

**The emotion structure of
the isiNdebele speaking group
in the Mpumalanga Province**

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REMARKS

The publication and reference method in this mini- dissertation is in accordance with the American Psychological Association (APA). It is in accordance with the Industrial Psychology policy at the North- West University to use the APA style in all scientific documents.

The mini- dissertation is submitted in the form of three (3) chapters, consisting of an introductory chapter, a research article as well as the concluding chapter. Each chapter is indicated in its own reference list.

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SUMMARY

Title: The emotion structure of the isiNdebele speaking group in the Mpumalanga Province.

Keywords: Emotion, emotion lexicon, prototypicality, componential theory, dimensionality and ethnic group.

Emotions play an important role in the lives of human beings and, without doubt, emotions form an inherent part of the workplace (Ashkanasy, Zerbe, Charmine & Hartel, 2002). Studying emotions within the South African context is relevant for applied psychology. South Africa comprises eleven official languages which are representative of the general population in the working environment. As a result, knowledge and understanding of emotions is useful since it forms part of social interaction at work. The understanding of one's own as well as others' emotions and the ability to deal with those emotions contribute to the productivity and cooperation among employees in the working environment.

The objective of this research was to determine the conceptualization of emotion and culture according to the literature study, to determine the different and representative emotion words within the isiNdebele speaking group, to determine the relevant and representative prototypical emotion words that have been encoded in this group, to determine the cognitive emotion structure of this group and lastly, to determine the inter-rater reliability of the raters and reliability of the measurement instrument as well as the dimensions of emotion structure in the isiNdebele speaking group in Mpumalanga province.

A survey design with convenience sample was used to achieve the research objectives in a series of three independent studies. The study population of the first phase ($N=126$) consisted of a convenience sample of the isiNdebele speaking group who have metric and are working in the South African Police Service in Mpumalanga province.

The study population of the second phase consisted of a convenience sample of Language Experts with degrees and diplomas ($N=51$) in isiNdebele language from different occupations. The study population of the third phase consisted of a convenience sample of the experts (educators) in isiNdebele speaking group ($N=183$) from different schools in the former KwaNdebele homeland in Mpumalanga province.

In this study, free listing, prototypicality and similarity rating questionnaires were administered by a qualified psychometrist. Statistical methods and procedures (Multidimensional Scaling and Descriptive Statistics) were used and Cronbach alpha coefficients were determined to analyse the results of the isiNdebele speaking group.

The results of the free listing task indicated the words with the highest frequency as *cry (lila)*, *happy (thaba)*, *laugh (hleka)*, *angry (kwata)*, *disappointed (swaba)*, *confused (hlangahlangana)*, *depressed (gandeleleka)*, *pain (ubuhlungu)*, *tired (dinwa)*, and *abused (hlukomezeka)*. The results of this phase also indicated the basic emotion concepts of *happiness (thaba)* and *angry (kwata)* as the only emotion terms which mostly came to mind to the isiNdebele speaking group.

The results of the prototypicality rating task indicated the emotion terms ranked as the ten (10) most prototypical emotion terms for the isiNdebele speaking group ($N=51$) were “*ukuthaba khulu*” (*exhilaration*), “*itukuthelo/ ukukwata*” (*anger*), “*ithabo elikhulu*” (*euphoria*), “*ukuthaba*” (*cheerfulness*), “*ithabo*” (*happiness*), “*ukudana*” (*dejection*), “*ukuthuwa/ ukudana*” (*glumness*), “*ukuthaba*” (*joviality*), “*ukulila/isililo*” (*cry*), “*ithabo*” (*joy*).

A multi- dimensional scaling was conducted to determine the cognitive structure of emotion concepts whereby a two- dimensional structure (evaluation and power) was identified to the isiNdebele speaking group.

Recommendations for future research to the organisation as well as recommendations for future research were suggested.

OPSOMMING

Titel: Die emosiestruktuur van die isiNdebele taalgroep in die Mpumalangaprovincie.

Sleutelwoorde: Emosie, emosieleksikon; prototipikaliteit; komponensiele teorie; dimensionaliteit en etniese groep.

Emosies speel 'n belangrike rol in die lewens vanmense en vorm ongetwyfeld 'n belangrike deel van die werkplek (.Ashkanasy, Zerbe, Charmine & Hartel, 2002). Dit is relevant vir toegepaste sielkunde om emosies binne die Suid-Afrikaanse konteks te bestudeer. In Suid-Afrika is elf amptelike tale wat deur die algemene bevolking in enige werkplek verteenwoordig kan word. Kennis en begrip van emosies is nuttig aangesien dit deel van sosiale interaksie in die werkplek vorm. Om 'n mens se eie en ander mense se emosies te verstaan, en te verwerk dra by tot produktiwiteit en samewerking in die werkomgewing.

Die doel van hierdie navorsing was om die konseptualisering van emosie en kultuur volgens die literatuurstudie te bepaal; om die verskillende en verteenwoordigende emosiewoorde binne die isiNdebelesprekende groep te bepaal; om die relevante en verteenwoordigende prototipiese emosiewoorde wat binne hierde groep gekodeer is te bepaal; om die kognitiewe emosiestruktuur van hierdie groep te bepaal, en laastens om die intertoetserbetroubaarheid en betroubaarheid van die meetinstrument te bepaal, asook die dimensies van emosiestruktuur in die isiNdebelesprekende groep in die Mpumalangaprovincie.

'n Navorsingsontwerp met gerieflikheidsteekproef is gebruik om die navorsingsdoelwitte te bereik in 'n reeks van drie onafhanklike studies. Die studiepopulasie van die eerste fase ($N=126$) het bestaan uit 'n gerieflikheidsteekproef uit die isiNdebelesprekende groep wat matriek het en in die Suid-Afrikaanse Polisiediens in die Mpumalangaprovincie werk.

Die studiepopulasie ($N=51$) van die tweede fase het bestaan uit 'n gerieflikheidsteekproef van taalkundiges in isiNdebele met grade en diplomas, vanuit verskillende beroepe. Die

studiepopulasie ($N=183$) van die derde fase het bestaan uit 'n gerieflikheidsteekproef van taalkundiges (onderwysers) in isiNdebele van verskillende skole in die voormalige KwaNdebeletuisland in die Mpumalangaprovincie.

In hierdie studie is vryelysting-, prototipikaliteit- en eendersheidgradering-vraelyste deur 'n gekwalifiseerde psigometris toegedien. Statistiese metodes en prosedures (Multidimensionele Skaling en Beskrywende Statistiek) is gebruik, en Cronbach alpha koëffisiënte is bepaal om die resultate van die isiNdebelesprekende groep te analiseer.

Die resultate van die vrye-lystingtaak het die woorde met die hoogste frekwensie as *cry* (huil), *happy* (gelukkig), *laugh* (lag), *angry* (kwaad), *disappointed* (teleurgesteld), *confused* (verward), *depressed* (terneergedruk/depressief), *pain* (pyn), *tired* (moeg), en *abused* (misbruik).

Die resultate van die prototipikaliteits-graderingtaak het as die tien mees prototipiese emosie terme vir die isiNdebelesprekende groep die volgende aangedui: “*ukuthaba khulu*” (uitgelatenheid), “*itukuthelo/ ukukwata*” (woede), “*ithabo elikhulu*” (euforie), “*ukuthaba*” (opgewektheid), “*ithabo*” (geluk), “*ukudana*” /verwerping), “*ukutluwa/ ukudana*” somberheid), “*ukuthaba*” (jovialiteit), “*ukulila/isililo*” (huil), “*ithabo*” (vreugde).

'n Multidimensionele skaling is gedoen om die kognitiewe struktuur van emosiekonsepte te bepaal, waardeur 'n twee-dimensionele struktuur (*evaluering* en *mag* vir die isiNdebelesprekende groep geïdentifiseer is).

Aanbevelings is gemaak vir toekomstige navorsing vir die organisasie sowel as algemene navorsing.

CHAPTER 1

INTRODUCTION

The focus of this mini-dissertation is on the emotion structure of the isiNdebele speaking group in Mpumalanga Province.

Chapter One addresses the problem statement and a discussion of the research objectives, whereby the general objective and specific objectives are indicated. The research method is discussed and the chapters are divided accordingly.

1.1 PROBLEM STATEMENT

1.1.1 Overview of the problem

In the past, research into emotions was neglected and researchers felt that research on job satisfaction had covered emotion research adequately. Emotions are generally seen as an aspect of well-being that is not of an organisational concern, but rather an aspect of clinical or health psychology. As a result, and to gain an understanding of emotions in the workplace, emotion research is now aimed at addressing the way in which the organisation helps or manipulates people to regulate their emotions, particularly in occupations where strong emotions are part of the job, such as in the police services or the nursing profession (Ashkanasy, Zerbe & Charmine, 2002; Fox & Spector, 2002).

However, there is a serious difference of opinion between the different schools of thought regarding emotions. For instance, some researchers believe that emotions are universal and some believe that they are culturally bound [relativism] (Russell, 1991). Furthermore, Shaver, Murdaya and Fraley (2001) state that the emotion research field needs more studies conducted in different cultures, based on languages with different historical roots, so that the issue of universality versus relativity can be evaluated extensively. In South Africa, which comprises

eleven different languages and cultures, only three studies have been done on emotion research to indicate the similarities and differences of emotions in cultural groups (Du Toit, 2009; Fourie, 2009 and Nicholls, 2008).

This research study aids in understanding of what emotions are and provides an emotion structure of the isiNdebele cultural group of South Africa. More specifically, this research assists in achieving a better understanding of the emotion terms that are generally used by the isiNdebele cultural group. Such research into the emotion structure of a specific cultural group aids understanding the emotions of others better, improve the ability to manage emotions effectively and establish a more reliable way of constructing the emotion measurement of the isiNdebele cultural group.

1.1.2 Literature review

Emotions play an important role in the lives of human beings and, without doubt, emotions form an inherent part of the workplace (Ashkanasy et al., 2002). However, Fox and Spector (2002) state that the broader field of organisation research that was conducted in previous years focused more attention on attitude, behaviour, cognition and personality than on emotions. In any working environment, it can happen that superiors may be angered by morally reprehensible behaviour and job incompetence, co-workers may be emotional as a result of public humiliation (being teased and/or criticised in front of others) and subordinates may be angered by unjust treatment (Fitness, 2000). Emotions at work are thus important research phenomena as part of organisational behaviour. For instance, the work studies about “Emotions in the workplace. The neglect of organisational behaviour” focuses on the impact that is brought about in the organisation by the negligence of positive and negative emotions that emerge at work (Muchinsky, 2000). In addition, Zeider, Mathews and Roberts (2004); Clarke (2006); Kuger, Tucker and Yost (2006) conducted studies which focus on the importance of emotional intelligence in the workplace. The conclusion can now be drawn that research on emotions as part of organisational behaviour is an important research area to study behaviour in the workplace.

Currently, a workplace has been identified as one of the most interpersonally frustrating environments that people have to deal with (Fitness, 2000). For instance, employees in service industries, such as police officers and debt collectors, are expected to display certain emotions while performing their tasks, and especially to conceal negative emotions (Ashkanasy et al., 2002; Fisher, 2000).

However, emotion researchers from western countries have different understandings about emotions (Wallbott & Scherer, 1985; Scherer, Wallbott & Summerfield, 1986). For example, Scherer, (1999) supports the idea that western anthropologists and ethnologists have concentrated exclusively on the cultural practice of emotions in people and have neglected the individual experience of emotions. As a result of different understandings, it is therefore crucial that more research be conducted that focuses on the causes, features and consequences of emotions and on the way individuals experience and react to emotions in the workplace in different cultural groups (Fitness, 2000).

A challenge in the domain of emotion research is that as a result of the differing views of various researchers, there are serious differences regarding emotions and words that express emotion in different cultures. Furthermore, Fitness (2000) and Fontaine, Poortinga, Setiadi, and Suprpti (2002) state that emotion words and emotion features play a major role in the lives of human beings: emotion features tell more about a person's feelings (face, voice and gestures), for example humiliation, embarrassment, or discomfort are emotional features of employees in the workplace. It is therefore important for South African researchers to investigate views on the emotions that have been mentioned. The Employment Equity Act, No 55 of 1998 emphasises that the measuring instruments or tests should be reliable, valid, culturally fair and not biased against any employee or group. This indicates that there is a need to develop a culturally fair instrument for the measurement of emotions.

In addition, South African emotion researchers are faced with the serious challenge of determining the total number of emotions that are found in different cultural groups and to determine those emotions that are regarded as the basic/fundamental emotions of the eleven cultural groups in South Africa. This challenge can be addressed by means of translation (the

translation of emotion words from one cultural group to another) (Fontaine et al., 2002) and by determining the emotion structure (the meaning of the emotion for that particular culture).

According to Storm and Storm (1987), emotions are divided into different domains; these comprise the negative domains embarrassment, sadness, pain, anxiety and fear; and also the positive, which are the love domains, among others. In contrast, Clore, Orton and Foss (1987) believe that emotions are divided into four broad domains: the affective condition (the internal mental conditions in which affect is dominant), the cognitive condition (internal mental states in which cognition is dominant), the physical and body condition (internal but non mental states, e.g., aroused, sleepy) and the external condition with two subcategories which is subjective evaluation of character (e.g. attractive, trustworthy) and objective conditions such as things done to a person (e.g. abandoned, insulted).

A part of the cultural challenge in the study of emotions is that different models are used by behavioural scientists to conduct emotion research. To solve this problem the componential emotion models are generally used by western countries (Scherer, 2003) to investigate multiple components of emotions. The componential emotion theory offers a comprehensive theory to investigate the meaning of emotion within different cultural groups and determines if the meaning of emotion within different cultures is universal or relativistic across cultures.

Thus, determining the emotion structure of the isiNdebele group aids in the formulation of a unique South African GRID for this cultural group. This study replicates the GRID approach that has been developed in Ghent and Geneva with culturally relevant material (words and features), and can be referred to as a bottom-up approach in determining the meaning of emotion for a specific cultural group. The phases of this approach are discussed in the method section of this proposal.

A key research question is whether all emotions are experienced and expressed in the same way across different ethnic groups. That is, if an English-speaking person says he feels depressed, does that mean the same feelings can also be experienced by the Ndebele or Sotho-speaking person. For one to understand the feelings of the different cultural groups, it is therefore crucial to firstly understand the meaning of the term “emotions”. Without consensual conceptualisation

and an operational definition of this term it would be difficult for the researcher to achieve his objectives. Consequently, the fruitless debate is likely to proliferate (Scherer, 2005) unless specific definitions are established.

Frijda (1986) and Mesquita, Frijda and Scherer (1997) define emotions as the process consisting of the relationship between different components, such as appraisals, psycho-physiological changes, expressive behaviour, action tendency and subjective experiences that result from specific and relevant situational antecedents. According to Fontaine et al., (2002), based on componential emotion theory, the word “emotion” in common language refers to systematic appraisals, psychophysiological changes, expressive facial, vocal and gestural behaviour, action tendencies, subjective experiences and regulatory efforts.

It is therefore of the utmost importance in this study to find out whether similar emotion concepts are found in various cultural groups. Fontaine et al., (2002) indicate that in order to understand emotions across cultural groups one has to distinguish three aspects of emotions: emotion terms, representation of facets of the emotion process and the similarities and differences between emotion terms. According to Lutz (1982), emotion terms are regarded as referring to a process that is intrinsically found only in the specific society in which the term is used. This view is supported by Fontaine et al., (2002), who state that emotion terms are used differently by different cultural groups. For instance, in the Netherlands and Indonesia, terms for social emotions like “shame” and “guilt” are used differently or have different meanings for both cultures. In addition, Wierzbicka (1992) argues that there is no universal emotion term across cultures. Emotion concepts such as “anger” and “sadness” are English cultural artefacts that cannot be matched to emotion terms in other languages or cultures. Markus and Kitayama (1991) also stress that emotion terms differ across cultures. For instance, in some Eastern cultures like China, the concept of “guilt” would be linked more closely to interpersonal relationships, whereas in Western cultures, such as the USA, the term “guilt” would be related to the violation of moral and legal norms.

Some English emotional terms have no equivalent in other languages. For example, words such as terror, horror and dread are used by English-speaking people as referring to fear (Hiatt, 1978). Furthermore, Gerber (1975) believes that some other cultural groups or languages have their own

concepts which are similar to the English term “emotions”. Samoans have no word for emotion but they have a word *lagona* which groups together feelings and sensations. These views from various schools of thoughts indicate that terms relating to the emotions are culturally diverse. Hence, historians and anthropologists have concluded that there are historically and culturally diverse emotion vocabularies (Harre, 1986).

Some social scientists/researchers, however, argue that emotion terms are similar or universal across cultures. Saucier and Goldberg (1996) state that emotions which are experienced by members of cultural groups, are encoded in most languages. Sommers (1984) also states that there are strong cultural similarities with respect to the emotion terms love, happiness and joy, which are considered desirable in all cultures. In addition, Ekman and Oster (1979) support the notion that there is universality across cultures in the expression of the following emotion concepts; happiness, anger, disgust, sadness and fear.

There is also a high degree of agreement among Americans, the English, Swedish, French, Swiss and Greek with regard to universality of the following emotion terms; excitement, enjoyment, surprise, distress, joy, disgust, anger, shame and fear (Izard, 1977). In addition, Darwins (1877/1965) as cited by Izard, (1991) states similarly that emotions are universal across different cultural groups. Darwins (1965) as cited by Russell, (1991) further emphasises that communication as well as the expression of emotion is part of the human being’s biological heritage.

Furthermore, Russell (1991) supports the idea that similarities in categories of emotion are universal across cultures and languages. This view is supported by Plutchik (1980), who states that words like angry, afraid and happy appear in all languages and that these words represent the universal experience of different cultures. Indeed, Rosaldo (1983) expresses the view that some cultures use one word to cover all emotion words. For instance, the Ilongot use one word *betang* to cover shame, timidity, embarrassment and respect, whereas the Javanese use their emotion word *isin* to cover shame, guilt, shyness and embarrassment (Geertz, 1959). In addition, the Pintupi use one word *kunta* to refer to shame, embarrassment, shyness and respect (Myers, 1979). However, in reviewing the evidence, Mesquita and Frijda (1992) state that there are cultural similarities and differences in all components of the emotion process (i.e. the antecedent

events, appraisals, physiological reaction patterns, action readiness, emotional behaviour and regulation). However, Marsella (1981) found that there is no word for depression in many non-Western cultural groups.

Since there are serious arguments from researchers about universality and differences with regard to emotion terms for different cultural groups, there are also some scientists or schools of thought that believe that emotional concepts are divided into different categories, clusters or domains (Storm & Storm, 1987). Clore et al., (1987) and Fitness (2000) conclude that emotions are divided into four broad categories (i.e. affective conditions, cognitive conditions, physical and bodily condition and external conditions plus a number of subcategories). In addition, Lewis (2000) maintains that emotions vary from active to passive which includes (i) positive arousal or enthusiasm; (ii) negative activation; and (iii) low arousal or fatigue and relaxation.

Lutz (1982) and Muchinsky (2000) also divide emotion terms into four clusters. These are emotion when experiencing good fortune (love and joy), emotion when experiencing danger (fear), emotion brought on by connection and loss (sadness and anger) and the cluster which involves emotions such as hate, irritation, frustration, grief and jealousy. Scherer (1994a) also supports the notion that emotions can be divided into four clusters; these are achievement emotions (emotions such as pride, elation, joy and satisfaction, which share common characteristics and are sometimes referred to as positive emotions); approach emotions, which include emotions such as relief, hope, interest and surprise; resignation emotions, which include sadness, fear, shame and guilt; and antagonistic emotions, which refer to envy, disgust, contempt and anger.

According to Schlosberg (1952/1954), Russell (1980), Larsen and Diener (1992) and Fisher (2000), emotion as displayed in facial expressions can be divided into two dimensions: pleasant versus unpleasant, and attention versus rejection. Shepherd (1962) and Cliff and Yang (1968) also support the idea that emotion in facial expression can be divided into three dimensions. In addition, Diener (1999) maintains that emotion terms are divided into pleasant emotions (joy, affection, pride), and unpleasant emotions, such as anger, anxiety and sadness. Furthermore, Diener, Smith and Fujita (1995) emphasise that the pleasant and unpleasant emotions are independent; they correlate at a very low level with one another and show different patterns of

relations with external variables. Watson and Tellegen (1985) and Teddlie and Hull (1994) also support the idea that different patterns of coping are associated with pleasant and unpleasant affects. However, Shaver, Schwartz, Kirston & O'Connor, (1987) indicate that the most frequently experienced emotions are fear, sadness, anger, joy and love.

The researcher intends to determine whether the different features, words and categories exist in the Ndebele cultural group by using a free listing questionnaire. The objective of this study is to investigate the impact of culture on emotions, specifically in the Ndebele cultural group. The Ndebele ethnic group forms the smallest cultural group in South Africa. According to Statistics South Africa, they constitute only 1, 59% of the South African population. The Ndebele ethnic group originated from the Nguni tribe of North Africa and settled in the Drakensburg Mountain under the chieftainship of Ndebele (Warmelo, 1930).

Between 1550 and 1580, the Ndebele crossed the Tugela River and entered the Transvaal at eMhlangeni, currently known as Randfontein. In 1620, they relocated to kwaMnyamana (Pretoria, Wonderboom) under the chieftainship of Musi (Nhlapo & Bekker, 2007). While they were in the Transvaal they became separated into two groups: that is, the Southern Ndebele group consisting of Ndzundza and Manala, and the group known as the Northern Ndebele consisting of Kekana, which went on to settle in the Northern Transvaal around Potgietersrus (now known as Makopane) and in other areas around Pietersburg, now Polokwane (Van Vuuren, 1983).

The Ndzundza and Manala group, known as the Southern Ndebele, maintained its culture and traditions as amaNdebele. After a few years the two (Manala and Ndzundza group) became separated and recognised their chieftainship as being independent from one another (Mahlangu, 2007).

Some few years later, the Ndzundza group moved eastwards and settled in KwaMaza and KwaSimkhulu until they were removed by the previous government to the Mapoch caves in Mpumalanga (Skhosana, 1998; Van Vuuren, 1983; and Wilkes, 2001).

In 1883, the Ndzundza group was defeated by the Zuid Afrikaanse Republiek commander Piet Joubert at Roosenekal under the chieftainship of Nyabela. As a result, the Ndzundza group was

forced to work in the Highveld region of Mpumalanga as domestic and farm workers (Van Vuuren, 1983). In 1970, the Ndzundza and Manala groups reunited and strove for political recognition and the formation of their own homeland known as KwaNdebele (Mahlangu, 2007). In 1979, the KwaNdebele government was formed. Its formal language, isiNdebele, was introduced and was later recognised as one of the eleven official languages (Skhosana, 2002).

The Northern Ndebele are currently regarded as the Northern Sotho-speaking community and its language is known as Siyasumayela, which has not yet been recognised (Wilkes, 2001).

This study focuses only on the Southern Ndebele (Manala and Ndzundza) group, which is settled in Mpumalanga Province in the former KwaNdebele townships.

The researcher attempts to determine whether the different features, words and categories exist in this cultural group by using a free listing questionnaire.

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

- How are emotion lexicon, prototypicality of emotions, dimensions of emotion and emotion and culture conceptualized in the literature?
- What are the different and representative emotion words within the isiNdebele- speaking group in the Mpumalanga province?
- What are the relevant and representative prototypical emotion words that have been encoded in the isiNdebele- speaking group in the Mpumalanga province?
- What are the cognitive emotion structures of the isiNdebele- speaking group in the Mpumalanga province (the emotion dimensions it consists of)?
- What are the inter- rater reliabilities of the measurement instrument as well as the 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 isiNdebele language group, so as to generate prototypical emotion words and to identify the manifestation of the emotions for this language in South Africa as well as the categorisation of emotion terms.

1.2.2 Specific Objectives

The specific objectives of this research are:

- To determine the emotion lexicon, prototypicality of emotion, dimensions of emotion and emotion and culture conceptualized in the literature.
- To determine the different and representative emotion words within the isiNdebele- speaking group in the Mpumalanga province.
- To determine the relevant and representative prototypical emotion words that have been encoded in the isiNdebele- speaking group in the Mpumalanga province.
- To determine the cognitive emotion structure of the isiNdebele- speaking group in the Mpumalanga province.
- To determine the inter-rater reliability of the raters and reliability of the measurement instrument as well as the dimensions of the emotion structure.

1.2.3 PARADIGM PERSPECTIVE OF THE RESEARCH

A certain paradigm perspective that includes the intellectual climate and market of intellectual resources (Mouton & Marais, 1992) directs the research. The paradigm perspective of research defines this research within the structure of the relevant research context. The paradigm perspective is discussed in terms of the intellectual climate, disciplinary framework, meta-theoretical assumptions and market of intellectual resources.

1.2.4 Intellectual climate

The intellectual climate refers to the variety of meta-theoretical values or beliefs that are held by those practising a discipline at a given stage (Mouton & Marais, 1992). For the purpose of this research, the assumptions are formulated within the framework of the relevant paradigm of Industrial Psychology.

1.2.5 Discipline

This research falls within the boundaries of the behavioural sciences and, more especially, Industrial Psychology. Industrial Psychology is a field of psychology which focuses on recruitment, selection, training and development in a working environment. It also focuses on methods to improve work motivation, to reward excellent performers and to address the attitudes that people have towards their jobs (Baron, 1995). The sub- disciplines of Industrial Psychology that are focused on in this research are personnel psychology and psychometrics. The different subfields of Industrial Psychology are as follows:

1. Research methodology is the discipline which focuses on applying scientific methods in conducting research. It also involves the collection, analysing and interpreting of information through quantitative and qualitative approaches (Struwig & Stead, 2001).
2. Psychometrics; this field involves the study of administering, scoring and interpreting psychological tests, and the study of principles and techniques in assessing individual differences and similarities (Owen & Taljaard, 1989).
3. Personnel psychology focuses on utilising individual differences in and between employees and predicting the optimal fit between the employee and the work organisation. It involves the assessment and appraisal of employees, personnel selection, placement and promotion of employees as well as training and development, work attitudes and motivation of employees (Bergh & Theron, 2006).
4. Organisational psychology is concerned with work organisation as systems involving individual employees and work groups, as well as the structure and dynamics of organisations (Greenberg & Baron, 2000).

5. Career psychology involves studying and facilitating occupational development across the life-span with the emphasis on adult development (Bergh & Theron, 2006).

1.2.6 META-THEORETICAL ASSUMPTIONS

Five paradigms are relevant to this research. Firstly, the literature review is done within the humanistic paradigm and systems theory and, secondly, the empirical study is done within the behaviouristic, positivist and functionalist paradigms.

1.2.6.1 Literature review

According to Bergh and Theron (2003, p.356), the humanistic paradigm is a school of thought which emphasises that human beings are intrinsically good and willing to achieve something by using their potential. The following basic assumptions are relevant in this regard (Bergh & Theron, 2003, p. 357):

1. “Subjective or phenomenological experiences emphasise that humans do not only react to physical things; thus, they react to something that can be touched, seen, heard or smelt, but they also react to something that cannot be touched or seen. For instance, decisions taken by management, stressful situations and traumatising events such as being involved in an accident.
2. Human beings differ, they are not the same. This assumption emphasises the principle that no two individuals are alike.
3. Human beings have different personalities; they react differently to different scenarios. People involved in the same traumatic event will react differently.
4. Intrinsic goodness and self-actualisation emphasise the belief that people believe in the natural ability which is situated within them when achieving their goals. This assumption also emphasises that people have something that pushes them from inside to do something or to achieve what they want.
5. Free will or self-determination relates to people having freedom of choice. People have the right to choose what they want, what they think is good for them. This indicates that

people can control their own lives and achieve their goals. It also shows that people are responsible for their own lives and for what happens around them”.

According to systems theory (Chaplin & Krawiec, 1968), all functional systems are characterised by emphasising the way the mind functions. This involves aspects of the mind such as learning, attention, perception and intelligence, which are useful for adaptive behaviour. Lundin (1996) also states that functionalism focuses on the study of mental process in attempting to discover how mental processes function.

1.2.6.2 Empirical study

The behaviouristic paradigm is aimed at developing general principles of behaviour that are based on control and prediction of overt behaviour. The behaviourist John B Watson believed that only observable behaviour can be studied or researched objectively (Bergh & Theron, 2003).

The positivistic paradigm is based on an assumption that combines a deductive approach with the precise measurement of quantitative data through which researchers can discover and confirm the causal laws that permit predictions about human behaviour (Struwig & Stead, 2001). In addition, Bergh and Theron (2003) are of the opinion that a positivist paradigm is based on the external reality of certain laws used by detached and objective observers who test their hypotheses against experimental and other quantitative methods; for example assessing employees' aptitude and personality traits with the intention of making comparisons with measures for successful work performance.

The functional paradigm emphasises that psychology is seen as a practical science focusing on the mind, as it is functional to the individual's adaptation to the environment (Bergh & Theron, 2003).

1.2.7 Market of intellectual resources

The market of intellectual resources refers to the collection of beliefs which has a direct bearing on the epistemic of scientific statements. These beliefs are theoretical and methodological (Mouton & Marais, 1992).

1.2.7.1 Theoretical beliefs

Theoretical beliefs can be described as a general principle or a collection of interrelated principles that are put forward as an explanation of a set of known facts and empirical findings (Reber & Reber, 2001). Mouton and Marais (1992) regard theoretical beliefs as testable statements about social phenomena which involve questions like the ‘what is and why’ aspects of human behaviour.

A. Conceptual definitions

The relevant conceptual definitions are given below:

Emotion refers to the strong feelings of the human spirit, for instance love, hatred, grief and so on. Fontaine et al., (2002) regard emotions as a common language referring systematically to appraisals, psycho-physiological changes in facial expression, vocal and gestural behaviour.

Ethnic group refers to a group of people who are biologically related, or any group with common cultural traditions and a sense of identity (Reber & Reber, 2001).

Prototypicality refers to the ranking of emotion words according to “goodness of example”. This refers to how easily the word comes to mind or how likely it is to be labelled as an emotion (Fehr & Russell, 1984).

B. Models and theories

The componential emotion theory, which considers six emotional components – appraisals, psycho-physiological changes, expressive facial, vocal and gestural behaviour, action tendencies, subjective experience and regulation efforts are used in this study. Componential emotion theory focuses on dynamic multicomponential processes that are triggered by specific situational antecedents. This model integrates various emotion theories in Western emotion psychology and is essential for cross-cultural emotion research. It is also regarded as a sound point of departure for a study on emotion (Fontaine et al., 2002).

1.2.7.2 Methodological beliefs

Methodological beliefs can be defined as those beliefs which deal with the nature of social science and scientific research. These involve beliefs such as positivism, realism, neo-Marxism, as well as qualitative and quantitative models (Mouton & Marais, 1992).

The empirical study is presented within the positivist and functionalist frameworks. The root assumption of the functionalist framework is that humans resemble animals in facial and postural expression during emotional activity. There is a constant interaction or relationship between the mind and the body (Lundin, 1996).

1.3 RESEARCH DESIGN

1.3.1 Research Approach

The cross-sectional research design refers to the assessment of subjects at a single time in their lives (Struwing & Stead, 2001). A cross-sectional survey design is used to collect the data and attain the research goals. Cross-sectional research is usually the simplest and least costly alternative. Its disadvantages are that it cannot capture social processes and change. Cross-sectional research can be exploratory, descriptive, or explanatory, but it is most consistent with a descriptive approach to research (Neuman, 1997). The survey is a data-collection technique in which questionnaires are used to gather data about an identified population. The design is also used to assess interrelationship among variables within a population (Shaughnessy & Zechmeister, 1997). The cross-sectional research design is suitable to address the descriptive and explorative research. The research can be classified as descriptive. Descriptive research strives to describe something; it attempts to provide a complete and accurate description of the situation, (Struwig & Stead, 2001).

1.3.2 Research Participants

The study population of the first phase (free listing of emotion terms) consists of a convenience sample of entry level police applicants ($N=126$) from the South African Police Services. The sample includes isiNdebele speaking participants who have reached an entry level of grade 12.

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 isiNdebele language ($N=51$). The sample includes isiNdebele speaking participants who have a post matric qualification (diploma/ degree/ post graduate) to participate in this phase.

The study population of the third phase (Similarity Rating Task) consists of a convenience sample of experts (educators) in the isiNdebele speaking group ($N=183$) from different schools in the former KwaNdebele homeland in Mpumalanga province.

1.3.3 Research Procedure

The phases of this study are as follows:

Phase 1: Free listing task

This phase consists of four main steps or parts, which are:

Step 1: Generating prototypical emotion terms

The free listing questionnaire is distributed to 126 respondents who speak isiNdebele as their home language. The respondents are requested to list as many emotion words as they can think of in 10 minutes. The terms that are reported with a frequency of at least 5 or 10% are captured and retained for further study. The retained emotion terms are translated into English and are used to form a list of English emotion terms for the Ndebele ethnic group.

Step 2: Prototypicality, clarity, frequency and intensity ratings

The prototypicality, clarity, frequency and intensity ratings are done. To ensure comparability, all emotion words that are generated in step 1 are translated into English and the full list is then translated back to the Ndebele language. The full list is extended with emotion words from emotion lists from Western and cross-cultural research (Shaver et al., 1987). Thus a long list is generated that forms the translation equivalent in each of the cultural groups. Fifty-one cultural experts rated the prototypicality, clarity, frequency and intensity of all the emotion words on the list.

Step 3: Meaning similarity between emotion terms

The aim of this study is to identify similarity in meaning between emotion terms by clustering the 50 emotion terms in a limited set (six or seven) of emotion words. The pairs of emotion words are judged for similarity in meaning on a scale ranging from completely opposite in meaning to identical in meaning. Within the cultural group, 183 participants each judged the pair-wise similarity for 500 pairs of emotion words. The similarity of each pair is judged by 20 participants. Across the 20 participants, the average similarity is computed for each pair of emotion terms and a hierarchical cluster analysis is computed for the similarity matrix. For scientific interest, multidimensional scaling is applied as well. The expectation is that a three-to-four-dimensional structure is uncovered in the Ndebele ethnic group.

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 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 the language group. It is necessary to clean the data set by eliminating redundancy. All but one set of words formed from the same root (e.g. hate and hatred) is removed. Furthermore, these words are converted to nouns. 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) are rejected.

In order to ensure a comprehensive coverage of the emotion domain, the list of the emotion terms is 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 the 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 emotion literature, (2) consistent appearance in cross- cultural free listing and

prototypicality rating task, 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 (Extended English Emotion List) is again translated into isiNdebele language in order for the native speaking individuals to rate the prototypicality of each emotion term of the Extended Emotion List. In translating the terms, duplicate terms are removed. The final list of emotion words is rated by native language speaking experts on prototypicality for the concept of emotion.

Prototypicality Questionnaire

The Prototypicality Questionnaire is used for the isiNdebele speaking group to rate the emotion of the Extended Emotion List on prototypicality for the concept of emotion. The 51 respondents (language experts of isiNdebele language group with post matric qualifications) are asked to rate the terms on a 5- point scale. The scales are 0 (*definitely not an example of an emotion word*), 1 (*a poor example of an emotion word*), 2 (*a reasonable example of an emotion word*), 3 (*a good example of an emotion word*), 4 (*an excellent example of an emotion word*).

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 of the isiNdebele language group is used to draft the Similarity Rating Questionnaire. Emotion terms with the highest average scores based on prototypicality rating are included. A final list of 80 terms is used to construct the Similarity Rating, largely following the method and procedure suggested by Shaver et al., (1987) with the exception that terms are rated for statistical analysis. The Similarity Rating Questionnaire of the isiNdebele language group has 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 into 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 of 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 scale. The scales are 1 (*completely opposite in meaning (antonyms)*), 2 (*very opposite in meaning*), 3 (*moderately opposite in meaning*), 4 (*slightly opposite in meaning*), 5 (*slightly similar in meaning*), 6 (*moderately similar in meaning*), 7 (*very similar in meaning*), and 8 (*completely similar in meaning*). The instructions further mention that respondents need to remain concentrated and that every pair of words should be rated.

1.3.5 Data analysis

This part of the research relies on the cognitive representation of emotions by means of emotion terms, which are explored in order to conduct quantitative statistical analysis of the qualitative data. Emotion terms are then translated after which their frequency is determined. This indicates the prototypicality of emotion terms within the language group.

Excel is used to count the frequencies of the emotion terms and to determine the average of the prototypicality ratings. The statistical analysis is conducted using the SPSS program for Windows (SPSS, 2007). Multidimensional scaling and other dimensionality-reducing techniques are also used in this study for establishing the emotion structure. Inter-rater reliabilities are determined for the prototypicality and similarity sorting measurement instruments.

This study is conducted in Mpumalanga Province, Area Highveld, among members of the South African Police Service. The participants in this study include the functional police and public service act personnel who speak isiNdebele as their home language.

It is believed that the researcher will get a representative sample in Mpumalanga Province, Area Highveld, as most of the employees in this area are Ndebele speaking. According to a Statistics South Africa report, the Ndebele cultural group constitutes 53% of the Mpumalanga Province population.

1.4 RESEARCH PROCEDURE

The free- listing questionnaire is compiled. Ethical aspects of the research are discussed with the participants. The test battery is administered in isiNdebele on separate occasions at the different police stations in Mpumalanga Province. The respondents consist of police applicants who are recruited for the basic training programme of the SAPS in January 2008 and isiNdebele speaking clerks. Respondents are expected to complete the questionnaire (list emotion terms) in their mother tongue. A standardised procedure is followed by a qualified psychometrist in order to administer the test battery. Each respondent has his or her own table, chair as well as the necessary stationery (questionnaire, pencil, eraser and sharpener). The conference rooms are properly lit and ventilated. The supervised and controlled test session lasted for 15 minutes.

A prototypical rating questionnaire is compiled. Ethical aspects of the research are discussed with the participants. The test battery is administered by a native speaking language expert (respondents are isiNdebele speaking teachers from different Primary and Secondary schools on various different occasions, based on availability, and in possession of a post-matric qualification).

The similarity rating questionnaires is compiled. Ethical aspects of the research are discussed with the participants. The test battery is administered to the experts (educators) at different schools in former KwaNdebele Homeland in Mpumalanga province. A standardised procedure is followed by a qualified psychometrist in order to administer the test battery. Each respondent has his/her own desk, chair as well as the necessary stationery to administer a test. The classroom is properly lit and ventilated. The test session lasted for approximately 90 minutes.

1.4.1 Phase 1: Literature review

In phase 1 a complete review of the emotions, emotion structure, emotion domains and categories is undertaken. The sources used include:

- published books
- research articles

- journals

1.4.2 Phase 2: Empirical study

Phase 2 consists of descriptive research, participants, measuring battery, data collection and statistical analyses to fulfil the research objectives.

1.5 CHAPTER DIVISION

The chapters in this mini dissertation are presented as follows:

Chapter 1: Problem statement and literature review

Chapter 2: Research article: The emotion structure of the isiNdebele cultural group in the Mpumalanga Province.

Chapter 3: Conclusions, limitations and recommendations.

1.6 CHAPTER SUMMARY

This dissertation focuses on the manifestation of the emotion structure of the isiNdebele cultural group in South Africa. Chapter One provides the problem statement and gives an overview of the study in which the research objectives are stated. A literature review is then conducted which explores different views of previous research. In addition, the paradigm perspective of the research, which involves the intellectual climate and the discipline into which this study falls, is also clarified. The different steps of the study are outlined and indications of chapters to follow are given.

Chapter 2 provides a research article where the emotion lexicon, prototypicality of emotions and the emotion structure in the isiNdebele language is determined.

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CHAPTER 2

RESEARCH ARTICLE

THE EMOTION STRUCTURE OF THE ISINDEBELE SPEAKING GROUP IN MPUMALANGA PROVINCE

ABSTRACT

Orientation

This study is about the emotion structure of the isiNdebele speaking group in Mpumalanga province. Division regarding the total number of dimensions that are found in different cultural groups is also a serious challenge. Some emotion researchers argue that emotions are divided into one or two dimensions whereas some argue that emotions are divided into three or four dimensions.

Research purpose

The main purpose of this research is to study the prototypicality and meaning of emotion lexicon encoded in the isiNdebele speaking group, so as to generate prototypical emotion words and to identify the manifestation of the emotions for this language in South Africa, as well as the categorisation of emotion terms.

Motivation for the study

The study of emotions at work was previously neglected. Emotion Researchers focused their attention on two aspects of emotions, namely stress and satisfaction. As a result, the emotion researchers felt that these two aspects covered the topic of emotion more adequately. The insufficient supply of research which focuses more on emotions at work resulted in serious controversy regarding emotions. For example, some researchers believe that emotions are universal and some believe that emotions are culturally bound.

Based on these disagreements, it is necessary that research in the study of emotions be conducted which will contribute to addressing the challenges faced by emotion researchers.

Research design, approach and method.

A survey design was used that divided the study into three phases (i.e. a free listing questionnaire, a prototypicality rating questionnaire and, lastly, a similarity rating questionnaire). The free listing phase consisted of a convenience sample of the isiNdebele speaking group ($N=126$) with grade 12 qualifications in the South African Police Service. Fifty one ($N=51$) experts (educators) were requested to rate the prototypicality, clarity, frequency and intensity of all the emotion words on the questionnaire. The similarity rating phase consisted of a convenience sample of the experts (educators) in the isiNdebele speaking group ($N=183$) from different schools. Excel was used to compute

means and frequencies in the free listing and prototypicality phases while multidimensional scaling were done using SPSS to determine the emotion structure in isiNdebele.

Main findings

The main findings of the free listing task indicated the words with the highest frequency as cry, happy, laugh, angry, disappointed, confused, depressed, pain, tired, and abused. The results of this phase also indicated the basic emotion concepts of happiness and angry as the only emotion terms which mostly came to mind to the isiNdebele speaking group. The results of the prototypicality rating task indicated that the emotion terms ranked as the ten (10) most prototypical emotion terms for the isiNdebele speaking group ($N=51$) were (*ukuthaba khulu*) exhilaration (*itukuthelo/ ukukwata*) anger, (*ithabo elikhulu*) euphoria, (*ukuthaba*) cheerfulness, (*ithabo*) happiness, (*ukudana*) dejection, (*ukutluwa/ ukudana*) glumness, (*ukuthaba*) joviality, (*ukulila/isililo*) cry, (*imizwa ye thabo*) ecstasy. The results of the similarity rating task indicated the cognitive structure of emotion concepts whereby a two-dimensional structure (evaluation and power) was identified within the isiNdebele speaking group.

Practical/ managerial implications

South Africa comprises eleven official languages which represent the cultural groups in the working environment. As a result, the findings of this study might be used to develop diversity management material and/or courses that can be useful at work. Currently, there is no psychometric test that can be used for this cultural group, therefore, the findings in this study might be used as a benchmark to develop a unique and culture specific assessment of emotions for the isiNdebele speaking group. Furthermore, the findings of this study might be used as a foundation for conducting other emotion research that might be needed in South Africa. For instance, it might lead to the development of other psychological instruments that may be utilised for psychological interventions (counseling and emotional intelligence instruments).

Contribution/Value added

The results stated in this article added value to the domain of industrial psychology in a sense that other researchers may use it as a foundation for further emotion research in the workplace. It will be useful as employees will be able to know the emotions that are found in isiNdebele speaking group, as a result, they will be able to be aware of those emotions and able to manage them. It will form the basis on which psychometric instruments, interventions and counseling in the isiNdebele language will be formulated.

Key words: lexicon, prototypicality, dimensionality, culture, free-listing.

According to Ashkanasy, Zerbe, Charmine & Hartel (2002), emotions play an important role in the lives of human beings and, without doubt, emotions form an inherent part of the workplace. However, Fox and Spector (2002) are of the opinion that the broader field of organisation research that was conducted in previous years focused more attention on attitude, behaviour, cognition and personality than on emotions. Emotions at work are thus important research phenomena as part of organisational behaviour (Muchinsky, 2000). However, within this study of emotions in organisational behaviour, two research dilemmas have presented themselves:

Firstly, the study of emotion has been problematic for researchers as a result of strong disagreements about what emotions are, (Fehr and Russell, 1984; Russell & Barret, 1999; Russell & Carroll, 1999; Scherer, 2005) and the dimensions which emotions consists of (Fontaine, Scherer, Roesch and Ellsworth, 2007). Some researchers argue that emotions may comprise two, three, four or more dimensions (Fontaine et al., 2007). Some theorists believe that emotions only consist of an evaluation and arousal dimension (Russell, 1983), while others also include a power-control (Osgood, May & Miron, 1975) and unpredictability dimension (Fontaine et al., 2007) in the study of what the structure of emotions is.

Secondly, the cultural issues of emotions need to be taken into consideration when conducting emotion research. Some researchers consider emotions as universal (Izard, 1977 & Plutchik, 1980; Scherer, Summerfield & Wallbott, 1983; Ekman, 1984; Buck, 1988; Scherer & Wallbott, 1994) while others argue that emotions are culture bound (Averill, 1980; Harre, 1986). The conclusion can be drawn that it therefore becomes necessary to determine the structure of emotion within specific cultural groups. With this contribution of research, sound emotion research can then be conducted in organisations. In order to achieve this, the classical approach of Russel (1991) will be followed in which the emotions lexicon in a specific cultural group is determined, the prototypical emotion terms used in the cultural group are established and a cognitive structure of emotions is represented as an end result of a similarity rating task of emotion terms. In this study, emotion terms and emotion words refers to emotion lexicon. The specific cultural group that this study will focus on is the isiNdebele group in South Africa which is settled in Mpumalanga Province in the former KwaNdebele townships.

The isiNdebele cultural group forms the smallest cultural group in South Africa. According to Statistics South Africa, they constitute only 1,59% of the South African population; however, isiNdebele is still one of the eleven official languages in South Africa. Although the origin of the South African Ndebele is shrouded in mystery, they have been identified as one of the Nguni tribes. Their language is called amaNala and amaNdzundza and is related to that of the Ndebele people of Zimbabwe. They are the branch of the Zulus who split from King Shaka in the early 1820s under the leadership of Mzilikazi (Matjiga, 2006). The Ndzundza and Manala group, known as the Southern Ndebele, maintained their culture and traditions as amaNdebele. After a few years the two (Manala and Ndzundza groups) became separated and recognised their chieftainships as being independent from each other (Mahlangu, 2007).

Despite the fact that South Africa is characterised by eleven different languages and cultures, there have only been three studies on emotion research and aimed at highlighting both the similarities and differences between cultural groups (Du Toit, 2009; Fourie, 2009; Nicholls, 2008). This, in turn, indicates the need for more studies about emotions to be conducted in South Africa. This research study will aid in the understanding of what emotions are and will provide an emotion structure of the isiNdebele cultural group of South Africa. More specifically, this research will assist in achieving a better understanding of the emotion terms that are generally used by the isiNdebele cultural group. Such research into the emotion structure of a specific cultural group will also aid in understanding the emotion of others better, improves the ability to manage emotions effectively and aid in constructing the emotion measurement of the isiNdebele cultural group in South Africa in a more reliable manner.

Next, the research literature will expand on the meaning of emotion, and what emotion comprises will be further investigated with specific reference to emotions and emotion lexicon, prototypicality of emotions and emotion dimensions. The second part of the research literature will explore emotions and culture with specific reference to the universality and the relativity of emotions. Based on the research literature, research objectives will be formulated and the potential value of the study added to the field of industrial psychology will be presented.

TRENDS FROM THE LITERATURE

Emotion Lexicon

Language and cultural groups apparently differ considerably in defining and clustering emotion terms and the size of their emotion related lexicon (Clore, Ortony, and Foss, 1987). These three terms are used interchangeably. For instance, the Malaysian cultural group has 230 emotion terms (Boucher, 1979), the Indonesian language has 235 emotion terms (Gehm & Scherer, 1988), and the English group has more than 500 emotion terms (Averill, 1975; Bush, 1973). There are 750 emotion terms used by the Chinese people (Boucher, 1979) and the Filipino cultural group contain about 256 emotion related words (Church et al., 1998). Kosmitzki and John (1991) report that German- English bilinguals differ in their cultural backgrounds as a function of a language, while Buck and Zhang (1991) report that Chinese students differ in their use of emotion words as a function of the language used to express their emotions. Matsumoto and Assar (1992) also support the view that cultural differences in language produce differences in the judgement of emotion terms.

Apart from the issue that the number of emotion terms in cultures differs, Church et al., (1998) emphasise that emotion terms have often been included in emotion studies without explicit criteria for designating terms that refer to emotions. This challenge can only be addressed by having a clear understanding of specific emotion terms used across cultures. These results provided insight into the question of what constitutes an emotion term in a specific cultural group. According to Clore et al., (1987) emotion terms referring to physical states (e.g. active, strong, sleepy) and cognitive states (e.g. interest) are not perceived as good examples of emotion terms by the Filipino. However, (Clore et al., (1987) propose that the best examples of emotion words are those that refer to internal mental conditions with a dominant focus on affect rather than behaviour or cognition.

Indeed, Fontaine et al., (2002) found that words from the emotion lexicon are used differently by different cultural groups. In other studies conducted by Markus and Kitayama (1991) it was also found those emotion lexicons (words) differ across cultures, while Hiatt (1978) maintains

that some English emotion words have no equivalence in other languages. For instance, words such as terror, horror and dread are used by English-speakers to refer to fear. In certain Eastern cultures, for example in China, the concept “guilt” would be closely linked to interpersonal relationships whereas, in Western cultures, such as the USA, this same term would be related to the violation of moral and legal norms. However, despite this confusion, Alonso- Arbiol, Shaver, Fraley, Oronoz, Unzurrunzanga and Urizar, (2006) found five basic level emotion words (love, happiness, anger, sadness, and fear) in American English and Indonesian cultures. In addition, the Basque country also revealed the five basic level emotion categories similar to those found in American English and Indonesia (love, happiness, anger, sadness and fear) as well as five other small positive emotion categories. However, Brandt & Boucher (1986); Gehm & Scherer (1988) and Shaver, Schwartz, Kirson & O’ Connor, (1987) emphasise that happy and sad appear to be the only emotion terms to be represented by clusters in all of the languages studied thus far.

The conclusion can be drawn that the number of emotion words in different cultures differs. Some emotion words are universal but others are typically used in cultural groups. The prototypicality of emotions therefore needs to be determined in cultural group – that is, the typical emotion words used in that specific language.

Prototypicality of emotions (Prototypicality theory)

The prototypicality theory emphasises the most basic level of categorisation of emotion words used by ordinary people (Shaver et al., (1987). In the application of the prototypicality method, the ranking of emotion words according to goodness of example, how easily it comes to mind or how likely it is labelled as an emotion term are rated by a specific cultural group (Fehr and Russell, 1984).

Kitayama and Markus, (1991); Church et al., (1999); and Kitayama et al., (2000) all support the notion that determining and testing emotion lexicons and prototypes becomes crucial if one may assume that descriptive emotion terms differ across cultures. In addition, Church et al., (1998) emphasise that it is essential that the prototypicality of emotion words be determined if there is to be any understanding of the emotions that are represented in everyday life within a specific cultural context.

In a South African study that was conducted by Fourie (2009) in which the prototype theory was applied, it was found that the five prototypical terms with the highest scores in Setswana were *cry, like, fed up, warming and love*. However, Nicholls (2008) identifies the five most prototypical emotion terms in Sepedi as *emptiness/glumness, melancholy/moodiness, restlessness, unhappiness/displeasure, compassion/pitifulness, pity/sympathy* and *tired*. Furthermore, Nicholls (2008) also found *shock, doubt, humiliation, shyness* and *exuberance* to be the most prototypical emotion words for the Xitsonga group whereas *wrath, suspicion, sinfulness, fondness* and *insecurity* were the most prototypical emotion words for the Tshivenda cultural group in South Africa. On the other hand, Du Toit (2009) found *rage, fear, angry, hate, sadness, anxiety, happy, joy, ecstasy* and *jealousy* to be the most prototypical emotion terms in respect of the Afrikaans-speaking group in South Africa. Scherer (1985) emphasises that *anger, fear, disgust, happiness* and *sadness* are the five major types of emotional states that may be expected to occur frequently in the daily lives of many organisms. In further studies conducted by Shaver et al., (1987), it was found that *fear, sadness, anger, joy* and *love* are the most frequently experienced emotions.

Furthermore, in a study that was conducted by Fontaine et al., (2002), which involves the Indonesian and Netherlands cultural groups, the five most prototypical emotion terms found within Indonesia were *happy, love, hate, joy* and *sad*, whereas *joy, anger, sadness* and *rage* were found to be the most prototypical terms found in the Netherlands. In addition, the seven most prototype emotion terms (*happiness, sadness, fear, anger, surprise, disgust* and *neutral*) were found in a study of facial expression that was conducted by Ekman and Friesen (1976).

Clore et al., (1987) found *happy, sad, angry, fearful, disgusted, surprised, ashamed* and *guilty* to be the most prototypical emotion terms. However, Church et al., (1998) recognised *fearful, surprise, uncertain, quiet, tired* and *sleepy* as the most prototypical emotion terms. Ortony & Tuner (1990) concluded that the most prototype emotion terms among the Filipino speakers are *anger, anxiety, fear, happiness, contentment, sadness* and *arousal*. This indicates that different cultural groups identified diverse most prototypical emotion terms in their cultural groups. In view of the fact that Fontaine et al., (2002) previously indicated that emotion terms are used by the different cultural groups, this remains a challenge in South Africa as it is incumbent on the

emotion researchers to uncover the most prototype emotion terms that are common to the eleven cultural groups in South Africa.

Although it would appear that the majority do share a common sense notion that affect includes the self reportable feelings of *happiness, sadness, elation, depression, tension, relaxation* and countless others including, but not limited to those, involved in mood and emotion (Russell & Carroll, 1999), many emotion terms are culture specific and therefore the cognitive emotion structures that exists for specific cultural groups need to be determined.

The meaning of emotion as emotion dimensions

For more than half a century, emotion researchers have attempted to establish a dimensional space that would account for the both similarities and differences in emotional experiences in the most economical way. However, there has been considerable disagreement about the number of emotions and the nature of the dimensions that would provide an optimal framework for studying emotions (Fontaine et al., 2007) in organisations.

Different emotion researchers have different understandings about the total number, dimensions or categories of emotions. Certain researchers emphasise one or two dimensions of emotions (Fiske, Markus, Kitayama & Misbett, 1998) whereas others found three or four dimensions (Osgood, May & Miron, 1975; Nicholls, 2008). Watson and Tellegen (1985) emphasise that an emotion model should focus on both positive affect (PA) and negative affect (NA), whereas the circumplex models of Russell, (1980); Larsen and Diener, (1992); and Russell, (2003), highlight pleasantness and activation dimensions. This “circumplex model” of emotion is presented as a circle with the circle indicating those emotions that are similar and opposite to each other and ranging from arousal to sleepiness and from pleasure to displeasure or misery (Russell, 2003). Fontaine, Scherer and Roesch (2006) raise a question about the total number of emotions with Fontaine et al., (2007) maintaining that it is the fact that emotion theories all suggest very different answers to this question which gives rise to the ongoing debate. Ongoing research is therefore needed to establish the cognitive structure of emotions in specific cultural groups.

Russell and Mehrabian (1977) regard valence and arousal as the two dimensions of emotions that account for the majority of the variance in effective judgements. Arousal may be interpreted as the extent to which an individual incorporates subjective experiences of arousal into a conscious affective experience, and it may be associated with a tendency to attend to the internal sensation associated with an affective experience (Fieldman, 1998). Arousal ranges from sleep through intermediate states of drowsiness to alertness with frenzied excitement at the extreme end (Mehrabian, 1972a, b; Mehrabian & Ksionzky, 1974). Valence may be viewed to relating to how well one is doing at the level of subjective experience and ranges from displeasure to pleasure and the extent to which an individual incorporates pleasantness or unpleasantness into his/her conscious affective experience. It may also be associated with a tendency to attend to the unpleasant/pleasant aspects of stimulus (Fieldman, 1995a).

Further studies conducted by Osgood et al., (1975) indicate that the dimensions of evaluation, activity and potency or power may be regarded as the major components of the meaning of natural languages. According to Hickson, Lee, Schneck and Pennings (1971); MacMillan (1978), and Pfeffer (1981), power may be defined as the capacity to exert the will.

Russell and Barret (1991) pointed out that, from the beginning of 1991, the *Journal of Personality and Social Psychology* has published 359 articles in which emotions were among the variables assessed. Although often implicitly, all 359 articles presupposed some structures of emotions. Unfortunately, there is no consensus on what the structure of emotions should be and, indeed there is every appearance of disagreement. Russell and Barret (1991) are of the opinion that this is as a result of the fact that some researchers use categories, some use dimensions; some use bipolar concepts, some unipolar concepts; some presuppose simple structure while some use a circumplex structure in order to classify emotions. Examples of research findings that found different cognitive structures of emotions include, but are not limited to, the following:

- Dittman's (1972) approach to the study of emotions is to question how people conceptualise emotions, and would be to seek the dimensions in terms of which they perceive both the similarities and differences among feelings. Rapport (1971) found a single dimension only that was interpretable in his study, namely the pleasure –

displeasure dimension. In contrast, Fiske et al., (1998) found that individualism and power-distance both stand out as two important cultural dimensions affecting the psychology process. In addition, Paez and Vergara (1995) and Arrudel, Hatzichriston, Wensik, Rosenberg, Van Twiliet, Stedena and Meijer (1997) established that cultural femininity and uncertainty avoidance are two dimensions that correlate strongly with higher emotional intensity.

- In addition, Block (1957) used a semantic differential technique in order to explore the meaning of emotions specifically. He also obtained evidence of two dimensions, namely, pleasure and arousal. In a study that was conducted by Russell (1983) and which involved five language groups (Gujurati, Groation, Japanese, Chinese and English), it was found that emotion-related words fell roughly in a circular order in a space which was definable by two dimensions: (pleasure – displeasure and arousal – sleep). Furthermore, Scholsberg (1952); Engen, Levy and Scholsberg (1957; 1958); Abelson and Sermal (1962); Gladstones (1962); Osgood (1966); Micko (1970); Dittman (1972); and Bush (1973); all agree that pleasure – displeasure and arousal – sleep are the major dimensions in any description of emotions.
- Fontaine et al., (2007) express the view that four dimensions are necessary in order to represent similarities and differences satisfactorily in the meaning of emotion words. Those dimensions include evaluation, pleasantness, potency - control, activation - arousal and unpredictability which consist of six components of emotion (appraisals of events, psychophysiological changes, motor expressions, action tendencies, subjective experiences and emotion regulation). Fontaine et al., (2007) argue that no previous emotion studies had included all six of these components. In addition, they emphasise that their study was the first study to have included all six of the major components of emotions as identified by emotion researchers.
- Watson and Tellegen (1985) emphasise that the emotion model should focus on both positive affect (PA) and negative affect (NA), whereas the circumflex model of Russell, (1980); Larsen, Diener, (1992) and Russell, (2003), highlight pleasantness and activation

dimensions. This “circumflex model” of emotion is presented as a circle with the circle indicating those emotions that are similar and opposite to each other and ranging from arousal to sleepiness and from pleasure to displeasure or misery (Russell, 2003).

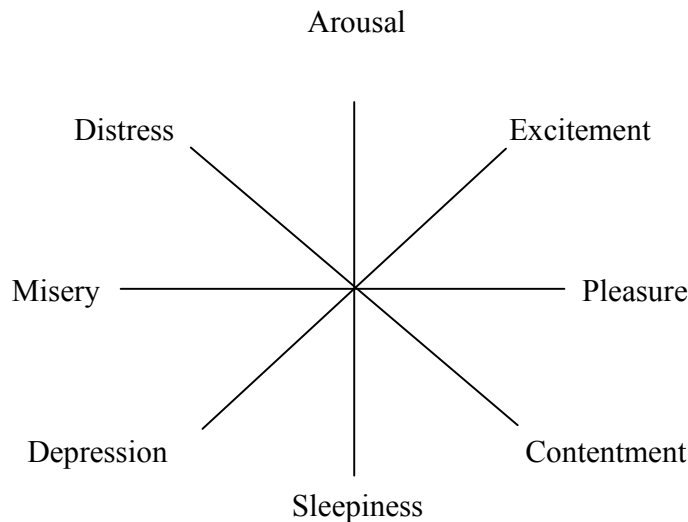


Figure 1. The circumflex model of Russell (1980).

The issue of emotion dimensions across different cultural groups is also a serious challenge faced by national and international emotion researchers. Hence, Russell and Barret (1999) stress that the naming and the interpretation of dimensions are both extremely difficult to do. In fact, this may be the reason why different researchers find different emotion dimensions.

As a result, this indicates that there is still a challenge regarding the number or size of emotion words used by different cultural groups. Hence, different cultures have identified different prototypical emotion terms in their studies. The total number of emotion dimensions identified across cultures is still a dilemma in the study of emotions. Therefore, more studies on emotions and culture need to be considered to clarify these challenges.

Emotions and culture

According to Russel (1989) it is emphasised that the key research question remains as to whether or not all emotions are experienced, expressed and represented similarly across cultural boundaries with the argument being waged as to which aspects of emotion are common to all human beings, and which are common to members of particular cultures only. There are, however, certain emotion theorists who anticipate more universal aspects of emotions (Izard, 1977; Plutchik, 1980; Panksepp, 1982; Ekman, 1984; Tomkins, 1984; and Buck, 1988), whereas there are also others who anticipate more culturally specific aspects (Averill, 1980; Harre, 1986; Levy, 1984 and Solomon, 1977). This, in itself, offers a real challenge in the study of emotions. On the other hand, Ekman, Friesen and Ellsworth (1972) emphasise that some aspect of emotions appear to be universal. For instance, the same facial expressions are associated with particular emotions in widely different cultures.

However, research conducted by Mesquitta et al., (1997) and also Shipper, Kincaid, Rotondo and Hoffman (2003) indicates that cultural variations in emotions do exist. In addition, Saucier and Goldberg (1992) maintain that most, if not all, of the emotions experienced by the members of a specific cultural group will be encoded in the languages of that group while the most basic or important emotions will be encoded in most languages. Sommers (1984) also supports the notion that there are strong cultural similarities with respect to the emotion terms of love, happiness and joy, all of which are considered desirable in all cultures. Furthermore, Plutchik (1980) indicates that words such as angry, afraid and happy appear in all languages and that these words represent the universal experiences of different cultures. Indeed, Ekman and Oster (1979) support the notion that there is universality across cultures in the expression of happiness, anger, disgust, sadness and fear while Matsumoto and Kishimoto (1983), as well as Van Bezooijen, Otto and Heeman (1983), regard smiles, frowns and other facial expressions as having similar meaning in all cultures.

In contrast, Wiezbicka (1992) argues that there are no universal emotion concepts, and that emotion terms such as anger and sadness are English cultural artefacts, and that it is not possible to match these with concepts in other languages or cultures. Lutz and White (1986) and Lutz (1988) support the notion that the emotion term may be perceived as designating a state or a process that is intrinsically related to an aspect of cultural context found only in the specific society in which the term is used. Fontaine et al., (2002) are also of the opinion that emotion terms are used differently by different cultural groups.

Despite the different views about emotion terms, Mesquita and Frijda (1992) stress that there are cultural similarities and differences in respect of all the components of the emotion process (i.e. the antecedent events, appraisals, physiological reaction patterns, action readiness, emotional behaviour and regulations). These prove that additional research about emotions is still needed in order to clarify the issue of universality versus relativity. In addition, Shaver, Murdaya and Fraley (2001) stress that the field of emotion research needs more studies to be conducted in the different cultures, based on languages with different historical roots, so that the issue of universality and relativism may be evaluated extensively. This study may be considered relevant as it is hoped it will assist in bringing about a better understanding of the emotion terms that are generally used by the isiNdebele cultural group in South Africa.

South Africa is a multicultural country with eleven official languages, one of which is isiNdebele. The isiNdebele ethnic group is the smallest cultural group in South Africa and comprises 1, 59% only of the South African population. The group originates from the Nguni tribe of North Africa and settled in the Drakensberg Mountains under the chieftainship of Ndebele (Van Warmelo, 1930).

It is clear that psychologists and emotion researchers have failed to agree on a number of fundamental issues concerning emotions. For instance, they have failed to agree on a formal definition of the emotion term, on the total number of emotion dimensions and on the specific model that should be used to explain emotions (Fehr & Russell, 1984). The fact that South Africa is characterised by eleven official languages as well as eleven cultural groups emphasises the need for South African emotion researchers to conduct extensive studies into the understanding

and meaning of emotion lexicon within the South African context. Cross-cultural differences in respect of the experience and expressions of emotions constitute an important topic, not only in current social psychology, but also in classic and modern philosophy (Fiske et al., 1998). Consequently, Hermaun and Raybeck (1981) as well as Fontaine et al., (2006) are of the opinion that it is essential that the richer cross-cultural aspects be considered in emotion studies.

The conclusion can be drawn that it becomes essential to determine the emotion lexicon with regard to the prototypicality of emotion terms, to establish the emotion dimensions and to find out the understanding and interpretations of emotions and culture across the different language groups in order to acquire sufficient knowledge regarding cross-cultural differences and similarities.

Therefore, it is crucial to ensure that more research studies are conducted which focus on identifying the emotion lexicon, the most and least prototypical emotion terms used across cultures, and to clarify the meaning of emotions and culture and the emotion dimensions in specific cultural groups. The study of emotion and culture remains an important research topic. This gives rise to the following research objectives;

- To determine the emotion lexicon, prototypicality of emotion, dimensions of emotion and emotion and culture conceptualised in the literature.
- To determine the different and representative emotion words within the isiNdebele- speaking group in the Mpumalanga province
- To determine the relevant and representative prototypical emotion words that have been encoded in the isiNdebele- speaking group in the Mpumalanga province
- To determine the cognitive emotion structure of the isiNdebele- speaking group in the Mpumalanga province (emotion dimensions it consists of)
- To determine the inter-rater reliability of the raters and reliability of the measurement instrument as well as the dimensions of the emotion structure.

METHOD

Research design

The objectives of this study were achieved by using a survey research (Kepple, Saufley, & Tokunaga, 1992). The advantage of this design (survey design) is that the researcher can obtain a large amount of the information (free listing of emotion words as well as similarity sorting of emotion) stated by the large population (isiNdebele speaking group in Mpumalanga province). However, each research design has disadvantages. The disadvantage of this design is that it is time consuming (Kerlinger & Lee, 2000).

This research was presented in three (3) independent studies. That is free listing, prototypicality rating, and lastly the similarity sorting of emotion terms for the isiNdebele – speaking group. The participants, characteristics of the participants, measurement instrument, procedure, data analysis and results will be presented for each study respectively:

Study 1: The Free listing

Participants

The first phase of this study consisted of a convenience sample of the isiNdebele speaking group in Mpumalanga Province ($N=126$) who have a grade 12 qualification and are working in South African Police Service. Table 1 presents the characteristics of the participants.

Table 1

Characteristics of the isiNdebele speaking participants of the free listing exercise (N=126).

Item	Category	Frequency	Percentage
Gender	Male	54	43
	Female	72	57
Age	18-27	62	49
	28-37	41	33
	38-47	15	12
	48+	8	6
Language	IsiNdebele	126	100
Province	Mpumalanga	125	99
	Limpopo	01	1
Educational Level	Grade 12	84	67
	Exemption	17	14
	1-2yr Dip	13	10
	3yr Dip/Degree	8	6
	Post Graduate	4	3

The study population included only the SAPS employees who are of the isiNdebele speaking group ($n=126$). In terms of the gender, 43 % ($n=54$) were men and 57 % ($n=72$) were women. Forty nine per cent (49. %) of the participants were between the ages of 18 and 27, ($n=62$), whereas 33 % ($n=41$), were between 28 and 37 of age. In addition, 12 % of the participants were between the ages of 38 and 47 ($n=15$) while 6 % ($n=8$) were 48 years and older.

Ninety nine per cent of the participants were from Mpumalanga Province whilst only 1 percent was from Limpopo Province. The educational level of the participants ranged from grade 12, which is 67 % whilst grade 12 with exemption constituted 14 %;.10% had a one or two year diploma whereas 6 % had a three year diploma or degree. Lastly, 3 % had post graduate qualifications.

Measuring instrument

This study focused on identifying the relevant and representative emotion words that are used by the isiNdebele-speaking group in the Mpumalanga province. A free listing emotion questionnaire was 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, the respondents were asked to list as many emotion terms they can think of in ten (10) minutes. The station commissioners of the three stations (Siyabuswa, Kwaggafontein and KwaMhlanga) were approached by the Psychometrist to get the permission to conduct the research for this study. Furthermore, the psychometrist also approached and requested the participants who were isiNdebele speaking to participate in this study. The psychometrist indicated to the participants that they are not forced to participate in this study. However, the researcher emphasised that it is useful for the participants to be part of the study since they form the relevant target group for the study of the isiNdebele speaking group in Mpumalanga province.

During the session, the psychometrist stated the purpose of the study and asked the participants to be part of this study. After the participants agreed verbally to participate in the study, the psychometrist distributed pencils, erasers and questionnaires to the participants. The participants were assisted by the psychometrist to complete part 1 (biography part) of the questionnaire and emphasised that they should use an X mark to indicate their choice on the questionnaires. The psychometrist emphasised on the instruction that the participants should list as many emotion terms they can think of in ten (10) minutes on the free- listing questionnaire. After ten minutes questionnaires, pencils and erasers were collected from the participants and the psychometrist thanked the participants for being part of the study.

Data analysis

Free listing 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, the 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 medium per emotion term.

RESULTS

All the emotion terms that were reported five times or more by the participants were adopted/ selected to compile the Basic English Emotion List or BEEL. Table 2 reports the emotion terms that were reported five times or more by the respondents of the isiNdebele speaking group. Emotion words or phrases that were mentioned five times and more were captured, resulting in a list of eighty two (82) emotion words which had a frequency of 5 and higher.

Table 2

Emotion terms (reported five times or more)

IsiNdebele			IsiNdebele		
Original IsiNdebele list	English translations	Number of participants reported the term	Original IsiNdebele list	English translations	Number of participants reported the term
Lila	Cry	94	Hlogomela	Careful	9
Thaba	Happy	91	Kumbi	Sad	9
Hleka	Laugh	77	Ngakatjhaphuluki	Uncomfortable	9
Kwata	Angry	77	Thukana	Swear	9
Swaba	Disappointed	64	Zindla	Thinking too much	9
Hlangahlangana	Confused	58	Idla	Eat	8
Gandeleleka	Depressed	55	Limala	Injured	8
Ubuhlungu	Pain	40	Nzinza	Relax	8
Dinwa	Tired	39	Sola	Regret	8
Hlukomezeka	Abused	37	Ukoma	Thirsty	8
Silingeka	Upset	34	Bekezela	Perseverance	7
Tsirimezeka	Faint	33	Cula	Singing	7
Thukwa	Scared	32	Katelelwa	Forced	7
Hloya	Hate	28	Khohlwa	Forget	7
Thanda	Love	22	Rhuwelela	Scream	7
Rareka	Surprised	20	Umona	Jealousy	7
Tswenyeka	Worry	20	Betha	Beat	6
Khuthala	Active	19	Delela	Defy	6
Moyizela	Smile	17	Duduza	Comfort	6
Gula	Sick	16	Hlala	Stay	6
Donda	Lazy	15	Hlanza	Vomit	6

Ilwa	Fight	15	Hlonipha	Respected	6
Tjhaphuluka	Free	15	Hluthuleka	Impulsive	6
Isizungu	Lonely	14	Inyazo	Undermined	6
Khanuka	Attract	14	Khumbula	Remembered	6
Ngheneka	Demotivated	14	Silaphazeka	Cleanliness	6
Phelaihiziyo	Short temper	14	Tlhoga	Poor	6
Fisa	Wishful	12	Bambeka	Busy	5
Hlanya	Mad	12	Berega	Work	5
Lamba	Hungry	12	Dengezela	Shivering	5
Khamba	Walk	12	Dlala	Play	5
Lala	Asleep	12	Hlulwa	Defeated	5
Qabanga	Think	12	Isiyezi	Dizzy	5
Balabala	Complain	11	Itjhada	Noisy	5
Khakhazisa	Pride	11	Liya	Disturb	5
Khulumawedwa	Speaking alone	11	Lunga	Kind	5
Lalela	Listen	11	Mnandi	Nice	5
Phelamandla	Powerless	11	Sutha	Full up	5
Rhameja	Shout	11	Tlhaga	Suffer	5
Thula	Quiet	11	Tjharhatha	Roaming around	5
Rhawukela	Sorry	10	Yamukela	Accept	5

Table 2 presents a list of the top 249 most prototypical isiNdebele emotion words, the English translations, and the average scores of the prototypicality rating of each term. This list was expanded to include the 24 terms used in the GRID instrument so as to yield 80 terms which would be used in the third phase (the similarity rating phase). A Cronbach's alpha of 0,99 for the prototypicality data was obtained.

According to Table 2, the emotion words which most readily came to mind as examples of the 'emotion' words by the isiNdebele speaking group were the emotions of *cry* (*lila* = 94), *happy* (*thaba* = 91), *laugh* (*hleka* = 77), *angry* (*kwata* = 77), *disappointed* (*swaba* = 64), *confused* (*hlangahlangana* = 58), *depressed* (*gandeleleka* = 55), *pain* (*ubuhlungu* = 40), *tired* (*dinwa* = 39), and *abused* (*hlukomezeka* = 37).

Study 2: Prototypicality Rating

Research Participants

The population in the second phase (Prototypicality ratings of the Extended English Emotion List) consists of a convenience sample of Language Experts in isiNdebele language from different occupations ($N=51$). Table 3 presents the characteristics of the participants.

Table 3

Characteristics of the participants of the Prototypicality Rating Exercise (N=51).

Item	Category	Frequency	Percentage
Gender	Male	21	41
	Female	30	59
Age	18-27	4	8
	28-37	22	43
	38-47	22	43
	48+	3	6
Edu-Level	1-2yr Dip	7	14
	3yr Dip/Degree	33	65
	Post Graduate	11	21
Province	Mpumalanga	51	100

The sample included 100 % of isiNdebele speaking group from Mpumalanga Province. In terms of gender, 41 % were men ($n=21$), and 59 % ($n=30$) were women. Eight per cent (8%) of the participants were between the ages of 18 and 27. Forty three percent (43%) were between 28 and 37 years of age. Another forty three percent (43 %) were between 38 and 47 years of age whereas 6% of participants were older than 48 years. In terms of education level, fourteen percent (14 %) had 1 – 2 year diplomas. Sixty five percent (65 %) of the participants had three year diplomas or degrees, whereas 21 % had post graduate qualifications.

Measuring instrument

The Prototypicality questionnaires were used to rate the emotion terms of the Extended Emotion List on prototypicality for the concept of emotion. The Prototypicality questionnaires were used where emotion terms were listed in randomised order. The scale used ranged from 0 to 4 – points. The scales used were 0, (*definitely not an example of an emotion word*), 1 (*a poor*

example of an emotion word), 2 (a reasonable example of an emotion word), 3 (a good example of an emotion word), 4 (an excellent example of an emotion word).

Procedure

The prototypical rating questionnaire which was compiled from the Basic English Emotion List was used to rate the prototypicality of the emotion terms. The participants were arranged into small groups in different venues. The test battery was administered by the registered Psychometrist who was an expert in the isiNdebele language. Ethical issues in this study were explained to the participants before the administration of the questionnaire. At the beginning of the session, the psychometrist distributed questionnaires, pencils and erasers to the participants. The participants were requested to indicate the extent to which of the emotion terms that were on the questionnaires were an example of the concept of emotion in their culture. The participants were given the instruction to rate on a scale ranging from 0-4 i.e. 0 = (definitely not an example of emotion words) 1 = (a poor example of an emotion word) 2 = (a reasonable example of an emotion word), 3 = (a good example of an emotion word) 4 = (an excellent example of an emotion word). The psychometrist emphasised that all the terms on the questionnaire should be rated by using the response scale on the questionnaire.

The psychometrist collected questionnaires, pencils and erasers and thanked the participants for being part of the study at the end of the session.

Data analysis

A Cronbach alpha was computed for each of the emotion terms. All the alpha scores that were less than 0.40 reported by participants were removed. The 80 emotion words with the highest average scores (including 24 GRID terms reported by Scherer, 2005) which remain were most prototypical and were retained.

RESULTS

Table 4 represents the original list of the top 80 most prototypical isiNdebele emotion words, as well as English translations. The list was extended with the 24 terms used in the GRID instrument to yield 80 terms.

Table 4

Mean prototypicality ratings of emotion words in the isiNdebele speaking group

isiNdebele	English	M
ukuthaba khulu	exhilaration	3,5
itukuthelo/ukukwata	anger	3,5
ithabo elikhulu	euphoria	3,4
ukuthaba	cheerfulness	3,4
ithabo	happiness	3,3
ukudana	dejection	3,3
ukutlhuwa/ukudana	glumness	3,3
ukuthaba	joviality	3,3
ukulila/isililo	cry	3,3
imizwa yethabo	ecstasy	3,2
ukuba nethabo	jolliness	3,2
ukujabula/ukuthaba	jubilation	3,2
itukuthelo engalawulekiko	rage	3,2
umuzwa wethabo elikhulu	rapture	3,1
isizi/ubuhlungu	misery	3,1
ukuzonda/inzondo	hate	3,1
ukuthukwa	agitation	3,1
thanda/ithando	love	3,1
ubuhlungu/isizi	pain	3,1

Table 4 continues

ukuthanda	affection	3,1
ivalo/ukuthukwa	dismay	3,1
itukuthelo ekulu	outrage	3,1
namajadu nethabo	exuberance	3,1
ilaka	wrath	3,1
saba khulu/ivalo	dread	3,1
ukutshwenyeka emmoyeni	anxiety	3,1
ukungathabi	displeasure	3,
ukutlhuwa/isizi	sorrow	3,
ukugandeleleka/ukudana	depressed	3
ukutlhuwa	distress	3
ukujabula	pleasure	3
ukuhlala udubhule	grouchiness	3
ukusaba/ukuthukwa	fright	3
amagama wethabo	joy words	3
zwise ubuhlungu/ubuhlungu	hurt	3
ubumnandi/ukuthabisa	pleasantness	3
ukusilingeka/ukudineka	resentment	3
ukungaphatheki kuhle/ubudisi	awkwardness	2,9
ukumomotheka	smile	2,9
dubhulileko	grumpiness	2,9
sethandweni	in love	2,9

Table 4 continues

ukutlhuwa/ukubaba	bitterness	2,9
amatlhuwo/isizi elingapheliko	melancholy	2,9
isirhawu	compassion	2,9
ukuthukuthelisa/ukucasula	exasperate	2,9
ukusaba/ivalo	fear	2,9
ukuthanda/ukwazisa	liking	2,9
ukukarwa	admiration	2,9
ukuzizwa udanile	feel chagrined	2,9
ivalo/ukuthukwa khulu	terror	2,9
ukuhlukumezeka ngomkhumbulo/ivalo	torment	2,9
tshwenyeka	worry	2,9
thukiweko	scared	2,9
ubuhlungu bomkhumbulo/bomzimba/ukutlhuwa	anguish	2,8
tlhorisiweko	abused	2,8
ithabo/ikareko	thrill	2,8
ukunghonghoyila/	complain	2,8
hleka	laugh	2,8
ngakathabi/silingekileko/ketula	upset	2,8
ukuthanda	fondness	2,8
ukuzisola	remorse	2,8
ukuthukuthela	lose temper	2,8
ukuba nesizungu/wedwa	loneliness	2,8

Table 4 continues

ukuthanda khulu	adoration	2,8
ukuthukwa/ukusaba	nervousness	2,8
ukurarana/irarano/ukutjharagana	confusion	2,8
umona	envy	2,8
ukusilinga	irritation	2,8
igandelelo emkhumbulweni/emmoyeni	stress	2,7
ba netjisakalo	eagerness	2,7
ukuthukwa/ukuthusa/ukurara	shock	2,7
ba nesirhawu	pitifulness	2,7
isizi	grief	2,7
ukubabaza/ukumangala	astonishment	2,7
itlhuwo	woe	2,7
umona/isikhwele	jealousy	2,7
izwelano	sympathy	2,7
ukuninwa/ukuhlukaniswa	isolation	2,7
ukungabi nethabo	unhappiness	2,7
thusa/rara	startle	2,7
inzondo	aversion	2,7
itukuthelo efihliweko	suppressed anger	2,7
rhuwelela	shout	2,7
phela ihliziyo/nganasineke	impatience	2,7

itjhiseko	passion	2,7
Table 4 continues		
khathazako/gugunako	uncomfortable	2,7
ukusaba/ukuba namahloni	diffidence	2,7
ikanuko/itjisakalo	desire	2,6
nomusa	kind	2,6
silingekileko/nesithukuthezi	fed up	2,6
ikanuko	logging	2,6
okwesabekako/okuthusako	horror	2,6
isenzo senturhu/sokuhlasela	aggression	2,6
ukukhumbula ekhaya	homesickness	2,6
amatluwo	sadness	2,6
ukudoswa bubuhle/ithando lesikhatjhana	infatuation	2,6
amajadu/itjisakalo	enthusiasm	2,6
ukungahlaliseki/ukuthukwa	tenseness	2,6
tjhiriya/duduza/ukuzigedla	comfort	2,6
ukuhlulukela	miss	2,6
ukungahlaliseki	restlessness	2,6
ukukara/ukumangala	amazement	2,5
ihlamba/thuka	insult	2,5
rhuwelela	scream	2,5
ukuthumba/ukuphumelela	triumph	2,5
ukuzisola	regret	2,5

isibindi	courage	2,5
Table 4 continues		
ba nethemba lokuphumelela	optimism	2,5
isizungu/isithukuthezi	boredom	2,5
ukwaneliswa	satisfaction	2,5
igandelelo	oppression	2,5
ukuzethemba	confidence	2,5
tjhebetjhebe/danileko	sorry	2,5
igugu/ikhakhaziso	pride	2,5
ukugula ngokomkhumbulo	hysteria	2,5
ubuhlungu bokhumbulo/umzimba	agony	2,5
ukulindela ngokusaba/ukubopha umuntu	apprehension	2,5
ukulahla ithemba	despair	2,5
netjhada	noisy	2,5
neenhloni	shyness	2,5
ukuba nokuthula/ukuthikanyezwa	peacefulness	2,4
ikanuko	lust	2,4
ukwaneliseka	contentment	2,4
diniweko	tired	2,4
ukuthokozisa/ukugqilaza	enthrallment	2,4
ukuzigedla/ukutjhaphuluka/ukwamukelwa	feel at home	2,4
ukutlhaga/ukutlhuwa	suffering	2,4
iinhloni	shame	2,4

ukuninwa/ukuhlukaniswa	alienation	2,4
Table 4 continues		
vilapha	lazy	2,4
ukuvuswa kwemizwa/ipendulo	arousal	2,4
ukuphelelwa lithemba	hopelessness	2,4
ukunganeliswa	dissatisfaction	2,4
bumbi/nturhu	ferocity	2,3
ukulwa/ukulinga ngamandla	fight	2,3
ukungafuni/ukudonda	reluctance	2,3
ngafuniko	loathing	2,3
ukuthula/nganatjhada	quietness	2,3
ukutjhuguluka kwamazizo	moodiness	2,3
ukwamukela	accept	2,3
isazelo	guilt	2,3
rhalelako	wishful	2,3
hengezela/qhaqhazela	shiver	2,3
ukuhlula/ukukhandela ipumelelo	defeat	2,3
rara/mangaza	surprise	2,3
ikuthalo/umndlandla	zeal	2,3
ukungabi nethemba ngengomuso	pessimism	2,3
ukunyazwa/ukudaniswa/ukwehlisa	humiliation	2,3
ithemba	hope	2,3
ukukhuluma wedwa	speaking alone	2,3

tjhejako/tlhogomelako	caring	2,3
Table 4 continues		
gulako	sick	2,3
cabanga khulu	thinking too much	2,3
ukuhlekisa/ukulibazisa	amusement	2,3
rhaphako/thinta/phathaphatha	touched	2,3
ukudelela/idelelo/ukunyaza	contempt	2,3
buthakathaka/nganamandla	powerless	2,3
ikuthalo	zest	2,3
ukuthokoza/ukulisa	resignation	2,2
ikareko/inzuzo	interest	2,2
ukuphathisa iinhloni/ukululaza/imiraro y	embarrassment	2,2
ukuzidela/ukuzinikela	surrender	2,2
ukuthobela/ukuzehlisa	submission	2,2
ukusukela emizweni	sentimentality	2,2
nyaza/delela	defy	2,2
ukudosa/ukukhanukeza	attraction	2,2
ukungabaza	doubt	2,2
thikameza	disturb	2,2
ukuhlaziswa	mortification	2,2
ukungazwisisi	feel lost	2,2
netjiseko/phelelwa lithemba	desperate	2,2
ukurhuga/ukurhagalisa	aggravation	2,2

ubuthakathaka/ukuba sengozini	tenderness	2,2
Table 4 continues		
ukugula	indisposition	2,2
qeda ikareko/amandla/isiqedikareko	demotivation	2,2
ukudelela	scorn	2,2
hlanyako	mad	2,2
ukungakhathali/nganazwelo	indifference	2,2
ukuthembeka	honesty	2,2
nesiyezi	dizzy	2,2
ubutha	hostility	2,1
isilingo	annoyance	2,1
ukwaliwa/ukurarha	rejection	2,1
ukuthula	calmness	2,1
ukungakaphephi/ukungakavikeleki	insecurity	2,1
omileko	thirsty	2,1
ukudosa/ukukhanukeza	fascination	2,1
bethiweko/hluliweko	beaten	2,1
isizo/iphumuzo/thunda	relief	2,1
hle/qalekako	nice	2,1
zibuyiselelako	vengefulness	2,1
ukulaya	spite	2,1
lambileko	hungry	2,1
khunjulwako	remembered	2,1

nyazwako	undermined	2,1
Table 4 continues		
ukuzizwa uhloniphekile	flattered	2
ihlangahlangano/khandela	frustration	2
katelelweko	forced	2
vumako	singing	2
bambelela/qiniselela	perseverance	2
funga	swear	2
ukuzaza/ukungabi nesiqiniseko	uncertainty	2
ukungatjheji	neglect	2
therezela	groggy	2
ukulindela okuthileko	anticipation	2
zulako	roaming around	2
ngamandla amakhulu	fury	2
ukuzigedla	relax	2
laleleko	listened	2
ngakarisiko	corny	2
ukuhlanza	vomit	2
isiyeleliso/i-alamu	alarm	2
netjhitjhimezo/ngaphandle kokucabanga	impulsive	2
nganamandla/ngavukelwako	impotence	2
tjhaphulula/tjhaphulula/simahla/khululek	free	2
ba nesono	sinfulness	2

hlonitjhwako	respected	2
Table 4 continues		
ubuphasi	inferiority	1,9
limeleko	injured	1,9
khohlwa/libala	forget	1,9
ukuzijamela/ukuzibusa	independence	1,9
isolo	suspicion	1,9
sebenza/umsebenzi	work	1,8
hlwengeka	cleanliness	1,8
dlulwa/fika msinyana/ba yikulu	overtaken	1,8
ukubambeka	busy	1,8
tjhidileko/khambileko	moved	1,8
ubungani	friendship	1,8
qhakileko	poor	1,8
khamba/ikhambo	walk	1,8
dlalako	playing	1,7
hlala/ukuhlala	stay	1,7
ukungabi naqiniso	emptiness	1,7
cima	put out	1,7
ba nesiqiniseko	be sure	1,6
leleko	asleep	1,5
ncani khulu/ukuyatha/ngazwakaliko	faint	1,4
ubumnyama	gloominess	1,4

dlako	eating	1,3
zala phama	full up	1,2
isembeso esifika enyathelweni	guilty	1

The emotion terms ranked as the ten (10) most prototypical words for the isiNdebele speaking group were (*ukuthaba khulu*) exhilaration, (*itukuthelo/ ukukwata*) anger, (*ithabo elikhulu*) euphoria, (*ukuthaba*) cheerfulness, (*ithabo*) happiness, (*ukudana*) dejection, (*ukutluwa/ukudana*) glumness, (*ithabo nomuzwa wobungani*) joviality, (*ukulila/isililo*) cry, (*imizwa yethabo*) ecstasy. The ten (10) least prototypical words from the list generated in the free listing task were: (*isembeso esifika enyathelweni*) guilty, (*zala phama*) full up, (*dlako*) eating (*ubumnyama*) gloominess, (*ncani khulu/ ukuyatha/ngazwakaliko*) faint, (*leleko*) asleep, (*ba nesiqiniseko*) be sure, (*cima*) put out, (*ukungabi naqiniso*) emptiness, (*hlala/ukuhlala*) stay.

Study 3: Similarity Rating Task

Participants

The study population of the third phase (Similarity Rating Task) consisted of a convenience sample of the experts (educators) in the isiNdebele speaking group ($N=183$) from different schools in the former KwaNdebele homeland in Mpumalanga province. Table 5 presents the characteristics of the participants.

Table 5

Characteristics of the isiNdebele speaking participants of the Similarity Rating Task (N=183)

Item	Category	Frequency	Percentage
Gender	Male	59	32
	Female	124	68
Age	18-28	23	13
	29+	160	87
Edu-Level	1-2yr Dip	24	13
	3yr Dip/Degree	117	64
	Post Graduate	42	23
Province	Mpumalanga	183	100

The participants only included black (100%) isiNdebele ($n=183$) speaking people. In terms of gender 32% were men and 68% were women. Thirteen percent (13%) of the group were between the ages of 18 and 28, while 87% were older than 29 years. In terms of education level, thirteen percent (13%) had 1-2 year diplomas, whereas 64% had 3 year diplomas/ degrees, while 23% had post graduate qualifications.

Measuring Instrument

In order to conceptualise the cognitive representation of differences and similarities between various emotion terms, the cognitive structure of emotions needs to be investigated by means of similarity rating (Scherer *et al.*, 1987).

The list of prototypical emotion terms from the isiNdebele speaking group was used to compile 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 of the isiNdebele speaking group. The list contain 24 GRID terms reported by Scherer (2005) regardless of the average score ratings.

Emotion terms were alphabetically listed and then translated in Excel to combine the emotion terms into 3 160 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 questionnaire 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 by 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 (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 needed to remain concentrated and that every pair had to be rated.

Procedure

The test battery was administered to the educators in different schools in former KwaNdebele homeland in Mpumalanga province. Ethical aspects of the research were discussed with the participants. The tests were administered in different sessions in schools based on the availability of the educators from each school.

A standardized procedure was followed by a qualified psychometrist to administer the test battery. The instructions of the test were explained to each group. Different sessions commenced at different times based on availability of educators. Some educators were available in the early hours of the day and some were available in the afternoons. The arrangement was well communicated between the psychometrist and the educators via the principal's office. Each respondent had his/her own table, chair as well as necessary stationery to complete the test. The staff rooms were properly lit and ventilated. The semi- controlled sessions lasted for one (1) hour per group.

Data 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 isiNdebele speaking group. 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. Russell (1983, 1991) emphasizes that the first dimension is always on evaluation or pleasantness (positive to negative dimension). Osgood, May, & Miron (1975) indicate that other dimensions which often emerge 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.

According to Borg & Groenen, (1997), Davison (1983), Kruskal & Wish (1978), it is stressed that Multidimensional Scaling allows for the representation of emotion words as points in a space, with the distance between two points representing dissimilarity in sorting. 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 poor fit or stress measure ranges from 0 to 1, with 0 meaning that the observed dissimilarities are accounted for by the distances in the geographical representation and 1 meaning that the observed dissimilarities are not accounted for at all by the distances in the geometrical representation. The lower the normalized raw stress, the better.

RESULTS

The reliabilities for the isiNdebele speaking group are reported in Table 6 on the eight (8) similarity questionnaires.

Table 6

Reliability table of the results of the eight Similarity Rating Questionnaires for the isiNdebele speaking group.

Similarity Questionnaire	Reliabilities with respondents with all item correlations of at least 0,30 (α)
Similarity Questionnaire 1 (n=25)	0,82
Similarity Questionnaire 2 (n=23)	0,91
Similarity Questionnaire 3 (n=27)	0,93
Similarity Questionnaire 4 (n=20)	0,90
Similarity Questionnaire 5 (n=25)	0,91
Similarity Questionnaire 6 (n=25)	0,91
Similarity Questionnaire 7 (n=20)	0,91
Similarity Questionnaire 8 (n=20)	0,86

*Cronbach alpha did not increase after removing item-total correlations with values less than 0.30

Inspection of Table 6 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, and it appears that all the measuring instruments have acceptable levels of internal consistency. It should, however, be noted that no respondents with item-

total correlation lower than 0,30 have been removed. If the item-total correlations with a value of less than 0,30 were removed, the Cronbach alpha did not increase.

The Classical Multidimensional Scaling (CMDS) procedure reports normalized raw stress for the Ndebele group (0,08) with a solution of two dimensions which were respectively evaluation and power- control dimensions. The final dimensionality was decided upon based on the interpretability of the representation. The two dimensional representations could be well interpreted.

Table 7

Coordinates of the isiNdebele emotion terms on the two dimensions.

isiNdebele	English	Dimensions	Evaluation (positive vs. negative)	Power(weakness vs. dominance)
76 ukunyazwa	humiliation		-0,15	0,79
4 idelelo	contempt		-0,23	0,77
63 rhuga/ ihlamba	insult		-0,34	0,75
47 umona	envy		-0,06	0,72
17 ikhakhaziso	pride		0,57	0,67
24 ukutswenya	agitation		-0,43	0,64
14 isikhwele	jealousy		0,63	0,63
22 itlalelo	ecstasy		0,39	0,61
36 ukubaba	bitterness		0,12	0,54
78 ukuphathisa	embarrassment		0,92	0,50
inhloni				
10 ithabo	happiness		0,78	0,50
54 ukungabi	impatience		-0,29	0,49
nesineke				
58 isenzo senturhu	aggression		-0,43	0,44
27 ukuba majadu	exuberance		0,69	0,44
80 ukuhlaziswa	mortification		-0,02	0,43
16 ubumnandi	pleasure		0,86	0,43
11 inzondo	hate		-0,55	0,43
43 tlorisa	abused		-0,65	0,39
28 ilaka	wrath		-0,37	0,39
38 ukucasula	exasperation		-0,47	0,36
60 ukudoswa	infatuation		0,72	0,31
bubuhle				
13 isilingeko	irritation		-0,31	0,30
23 itukuthelo	rage		-0,41	0,30
engalawulekiko				
74 umdlandla	zeal		0,79	0,29
32 ukulimaza	hurt		-0,64	0,27

1	itukuthelo	anger	-0,42	0,24
52	ukuninwa	isolation	-0,82	0,22
45	kgabhudleka/ hluthuleka	loose temper	-0,34	0,22
26	itukuthelo ekulu	outrage	-0,50	0,21
44	ikareko	thrill	0,81	0,18
57	ukukgalela	longing	0,65	0,16
69	ukugqilaza	enthralment	-0,78	0,14
33	ukudineka	resentfulness	-0,46	0,14
68	ukuzethemba	confidence	0,88	0,13
12	itjiseko	interest	0,62	0,12
48	banetjisakalo	eagerness	0,66	0,11
40	khanuka	admiration	0,72	0,08
72	ubumbi	ferocity	-0,68	0,06
53	itukuthelo efihliweko	suppressed anger	-0,36	0,06
71	ukumiswa kwemizwa	arousal	0,10	0,01
65	ukuba nethemba lokuphumelela	optimism	0,80	-0,01
55	irhuluphelo	passion	0,75	-0,03
31	ukuhlala udubhule	grouchiness	-0,51	-0,04
35	dubhula	grumpiness	-0,70	-0,05
61	ukuba masikizi	tenseness	0,11	-0,07
18	ukungabi nethabo	sadness	-0,41	-0,08
56	gugunako	uncomfortable	-0,05	-0,08
34	ukungaphatheki kuhle	awkwardness	-0,34	-0,08
5	ukwaneliseka	contentment	0,92	-0,12
39	ukuthanda	liking	0,79	-0,14
73	ukutjuguluka kwamazizo	moodiness	0,19	-0,14
42	ukuhlukumezeka ngokomkhumbulo	torment	-0,37	-0,14
15	ithando	love	0,82	-0,14
20	igandelelo emkhumbulweni	stress	-0,36	-0,15
2	ukutswenyeka emoyeni	anxiety	-0,27	-0,17
29	ukugandeleleka	depressed	-0,52	-0,23
25	ubuhlungu	pain	-0,45	-0,23
67	ukuzigedla	satisfaction	0,98	-0,23
46	tjharagana	confusion	-0,63	-0,25
77	ithemba	hope	0,82	-0,25
37	isizi elingapheliko	melancholy	-0,31	-0,33
7	ukudana	disappointment	-0,37	-0,34
49	isizi	grief	-0,23	-0,40
59	ukukhumbula ekhaya	home sickness	0,40	-0,41
9	isazelo	guilt	0,14	-0,44

6	ukulahlekelwa lithemba	despair	-0,58	-0,46
30	ukutlhuwa	distress	-0,20	-0,46
50	itlhuwo	woe	-0,14	-0,51
75	ukungabi nethemba ngengomuso	pessimism	-0,46	-0,53
64	ukuzisola	regret	0,07	-0,60
51	izwelano	sympathy	0,56	-0,62
3	isirhawu	compassion	0,48	-0,64
41	ukuthukwa khulu	terror	-0,47	-0,65
62	ukutjiriya	comfort	0,38	-0,70
8	ivalo	fear	-0,45	-0,70
79	ukungabaza	doubt	0,00	-0,74
19	iinhloni	shame	0,19	-0,77
21	rareka	surprise	-0,24	-0,79
66	isizungu	boredom	-0,06	-0,82
70	vilapha	lazy	0,03	-0,96

The similarity rating task in the present study (Table 7) revealed the results of the Multidimensional Scaling. The first dimension was labelled *evaluation- dimension* (where pleasant emotions are opposed to unpleasant emotion terms). The second dimension was labelled *power-control dimension* (weakness vs. dominance).

According to Table 7 the first dimension that emerged was an *evaluation dimension*. This dimension evaluates the pleasantness versus the unpleasantness of an emotion. This dimension is characterised by intrinsic appraisals of pleasantness and goal conduciveness and action tendencies of approach versus avoidance (Fontaine, Scherer, Roesch & Ellsworth, 2007). Examples of emotion terms such as *humiliation, contempt, insult, envy, pride, agitation, jealousy, ecstasy, bitterness, embarrassment, happiness* and *impatience* appeared. Unpleasant emotion terms included *humiliation, contempt, insult, agitation, jealousy, bitterness, embarrassment, impatience* and pleasant emotion terms included *happy* and *ecstasy*.

The second dimension that emerged was a *power-control dimension*. This dimension is characterised by appraisals of control, how powerful or weak a person feels when a

particular emotion is experienced. This includes feelings of dominance or submission, the impulse to act or withdraw and changes in speech and parasympathetic symptoms (Fontaine et al., 2007). Examples of emotion terms that emerged on this dimension included *pride, envy and mortification*. Emotion terms indicative of weakness included *shame, doubt* and *lazy* compared with emotion terms more indicative of dominance: *ferocity, lose temper* and *anger*.

Next, the discussion of results which are based on the objectives of this study will be presented. This refers to the determining of the different and representative emotion words, the relevance and representative prototypical emotion words that have been encoded in the isiNdebele language and lastly, the determining of the cognitive emotion structure of this group is stated.

DISCUSSION

The aim of this research is therefore, to study the prototypicality and meaning of emotion lexicon encoded in the isiNdebele speaking group, so as to generate prototypical emotion words and to identify the manifestation of the emotions for the isiNdebele language group in South Africa as well as the categorization of emotion terms.

Next the results of each of the stated research objectives will be discussed.

Research aim 1: To determine the different and representative emotion words within the isiNdebele- speaking group in the Mpumalanga province

In order to determine the different and representative emotion terms within the isiNdebele speaking group, a sample population ($N=126$) from the South African Police Service completed the free- listing questionnaires to list as many emotions terms in isiNdebele as they could think of in ten (10) minutes. Words with the highest frequency, as listed during the free- listing by the isiNdebele speaking participants were; *cry (lila = 94)*, *happy (thaba = 91)*, *laugh (hleka = 77)*, *angry (kwata = 77)*, *disappointed (swaba = 64)*, *confused (hlangahlangana = 58)*, *depressed (gandeleleka = 55)*, *pain (ubuhlungu = 40)*, *tired (dinwa = 39)* and *abused (hlukumezeka = 37)*.

The results for the free- listing task indicate that the basic emotions of *happiness*, *angry* were the only emotions which mostly came to mind for the isiNdebele speaking group. The list of basic emotion terms for the isiNdebele partially corresponds with the list of Gehm & Scherer (1988); Shaver et al., (1987) and Russell (1991) whereby happy and angry were found to be the most basic emotion terms identified in their studies. In comparison with South African studies (Table 8), happiness and angry terms are also identified as the words with the high frequency to for the Sepedi, Tshivenda, Xitsonga and Afrikaans people:

Table 8

Emotion words with highest frequency in South Africa

Sepedi	Xitsonga	Tshivenda	Afrikaans	Setswana
Happiness/Excitement	Sadness, Anger	Happiness, Pain	Sad, Angry	Joy, Sorrow
Anger, Sadness Love, Pain, Hate	Insult, Humiliation Happiness, Love	Anger, Worry Acceptance, Love	Love, Happy Hate,	Love, Annoyed Happy, Cry
Acceptance, Perseverance	Hate, Hurt	Hate, Fear	Excitement	Hatred, Grief
Thankfulness, Impatience Confusion, Respect, Fear	Perseverance	Sadness	Feel depressed	

This shows that the only basic emotion terms that are identified to both African and Western emotion researchers which are found to the isiNdebele speaking group were; *happy and angry* terms. As a result, these two basic terms correspond with some of the basic emotion terms identified in American English and Indonesian cultures (Alonso-Arbiol et al., 2006).

Research objective 2 was to determine the relevant and representative prototypical emotion words that have been encoded in the isiNdebele- speaking group in Mpumalanga province.

The emotion terms ranked as the ten (10) most prototypical emotion terms for the isiNdebele speaking group were (ukuthaba khulu) exhilaration, (itukuthelo/ukukwata) anger, (ukuthaba udembese) euphoria, (ukuthaba) cheerfulness, (ithabo) happiness, (ukudana) dejection, (ukutluwa/ukudana) glumness, (ukuthaba nomuzwa wobungani) joviality, (ukulila/isililo) cry, and “ (imizwa yethabo) ecstasy. Only three emotion studies have been conducted to determine the similarities and differences in specific cultural groups in South Africa (Du Toit, 2009; Fourie 2009; and Nicholls, 2008).

In executing these studies (Table 9), Nicholls (2008), Du Toit (2009 and Fourie (2009) identified the following ten most prototypical emotion terms for the Afrikaans, Sepedi, Tshivenda, Xitsonga and Setswana speaking group in South Africa:

Table 9

The ten most prototypical words for the Afrikaans-, Sepedi-, Tshivenda-, Xitsonga and Setswana speaking group in South Africa.

Most prototypical word	Afrikaans	Sepedi	Tshivenda	Xitsonga	Setswana
1	Rage	Loneliness/Emptiness/Glumness	Wrath	Shock	Cry
2	Fear	Restlessness	Suspicion	Doubt	Like
3	Anger	Unhappy/Displeasure	Sinfulness	Humiliation	Fed-up
4	Hate	Compassion/Moved/Pitifulness	Fondness	Shyness	Warning/Feel charigned
5	Sadness	Tired	Insecurity	Exuberance	Love
6	Anxiety	Love/ Adoration/ Affection/ Fondness	Disgust	Agitation	Joy
7	Happy	Joy/ Happiness/ Calmness	Aggression	Ecstasy/ Elation	Being hurt
8	Joy	Fear/ Alarm/ Fright/ Horror/ Shock	Upset/ Worry	Pride	Anger
9	Ecstasy	Astonishment	Diffidence	Fear/ Anxiety	Affection
10	Jealousy	Grief	Uneasiness	Confusion	Elation

There is only one most prototypical emotion term that is found in both Afrikaans and isiNdebele speaking group. That emotion term is *anger*. There are only four emotion studies that have been conducted in South Africa. Surprisingly, the lists of most prototypical emotion terms of all the studies conducted in South Africa are quite different. This indicates that the prototypicality of emotion terms are different across cultural groups. The conclusion can therefore be drawn that some emotion terms are relativistic.

Prototypicality refers to the most basic level of categorisation of emotion words as used by ordinary people (Shaver et al., 1987). It refers to the ranking of emotion words according to goodness of example, how easily it comes to mind, or how likely it is labeled as an emotion (Fehr & Russell, 1984). Different researchers identified different emotion terms in their studies. For instance, the most prototypical emotion terms in Indonesia were happy, love, hate, joy and sad whereas in Netherlands, joy, anger and

sadness were the most prototype emotion terms (Fontaine et al., 2002). In another study conducted by Ekman and Friesen (1976), happiness, sadness, fear, anger, surprise, disgust and neutral were found to be the most prototypical emotion terms.

It is essential that the prototypicality of emotion terms be determined if one seeks to understand the emotion terms that are represented in every day life within a specific cultural group (Church et al., 1998). Determining and testing of emotion lexicons and prototype becomes crucial in one assuming that descriptive emotion terms differ across cultures (Fiske et al., 1998 and Kitayama et al., 2000). According to Mesquita & Frijda (1992) emotions are labelled based on culturally shared concepts and meanings that can be seen to be similar to that of event coding.

Research objective 3 is to determine the cognitive emotion structure of the isiNdebele-speaking group in the Mpumalanga province (emotion dimensions)

The result of the similarity rating task of this study revealed a two – dimensional emotion structure which is well interpreted for the isiNdebele speaking group in Mpumalanga province. The two emotion dimensions identified in this study are *evaluation* and *power dimensions*. According to Fieldman (1995a), *evaluation* is regarded as relating to how well one is doing at the level of subjective experience which ranges from displeasure to pleasure and the extent to which an individual incorporates pleasantness or unpleasantness into the conscious affective experience. Power is viewed as the capacity to exert will (Macmillan, 1978; Pfeffer, 1981). The two dimensions are decided on the basis of the interpretability of the representation.

These two dimensions (evaluation and power) are also identified by other western and South African emotion researchers such as Du Toit (2009); Fourie (2009); Fontaine et al., (2007) and Osgood et al., (1975). In addition, Nicholls (2008) also identified *power* as one of the dimensions in the Xitsonga group in South Africa. This two factorial solution is similar to the first two dimensions of the GRID (Scherer, 2005). According to Scherer (2005), the first dimension identified is *evaluation* (positive or negative), the second dimension is *power* (dominance or potency), then followed by *unexpectedness* dimension

and lastly, the *arousal* (or activation dimensions). In the Similarity rating task of this study, the first dimension identified is also evaluation, and then followed by power dimension.

The first dimension which is identified to the isiNdebele- speaking group is also identified by Nicholls (2008) to the Sepedi, Tshivenda and Xitsonga language groups in South Africa. This dimension involves *evaluation* dimension opposing *pleasant* to *unpleasant* emotion terms whereas Russell and Mehrabian (1977) also identified *valence* as one of the dimensions that account for the variance in effective judgments.

According to Russell (1991) the structural analyses, factorial analysis and multidimensional scaling of emotion terms typically result in two or three dimensions. Other researchers emphasise one or two dimensions of emotions (Fiske, et al., 1998; Rapaport, 1971). However, Osgood, et al., 1975; and Nicholls 2008 identified three or four dimensions in their studies. In contrast, Fontaine et al., (2007) expresses the view that four dimensions (evaluation, pleasantness, potency- control, activation- arousal and unpredictability) which comprise six components of emotions are necessary to represent the similarities and differences in the meaning of emotion words.

Researchers thus differ as to which dimensions should be distinguished to establish the underlying dimensional space that accounts for the similarities and differences in emotional experience. As a result, there have been disagreements about the number that provide an optimal framework for studying emotions (Fontaine et al., 2007). Despite such disagreement, Plutchik (1980) concludes that there are unmistakable similarities in the categories of emotion even across great differences in language and culture. The disagreement on the total number of dimensions is caused by the lack of clear definition of the term “emotion” (Russell & Barrett, 1999). Hence, Russell (1989) suggests that the only way to approach the question of how people conceptualise emotional feelings has been to seek the dimensions by which they perceive the similarities and differences among feelings.

The results of the similarity rating task therefore indicate that the two dimensions identified in this study are normally identified by other emotion researchers in their scientific studies. As a result, this confirms that these results comply with findings that were identified by some western and South African emotion researchers. Only two dimensions are identified in this study, whereas some studies conducted in South Africa revealed more than two dimensions (Du Toit, 2009; Fourie, 2009; Nicholls, 2008). These further indicate that the cognitive emotion structure of these cultural groups is different in South Africa.

Research objective 4 is to determine the inter-rater reliability of the raters and reliability of the measurement instrument as well as the dimensions of the emotion structure.

The reliability coefficients for the eight (8) different versions of the similarity questionnaires for the isiNdebele speaking group were computed. The alpha coefficients of this group were higher than the guideline of $\alpha > 0,70$ (Nunnally & Bernstein, 1994). The alpha coefficients on the Similarity Questionnaire for the isiNdebele speaking group ranged between 0,82 and 0,91. Therefore, it appears that all the measuring instruments had acceptable levels of internal consistency. The multidimensional scaling analyses identified two dimensions which were clearly revealed with a normalized raw stress score of (0,08). The two dimensions identified in this study are *evaluation* and *power* dimensions. The instruments used in this study were valid and reliable since the alpha coefficients were above 0,7. The method followed by the three phases can therefore also be interpreted as a reliable method.

Although the study clearly indicates that the emotion lexicon, prototypicality and emotion structure of the isiNdebele language group are different from other cultural groups, the study also had its limitations. Because this study was done in the Mpumalanga province the results can only be generalised to this province. The emotion list that was added of the 24 Grid emotion terms in the prototypicality rating may have contained emotion terms not familiar to the isiNdebele language. There is also a lack of professional English

translators translating from English to isiNdebele. No emotion instrument exists in the isiNdebele language group that could have been used as benchmark to compare the results of this study with. The results were also not obtained within a specific isiNdebele occupational group.

RECCOMENDATIONS

Since there is no emotion instrument that exists to the isiNdebele speaking group, it is therefore recommended that more emotion research be conducted to this group which will contribute in developing the emotion instrument that can be used to the isiNdebele speaking group, Findings in this study may be used as a benchmark in conducting further emotion research to the isiNdebele speaking group,

The Grid seem to be consisting of emotion terms that are not familiar to the isiNdebele cultural group, it is therefore recommended that extensive emotion research about the 24 Grid emotion terms be conducted, The results found in prototypicality ratings give impression that the 24 Grid emotion terms added during prototypicality rating task may not be used or found to some of the cultural groups in South Africa,

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CHAPTER 3

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

The purpose of this study is to provide conclusions regarding the results of the empirical research article. Conclusions are drawn with regard to the research objectives. Furthermore, limitations of the study will be discussed. Finally, recommendations for the organisation are made and research opportunities that emanate from this research are presented.

3.1 CONCLUSIONS

The general objective of this research was to study the prototypicality and meaning of emotion lexicon encoded in the isiNdebele language group, so as to generate prototypical emotion words and to identify the manifestation of the emotions for speakers of this language in South Africa, as well as the categorisation of emotion terms.

Research aim 1:

To conceptualise emotion lexicon, prototypicality of emotions in cultures, emotion dimensions (from similarity sorting studies) and emotion and culture as found in the literature.

Based on literature review of this study, it is clear that different cultural groups differ in terms of defining and clustering emotion terms (Clore et al., 1987). As a result, this confirms that emotion terms are used differently by different cultural groups (Fontaine et al., 2002). It can therefore be concluded that the using of different terms by different cultural groups may be caused by the lack of sufficient definition of the term “*emotion*”. Hence different cultures use different emotion terms in their cultural groups. It is therefore suggested that further research on the meaning of the term “*emotion*” be conducted within the different cultural groups. Such research will assist in clarifying how the cultural groups understand the meaning of the term “*emotion*”.

It is also necessary to conduct prototypicality ratings of emotion words if one needs to understand the representivity of emotion words within a specific cultural group (Church et al., 1998). In applying the prototypicality method to different emotion research in South Africa, it was found that the prototypicality of emotion terms in Setswana, Sepedi, Xitsonga, Tshivenda and Afrikaans cultural groups is totally different.

As result, it can therefore be concluded that prototypicality of emotion terms in South Africa is totally different across Setswana, Sepedi, Xitsonga, Tshivenda and Afrikaans cultural groups whereas, *fear*, *happiness*, *anger* and *sadness* are identified as the common prototypical emotion words by the studies conducted by western emotion researchers (Church et al., 1998; Clore et al., 1987; Ekman, 1984; Ortony and Turner, 1990; Scherer, 1985; Shaver et al., 1987). The difference between the South African and most western prototype emotion terms may be due to the reason that there only three emotion studies have been conducted in South Africa whereas extensive research about emotion has been conducted in western countries.

There is still disagreement about the total number of dimensions that are used by emotion researchers to classify emotions. Some researchers classify emotions into one dimension, some into two, three or four dimensions. As a result, these create a lot of confusion about the dimensions of emotions. Russel (1991) concludes that the confusion about emotion dimensions is due to the fact that emotion researchers use different terms in classifying emotions. For instance, some use concepts, some use dimensions, and some use structure to categorise emotion. Due to this confusion of classifying emotion terms, it can be concluded that extensive research on emotion dimensions is needed to establish the cognitive structure of emotion in specific cultural groups (Fontaine et al., 2007). In such extensive study, a single term should be developed which can be used by all emotion researchers to classify emotions. Emotion researchers should decide whether they use the term dimension, structure, unipolar concepts or circumplex concepts to categorise emotions.

It is clear that there is different understanding about the use of emotion terms across the different cultural groups. Some researchers believe that emotions are expressed and

experienced similarly while others argue that emotions are expressed and experienced differently across cultural groups. Some researchers further emphasise that cultural variations in emotions still exist across cultural groups (Shipper et al., 2003).

Due to this argument, it can be concluded that more research in the field of emotion research should be conducted in different cultures so that the issue of universality and relativism can be evaluated extensively (Shaver et al., 2001). Such studies in South Africa will be of assistance since South African emotion researchers will be able to know whether South African cultural groups fall under relativist or universalists in terms of emotion terms.

One needs to understand emotions as they are represented in everyday life within a specific cultural context (Church et al., 1998). According to Mayer, Caruso, & Salovey (1999) it is stressed that emotions are an integral part of humans that forms the basis for all social transactions and as such they are a key to social life. However, the term “emotion” is not yet consensually defined; psychologists and other emotion researchers have not yet agreed which emotion terms should be included in their questionnaires on emotions (Russell and Carroll, 1999). As a result, different cultural groups have different understandings about the term emotion (Clare et al., 1987).

Different emotion dimensions are identified by different emotion researchers. Some researchers identify one or two dimensions of emotions (Fiske et al., 1998) while other emotion researchers identify three or four dimensions in their studies (Nicholls, 2008; Osgood, et al., 1975). The issue of relativist versus universals is still a dilemma in the study of emotions. According to Ekman, Friesen and Ellsworth (1972) it is stressed that emotions are universal whereas Levy (1984) and Solomon (1977) argue that emotions are culturally specific.

Based on the information provided, it is therefore, concluded that the challenge about the meaning of the term “*emotion*”, the dimensions that emotions constitute, cultural differences and similarities in terms of emotion terms still exist.

Research aim 2:

To identify the different emotion words within the isiNdebele language groups in South Africa.

To achieve this objective, a sample population of ($N=126$) from the South African Police Service completed the free- listing questionnaire to list as many emotion terms in isiNdebele as they could think of in ten (10) minutes. The result indicated that the ten words with the highest frequency listed during free- listing phase included; *cry, happy, laugh, angry, disappointed, confused, depressed, pain, tired* and *abused*.

Linking these results back to the study of organisation behaviour, emotions at work most certainly have a large influence on how employees react to situation or to decision making, something that is integral to our lives, whether personal or professional (<http://www.naukrihub.com/hr-today/emotions>). The study of emotions in the workplace is crucial in a sense that knowing and identifying or being aware of emotions will assist an employee to be able to deal with or manage their emotions. Emotions at workplace generally fall into the category of positive (good) and negative (bad) emotions. Therefore, the emotion terms that are identified in the free- listing phase of this study fall under both positive and negative emotions. Positive emotions are *happy* and *laugh* whereas the negative emotions involve *cry, angry, disappointed, confused, depressed, pain, tired* and *abused*. This finding is in accordance with studies of positive and negative affectivity in the workplace (Canaff & Wright, 2004; Greenberg & Baron, 2000; Olofsson et al., 2003; Staw, Sutton and Pelled, 1994).

Positive emotions are the feelings of an individual that are favourable to the attainment of organisational goals, whereas the negative emotions are those emotions that are perceived to be destructive to the organization (<http://www.naukrihub.com/hr-today/emotions>). Positive emotions in the workplace help employees to obtain favourable outcomes including achievement, job enrichment, and higher quality social context (Weiss, 2002). Furthermore, Staw et al., (1994) stressed that positive emotions at work such as high achievement and excitement have a desirable effect on a person's relationship with

others, including greater task activity, persistence and enhancement cognitive function, optimism and emotional resilience to persevere under adverse circumstances.

Negative emotions such as *fear, anger, stress, hostility, sadness, guilt*, etc; increase the predictability of workplace deviance (Staw et al., 1994). According to Olofsson et al., 2003; Oguiska Bullik, 2005; Muir, 2006;) negative emotions at work can be caused by work overload, lack of reward, verbal abuse, stories via the grapevine, poor leadership, lack of guidance and lack of support. Consequently, Canaffand Wright (2004) conclude that negative emotions at work may result in burnout brought home from the workplace, low employee morale and lack of commitment to the organisation.

The results further indicate that the basic emotions of *happiness, angry* were the only emotions which mostly came to mind within the isiNdebele speaking group. This list partially corresponds with the list of basic emotions identified by Gehm & Scherer (1988) and Shaver et al., (1987) whereby *happy* and *sad* were found to be the only emotion terms identified in all the studies conducted thus far. As a result, it can therefore be concluded that the two basic emotion terms (*happy* and *angry*) identified in this study correspond with the basic emotion terms identified by other western emotion researchers.

Crying is one of the negative emotions identified as the highest frequency within the isiNdebele speaking group. *Crying* is regarded as the natural, normal response to a highly charged emotional situation. The situation could be negative or a very positive one. Crying creates a very powerful emotional release in the human body and it is excellent for stress management (<http://www.Autumnmom.com>). Crying is not necessarily a sign of weakness or inadequacy, but may be simply one way of emotional release. It is believed that employees normally cry at work due to different reasons, for example, due to work *frustration, anger, embarrassment, sense of loss, sadness* or *joy* (<http://myevt.com/columns/32/when-tears-flow>).

Ryan & Deci, (2004) and Sushiene & Jurkanskas, (2009) regard *happiness* as the way in which people evaluate how happy they are or how good their quality of life is, using their own subjective perceptions of happiness and well- being. In addition, Seligman (2002)

regards *happiness* as the experience of a sense of *joy*, satisfaction and positive well-being combined with a sense that one's life is good, meaningful and worthwhile. Happiness in the workplace includes many different aspects like work engagement and job satisfaction. These in turn lead to several positive organisational outcomes (Fisher, 2010). According to Gavin & Mason (2004) happy employees tend to be more productive in the long run, generating better goods and more fulfilling services for the customers and others with whom they interact and do business. The study that was conducted by Gavin and Mason (2004) shows that *happiness* and positive states mind of people at work contribute to increased organizational success and commitment. *Laugh* is one of the most important emotions in the workplace. *Laughing* at work increases productivity, teamwork, employee's retention and job satisfaction. Laughing as an emotion lowers blood pressure, reduces stress and boosts immune function (Ilfed, 1978).

Anger is a strong emotion of displeasure or antagonism stimulated by injury or insult to oneself or others or by the perceived intent to do such harm (Ilfeld, 1978). According to Glomb (2002) *anger* is regarded as an emotional state that may include feelings that vary in intensity from wild *irritation* to *fury* and *rage*, physiological and cognitive reactions and behaviour tendencies. Averill, (1980) clarifies that employee's report anger from a few times a day to a few times in a week. Therefore, managers are expected to be aware of angry employees as anger appears to be a direct antecedent to the workplace aggression (Glomb & Liao 2003).

Anger at workplace can lead to serious unpleasant and uncomfortable emotions which may be due to poor management, unjust treatment, and lack of career advancement, lack of appreciation, excess workload, dishonest colleagues, and incompetence of subordinates, absence of reward or presence of punishment in the given situation (Fernandez & Turk, 1995). Employees normally experience *anger* when they perceive that the organization is depriving them of something to which they feel entitled. Anger may result in behaviour such as absence, turnover and accidents on the job (Ilfed, 1978; Schwartz & Clore, 1983).

The DSM –IV classifies depression as a mood disorder, meaning that the predominant feature of a depressive disorder is a disturbance in a person's mood (APA, 1994). Radloff (1977) emphasises that major components of depressive symptomatology include depressed mood, feeling of guilt and worthlessness, inability to concentrate fully or make decisions, feeling of helplessness and hopelessness, psychomotor retardation, loss of appetite and sleep disturbances. The studies conducted by Otto (2002) revealed that South African police members are experiencing extremely high levels of stress, depression and trauma. As result, depression is regarded as the single largest negative effect on work productivity and absenteeism.

Workplace abuse is regarded as the repeated less favourable treatment of a person by another or others in the workplace which may be considered unreasonable and inappropriate workplace practice. It includes behaviour that intimidates, offends, degrades or humiliates a worker. Abuse can range from very obvious verbal or physical assault to very subtle psychological abuse (Waldron, 2000). An individual who is repeatedly exposed to fellow workers' verbal or non verbal, but non physical aggressive behaviour is also regarded as undergoing emotional abuse at work (Waldron, 2000). Workplace abuse may result in some of the more long term and extensive effects such as decreased psychological well- being, poor psychosomatic functioning, reduced organizational functioning, emotional exhaustion, poor job performance and accidents (Namie & Namie, 2000).

Disappointment at work can serve to demotivate the employees. Disappointment at work may be caused by some of the factors, including unruly colleagues, poor communication, lack of appreciation, lack of motivation, clash of ideas, being overlooked etc.

([http://www.medimanager.com/my health at work](http://www.medimanager.com/my_health_at_work)). If the employee's contribution is not valued or recognized by his seniors, the zeal to perform consistently and at a high level will deteriorate. As a result, such disappointment may lead to employees' resignation (Gavin & Mason, 2004). Pain is regarded as the constant aching and throbbing that may persist for a long period of time. It may be caused by injury, temporary hurt, or stress. It may be difficult for an employee to work effectively with constant pain. Constant pain to

an employee may also lead to absenteeism and resignation from work (<http://www.org/blog/naidwnews/pain-work>).

Research aim 3:

To determine prototypical emotion words for the isiNdebele language groups in South Africa.

According to Fiske et al., (1998) and Kitayama et al., (2000) the determining and testing of emotion lexicons and prototype is crucial as one assumes that the description of emotion terms differs across cultures. Therefore, it is essential that the prototypicality of emotion terms be identified if one needs to understand the emotion terms that are represented in specific cultural groups (Church et al., 1998).

In this study, the positive emotion terms like (*ukuthaba khulu*) exhilaration), (*ukuthaba udembese*) euphoria, (*ukuthaba*) cheerfulness, (*imizwa yethabo*) ecstasy, (*ithabo nomuzwa wobungani*) joviality and (*ithabo*) joy are ranked as the most prototypical positive emotion terms in the isiNdebele speaking group whereas terms like (*itukuthelo/ukukwata*) anger, (*ukudana*) dejection, (*ukutluhuwa*) glumness and (*ukulila*) cry are ranked as the most negative prototypical emotion terms within the isiNdebele speaking group. Positive emotion terms at work help employees to obtain favourable outcomes including achievement, productivity and higher quality of social context (Weiss, 2002) whereas negative emotions lead to low employee morale, high rate of turnover and lack of commitment to the organization (Canaff & Wright, 2004; Staw et al., 1994).

Only four emotion studies have been conducted to determine the similarities and differences of emotions in specific cultural groups in South Africa (Du Toit, 2009; Fourie, 2009 and Nicholls, 2008). The emotion terms ranked as the ten (10) most prototypical emotion terms for the isiNdebele speaking group were (*ukuthaba khulu*) exhilaration, (*itukuthelo/ukukwata*) anger, (*ukuthaba udembese*) euphoria, (*ukuthaba*) cheerfulness, (*imizwa yethabo*) ecstasy, (*ukudana*) dejection, (*ukutluhuwa*) glumness, (*ithabo nomuzwa wobungani*) joviality, (*ukulila/isililo*) cry, and (*ithabo*) joy whereas

table 9 indicates other most prototype emotion terms found in three cultural groups in South Africa.

The isiNdebele language in South Africa is still developing. It is not well developed like other African languages of South Africa. As a result, the positive emotion terms mentioned in prototypical rating like, (*imizwa yethabo*) *ecstasy*, (*ukuthaba*) *cheerfulness* and (*ukuthaba khulu*) *exhilaration* do not have specific different meaning in isiNdebele. These emotion terms are differentiated in terms of degrees of comparison. This implies that if someone needs to construct the emotion measurement to this cultural group, the terms that are differentiated in terms of degree of comparison should be taken into consideration. The ignoring of these terms in constructing emotion measurement to the isiNdebele speaking group may result in invalidity and unreliability of measuring instrument to this group.

Table 1

The ten most prototypical words for the Afrikaans-, Sepedi-, Tshivenda-, Xitsonga and Setswana speaking group in South Africa.

Dimension	Afrikaans	Sepedi	Tshivenda	Xitsonga	Setswana
1	Rage	Loneliness/Emptiness/Glumness	Wrath	Shock	Cry
2	Fear	Restlessness	Suspicion	Doubt	Like
3	Anger	Unhappy/Displeasure	Sinfulness	Humiliation	Fed-up
4	Hate	Compassion/Moved/Pitifulness	Fondness	Shyness	Warning/Feel charigned
5	Sadness	Tired	Insecurity	Exuberance	Love
6	Anxiety	Love/ Adoration/Affection/ Fondness	Disgust	Agitation	Joy
7	Happy	Joy/ Happiness	Aggression	Ecstasy/ Elation	Being hurt
8	Joy	Fear/ Alarm/ Fright	Upset/ Worry	Pride	Anger
9	Ecstasy	Astonishment	Diffidence	Fear/ Anxiety	Affection
10	Jealousy	Grief	Uneasiness	Confusion	Elation

Based on this table, it can therefore be concluded that the negative emotions such as *anger* and *cry* and positive emotions such as *happiness* and *joy* are the only most

prototypical emotion terms identified to be common to other cultural groups in South Africa. For instance, *anger* as term is identified by isiNdebele, Afrikaans and Setswana cultural groups, *happiness* is identified by isiNdebele and Afrikaans groups and the emotion term *cry* is found with the isiNdebele and Setswana groups whereas the term *joy* is identified with isiNdebele, Afrikaans, Sepedi and Setswana cultural groups. In comparison with other studies conducted in South Africa, it is clear that the most prototypical emotion terms of isiNdebele partially differ from most prototypical emotion terms found in Afrikaans, Sepedi, Tshivenda, Xitsonga and Setswana groups. Only four terms are found within other cultural groups in South Africa. Those emotion terms are *anger, happiness, cry* and *joy*.

As a result, this indicates the emotion terms only found in specific cultural groups. In this study, *exhilaration, euphoria, cheerfulness, dejection, glumness* and *joviality* are only emotion terms identified in the isiNdebele speaking group. These terms are not identified in other cultural groups in South Africa. In the isiNdebele speaking group, the terms such as *exhilaration (ukuthaba khulu), euphoria (ukuthaba udembese), cheerfulness (ukuthaba)* and *joy (ithabo)*, do not have specific definitions which differentiate these terms. That is the emotion gets bigger but the word does not change, whereas in English the meaning is different. Hence, these terms are differentiated in terms of degrees of comparison. Consequently, this indicates that such terms should be taken into cognizance when developing the emotion measurement to this group. Ignoring terms that are differentiated in terms of degree of comparison in this group may lead to measurement to be regarded as invalid and unreliable.

Research aim 4:

To determine the emotion structure (different dimensions) across the isiNdebele language groups in South Africa.

The result of the similarity task of this study revealed a two dimensional structure which is well interpreted for the isiNdebele speaking group in Mpumalanga province. The two emotion dimensional structures are *evaluation (positive vs. negative terms) and power (weakness vs. dominance) dimensions*. According to Fontaine et al., (2007) the evaluation

dimension clarifies the pleasantness or positivity versus the unpleasantness or negativity of an emotion. This dimension is characterized by the intrinsic appraisals and goal conduciveness and action tendencies of approach versus avoidance.

The evaluation dimension involves positive emotions such as *glad, pleased, happy* at one end and negative emotions such as *angry, frustrated* and *furios* at the opposite end (Morgan & Heisie, 1988). The power or potency dimension is characterized by appraisals of control; this involves how powerful or weak a person feels when a particular emotion is experienced. This includes the feelings of dominance or submission, the impulse to act or withdraw, and changes in speech and parasympathetic symptoms (Fontaine et al., 2007). Power is associated with feelings of *disgust, bitterness*, the emotions of *flight* and *fight* when in a serious or stressful situation (Morgan and Heisie, 1988).

Positiveness in the workplace is identified with the employee who feels good or satisfied with the job. Employees who are positive at work show signs of persistence, optimism, and have emotional resilience to persevere under adverse circumstances. It involves the employee who has favourable feelings to the attainment of organizational goals (Staw et al., 1994). Negativism in the workplace refers to negative emotional states of an employee who shows feelings of *anger, fear, sadness, disgust* etc. Such emotions may be caused by poor leadership, lack of support, and lack of guidance (Olofsson, et al., 2003). Employees with negativism tend to have low work morale, lack commitment to the organisation and normally absent themselves from work (Canaff & Wright, 2004).

In this study power was one of the dimensions identified in the isiNdebele speaking group. According to the personal experience of the researcher, power or respect for people with higher authority is the most important issue to the isiNdebele speaking group. The communication or reporting structure of the isiNdebele speaking group has different phases of seniority. For instance, if a child needs something in the family, he must first report to his mother, and then the mother will report to the father who is regarded as the head of the family. So it happens in the community as well. If there is a problem in the community, it must first be reported to the induna. The induna will then report the problem to the Chief who will take it further to the King of the isiNdebele tribe. The issue

cannot be directly reported by a junior person to the most senior person. The hierarchy or structure should be followed strictly. As a result, the hypothesis can be formulated that it is due to the respect for seniority found in this cultural group that power emerged as an emotion dimension in the isiNdebele speaking group.

According to Russel (1991), structural analyses, factorial analyses and multidimensional scaling of emotion terms typically result in two or three dimensions. Nevertheless, Fontaine et al., (2007) identified four dimensions with the first dimension usually being evaluation, the second potency, and the third arousal and lastly, the unpredictability dimensions. In addition, Fiske et al., (1998) identified one or two dimensions whereas Nicholls (2008) identified three or four dimensions of emotions. Due to these differences, the emotion theories have also suggested different answers to the total number of emotions which give rise to the ongoing debate regarding emotion dimensions (Fontaine et al., 2007). The result of the similarity rating task of this study revealed a two dimensional emotion structure which is well interpreted for the isiNdebele speaking group in Mpumalanga province. The two emotion dimensional structure is *evaluation* and *power dimensions*.

In previous studies that were conducted in western countries by Osgood et al., (1975), Fontaine et al., (2007) and South African studies conducted by Du Toit (2009) and Fourie (2009), the same two dimensions of evaluation and power were identified as one of their dimensions. In addition, Scherer (2005) also identified evaluation and power as the first two dimensions in his study, and these were followed by unexpectedness and arousal dimensions. These two dimensions that are identified in this study were also identified by Nicholls (2008) in the study of Sepedi, Tshivenda and Xitsonga in South Africa.

Therefore, the conclusion can be drawn that the two dimensional structures identified in this study comply with other emotion structures that were identified by other western and South African researchers. There are only two dimensions identified in this study whereas some other studies conducted in South Africa revealed more than two dimensions (Du Toit, 2009; Fourie, 2009; Nicholls, 2008;). This further concludes that

the cognitive structure of emotions within Sepedi, Tshivenda, Xitsonga, Afrikaans and Setswana cultural groups in South Africa is each totally different from the other.

Research aim 5:

To determine the inter-rater reliability of the raters and reliability of the measurement instruments as well as the dimensions of the emotion structure

The reliability coefficients for the eight (8) different versions of the similarity questionnaires for the isiNdebele speaking group were computed. The alpha coefficients of this group were higher than the guideline of $\alpha > 0,70$ (Nunnally & Bernstein, 1994). The alpha coefficients on the Similarity Questionnaire for the isiNdebele speaking group ranged between 0,82 and 0,91.

All the measuring instruments used in this study had the acceptable level of internal consistency and the multidimensional scaling analyses identified two dimensions which were clearly revealed on a normalized raw stress score with an alpha co-efficient of above 0,7. Consequently, it can be concluded that the instruments used in this study were valid and reliable. The alpha coefficient of the isiNdebele speaking group is higher than the guideline of 0,7. When compared with other studies conducted in South Africa to Sepedi, Tshivenda, Xitsonga, Setswana and Afrikaans groups, the same alpha coefficient of higher than 0,7 was identified. This indicates that this method is effective and the measuring instruments are reliable and valid.

This study added value to the domain of industrial psychology (organisational behaviour) in a sense that other researchers may use it as a foundation for further emotion research in the workplace. It will be useful as employees will be able to know the emotions that are found in the isiNdebele speaking group. As a result, they will be aware of those emotions and able to manage them.

3.2 LIMITATIONS OF THIS RESEARCH

With regard to this study, the following limitations were identified:

The findings of this study may not be representative of the entire isiNdebele speaking group in South Africa as it is conducted only in one area of Mpumalanga province which is the former KwaNdebele homeland. There is still very little scientific information available for this group. Only a few studies have been conducted for the isiNdebele speaking group.

The isiNdebele language is still developing. It is not well developed like other African languages. Currently, isiNdebele language is only offered at two universities in South Africa. It is offered at undergraduate level at the University of Pretoria and in 2011 it was introduced to the first year students at the University of Venda. The fact that it is only offered at two universities in South Africa, clearly indicates that isiNdebele language is still a developing language.

The isiNdebele speaking group in South Africa still experiences some cultural challenges. It is still divided into two different cultural subgroups. The amaNdzundza and amaNala groups. These two groups use different words/dialects and click sounds to express themselves in their cultural groups.

Professional language translators were used in this study to translate emotion terms from English to isiNdebele and back again. However, translation errors may occur as isiNdebele language is still developing and it poses different language challenges. Furthermore, the future researchers can also use this study as a basis for constructing the psychological assessment instruments which may be useful for psychological intervention in the working environment. The result of this study may be used to construct the emotion instruments that can be used in the isiNdebele speaking group. This includes the measuring instruments for emotional intelligence, counseling and identifying the suitable candidates who can be referred to different areas of training based on their personalities.

The use of police employees in the first phase of the research could have influenced the listing of emotion terms and future studies must take this into account.

3.3 RECOMMENDATIONS

Recommendations pertaining to the specific organisations used in this study, as well as recommendations for the future research, are made in this section.

3.3.1 Recommendations for the organisation

The first step in developing a culture free measuring instrument for the measurement of emotions is to find out the emotion structure of the different cultural groups; therefore, further studies on emotions in the workplace which will contribute to the constructing of psychological instruments that may be used for psychological interventions are necessary (recruitment and selection, emotional intelligence, therapy, etc).

Employees and managers are always expected to have the ability to understand their own as well as others' emotions and be able to deal and utilise their emotions effectively; therefore further studies of emotions in the workplace will be useful in order to enable employees and managers to better understand and manage their emotions.

Currently, there is a limited scientific knowledge of different cultural groups at work; therefore, further studies are recommended which might be used to develop diversity management material or courses for workers. South Africa constitutes eleven official languages that are represented in the working environment. By virtue of this, it is crucial that employees understand the cultures of other ethnic groups in order to avoid conflict and misunderstandings at work.

It is thus, recommended that more research on the study of emotions in the workplace be conducted. Further research in emotions at work will help employees to have adequate information about emotion knowledge since it is useful for social interaction. Knowledge of emotions makes someone understand his own and someone else's emotions better,

which might contribute to perseverance, cooperation, productivity and team work among employees.

3.3.2 Recommendation for future research

It is further recommended that more extensive research be conducted for the isiNdebele speaking group in South Africa as only little scientific information is available which deals with the culture, values and customs of this cultural group.

More research on the meaning of “*emotion*” term should be conducted by the South African emotion researchers. Such studies will form a solid basis for constructing psychological assessments which can be used fairly for all South Africans. Furthermore, scientific emotion studies will also contribute as basic information for clarifying the serious challenge faced by universalities versus relativism in the domain of emotions. Emotion episodes that elicit emotions in the workplace should be investigated.

Since there is no emotion instrument that exists within the isiNdebele speaking group, it is recommended that more emotion research be conducted on this group which will contribute to developing the emotion instrument that can be used to the isiNdebele speaking group. Findings in this study may be used as a benchmark in conducting further emotion research in the isiNdebele speaking group.

This chapter provided conclusions regarding the results of the empirical studies of the three independent articles that formed part of this study. Conclusions were formed with regard to the research objectives that were stated for this article. Limitations were stated and discussed. Finally, recommendations for the organisation and for future research were presented.

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