khomisa tingana/ku nyumisa” (humiliation), “ku nyuma/nyumo” (shyness), “ku tsaka swinene” (exuberance) and for the Tshivenda group, most prototypical emotion words were “vhuhali vhuhulu” (wrath), “u sa fulufhela” (suspicion), “tshimangadzo” (sinfulness), “tambudzwa” (fondness), “sa tsireledzea” (insecurity).

The fourth objective of this research was to determine the emotion structure or dimensions across the Sepedi, Xitsonga and Tshivenda language groups.

According to Russel (1991), structural analyses, factor analysis and multidimensional scaling of emotion terms, typically result in two or three dimensions. Emotion terms can furthermore be systematically ordered on a positive-negative dimension with the first dimension most often presenting as pleasantness or valence. In the present study, linguistic and cognitive variances as well as cultural specificity was found for some of the emotion terms.

A four-dimensional representation could be well interpreted for the Sepedi group and was decided upon on the basis of the interpretability of the representation. This four-factorial solution is similar to that of the GRID (Scherer, 2005) with the first dimension being pleasantness (or evaluation) dimension opposing pleasant to unpleasant emotion terms. The second dimension is a power (dominance or potency) dimension opposing anger/pride terms to sadness/fear terms. The third dimension relates to an unexpectedness dimension with all surprise items having negative coordinates. The fourth dimension is clearly an arousal (or activation) dimension with anxiety terms being separated from sadness terms.

Taking the results at face value, the first dimension of all three language groups appears similar in nature. This dimension is a pleasantness (or evaluation) dimension opposing pleasant to unpleasant emotion terms. All three language groups presents with a power (or potency) dimension opposing anger/pride terms to sadness/fear terms. Expecting to extract four dimensions on all three language groups, this procedure was repeated on the Xitsonga and Tshivenda speaking groups.

For the Xitsonga group, the first two dimensions and the last dimension can readily be interpreted. Some difficulties present in interpreting the third dimension. The first dimension is clearly a pleasantness (or evaluation dimension). The second is clearly a power dimension. The third dimension, although not clear, shows similarity to an arousal dimension with opposing emotions of fear related terms to sadness related terms. There are however substantial deviations (e.g. pride has a negative coordinate and sadness has a positive coordinate). The fourth dimension can be interpreted as an unpredictability dimension. The coordinates justify this interpretation quite well.

For the Tshivenda group, only three of the four dimensions (dimension 1, 3 and 4) could be well interpreted. The first dimension is clearly a pleasantness (or evaluation dimension) with the third dimension being a power dimension (with anger emotions having positive coordinates). The fourth dimension is an arousal dimension (with fear/surprise/anger having positive coordinates and sadness having negative coordinates).

The fifth objective of this research was to do a comparison between the emotion terms for the Sepedi, Xitsonga and Tshivenda language groups and to see how emotions manifest itself in South Africa for the Sepedi, Xitsonga and Tshivenda language groups.

Using the prototype approach, as well as conducting a multidimensional scaling analysis of the emotion terms, a comparison between the emotion terms for the Sepedi, Xitsonga and Tshivenda language groups were done. Emotions which strongly came to the fore were that of loneliness, emptiness and melancholy which can be interpreted and refers to emotional states experienced as a result of powerful feeling of isolation (Marano, 2003). This subjective sense of inner hollowness is furthermore associated with feelings of separation or alienation from the world (Gilman, 1985). According to Keedwell (2008) and Moss (1993), these emotions include feelings of low self-esteem, vulnerability, self-hatred and are generally

referred to as symptoms of social or psychological problems as defined by the Manual of Mental Disorders. Moreover, the conclusion can be drawn that these emotions are therefore linked to several forms of depression, antisocial and self-destructive behaviour (Emerson, 1996; Keedwell, 2008). It is not uncommon that with these strong negative emotions are linked to positive emotions of compassion and sympathy. This, according to Rinpoche and Cameron (2001), may be due to these feelings commonly giving rise to an active desire to alleviate another's suffering.

Other emotions which presented as most prototypical for all three language groups were that of shock and doubt. These emotions refer to psychological conditions (the mind's and body's response to feelings, both perceived and real) of intense helplessness arising in response to being a victim or witnessing as well as experiencing an extreme or terrifying event and may furthermore result in feelings of confusion, detachment and depression. The conclusion can be drawn that this may have particular importance as leading towards disbelief as well as being interpreted as a symptom of fear, shyness and low self-esteem (Baumeister & Boden, 1996).

An interesting finding was that wrath was the most prototypical emotion for the Tshivenda group, followed by suspicion, sinfulness and insecurity. According to DiGiuseppe and Tafrate (2006) as well as Laux and Weber (1991) this emotion refers to strong vengeful anger or indignation. Such anger becomes the predominant feeling when a person makes the conscious choice to take immediate action to stop the threatening behaviour of another or outside force. This act pertains to self regulation in the social environment and may often be in direct violation of moral rules giving rise to feelings of guilt, shame and sinfulness as a result of a focus on the wrong-doing (Izard, 1977; Lindsay-Hartz, De Rivera, & Mascolo, 1995; Tangney, 1990). Sinfulness is a term used mainly in a religious context to describe an act that violates a moral rule, or the state of having committed such a violation. This may again result in doubt as well as insecurity and suspicion of others, events or information as well as impacting on self-esteem (David, 2006).

The sixth objective of this research was to determine the reliability of the measurement instruments as well as the reliability of the dimensions of the emotion structure

The approach and set-up of this study was meant to allow explicitly for the emergence of culture-specific trends in the data in order to avoid cultural imposition that often is raised against culture-comparative research (Greenfield, 1997). For the prototypicality, Cronbach's alphas were computed for each of the emotion terms for the three (3) language groups. Participants who reported an alpha score less than 0,40 on the combined score were removed; these participants had some idiosyncratic understanding of the emotion words.

Reliability coefficients for the eight different versions of the similarity questionnaires were computed for each language group. All the alpha coefficients were higher than the guideline of $\alpha > 0,70$ (Nunnally & Bernstein, 1994). The alpha coefficients on the Similarity Questionnaires for the Sepedi group ranged between 0,89 and 0,95; for the Xitsonga group, the ranges were between 0,90 and 0,95 and for the Tshivenda group it ranged between 0,82 and 0,98. It therefore appears that all the measuring instruments had acceptable levels of internal consistency. Normalized raw stress scores were found for the various dimensions as identified in the multidimensional scaling analysis.

3.2 LIMITATIONS

The present research is not without limitations. The following limitations with regard to this study were identified:

The results of this study may not be representative of all the Sepedi, Xitsonga and Tshivenda-speaking South Africans due to the convenience sampling that only included representatives, recruited as Police officers during the 2007 and 2008 intake. Furthermore, the administration during the Similarity questionnaires for the Xitsonga but more so for the Tshivenda group may have impacted negatively on the findings of this research.

With regard to the literature study, very little scientific information of the Sepedi, Xitsonga and Tshivenda cultures in South Africa could be generated, as few studies have previously been done on these cultures. This implies that the researcher was unable to present a holistic view on the respective language or cultural groups concerned as it is embedded in South Africa.

3.3 RECOMMENDATIONS

3.3.1 Recommendations for future research

An extension of the current approach is suggested with more extensive research on the culture of the three languages concerned is required in South Africa, as very little information on the customs and traditions of these cultures are available in literature.

Future research on the concept of emotion amongst South African cultures, should preferably rely on alternative methods to establish individual or group differences in the meanings of emotion concepts. One firstly has to determine the core affect which describes moods and emotions in its simplest form (Russell, 1991) in order to establish a unique South African componential emotion GRID consisting of a representative sample of emotion words and emotion features. Ideally, this should be a replication of the Geneva GRID (Scherer, 2005) with cultural relevant material (words and features).

It would be useful to study the correspondence between the concrete use of emotion words to describe one's feelings and the underlying psychological processes as well as personality attributes. This could furthermore be used for the construction of personality and emotional competence instruments and measurement tools, and may inform the translation of the emotion words across cultural groups (as well as for studying the impact of culture in the emotion domain).

REFERENCES

- Baumeister, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychology Review*, *103*, 5-33.
- Berg, F. S., & Stein, J. (Eds.). (1997). *Random House Webster's Unabridged Dictionary*. New York: Random House.
- Bretherton, I., & Beeghly, M. (1982). Talking about internal states: The acquisition of an explicit theory of mind. *Developmental Psychology*, *18*, 906-912.
- Church, A. T., Katigbak, M. S., Reyes, J. A. S., & Jensen, S. M. (1998). Language and organization of Filipino emotion concepts: Comparing emotion concepts and dimensions across cultures. *Cognition and Emotion*, *12*, 63-92.
- David, H. (2006). Faith and doubt in Rose Macaulay's "The Towers of Trebizond". *Anglican Theological Review*, *88*, 47-68.
- DiGiuseppe, R., & Tafrate, R. C. (2006). *Understanding anger disorders*. London: Oxford University Press.
- Ekman, P. (1984). Expression and the nature of emotion. In K. S. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp.319-343). Hillsdale, NJ: Erlbaum.
- Emerson, W. R. (1996). The vulnerable pre-nate. *Pre- & Perinatal Psychology Journal*, *10*(3), 125-142.
- Epstein, S. (1984). Controversial issues in emotion theory. In P. Shaver (Ed.), *Review of personality and social psychology* (Vol. 5, pp. 64-88). Beverly Hills, CA: Sage.
- Feldman Barrett, L. (2001). Mental representations of affect knowledge. *Cognition and Emotion*, *15*, 333-363.
- Frijda, N. H., & Mesquita, B. (1994). The social roles and functions of emotions. In S. Kitayama & H. Markus (Eds.), *Emotion and culture: Empirical studies of mutual influence* (pp. 51-88). Washington, DC: American Psychological Association.
- Gilman, S. L. (1985). *Difference and Pathology: Stereotypes of sexuality, race and madness*. Ithaca, NY: Cornell University Press
- Greenfield, P. M. (1997). Culture as process: Empirical methods for cultural psychology. In J. W. Berry, Y. H. Poortinga, & J. Pandley (Eds.), *Handbook for cultural psychology*. (2nd ed.). (Vol. 1, pp. 301-346). Boston, MA: Allyn & Bacon.
- Izard, C. E. (1977). *Human emotions*. London: Plenum
- Keedwell, P. (2008). *How sadness survived: The evolutionary bias of depression*. Oxford: Radcliffe Publishing.

- Kitayama, S., & Markus, H. R. (Eds.). (1994). *Emotion and culture: Empirical studies of mutual influence*. Washington, DC: American Psychological Association.
- Laux, L., & Weber, H. (1991). Presentation of self in coping with anger and anxiety: An international approach. *Anxiety Res.*, 3, 233-255.
- Lindsay-Hartz, J., De Rivera, J., & Mascolo, M. F. (1995). Differentiating guilt and shame and their effects on motivation. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 274–300). New York: Guilford Press.
- Marano, H. E. (2003) The dangers of loneliness. *Psychology Today*. Retrieved June 9, 2008, from the World Wide Web: <http://www.psychologytoday.com/articles>
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings and implications. *Psychological Inquiry*, 15, 197-215.
- Mesquita, B., Frijda, N. H., & Scherer, K. R. (1997). Culture and emotion. In J.W. Berry, P. R. Dasen, & T. S. Saraswathi (Eds.), *Handbook of cross-cultural psychology: Basic processes and human development* (pp255-297). Boston, MA: Allyn and Bacon.
- Moss, R. A. (1993). *Understanding emptiness: The think/feel conflict*. Greenville, SC: Centre for Emotional Restructuring
- Nunnally, J. C., & Bernstein, I. P. (1994). *Psychometric theory*. New York: McGraw Hill.
- Poortinga, Y. H. (1998). Cultural diversity and psychological invariance: Methodological and theoretical dilemmas of (cross-)cultural psychology. In J. G. Belanger, & Dion, K. L. (Eds.), *Advances in psychological science*, (pp229-245). Hove, UK: Psychology Press.
- Rinpoche, L. Z., & Cameron, A. (2001). *Ultimate healing: The power of compassion*. Boston, MA: Wisdom Publications.
- Russell, J. A. (1991). Culture and the categorization of emotions. *Psychological Bulletin*, 110, 426-450.
- Scherer, K. R. (2005). What are emotions? And how can they be measured? *Social Science Information*, 44, 695-729.
- Shaver, P., Schwartz, J., Kirson, D., & O'Conner, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology*, 52, 1061-1086.
- Shipper, F. M., Kincaid, J. F., Rotondo, D. M., & Hoffman, R. C. (2003). A cross-cultural exploratory study of linkage between emotional intelligence and management effectiveness. *International Journal of Organizational Analysis*, 11, 171-193.
- Sykes, J. B. (Ed). (2000). *Oxford Dictionary* (7th ed.). Hinsdale, IL: Penguin Press.

- Tangney, J. P. (1990). Assessing individual differences in proneness to shame and guilt: Development of the Self-Conscious Affect and Attribution Inventory. *Journal of Personality and Social Psychology*, 59, 102–111.
- Van de Vijver, A. J. R., & Rothmann, S. (2004). Assessment in multicultural groups: The South African case. *SA Journal of Industrial Psychology*, 30(4), 1-7.
- Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly*, 13, 243-274.

APPENDIX A

143 Sepedi Emotion Words used in the Prototypicality Rating Questionnaire

Sepedi	English	Sepedi	English	Sepedi	English
amogela	accept	hlokomologa	neglect	maswabi	sadness
amogela ntle le bothata	willingness	hlonama	sulk / dejection	mohlako	suffering
ba le nnete	be sure	homotšega	be consoled	mona	jealousy
babja/lwala	sick	iketla	relaxed	ngangego ya maikutlo	tenseness
befetša	put out	ikokobetša	resignation	nyakalala	jolliness
belaela	doubt	ikwa o selekegile	feel chagrined	nyakalalo	bliss / gaiety
bobe	sinfulness / spite	ikwa o timetše	feel lost	nyefola	contempt / scorn
bodutu	boredom	ineela	surrender	nyefolo	humiliation
bodutwana	loneliness / corny / emptiness / glumness / melancholy / moodiness	ipona molato	guilt	nyenyefatšo	mortification
bohlokakhutšo	restlessness	itshola	regret / remorse	pefedišo	alienation
bohloko	pain	kgahlego	interest / admiration	pefelo	anger / aggravation / exasperation / fury / outrage / rage / wrath
boikgogomošo	pride	kgahlišo	fascination / amusement	pelaelo	grouchiness
boikokobetšo	submission	kgalefo	revulsion	phegelelo	zeal
boipshino	pleasure / enjoyment / pleasantness / zest	kganyoga	lust	phenyo	defeat / triumph
boitaolo	independence	kgatelelo	oppression	pherekano	agitation
boitefeletšo	vengefulness	kgatelelo ya monagano	stress / depression / gloominess	phuthologa	relief
boitlhaolo	isolation	kgobogo	embarrassment / awkwardness	poifo	dread
boitshupo	confidence / optimism	kgogego ya maikutlo	attraction	rata	liking
boloi	enthralment	kgononelo	suspicion	roga	insult
borumolane	aggression	kgopišegile	offended	segwera	friendship
borutho	tenderness	kgothatšega	encouraged	selekega	irritation
bošoro	ferocity	kgothatšo	courage	tena/šišimiša	disgust
botlaela	infatuation	kgotlelelo	perseverance	tenega	annoyance
dihlong	shyness	kgotsofalo	contentment / satisfaction	tenega/selekega	fed up
duma	desire / envy / longing	kgwathega maikutlo	touched	tetelo	anticipation
fela pelo	panic	khutšo	peacefulness	thothomela	shiver / thrill
foretšegile	flattered	kwelobohloko	compassion / moved / pitifulness / pity / sympathy	thothomela ka letšhogo	groggy
gatelela pefelo	suppressed anger	kwiša bohloko	hurt	tlala mafolofolo	exuberance

gatelelega monaganong	gloom	lahlegelwa	miss	tlalelo	anxiety / desperation / distress / eagerness / resentment
go ba le tebogo	thankful	lapile	tired	tlhakatlhakano	frustration
go ba le khutšo	quietness	lehloyo	hate / aversion / loathing	tlhaolo	rejection
go ba le lerato	caring	lehu	death	tlhompho	respect
go ba le metlae	joviality	lerato	love / adoration / affection / fondness / passion	tlhonomo/bodutwa na	grumpiness
go hloka lethabo	unhappiness / displeasure	leratong	in love	tšeeqa	overtaken
go hloka tshepo	pessimism	leta ka letšhogo	apprehension	tšharakano	confusion
go se be botho	bittiness / hostility	lethabo	joy / happiness / calmness / cheerfulness / delight / ecstasy / elation / euphoria / excitement / exhilaration / gladness / glee / rapture / sentimentality	tshepagalo	honesty
go se dudišege	uneasiness	letšhogo/tšhoga	fear / alarm / fright / horror / nervousness / shock / terror	tshepo	hope
go se dumelelane	indisposition	lokologa	feel at home	tšhušumetšo/phišeg o	enthusiasm
go se hlomphe	disrespect	madimabe	woe	tshwabo	disappointment / shame
go se itshepe	insecurity / diffidence	mafofonyane	hysteria	tshwarelo	forgiveness
go se kgotsofatše	dissatisfaction	mafolofolo	energetic	tshwenya	torment
go se le nnete	uncertainty	mahlatshe	luck	tshwenyega	upset / worry
go se rate	dislike	mahloko	anguish	tsošo ya maikutlo	arousal
go tlala letšhogo	dismay	mahlomola	agony / misery		
gopotše gae	homesickness	makalo	amazement		
hloka kgahlego	indifference / reluctance	makalo/makala	surprise		
hloka maatla	impotence	makalo/tlabego	astonishment		
hloka pelotelele	impatience	makatša	startle		
hloka seriti	inferiority	manyami	sorrow		
hloka tshepo	despair / hopelessness	manyami/mahloko	grief		

APPENDIX B

151 Xitsonga Emotion Words used in the Prototypicality Rating Questionnaire

Xitsonga	English	Xitsonga	English	Xitsonga	English
amukela	accept	ku pfumala ntsako/nhlomulo	unhappiness	ntsako	joy / jolliness / happiness / gladness / contentment / jubilation / pleasantness / pleasure glee / rapture
chavisa/tshukisa	startle	ku pfumaleka ka ku tshemba	hopelessness / diffidence	ntsako lowukulu	
fenya/ku hlekisa	amusement	ku phirheka	disgust	ntsako/ntsakelo	enjoyment
gamdzelo	adoration	ku rhula/ntshamiseko	peacefulness	ntshembo	confidence / optimism / hope
gome	grief / sorrow	ku rhulile	calmness	ntshikelelo	depression / melancholy / stress
gome/ku pfamala ntshamiseko	uneasiness	ku rhurhumela	shiver	ntshikelelo wo ka wu nga lawuleki	hysteria
gome/nhlomulo	despair	ku siringa	annoyance	ntwela-vusiwana	compassion / pityfulness / pity / sympathy
hluleka/tsandzeka	fail	ku swirheka	fed up / frustration	ntwisiso	apprehension
hunisa	neglect	ku tiarisa	reluctance	nxaniseko	anguish / misery / suffering
khombo	distress	ku tinyiketa/yingisa	submission / surrender	nxaniso	oppression
khombo/xo chavisa ngopfu	horror	ku tisola	regret	nyangantseko	revulsion / dismay
ku amukela	acceptance	ku tivonela hansi	inferiority	nyanyuko/nyanyulo	excitement
ku engetelela xiyimo xo karhi	aggravation	ku tsaka ka	bliss	nyanyulo	arousal / gaiety
ku fumiwa hi nchumu wo karhi	overtaken	ku tsaka swinene	exuberance	nyenya	dislike
ku hatla ku hlundzuka	grumpiness	ku tsana/gome	sadness / disappointment	nyenyemuka/sandza/s ola	scorn
ku hava ntsako	dissatisfaction / displeasure	ku tsan'wiwa	glumness	pfumala	miss
ku hela mbilu	impatience	ku tsekatsekisa	agitation	pfumaleko	emptiness / corny
ku hlamala	admiration	ku tshemba	be sure	pfumaleko wa nsirhelelo	insecurity
ku hlamala/ku khomisa tingana	shock	ku tshembheka	honesty	rirhandzu	love / affection
ku hlamala/xihlamariso	amazement	ku vava	pain	rivengo	hate / hostility / resentment / spite
ku hlamarisa/xihlamariso	surprise	ku vavisa	irritation	susa/humesela handle	put out
ku hlayisa	caring	ku venga lokukulu	aversion	swipfukelwa	moodiness
ku hlekelela	flattered	kuva eka rirhandzu	in love	tingana/ku nyuma	shame
ku hlongoriwa	to be chased away	kuva ni gome/ku tsana endzhaku ka ku hluleka	feel chagrined	titwe u lahlelele	feel lost
ku hlula	defeat / triumph	kuva ni nandzu	guilt	titwe u ri ekaya	feel at home
ku hluleka/tsandzeka	failure	kuva ni ntsako lowukulu	ecstasy / elation / euphoria / exasperation / exhilaration	tiyisela	persevere
ku hlundzuka hi xihatla	grouchiness	kuva ni ntshikelelo	gloominess	vavisa	hurt
ku hunisa	indifference	langutelo	anticipation	vudyoho	sinfulness
ku kanakana	doubt	mabvibvi	indisposition	vugono/vulema	impotence
ku kakananisa	uncertainty	mahlomulo/ku vaviseka	torment	vuhesiki	enthusiasm / eagerness

ku karhateka/vaviseka	worry	manyunyu	pride	vukari	anger / wrath
ku khirha/ku khiriwa	alienation	mapfaloku tivona nandzu	remorse	vukari lebyi tumbleke	suppressed anger
ku khiriwa	isolation	mavondzo	jealousy	vukari lebyo leva	rage
ku khomisa tingana/ku nyumisa	humiliation	maxuxu	dread	vulolo	loathing
ku khumbheka	moved / touched	mikanakaniso/mivilel o	suspicion	vunene/musa	tenderness
ku koka rinoko	enthralment	moya wo rihisela	vengefulness	vunghana	friendship
ku landzuriwa	rejection / dejection	mukhosi/nkalanga	alarm	vurhena	courage
ku langutela	envy	navelo	desire / longing / passion / willingness / zeal / zest	vurhongo/ku tsana hikokwalaho ka swidzidziharisi	groggy
ku lan'wa/huma entirhweni	resignation	navelo-kaya	homesickness	vusiwana	poverty
ku leva	fury	nchavo	fear / anxiety / fright / nervousness / panic / tenseness	vutshunxeko	independence
ku leva ka	ferocity	nchavo lowukulu	terror	xihlamariso	astonishment / fascination
ku miyerile	quietness	ndzivalalano/ku rivalela	forgiveness	xinyanyu/matitwele	sentimentality
ku navela ku tlula mpimo	lust	nhlomulo	agony / bitterness /woe	xiphukuphuku	fool
ku navela/hiseka ka nkarhinyana	infatuation	nhlundzuko	aggression / aggressiveness / outrage	xisandzo, ndzhukano	insult
ku nonon'hwa/ku karhata	awkwardness	nkala-ntshamiseko	restlessness	xisolo	contempt
ku ntshunxeka	relief	nkitsikitsi	confusion	xivundza	loneliness
ku nyama	pessimism / mortification	nkoka-mahlo	attraction	xivundza/ku borheka	boredom
ku nyamisa	upset	nkorwiso/ku kholwa	satisfaction	xiyimo xa ntshikelelo	gloom
ku nyanyula/nyanyulo	thrill	ntsakelo	interest / liking	xiyimo xo tsana	desperation

APPENDIX C

159 Tshivenda Emotion Words used in the Prototypicality Rating Questionnaire

Tshivenda	English	Tshivenda	English	Tshivenda	English
bvafha	reluctance	livhuwa	thankankful	tambula	suffering / misery
bvula	put out	lufu	death	tangedza	acceptance
dada	confusion	lufuno luhulu	adoration	tetemela	shiver
dahefhala	infatuation	lutamo	desire / fascination / longing / willingness	thavhisa thoni	shame
dakalo	happiness / joy / pleasure / gladness / delight / elation / glee	lwala	sick	thogomela	caring
dakalo lihulu	ecstasy / jubilation	maanda	courage / eagerness	thulo	relief
dala	exuberance	mafulufulu	zeal	thuphiwa	oppression
di netshedza	surrender	mangala	astonishment / woe	tshanduko	euphoria
dikhetha	isolation	manyanyuwo	excitement	tshenuwa	startle
dikukumusa	pride	mazhuluzhulu	anxiety	tshi songo khwathiswaho	uncertainty
dina/ thupha	annoyance	mbilaelo	complain	tshikhukhuliso	sinfulness
dinalea	upset / worry / troubled / feel chagrined	mbili yo swifhalelwaho	melancholy	tshimangadzo	surprise / amazement
dinetshedza	submission	mbiti	anger / fury / grumpiness	tshitakadzi	amusement
dinyadza	inferiority	mudifho	zest	tshuwa	fright / shock / ferocity / outrage
diphina	enjoyment / bliss	mu	moodiness	tsinyuwo	resentment
disola	regret	muhalifho	irritation	tsiruwo	resignation
dzangalelo	interest	mukosi	alarm	tungufhala	unhappiness / glumness
emula	affection	mulalo	peacefulness	u dipfa	sentimentality
fhelambilu	impatience	mulandu	guilt	u dzumba mbiti	suppressed anger
fhumula	quietness / calmness	mutsiko	stress / depression / dejection / pressured	u fhisea nbilu	enthusiasm
fulufhedzea	honesty	nala	sulk	u ita zwa kwine	overtaken
fulufhelo	confidence / hope / optimism	nana	pessimism	u lata fulufhelo	hopelessness
funa	love / liking	nanisa	aggravation	u pfa u hayani	feel at home
funana	in love	ndado	frustration / panic	u pfela muthu vhutungu	sympathy
fushea	contentment / satisfaction	ndeme	impotence	u sa diphina	uneasiness
goda	mock	ndifhedzo	vengefulness	u sa divha uri u iteni	desperation
halifha zwituku	nervousness / exasperation	neta	tired / boredom / fed up	u sa fulufhela	suspicion
havhia	hysteria	nyadza	contempt	u sa funa	dislike
humbula hayani	homesickness	nyala	loathing / disgust	u sa londa	indifference
huvhala	hurt	nyemulo	lust	u sa takala	displeasure
kanakana	doubt	nyofho	fear / apprehension	u sa vha na maanda	groggy
karusa	arousal	nyofho khulu	terror	u sa vha na nungo	dismay
khakhathi	aggression / revulsion	ofhisa	dread / gloom	u shaya fulufhelo	diffidence

khanganeo	distress	pfelovhutungu	compassion	veng,nndwa,vivho	hostility
khathutshela	pity	sa awela	restlessness	vengo	envy / spite / alienation
khathutshelo	pitifulness	sa fushea	dissatisfaction	vengo lihulu	rapture
khoda	flattered	sa tsireledzea	insecurity	vhaisa	corny
khukhulisa	scorn	sa vha na tshithu	emptiness	vhavha	bitterness / aversion
khuliso	respectful	sema	insult	vhenga	hate
khuthadza	console	shavhisa	horror	vhidzelela	shout
khwathisedza	be sure	shona	shyness	vhilaela	grouchiness
konda	tenseness	shonisa	embarrassment / mortification	vhofholowa	independence
kondelela	persevering	shoniswa	disappointment / discouraged / humiliation	vhuhali vhuhulu	wrath
kondelwa	awkwardness	sinyuwa	rage	vhukonani	friendship
kunda	defeat / triumph	swiswi	gloominess	vhulenda	tenderness
kundelwa	miss	takadzaho	pleasantness	vhulludu	loneliness
kunga	attraction	takala	jolliness / gaiety	vhupulu	enthralment
kwamaho	thrill	takala misi yothe	joviality	vhutungu	sadness / pain / grief / sorrow / anguish / agitation / passion
kwamea	touched / moved	takalaho	exhilaration	vhutungu ha luvalo	remorse
lata	rejection	takalela/tama	admiration	vhutungu vhuhulu	agony
lata fulufhelo	despair	takalla	cheerfulness	vhutungunyana	indisposition
lavhelela	anticipation	tama	fondness	vivho	jealousy
litshedzela	neglect	tambudzwa	torment	xelelwla	feel lost

APPENDIX D

Emotion terms used in the Similarity Questionnaires

Sepedi	English	Xitsonga	English	Tshivenda	English
amogela	accept	chavisa/tshukisa	startle	bvafha	reluctance
amogela ntle le bothata	willingness	gome	grief / sorrow	dakalo	happiness / joy / pleasure / gladness / delight / elation / glee
babja/lwala	sick	gome/ku pfamala ntshamiseko	uneasiness	di netshedza	surrender
befetša	put out	gome/nhlomulo	despair	dikumumusa	pride
belaela	doubt	khombo	distress	dinalea	upset / worry / troubled / feel chagrined
bobe	sinfulness / spite	khombo/xo chavisa ngopfu	horror	dinetshedza	submission
bodutu	boredom	ku fumiwa hi nchumu wo karhi	overtaken	dinyadza	inferiority
bodutwana	loneliness / corny / emptiness / glumness / melancholy / moodiness	ku hatla ku hlundzuka	grumpiness	dzangalelo	interest
bohlokakhutšo	restlessness	ku hlamala/ku khomisa tingana	shock	emula	affection
boikgomošo	pride	ku hlamarisa/xihlamariso	surprise	fhelambilu	impatience
boikokobetšo	submission	ku hlayisa	caring	fhumula	quietness / calmness
boipshino	pleasure / enjoyment / pleasantness / zest	ku hluleka/tsandzeka	failure	fulufhelo	confidence / hope / optimism
boitefeletšo	vengefulness	ku hlundzuka hi xihatla	grouchiness	funa	love / liking
dihlong	shyness	ku kanakana	doubt	fushea	contentment / satisfaction
duma	desire / envy / longing	ku khomisa tingana/ku nyumisa	humiliation	halifha zwituku	nervousness / exasperation
fela pelo	panic	ku landzuriwa	rejection / dejection	humbula hayani	homesickness
gatelela pefelo	suppressed anger	ku nyama	pessimism / mortification	huvhala	hurt
go ba le tebogo	thankful	ku nyamisa	upset	khakhathi	aggression / revulsion
go ba le khutšo	quietness	ku nyanyula/nyanyulo	thrill	khanganeco	distress
go hloka lethabo	unhappiness / displeasure	ku nyuma/nyumo	shyness	khuthadza	console
go se dudišege	uneasiness	ku nyumisa/nyumiso	embarrassment	kondelela	persevering

go se rate	dislike	ku pfumala ntsako/nhlomulo	unhappiness	kundelwa	miss
go tlala letšhogo	dismay	ku phirheka	disgust	kwamaho	thrill
hloka kgahlego	indifference / reluctance	ku swirheka	fed up / frustration	lata fulufhelo	despair
hloka tshepo	despair / hopelessness	ku tsaka swinene	exuberance	litshedzela	neglect
hlonama	sulk / dejection	ku tsana/gome	sadness / disappointment	livhuwa	thankankful
iketla	relaxed	ku tsan'wiwa	glumness	lutamo	desire / fascination / longing / willingness
ikokobetša	resignation	ku tsekatekisa	agitation	lwala	sick
ikwa o selekegile	feel chagrined	ku vava	pain	mangala	astonishment / woe
ipona molato	guilt	ku vavisa	irritation	mazhuluzhulu	anxiety
itshola	regret / remorse	ku venga lokukulu	aversion	mbili yo swifhalelwaho	melancholy
kgahlego	interest / admiration	kuva ni gome/ku tsana endzhaku ka ku hluleka	feel chagrined	mbiti	anger / fury / grumpiness
kgalefo	revulsion	kuva ni nandzu	guilt	mudifho	zest
kgatelelo ya monagano	stress / depression / gloominess	kuva ni ntsako lowukulu	ecstasy / elation / euphoria / exasperation / exhilaration	muhaliho	irritation
kgobogo	embarrassment / awkwardness	mabvivi	indisposition	mukosi	alarm
kgopišegile	offended	mahlomulo/ku vaviseka	torment	mulalo	peacefulness
kgotsofalo	contentment / satisfaction	manyunyu	pride	mulandu	guilt
kgwathega maikutlo	touched	mavondzo	jealousy	nala	sulk
kwelobohloko	compassion / moved / pitifulness / pity / sympathy	mikanakaniso/mivilelo	suspicion	ndeme	impotence
kwiša bohloko	hurt	moya wo rihisela	vengefulness	neta	tired / boredom / fed up
lapile	tired	mukhosi/nkalanga	alarm	nyadza	contempt
lehloyo	hate / aversion / loathing	nchavo	fear / anxiety / fright / nervousness / panic / tenseness	nyala	disgust / loathing
lerato	love / adoration / affection / fondness / passion	nchavo lowukulu	terror	nyofho	fear / apprehension
lethabo	joy / happiness / calmness / cheerfulness / delight / ecstasy / elation / euphoria / excitement / exhilaration / gladness / glee / rapture / sentimentality	ndzivalelano/ku rivalela	forgiveness	nyofho khulu	terror
letšhogo/tšhoga	fear / alarm / fright / horror / nervousness / shock / terror	nhlomulo	agony / bitterness / woe	pfelovhutungu	compassion
lokologa	feel at home	nhlundzuko	aggression / aggressiveness / outrage	sa fushea	dissatisfaction

mahloko	anguish	nkitsikitsi	confusion	sa tsireledzea	insecurity
mahlomola	agony / misery	nkorwiso/ku kholwa	satisfaction	sema	insult
makalo	amazement	ntsakelo	interest / liking	shoniswa	disappointment / discouraged / humiliation
makalo/makala	surprise	ntsakelo/ku tsakela ngopfu	fondness	sinyuwa	rage
makalo/tlabego	astonishment	ntsakiso	cheerfulness / delight	swiswi	gloominess
makatša	startle	ntsako	joy / jolliness / happiness / gladness / contentment / jubilation / pleasantness / pleasure	takalaho	exhilaration
manyami	sorrow	ntsako lowukulu	glee / rapture	tama	fondness
manyami/mahloko	grief	ntshikelelo	depression / melancholy / stress	tambudzwa	torment
maswabi	sadness	ntwela-vusiwana	compassion / pityfulness / pity / sympathy	tetemela	shiver
mona	jealousy	ntwisiso	apprehension	thavhisa thoni	shame
ngangego ya maikutlo	tenseness	nxaniseko	anguish / misery / suffering	thulo	relief
nyakalala	jolliness	nyangantseko	revulsion / dismay	tshenuwa	startle
nyakalalo	bliss / gaiety	nyanyuko/nyanyulo	excitement	tshi songo khwathiswaho	uncertainty
nyefola	contempt / scorn	nyanyulo	arousal / gaiety	tshimangadzo	surprise / amazement
nyefolo	humiliation	nyenya	dislike	tshitakadzi	amusement
nyenyefatšo	mortification	nyenyemuka/sandza / sola	scorn	tungufhala	unhappiness / glumness
pefedišo	alienation	rirhandzu	love / affection	u dzumba mbiti	suppressed anger
pefelo	anger / aggravation / exasperation / fury / outrage / rage / wrath	rivengo	hate / hostility / resentment / spite	u pfa u hayani	feel at home
pherekano	agitation	swipfukelwa	moodiness	u pfela muthu vhutungu	sympathy
poifo	dread	tingana/ku nyuma	shame	u sa diphina	uneasiness
rata	liking	titwe u lahlelele	feel lost	u sa fulufhela	suspicion
selekega	irritation	titwe u ri ekaya	feel at home	u sa funa	dislike
tena/šišimiša	disgust	vavisa	hurt	u sa takala	displeasure
tenega	annoyance	vukari	anger / wrath	u sa vha na maanda	groggy
tenega/selekega	fed up	vukari lebyi tumbeleke	suppressed anger	u shaya fulufhelo	diffidence
thothomela ka letšhogo	groggy	vukari lebyo leva	rage	vhaisa	corny
tlalelo	anxiety / desperation / distress / eagerness / resentment	vrhena	courage	vhenga	hate
tlhakatlhakano	frustration	xihlamariso	astonishment / fascination	vhidzelela	shout
tlhonamo/bodutwana	grumpiness	xinyanyu/matitwele	sentimentality	vhuhali vuhulu	wrath
tšharakano	confusion	xiphukuphuku	fool	vhukonani	friendship

tshepo	hope	xisandzo, ndzhukano	insult	vhutungu	sadness / pain / grief / sorrow / anguish / agitation / passion
tshušetšo/phišego	enthusiasm	xisolo	contempt	vhutungu vuhulu	agony
tshwabo	disappointment / shame	xivundza/ku borheka	boredom	vivho	jealousy
tshwenyega	upset / worry	xiyimo xa ntshikelelo	gloom	xelewlwa	feel lost