EXPLORING AND DESCRIBING DEPRESSOGENIC COGNITIVE SCHEMA,
LEVELS OF DEPRESSION AND HOPELESSNESS AMONG DEPRESSED AND
NON DEPRESSED ADULTS

By:

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ABSTRACT

The subject of mood disorders and in particular depression is pertinent with rapidly increasing incidences of depression and suicide a widespread phenomenon in the world today. In South Africa, the rates of depression are increasing steadily each year. Much research has been undertaken in the area of depression, with negative cognitive schema identified as a common factor, which increases an individual’s vulnerability or diathesis to depression and hopelessness.

The primary aims of this research are to explore and describe the depressogenic cognitive schema of both a depressed as well as normal (non-depressed) individuals and identify the relationship these schema have to levels of depression and hopelessness. In order to achieve these objectives, three measures were administered, the Beck’s Depression Inventory, the Beck’s Hopelessness Scale and the Inferential Style Questionnaire.

The research design is quantitative in nature and took the form of an exploratory-descriptive study. The researcher made use of frequency tests to identify frequencies of scores and descriptive statistics to identify the mean, range and standard deviations. T tests, a Pearson product-moment correlation coefficient and factorial analysis of variance (ANOVA) were also employed for statistical analysis within this research study.

The findings of this research study identify that the depressed sample scored higher levels of depression, hopelessness and negative inferential style than that of the normal sample.

Key words: Depression, depressive ideation, cognitive schema, gender, helplessness, hopelessness, suicide.
CHAPTER 1

INTRODUCTION

Chapter Overview

The question can be asked, is it depression that causes a person to think in a depressive way or does depressive thinking cause a person to become depressed? Through the exploratory and descriptive nature of this research dissertation, questions like these could be addressed and given a context within which to be addressed. The nature of depression and the domains surrounding this pathology will be explored and described with reference to cognitive processes, identified as cognitive schema.

Within this introductory chapter, the researcher seeks to contextualise the research with reference to theory, methodology and purpose.

Context of the Research

It is evident that individuals differ in their responses to stressors in life. Some individuals may not develop any form of depression at all and some may respond in a way that causes a mild, short-term low mood state. Yet others may develop a long lasting, deep depression. From a cognitive perspective, the meaning or interpretations individuals’ ascribe to their stressors, determines whether or not they develop depression and possibly determines whether they might be vulnerable to recurrent, severe or even chronic episodes of depression (Alloy, Abramson, Whitehouse, Hogan, Tashman, Steinberg, Rose & Donovan, 1999).

Two major cognitive theories, namely, the hopelessness theory of Abramson, Metalsky & Alloy, (1989) and Beck’s theory of depression (Beck,
1967, 1987) form the theoretical foundation of this research study. According to both of these theories specific negative cognitive attributions increase an individuals’ potential toward developing depression, specifically a “cognitively mediated subtype of depression”, when encountering negative life events (Abramson et al., 1989). These cognitive theories maintain that people who employ depressogenic cognitive styles are “vulnerable to depression because they tend to generate interpretation of their experiences that have negative implications for themselves and their future” (Alloy et al. 1999, p.504).

Both theories have also generated considerable scientific research relating to the psychopathology of depression and facilitate empirical interventions relating to depression (Clark & Steer, 1996, in Reinecke & Steer, 2004).

Depression, its causes and the vulnerability to depression are well researched topics. The wide range of findings and predisposing factors which have been identified through scientific research enable researchers to investigate more rigorously the existence of vulnerabilities and the constructs which underpin the pathology identified as depression. Considerable attention has been given to explanations of a cognitive diathesis to depression (Gladstone & Parker, 2001). Research has lead to various hypotheses, some of which concluded that negative or depressive cognitive schema create vulnerability for depression and in worst case scenarios, hopelessness and successful suicide.

According to O’Connor and Sheehy, (2001), negative cognitive schema have been identified as a risk factor for both depression and suicide. They conclude that a sense of hopelessness may be achieved by multiple person factors which may include “memory biases, future thinking, cognitive schema,
perfectionist tendencies and problem solving ability” (O’Connor & Sheehy, 2001, p.24). They highlight the construct of hopelessness as the most frequently implicated construct relating to suicidal behaviour. Abramson et al. (1989) propagate that a sense of hopelessness, a descendant of the learned helplessness model, is the “final pathway” that ultimately leads to depression (Weiten, 2004, p.54).

With reference to the South African context, the structure of depressogenic cognitive schema, depressive ideation, hopelessness and their relationship to each other is becoming increasingly relevant. It has been the assumption within the history of South Africa that African people suffer less from depression and mood disorders due to a proliferation of protective factors such as extended family, traditional values and culture disorders (Robertson, Allwood & Gagiano, 2001). Gagiano, however refutes this assumption and concludes that it has been proved to be incorrect. He states that because of the increased exposure to segregation based on the oppressive policies of apartheid, the African people in South Africa have actually been placed in a more vulnerable position for the development of depression and mood disorders (Robertson et al., 2001).

Peltzer, at his inaugural lecture as the head of the department of psychology for the University of the North in 1998 stated that:

In the year 2020 it is calculated that the single highest cause of Disability Adjusted Life Years (DALY) will be depression (5.6%). In addition, because suicide is a far greater risk in depression, depression has a greater impact on premature mortality. Urbanization in developing countries involves
changes in social support and life events which have been shown to affect mental health, mainly depression and anxiety, particularly among low income women which accounts for a large proportion of visits to primary health services.

Suicide accounted for 1.6% of the world’s mortality on 1990. Rates of attempted suicide could be ten times higher. Suicide is one of the leading causes of death for young people in industrial and developing countries. A study among secondary school pupils in South Africa found 31 (17%) para suicides in males and 34 (13%) in females. Contributing factors for para suicide in Africa have been identified as unemployment, acute social conflict, psychiatric and physical illness, socio-economic deprivation partly aggravated by alcohol intake, alcohol abuse in parents, experience of loss, insufficient familial support, and hopelessness. (Peltzer, 1998, p.4)

Eley (2003, p.626), states that “anxiety and depression are now recognised as major areas of public health concern, associated not only with distress to sufferers but also with serious social consequences in areas of life such as friendships, relationships, education and work”. Contextualising the information within the theoretical framework of this study, it is evident that the subject of depression is increasingly topical with reference to South Africa. Similarly on an international scale, according to the World Health organisation in their “Summary Report, promoting Mental Health” (2004, p.13), “depression was the fourth largest contributor to the disease burden in 1990 and is expected to be the second largest after ischaemic heart disease by 2020”. With no empirical
research having been found by the researcher, identifying the nature of depressogenic cognitive schema and their relationship to depressive ideation and hopelessness, having been undertaken in South Africa, this study lays the groundwork for further study relating to both the nature of depressogenic cognitive schema, levels of depression, and hopelessness ideation of a depressed and non-depressed adult South African sample.

This research study seeks to explore and describe depressogenic cognitive schema as well as those domains which reinforce a sense of hopelessness depression of a South African adult sample. In so doing, the researcher hopes to add to the existing empirical studies undertaken by Beck (1967, 1987) and Abramson et al. (1989).

Motivation for the Study

Despite the comprehensive body of knowledge surrounding depression and the cognitive dimension of depression, there remains a limited amount of empirical research relating to the subject. It would seem that despite the increasing prevalence in depression globally, little emphasis is placed on research of the pathology.

Ingram (2003) identifies that research into vulnerability and the processes of depression are increasingly being addressed. The present researcher has yet to find any research surrounding depressogenic cognitive schema or cognitive vulnerability to depression with reference to a South African population.

The American Psychiatric Association (APA) in their report on the Summit on Women and Depression, identified the need for further research focusing on the effects of gender on the aetiology, diagnosis, treatment and prevention of depression (Mazure, Keita, & Blehar, 2002). It was strongly suggested that
researchers conduct gender-related data analyses in order to improve understanding of the effects of gender on depression. Consistently, research indicates that there is a greater prevalence of depression among women than in men (Nolen-Hoeksema, 1987). As a result, a gender specific aim has been included within this research study. Based on these results and the correlation of gender differences, this study shall attempt to identify whether the findings of the present research study are consistent with the findings of international research.

Purpose of the Study

The exposition in the preceding paragraphs identifies an increased frequency of depression as well as the need to address factors, which might create a vulnerability to developing depression.

This study will strive to reinforce the cognitive vulnerability hypothesis purported by Beck (1967, 1987) and Abramson et al. (1989), which asserts that negative thinking predisposes or creates a vulnerability to depression. The researcher aims to create a foundation for further research relating to depressogenic cognitive schema and the relationship of such schema to depressive ideation and hopelessness. It is hoped that the research study will also begin to address the call by the APA to further research into the effects of gender difference in the aetiology of depression.

Basic Outline of Methodology

The methodology employed in this research study follows that of quantitative research. It is a descriptive, explorative study and aims to explore and describe the relationship between depressogenic cognitive schema, levels of depression and hopelessness in depressed as well as normal adults.
Literature Review

Several studies have endeavoured to identify a cognitive vulnerability to depression (Alloy et al., 1999; Alloy, Abramson, Hogan, Whitehouse, Rose, Robinson, Kim & Lapkin, 2000; Beck, 1967, 1987; Abrason et al., 1989; Dykman and Johll, 1988; Hamilton & Abramson, 1983). In Beck (1987), dysfunctional attitudes are identified as cognitive vulnerabilities. Abramson et al.’s. (1989) hopelessness theory identifies negative inferential style as a cognitive vulnerability. The framework of cognitive schema identified in this study, include the constructs of dysfunctional attitudes as inferential style, correlating the theories for the purposes of measurement to ensure empirical validity. Both Beck’s (1967) theory and Abramson et al.’s (1989) theories have supported that negative cognitions are significant vulnerability factors in the occurrence of depressive symptoms (Hankin & Abramson, 2001; Ingram, Miranda, & Segal, 1998; Peterson, & Seligman, 1984).

Ruehlman and West (1985, p.86) conclude that “severely depressed individuals appear partially to confirm the traditional view of practicing clinicians that depressives have a pessimistic cognitive style”. Kwon and Laurenceau (2002, p.1317) found that negative attributional styles lead to an increase in “reactivity to stressors over time” as well as a “correspondence between levels of depressive symptoms and the severity of stressors experienced at a particular point in time”. Gladstone and Parker (2000, p.215) conclude that research involving “depressogenic core beliefs or schema” are of importance in “reinforcing the relevance of cognitive-based interventions” with reference to recurrent depressive disorders as well as to “confirm the potential of cognitive risk in some depressive disorders”. McClain and Abramson (1995, p.429)
concluded their research on self schema, stress and depressed mood stating that “specific, negative, self-schema are related to exacerbation of depressive symptoms”.

Gladstone and Parker (2001) allude to the lock and key hypothesis, which postulates that early negative life events or situations are able to create vulnerabilities which are known as “locks”. Fundamentally, the premise underlying the lock and key hypothesis states that “early adversity, which may be acute or chronic in nature, creates a cognitive template within the individual which translates into a type of accepted and reifying self knowledge or more general world knowledge” (Gladstone & Parker, 2001, p.210). These templates become locked into the subconscious of the individual and could be highlighted at a later stage in adulthood. The locks according to Young (1990) can be termed schema, defined as enduring patterns of thinking, which develop during childhood and are built on through the individual’s life. The lock and key hypothesis supports and is congruent with Abramson et al’s (1989) theory of hopelessness as well as Beck’s diathesis stress-model of cognitive vulnerability.

Alloy et al. (1999) identify that children may learn their cognitive styles from significant others even if it is only in part. They clarify that a process of modelling may occur in that children model the cognitive styles of their parents. They further identify that if children modelling parents’ cognitive styles is a contributor to the development of cognitive vulnerability to depression, then children’s cognitive styles should correlate with those of their parents (Alloy et al., 1999).

In identifying vulnerability for depression, children who are socialised with one or more parents’ who suffer from depression, could develop these
depressogenic schema and in so doing create a vulnerability for depression. Parents may teach their children inferences or attributions to behaviour either in an implicit or explicit way. If this feedback contributes to the child’s cognitive risk, the inferential communication of the parents’ should correlate with the cognitive style of the child (Alloy et al., 1999).

In a study conducted at Temple University and the University of Wisconsin, commonly known as the Temple-Wisconsin Cognitive Vulnerability to Depression Project, it was found that high risk participants’ who exhibited a negative cognitive style, were consistently found to have an elevated likelihood of developing depressive disorders (Alloy et al., 2000).

Conclusion

This chapter dealt with the context of the research study, the motivation for the study as well as the basic outline of the methodology employed in this research project. A brief literature review of past research exploring depressogenic cognitive schema was also included.

Contextualising the core focus of this research study within the boundaries of psychopathology, depression is categorised within mood disorders according to the Diagnostic and Statistical Manual IV-Text Revision (DSM-IV-TR), (APA, 2000). Following on from this introduction an exploration into the constructs of mood disorders, depressogenic cognitive schema, depression and hopelessness can now be embarked upon.
CHAPTER 2

MOOD DISORDERS

The Bell Jar

"If Mrs. Guinea had given me a ticket to Europe, or a round the world cruise, it wouldn’t have made one scrap of difference to me, because wherever I sat – on the deck of a ship or at a street café in Paris or Bangkok – I would be sitting under the same glass bell jar, stewing in my own sour air."

Plath, in Rowe (1978), p.235

Chapter Overview

A central theme within cognitive theories purports that individuals’ behaviours are based on their perceptions of the world. Within the cognitive paradigm, individuals create meaning surrounding their experiences and develop schemata or belief systems over time in order to process their experiences (Murray, 1988). These cognitive schema could cause the individual to process information from their experiences in a biased or distorted manner and in so doing create a diathesis for the development of depression (Beck, 1967, 1976).

This theoretical framework introduces the core constructs of this research study. Within this chapter a foundation is laid explaining the concept of mood disorders including a brief reference to depression within the South African context. A description of depressogenic cognitive schema and depression with reference to Beck’s (1967, 1987) theory of depression is also addressed. An introduction to Seligman’s (1975) theory of helplessness as well as Abramson et
al’s., (1989) theory of hopelessness are also presented within this chapter. Having explored these constructs, the foundation for further exploration and description of the relationship between depressogenic cognitive schema, depression and hopelessness can be embarked upon.

Clinical Picture of Depression

“But first I must tell you
That I should like to think there’s
something wrong with me –
Because, if there isn’t, then there’s something wrong,
Or at least, very different from what it seemed
to be,
With the world itself – and that’s much more
frightening!
That would be terrible.”

Elliot, in (Rowe, 1978, p. 129).

Depression can be likened to a set of paradoxes within the cognitive processes of an individual as illustrated in the above reflection. Beck (1967) uses the illustration of a wealthy man berating the fact that he does not have the means to provide for his progeny or of a clergyman with an impeccable reputation who tries to kill himself because he perceives himself as evil (Beck, 1967). Within these examples lies the paradox of desiring death over the basic human instinct to preserve one’s life and the desire for maximum satisfaction, otherwise known as the “pleasure principle” (Beck, 1967, p.3). These overriding depressive ideations form part of the cognitive process, which this research study endeavours in some detail to explore and describe.
Beck (1967, p.201) defines depression as “an abnormal state of the organism manifested by signs and symptoms such as low subjective mood, pessimistic and nihilistic attitudes, loss of spontaneity and specific vegetative signs”.

According to the World Health Organisation (2001, p.9) “major depression is now the leading cause of disability globally and ranks fourth in the ten leading causes of the global burden of disease”. They further propose that within the next 20 years, depression could be ranked the second highest cause of the global disease burden.

Depression is classified within the category of mood disorders within the DSM-IV-TR (APA, 2000). Symptomatically it is the extreme sense of feeling “down” or “blue”.

This definition is broad, vague, and amorphous and does not include an essential set of symptoms pertaining to the disorder identified as clinical depression.

According to the DSM-IV-TR (APA, 2000, p.249) Major Depressive Episode is diagnosed by the following identifiable features over a 2-week period.

“The essential feature of a Major Depressive Episode is a period of at least 2 weeks during which there is either depressed mood or the loss of interest or pleasure in nearly all activities. The individual must also experience at least four additional symptoms drawn from a list that includes changes in appetite or weight, sleep, and psychomotor activity; decreased energy; feelings of worthlessness or guilt; difficulty thinking, concentrating, or making decisions; or recurrent thoughts of
death or suicidal ideation, plans, or attempts. To count toward a Major Depressive Episode, a symptom must either be newly present or must have clearly worsened compared with a person’s pre-episode status.”

Within the context of the present research study, the levels of depression shall be limited to the criteria recognized within the DSM-IV-TR®, 2000 for Major Depressive Episode, criteria A, relating specifically to cognitive aetiology. As per DSM-IV-TR®, 2000 these do not include symptoms which are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.

These criteria are identified as:

- Item 7
  - Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)"

- Item 8
  - Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)”; and item 9 “recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide”

- Item 9
  - Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
With reference to criteria B,

- the symptoms do not meet criteria for a Mixed Episode

With reference to criteria C,

- The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

With reference to criteria D,

- The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism).

With reference to criteria E,

- The symptoms are not better accounted for by Bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterised by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation (American Psychological Association, 2000, p356).

Within the present research study, each of the symptoms identified in criteria A have been measured, comparing a depressed sample with that of a normal sample. The diagnosis of depression relating to the depressed sample was undertaken by various professionals, independent of the researcher. All criteria would have been taken into consideration for a diagnosis of depression to be made, although for the purposes of this research study only symptoms identified in criteria A relating to the cognitive functioning of the individual has been measured.

Beck (1967) indicates that suicide has traditionally been associated with depression and that although the occurrence of suicide does occur in non-
Depressed individuals, it occurs considerably more often with depressed individuals. The World Health Organisation (2001, p.39) identifies that “the most common mental disorder leading to suicide is depression”.

The cognitive triad identified by Beck (1967), see Figure 1, which identifies the process of negative thinking with regard to the individual, their future and their environment or world. As indicated, a possible result of this type of cognition could lead to suicide. O’Connor & Sheehy (2001) in their research have identified this pattern of negative thinking in the cognitions of individuals’ contemplating suicide. The construct of hopelessness has been identified as the most frequently implicated construct relating to suicidal behaviour, and forms an integral part of the present research study (O’Connor & Sheehy, 2001). Both Beck (1967) as well as O’Connor & Sheehy (2001) identify suicide as a possible consequence of depression.

**Figure 1: The effect of cognitive patterns on affects and motivation in depression**

![Diagram showing the cognitive triad](Beck, 1967 p. 256).

In conclusion, depression is classified within the category of mood disorders according to the DSM-IV-TR. Symptomatically it is the extreme sense of feeling “down” or “blue”.

*Diagram showing the cognitive triad*
This definition is broad, vague, and amorphous and does not include an essential set of symptoms pertaining to the disorder identified as clinical depression.

Beck (1967, p.201) defines depression as “an abnormal state of the organism manifested by signs and symptoms such as low subjective mood, pessimistic and nihilistic attitudes, loss of spontaneity and specific vegetative signs”.

Segal, Williams & Teasdale (2002, p.9) define depression succinctly as a “combination of elements” rather than a single element. They define depression as “a state in which persistent depressed mood or loss of interest occurs together with other reliable physical and mental signs, such as difficulty sleeping, poor appetite, impaired concentration, and feelings of hopelessness and worthlessness”. With reference to the DSM-IV-TR, a diagnosis of major depressive episode is only given when a combination of these symptoms are present during the same 2-week period and cause an impairment in social, occupational, or other important areas of functioning for the individual.

As alluded to in the introduction of chapter 1, the question was posed, is it depression that causes a person to think in a depressive way or does depressive thinking cause a person to become depressed? In considering this question an exploration of the cognitive component relating to depression needs to be undertaken. The next section seeks to explain the cognitive processing of an individual’s experiences.

Brief History of Depression

Toward the turn of the previous century a paradigm shift in the perception of emotional and behavioural problems emerged. Supernatural forces were no longer seen as the main influence on pathological human behaviour and in the
quest for causation, a significant transformation occurred toward the understanding of the internal functioning of the brain. As far back as Hippocrates, (460-377 B.C.) 400 years before Christ, disorders were being traced to biological factors. Hippocrates and his associates believed that psychological disorders could be treated as much as any other disorders that were manifest at the time, giving rise to the biological tradition (Barlow & Durand, 1995). This biological tradition is prevalent today in dealing with mental status, diagnosing, prognosis and treatment. Even the categorisation of pathologies, in the form of the DSM-IV-TR (APA, 2000), can be traced in part to the efforts of these pioneers’ efforts toward the biological tradition.

From the start, Hippocrates assumed that optimal brain functioning was dependant on four humours or fluids. These four fluids were identified as blood, black bile, yellow bile and phlegm. Terms, used even today, were developed as explanations for personality traits, based on these four humours. Sanguine referred to an excess of blood and is used to describe a cheerful and hopeful person. Melancholia (black bile) meant depression, phlegmatic referred to a sense of apathy and lethargy but can also take on the meaning of calmness during a stressful event. Choleric described someone who was rather hot tempered who could easily be irritated or angered. Each emotion is ascribed to an excess of the different humours with which it is associated.

The modern day psychological treatment can be traced back to Plato, with the identification of cultural and social factors influencing human behaviour. Early philosophers like Plato and Aristotle wrote about the importance of dreams, cognitions and even fantasies thereby sowing the seeds for psychoanalytic thought and cognitive science (Barlow & Durand, 1995). Even Beck (1969,
p.339) identifies the significance of “masochistic” dreams. As far back as the
twelfth century, the perception of calming treatment was discovered in the
writings of the Jewish philosopher, Maimonides. He stated that: “One who suffers
from melancholia may rid himself of it by listening to singing and all kinds of
instrumental music, by strolling through beautiful gardens and splendid buildings,
by gazing upon beautiful pictures and other things that enliven the mind and
dissipate gloomy moods.” (Barlow & Durand, 1995, p.20)

According to Arieti and Bemporad (1993) in their exploration into the
history of depression, they state that early writings regarding Mood Disorders
seem to identify symptoms of “affective illness”, which have basically been the
same over twenty-five centuries. After Hippocrates, Ariteaus, in 2 A.D. wrote
what is seen as the most comprehensive description of depression. In order to
identify the similarities with a modern understanding of Mood Disorders I quote a
section from Aretaeus’s definition of depression in Arieti and Bemporad’s (1993,
p. 12) “Severe and Mild Depression”.

“The characteristic appearances, then, are not obscure; for the
patients are dull or stern, dejected or unreasonably torpid,
without any manifest cause; such is the commencement of
melancholy. And they also become peevish, dispirited,
sleepless and start up from a disturbed sleep…They are prone
to change their minds readily; to become bossy, mean-
spirited, illiberal, and in a little time, perhaps, simple,
extravagant, munificent, not from any virtue of soul, but from
the changeableness of the disease. But if the illness becomes
more urgent, hatred, avoidance of the haunts of men, vain
lamentations are seen; they complain of life and desire to die.”

The nature of depression has not changed since the time of Aretaeus, with
many of the same characteristics forming the basis for a diagnosis of depression.

According to the World Health Organisation (2001) 1 in 4 people will suffer
from a mental or neurological disorder some time in their lifetime. 121 million
people will suffer from depression and 1 million people commit suicide every
year. These statistics serve to ground the contributing mood disorder of
depression within a global paradigm of mental health.

Within the South African context, the latest available statistics are those
researched in the 2001 census by Statistics South Africa, which identify
emotional disorders as criteria for measurement. Statistics South Africa define
emotional disorders as “psychological or behavioural” disorders, an extremely
broad categorisation, which includes the diagnosis of depression as well as other
psychological and behavioural disorders identified within the DSM-IV-TR, 2000.
(http://www.statssa.gov.za/census01/Census/Database/Census%202001/Provincial%20Level/Persons/Metap.doc).
The prevalence of emotional disorders is represented in Table 1.

**Table 1: Census 2001 by province, gender, disability and population group.**

<table>
<thead>
<tr>
<th>Province</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>22476</td>
<td>19963</td>
<td>24923</td>
</tr>
<tr>
<td>Free State</td>
<td>9420</td>
<td>8924</td>
<td>10140</td>
</tr>
<tr>
<td>Gauteng</td>
<td>16639</td>
<td>13275</td>
<td>19749</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>26529</td>
<td>23409</td>
<td>37846</td>
</tr>
<tr>
<td>Limpopo</td>
<td>18421</td>
<td>16059</td>
<td>35014</td>
</tr>
<tr>
<td>Mpumalanga</td>
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<td>Western Cape</td>
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http://www.statssa.gov.za/extract.htm

From the statistics identified above, it can be seen that emotional disorders among males is more prominent than within females. Black Africans are the largest population group diagnosed with emotional disorders, congruent with population demographics, comprising of all Black African cultural groups. The KwaZulu-Natal Province has the highest prevalence of emotional disorder diagnoses followed by the Eastern Cape. The statistics also identify the smallest population group diagnosed with emotional disorders being that of the Indian/Asian group. According to these statistics with a population of approximately 44 500 000 people, 0.60% of the South African population have been diagnosed with emotional disorders.
The concept of mood is an amorphous and subjective component of our daily lives. Bad, down, cheerful and good moods are all superficial concepts of what regulates emotion and more comprehensively, affect. Mood is the pathway to affect; that emotion which permeates every facet of an individual’s life and determines behaviour. The Dictionary of Psychology defines mood as a moderately persistent and prolonged emotional state (Reber, 1995). The concept of affect however is that underlying mood-state, the pathway of emotional well-being. A similarity is drawn between depression and a low mood in one’s normal behaviour in that the mood has developed along the depression continuum into an extreme state. This similarity exists in the perception that the pathological is merely an extension of one’s normal mood (Beck, 1967). It is also argued that a cyclical relationship seems to exist between affect and mood in that thought processes are determined by affect and equally that affect determines thought processes and mood.

Gagiano (2001) provides a concise definition of mood disorders as the “disruption”, characterised largely by a “disturbance in emotions and feelings” (Robertson, Allwood & Gagiano, 2001, p.111). Mood disorders rank within the top ten disabilities worldwide and major depressive disorder, also known as unipolar depression, ranks first with bipolar disorders ranking within the top ten disabilities (Regier, Rae, Narrow, Kaelber, & Schatzberg, 1998).

Subsequent to the DSM-III-Revised (APA, 1987), mood disorders have been categorised into different generalised disorders like depressive and affective disorders. Two experiences are primary in identifying Mood Disorders. These are mania and depression. The DSM-IV-TR (APA, 2000) however divides mood disorders into three distinct categories. These are the depressive
disorders, the bipolar disorders, and two disorders based on aetiology. Those based on aetiology are mood disorder due to general medical condition and substance-induced mood disorder (APA, 2000, p. 345).

Within South Africa, the cultural dynamic cannot be ignored. Within this study the researcher endeavoured to use as far as possible a homogeneous sample in order to reduce cultural biases which might exist in the interpretation of the psychological construct identified as criteria for evaluation within a diagnosis for depression.

An overview of the clinical picture of depression will now be presented in order to gain a better understanding relating to criteria associated with the psychopathology of depression.

**Depressogenic Cognitive Schema**

“It is not the things in themselves which trouble us, but the opinions we have about these things.”

Epictetus, in Rowe (1978), p.14

It was Nietzsche (in Rowe, 1978, p. 147) who said “We invent for ourselves the major part of experience.” From the moment we are born to the day we die we face a barrage of stimuli or information constantly feeding our senses as we ascribe meaning to our experiences. This information is coded and organised within cognitive structures identified as schema. These schema facilitate the processing, encoding and acquisition of schema-related information, creating meaning from the individuals experiences (Beck, 1967, 1976; Beck & Freeman, 1990; Markus, 1977; Williams, Watts, McLeod & Mathews, 1997).

Kaplan and Sadock (1998, p.152) define cognition as the “process of obtaining, and using intellectual knowledge”. They further explain that cognition
involves a perception of the relationship between cause and effect, action and consequence (Kaplan & Sadock, 1998). Although the concept of schema has been defined with varying degrees of accuracy (Williams, et al., 1997); most conform to the view that schema are cognitive structures, developed from past experience in order to make sense of those experiences. Schema are defined as “specific cognitive structures” (Kaplan & Sadock, 1998, p.152). According to Beck, Rush, Shaw and Emery (1979, p.565), the term schema is defined as “core beliefs”. Segal (1988, p.147) defines the term schema as the “organised elements of past reactions and experience that form a relatively cohesive and persistent body of knowledge capable of guiding subsequent perception and appraisals”. Gladstone and Parker (2001, p.211) define schema as “stable underlying constructs, which contribute to the core of the individual’s self-concept”. Furthermore, the development of these schema give rise to the “dysfunctional assimilation of environmental and intrapersonal data and the distortion of information regarding the self and the environment has the potential to give rise to negative automatic thoughts and subjective distress” (Gladstone & Parker, 2001, p.211).

Various characteristics have also been ascribed to schema. It has been identified that schema store a body of knowledge which directs attention, expectations, interpretation and recall related to particular experiences perceived as similar to previous experiences (Alba & Hasher, 1983; Graesser & Nakamura, 1982; Williams et al., 1997). Schema have the potential to act as templates for the organisation of new information and structure this new information in a stereotypical manner, based on previous experiences. Mandler (1984) purports
that the content of the schema comprises of numerous components and that if any of these component parts are triggered, the entire schema is activated. As a result of these core schema being activated, individuals tend to employ cognitive distortions which reinforce their foundational core beliefs.

Hollon & Kriss (1984) propose that schema need to be viewed within the contexts of structure, content, and organisation in the processing of information. The content is also varied and contains information regarding the self (Markus, 1977) and others. This content is in itself representative of concepts, objects and events the individual experiences (Trafimow & Wyere, 1993).

The development of cognitive schema has been likened to the process of conditioning in which specific responses are generated or triggered from a particular stimulus (Beck, 1967). Beck (1967) likened this conditioning to the formation of a chain, identifying that stimuli which is similar in nature to the original stimulus may induce a conditioned response, in this case depression.

Young (1990) proposes that individuals view the world they live in, through their schema. Young (1990) defines them as significant belief structures individuals hold with reference to themselves and their environment. The belief systems according to Young (1990) are accepted without question.

The term cognitive schema therefore represents the process of gathering information and using intellectual knowledge to structure thoughts relating to causal events and in turn anticipate consequences related to that specific activating situation or event.

Theories which focus on the cognitive schema (Beck, 1967; Gladstone & Parker, 2001) in depression suggest that the development of these schema are responses to traumatic childhood events (Ingram, 2003).
Beck, (1967, p.278) purports that

In childhood and adolescence, the depression-prone individual becomes sensitised to certain types of life situations. The traumatic situations initially responsible for embedding or reinforcing the negative attitudes that comprise the depressive constellation are the prototypes of the specific stresses that may later activate these constellations. When a person is subjected to situations reminiscent of the original traumatic experiences, he may then become depressed.

Within the cognitive theory of depression, Beck (1967), proposed that strictly negative beliefs surrounding an individual’s personal inadequacy or loss coupled with an over appraisal of results, with reference to the self, world and future, creates a diathesis which could predispose or maintain a state of depression. Although Beck identified that this susceptibility related to non-endogenous depression, recent research postulates that Beck’s model is relevant to major depression as a whole (Reinecke & Clark, 2004).

Negative or dysfunctional beliefs which predispose an individual to construct negative assumptions are referred to as core schema (Beck et al., 1979). These core schema relate specifically to neglect or abuse during childhood. Beck et al., (1979), propose that these cores beliefs are easily activated during stressful life events which resemble the negative experiences of childhood. He further postulated that they are not active during low-stress events through the life span and that the re-activation of these core schema has a profound effect on the cognitive and emotional behaviour of an individual (Beck et al., 1979). The following is a list of depressogenic cognitive assumptions:
• Overgeneralization
  o Overgeneralization refers to the concept of global thinking inferring
global reach when an event or statement clearly cannot permeate
all aspects of an individual’s life (Field, 2000).
• Selective abstraction
  o Selective abstraction can be defined as behaviour that plays out in
the selection of sporadic negative gestures or indicators, despite
overwhelming evidence that the statement or gesture is positive
(Field, 2000).
• Excessive responsibility (assumption of personal causality)
  o Excessive responsibility refers to the personalisation and
acceptance of excessive responsibility relating to incidence of
negative events (Leung and Poon, 2001).
• Assumption of temporal causality
  o Assumptions of temporal causality refers to the prediction of
outcomes in the absence of adequate proof (Beck et al., 1979).
• Self references
  o Self referencing refers to the attribution of “random negative events
to yourself despite evidence to the contrary” (Field 2000, p. 7).
• Catastrophizing
  o Abela, Brozina, & Seligman (2004) identify catastrophizing as an
inferential style and maintain that it is the tendency to view negative
events and consequences as important, unlikely to change, and as
affecting many areas of an individuals’ life.
• Dichotomous thinking
  
  Dichotomous thinking refers to inferring all or nothing thoughts to an event or statement. The term “black or white” is often used as a simile for dichotomous thinking. Field (2000, p.7) identifies this as particular assumption as having “no room to see alternatives”.

  Beck (1976) further proposed that depressogenic automatic thoughts are extremely negative with regard to three domains (the negative triad) of experience. These domains are the self, future and personal world (Haaga & Solomon in Reinecke & Clark, 2004). Beck (1967) differentiated between negative filters and automatic thoughts in the following way. Negative filters refer to the depressive’s ability to habitually use cognitive distortions to attain unrealistic negative conclusions. Automatic thoughts however are identified as the conclusions themselves and emphasise intrusive, repetitive and apparently involuntary assumptions. Young (1990) also identifies that schema are self perpetuated and extremely resistant to change. As a result of this persistence, when triggered, schema dominate an individual’s feelings and thoughts, and if depressogenic, predispose them to negative emotions and dysfunctional thoughts (Young, 1990).

  Schema facilitate the cognitive processes which interpret experiences and deliver context and meaning to these experiences when recalled. These schema could contain biases which influence the processing and storing of information (Pace, 1988). In the case of depressed individuals’, the bias is negative in relation to the self, the individual’s world and the future. Subsequently, information that is not congruent with a specific schema may be distorted to fit in with an existing schema or completely ignored (Beck, 1967,
Applying the concept of depressogenic cognitive schema, it is argued that information which is not necessarily negative may be distorted in order to fit a depressogenic schema or be completely ignored.

In Figure 2, Field (2000) contextualises these depressogenic cognitive assumptions in relation to the depressogenic cognitive triad, depressogenic schema and cognitive biases, leading to depression.

**Figure 2: Depressogenic cognitive assumptions**

![Diagram showing the relationship between negative cognitive triad, depressogenic schema, cognitive biases, and depression.](image)

Field, (2000, p. 7)

Having identified the concepts of cognitions, schema and depressogenic assumptions, one may conclude that depressogenic cognitive schema by definition are complex negative or depressive oriented cognitive processes. They are created as structures or templates which serve to organise information in
stereotypical ways with reference to content, structure and context. They are
generally created during childhood and relate to stressful life events developed
over time. Schema can be triggered in part or entirely during stressful life events
perceived as similar to those stressful events experienced in childhood. If
negative or depressogenic, these schema have the potential to create a diathesis
or vulnerability for the development of depression. They can be understood to
mean more than the sum of its parts.

Depressogenic cognitive schema by definition are illogical (Beck, 1967),
stable, underlying constructs (Gladstone & Parker, 2001) or core beliefs (Beck et
al., 1979), acquired through the exposure to traumatic childhood events (Beck,
1967, Ingram, 2003) which remain inactive during low-stress events through the
life span and are easily activated in part or entirely during stressful life events
which resemble the traumatic childhood experiences (Beck, 1967). These core
beliefs have a significant effect on the cognitive and emotional behaviour of an

In conclusion, Segal, Williams & Teasdale (2002, p.9) define depression
succinctly as a “combination of elements” rather than a single element. They
define depression as “a state in which persistent depressed mood or loss of
interest occurs together with other reliable physical and mental signs, such as
difficulty sleeping, poor appetite, impaired concentration, and feelings of
hopelessness and worthlessness”. This helplessness and hopelessness occurs
on the extreme side of the depression continuum. It has been described as a
dark place where little if any hope resides. Within the following section this
experience of helplessness and hopelessness is explained and explored.
Learned Helplessness and Hopelessness

“...a very deep pit. Bottomless, well, not entirely bottomless but so steep you couldn’t climb out. Much as you tried, the more you tried to grovel your way up, the more you would slide. Grey and nothing, like you see when a volcano’s erupted, all the lava, when it’s died down, all that sort of clinkery, burnt-away nothingness, no life, nothing colourful in it at all, no colour or anything like that. The darker it was, the worse it would be to me.”

Anonymous, in Rowe (1978), p. 8

The learned helplessness theory developed by Seligman (1975) proposed that depression is caused by a sense of resignation in response to unavoidable exposure to negative stimulation. Learned helplessness experimentation revolved around the concept of uncontrollability; these concepts relate to difficulties in motivation, cognition and emotion as a result of uncontrollable events (Peterson, Maier & Seligman, 1993). The fundamental aspect of the theory of learned helplessness which has sustained it over time however remains that deficits occur within the cognitive process as a direct result of uncontrollability. Within the context of experimentation, Cole and Coyne (1997) in Peterson et al. (1993) found that helplessness is prevalent immediately after the experience but not hours or days subsequent to experimentation. This recognizes that although the explanation of learned helplessness remains relevant the time component of experimentation is limited.

Abramson et al. (1989) revised the learned helplessness theory and emphasized a sense of hopelessness within this framework as the most
important component of numerous types of depression. Weiten (2004, p.57) identifies hopelessness theory as “the most recent descendant” of learned helplessness theory. Hopelessness theory postulates that “depressogenic inferential styles about the self, consequences, and causes serve as vulnerability factors to hopelessness depression” (Abela & Sarin, 2002, p.811).

Abramson et al. (1989, p.361) proposed that within hopelessness, three specific inferential styles exist. These inferential styles have been identified as firstly, the inclination to “attribute negative events to global and stable causes”; secondly, the “tendency to perceive negative events as having many disastrous consequences”; and thirdly the “tendency to infer negative characteristics about the self when negative events occur”.

Hopelessness encompasses “two core elements of proximal sufficient cause” for hopelessness depression: these have been identified by Abramson et al. (1989, p.359) as

a) “negative expectations about the occurrence of highly valued outcomes (a negative outcome expectancy)”, and

b) “expectations of helplessness about changing the likelihood of occurrence of these outcomes (a helplessness expectancy)”

Hopelessness theory postulates that a chain of “distal” and “proximal” causative factors are predicted by the depressed individual to “culminate in a proximal sufficient cause of the symptoms of hopelessness depression” (Abramson et al., 1989, p.359).

The process from activating negative life event, attribution and inferences as well as the development of symptoms associated with hopelessness are graphically represented in Figure 3 on page 40. Within Figure 3, the causal
chain of events begins with the perception of a negative event or stress. Research has identified that the prevalence of negative life events play a role in the development of depression (Lloyd, 1978). As identified earlier, hopelessness theory postulates that there are three inferences individuals make which aid the development of the symptoms of hopelessness subsequent to negative life events. These relate to causal attribution, the consequence of the negative life event and thirdly inferences relating to the self with reference to the activating event (Abramson et al., 1989).

**Figure 3: Causal chain specified in the hopelessness theory of depression**

(Arrows with solid lines indicate sufficient causes. Arrows with broken lines indicate contributory causes)

The hopelessness theory of depression proposes that people who engage in internal, stable, or global attributions for negative life events and external,
unstable, or specific attributions for positive life events are more likely to experience learned helplessness (Abramson, Seligman & Teasdale, 1978).

The cognitive model of depression developed by Beck (1967) postulates that three cognitive concepts exist. These are identified as the cognitive triad, which refers to negative thinking patterns, schemata and cognitive distortions. The negative inferential styles identified by Abramson et al. (1989) correlate with Beck’s (1967) cognitive triad which proposes that depressed individuals make cognitive errors involving the negative affiliation relating to themselves, their environment and their future (Barlow & Durand, 1995). The negative thinking patterns lead the depressed individual to perceive themselves as “unworthy, expecting failure and rejection as well as feeling hopeless about their future prospects” (Segal, 1988). Beck (1967, 1987) further proposed that with depressed individuals, a negative schema may have developed in childhood. These cognitive schema are identified as automatic thoughts, residing in the individual’s sub-conscious (Beck, 1967, 1987). Although Beck (1967, 1987), Seligman (1975) and Abramson et al. (1989) developed their theories at different times, a relationship exists between the cognitive theory of depression, learned helplessness theory and the theory of hopelessness depression.

O’Connor and Sheehy (2001), in their research undertaken on suicidal behaviour, have identified that a sense of hopelessness and psychological pain is evident in more than ninety percent of individuals who have written suicide notes before taking their own lives. Nimés, Träskman-Bendz & Alsen (1997) identify hopelessness as a key psychological factor in suicidal behaviour. Nimés et al. (1997, p.138) identify that hopelessness, measured by the Beck
Hopelessness Scale (BHS) has “emerged as the modulating variable linking depression and suicidal intent”.

In conclusion, Needles and Abramson (1990, p.156) define hopelessness as “the expectation that highly desirable outcomes will not occur, and that one is powerless to change the situation”. Abramson et al. (1989), in defining hopelessness depression, purport that these negative expectations are stable over time and global in that they have widespread consequences for the individual. O’Connor, Connery & Sheehy (2002, p.155) define hopelessness as “the degree to which an individual is pessimistic about the future”. O’Connor and Sheehy (2000) however propose that hopelessness acts as a go-between, linking depression and suicide. Beck (1967, p.56) identifies “hopelessness” as a factor to be identified when elicit information regarding suicide. Beck & Steer (1989) have also identified the presence of hopelessness as a variable to be considered when eliciting suicidal ideation.

Conclusion

Within this chapter a brief introduction into the clinical context of mood disorders was presented in order to lay the foundation for the construct of depression.

With reference to the theoretical framework, the core constructs of depression, depressogenic cognitive schema and hopelessness have been introduced. These constructs were contextualised within a cognitive theoretical framework, referring to Beck’s (1967, 1976) cognitive theory of depression, Seligman’s (1975) helplessness and Abramson et al’s. (1989) theory of hopelessness depression.
From these theories, reference to the individual’s perception of the self, the world and the future is highlighted. Within the framework of depressive cognitive schema, life events or stressors give rise to negative inferences relating to the self, the life event and the consequences thereof.

Beck (1967, 1976), supported by Rose, Abramson, Hodulik, Halberstadt & Leff, (1994) maintains that depressogenic cognitive schema could cause an individual to process information from their experiences in a biased or distorted manner and in so doing create a diathesis for the development of depression (Beck, 1967, 1976).

Having presented these constructs, the foundation for an exploration of the relationship between depressogenic cognitive schema, depression and hopelessness can now be initiated.
CHAPTER 3

DEPRESSOGENIC COGNITIVE SCHEMA, DEPRESSION AND
HOPELESSNESS

Chapter Overview

By its very nature depression is subjective or qualitative in nature. This experience can be different for everyone, yet research has identified that certain criteria exist which span the psychopathology of depression. Whether qualitative or quantitative, physiological, or a combination of both, depression remains a disorder which can be treated and the burden of depression eased.

A literature review referring to previous research undertaken on depressogenic cognitive schema, inferential and attributional style and their relationship to depression and hopelessness is the focus of this chapter.

Firstly research pertaining to the vulnerability to depression including research relating to depressogenic cognitive schema, inferential and attributional style will be discussed. Thereafter, studies identifying hopelessness and hopelessness depression as a subtype of depression will be discussed. The relationship between hopelessness and suicidal ideation will also be introduced.

Vulnerability to Depression

With the scientific era firmly entrenched in the social sciences, the measurement of pathology in a post modern era ascribes increasing value to the qualitative assessment process (Goldman, 1990, 1992). Goldman (1992, p. 616) reinforces this thought by explaining that the qualitative model of assessment offers counsellors ways of aiding clients to know and understand themselves better with methods that are “flexible, open-minded, holistic” and “non statistical”.

The construct of vulnerability is progressively becoming the main focus of research surrounding depression (Ingram, 2003). This predisposition has been identified in many ways from genetics to schema framework. The latter, schema framework, is a core focus of the present study and seeks to identify negative or depressogenic cognitive schema and their influence on levels of depression and hopelessness.

Beck (1967) identified that depressogenic schema are created as a result of negative or traumatic childhood experiences. As a result of these schema, experiences similar or resembling those experienced in childhood are assimilated using the same cognitive framework.

Rose and Abramson (1992) identify several developmental features which might create a vulnerability to hopelessness. They propose that children seek to create meaning around their negative experiences and in so doing make internal attributions for all of these experiences and as a result see themselves as the
cause of negative experience. These negative inferences create a depressogenic cognitive style and in turn lead to depression and hopelessness (Ingram, 2003). Rose and Abramson (1992) also propose that if these experiences are related to significant others like caregivers, it will reflect negatively on the child’s self-esteem as well as their perception about the future. If similar negative events continue through the child’s life, they may create a negative attributional style which affects the individual’s entire life (global) and does not change (stable). Besides Beck (1967) and Abramson et al. (1989), other studies have identified adverse childhood experiences as creating a vulnerability for developing depression (Parker, Gladstone, Mitchell, Wilhelm & Roy, 2000; Hankin, Abramson, Moffit, Silva, McGee & Angell, 1998).

Parker et al. (2000) in pursuing the lock and key hypothesis undertook empirical research in testing whether negative childhood or adolescent experiences create a vulnerability to depression. Their hypothesis involved the negative or adverse early experiences of the child creating a schema framework or lock, and later stressful life experiences, being the key, which unlocks the schema in order for the individual to make sense of their experience. Parker et al, (2000, p.210) support Abramson et al, (1978) and Beck (1979) in postulating that life events which fulfil “negative cognitive biases have a depressogenic impact” on certain cognitively vulnerable individuals. Their qualitative findings identified that “cognitive schema were more strongly associated with earlier life events than with precipitating life events” (Parker et al. 2000, p.212). This supports the theory that earlier adverse experiences create a cognitive framework which may manifest as depressogenic schema and be activated by some experience later on in life. Relating specifically to the lock and key hypothesis, Parker et al. (2000,
p. 213) failed to significantly prove that “lock and key links are mediated cognitively”. Elaborating on this finding, Parker et al., (2000) failed to identify clear evidence of a lock and key association with reference to the same negative or adversity theme of experiences. In research conducted later, Gladstone & Parker (2001, p. 212) propose that “depressogenic cognitions as vulnerability factors are more relevant for recurrent depressions than first episodes due to the influence of information processing during past episodes”.

Lewinsohn, Allen, Gotlib and Seeley, (1999) in their research on adolescents also support this hypothesis. Their findings indicated that the link between dysfunctional thinking and depressive ideation was larger for individuals who had previously been diagnosed with major depression than for those who had never been diagnosed with major depression. Although a comparison of single episode versus chronic depression was not specifically addressed in the present study, previous prescription of medication for depression was a variable identified in the present study, and comparisons were made between the depressed and normal sample with regard to this variable.

Several studies relating to the vulnerability to depression based on low self-esteem and lack of social support have also been undertaken (Andrews & Brown, 1988; Andrews & Brown, 1993; Brown, Andrews, Harris, Adler & Ridge, 1986; Brown, Bifulco, Veiel & Andrews, 1990; Butler, Hokanson & Flynn, 1994; & Kernis, Grannemann & Mathis, 1991). Although the construct of self-esteem has not been included as a variable in the present study, it is an area, which has an important impact on the vulnerability to depression.
Depression and Depressogenic Cognitive Schema

Much research has been undertaken on the subject of depression but for the purposes of the present study, only research relevant to depressogenic cognitive schema and its relationship to depression and hopelessness have been included in this literature review. The constructs of depressogenic cognitive schema as well as that of negative inferential and attributional style and their relationship to depression have been well researched and discussed in chapter two (Abela & Sarin, 2002; Alloy et al, 1999; Beck, 1976, 1989; DeFronzo Dobkin, Panzarella, Fernandez, Alloy & Cascardi, 2004; Gladstone & Parker, 2001; Harris & Curtin, 2002; Ingram, Partridge, Scott & Bernet, 1994; McLain & Abramson, 1995; Rude, Covich, Jarrold, Hedlund & Zenter, 2001; Rose et al., 1994; Ruehlman & West, 1985; Segal, 1988; Spence, Sheffield, & Donovan, 2002; Stiensmeier-Pelster, 1989; Joiner, 2001; Young, 1990; & Young, 1994).

Beck’s (1967, 1989) theory of depression encompasses constructs of insufficiency, failure, loss and worthlessness. These constructs are formulated within a negative or depressogenic cognitive framework, creating a diathesis for future depressogenic cognitive processing of experiences. This theory was put to the test in the Temple-Wisconsin Cognitive Vulnerability to Depression project (CVD). The project is a “two-site, prospective longitudinal study designed to test this cognitive vulnerability hypothesis, as well as the other etiological hypotheses of Beck’s and the hopelessness theories of depression” (Alloy et al., 1999). Although the samples used in the CVD research are adolescents and the present study was based on an adult sample, similar measures have been employed and the findings of the CVD study can provide useful clinical data and information with reference to the present study. Findings relating to retrospective lifetime
histories of depression identified that “depressogenic cognitive styles may indeed confer risk for full-blown, clinically significant depressive disorders and for hopelessness depression, and that the risk may be specific to depression” as opposed to anxiety or other Axis I disorders (Alloy et al., 1989).

Ruehlman et al. (1985) compared the individual schema content of a sample of depressed and non-depressed participants and found that the content of the non-depressed sample reflected largely positively oriented self-schema. A mildly depressed sample tends to show neither a positive nor a negativistic biased self-schema. Within the severely depressed sample however a negative bias relating to self schema with reference to content and self referent judgements was identified. Another important finding of Ruehlman et al (1985) is that the schema employed by the non-depressed and depressed samples seemed to be stable as opposed to those employed by the mildly depressed sample which was found to be vacillating. Clearly the non depressed sample was stable in relation to a positive bias and the severely depressed sample stable in relation to a negativistic bias. This supports Beck’s (1967) proposition of the cognitive triad relating to internal, stable and global inferences of depressogenic cognitions.

Spence, Sheffield & Donovan (2002) in their study of problem-solving orientation and attributional style as moderators of negative life events in the development of depression amongst an adolescent sample, found that attributional style had a direct effect in predicting future increases in depression. It was found that individuals who identified negative attributional styles were more likely to report increased levels of depression in a one year follow up study, irrespective of negative life events (Spence et al., 2002).
In their study of college students, McClain & Abramson (1995) found stress was associated with depressed mood with reference to the self-schema specific constructs of competence, self-worth and motivation. Their research also identified that “specific, negative self-schema are related to the exacerbation of depressed mood” (McClain & Abramson, 1995, p.429). This specific study identifies that there is not a blanket depressogenic schema, which is activated relating to all of the individual’s experiences rather, specific constructs within their experiences activate depressogenic schema which enhance or create vulnerability for a depressed mood.

Where Beck (1967) identifies 7 themes in the cognitions of depressed individuals namely: low self regard, ideas of deprivation, self criticism and self blame, overwhelming problems and duties, self commands and injunctions as well as escapist and suicidal wishes as thematic content of cognitions, Young (1990) identifies 16 specific schema in depressed patients. He identifies these as dependence/incompetence, subjugation, self sacrifice, vulnerability to harm and illness, fear of losing self-control, emotional deprivation, abandonment/loss, defectiveness/unlovable, mistrust/abuse, social isolation/alienation, social undesirability, shame embarrassment, unrelenting/unbalanced standards, failure to achieve, self-punishment and insufficient limits/entitlement. Although Young’s (1990) theory relating to cognitive schema has not been used in the present research it is interesting to note the similarities between the Young’s (1990) schema and Beck’s (1967) content themes as well as the constructs of depression identified in the BDI.

On a more positive note, research undertaken by DeFronzo et al., (2004), indicated that “individuals who received adaptive inferential feedback following an
academic failure experience, felt significantly ‘better’, more understood, and more supported than individuals who received general/non-specific types of support that did not include an adaptive inferential feedback component” (DeFronzo et al., 2004, p. 503). Added to this, those individuals who received the adaptive inferences displayed a significant decrease in their depressogenic inferences.

The cognitive component of depression comprises of the assimilation of an experience. These experiences are processed according to schema, which are used to categorise and interpret these experiences. Should an individual employ a negative self schema, it is found that a negative mood could be exacerbated. If an individual continues employing negative schema to their experiences, a slide along the depression continuum is facilitated, leading to a sense of hopelessness. The following section explores more comprehensively the sense of hopelessness and it’s relevance to depression.

Hopelessness

The concept of hopelessness appears to be synonymous with depression. The theory of hopelessness depression (Abramson et al, 1989) as a sub type of depression is also widely accepted as relevant in relation to depression. Early research on attributional models of depression have also demonstrated a correlation between negative attributional style and depression (Kwon & Laurenceau, 2002).

Much research exists regarding Abramson et al.’s (1989) theory of hopelessness, a derivative of Seligman’s (1975) theory of helplessness (Abramson et al., 1989; Alford, Lester, Patel, Beck & Steer, 1988; Buchanan & Giunta, 1995; Joiner, Rudd & Rajab, 1997; Joiner, Steer, Abramson, Alloy,
Alford, Lester, Patel, Buchanan and Giunta (1995), in researching whether hopelessness predicts future depressive symptoms, identified that hopelessness or as Beck (1967) identifies it, negative view of the future, a component of the cognitive triad, may in fact act as a vulnerability component of depressive ideation. Hopelessness was found to “predict depression over and above negative life event stressors, but not vice versa” (Alford et al. 1995, p. 337).

Consistent with these findings, Joiner’s (2001) research on college students, found a significant correlation between negative attributional style and hopelessness depression symptoms, in the presence of negative life events. These finding are concurrent with the theory of hopelessness depression (Abramson et al, 1989).

With reference to the Temple-Wisconsin Cognitive Vulnerability to Depression longitudinal study (Alloy et al., 1989, p. 514), findings indicated that “depressogenic cognitive styles have considerable predictive validity for clinically significant episodes of depression, hopelessness depression and suicidality”, creating a vulnerability specifically for hopelessness depression, a subtype of depression proposed by Abramson et al., (1989). This longitudinal study is seen as landmark research on the topic of attributional style and hopelessness depression due to its ongoing status.

In much of the research identified above, there is a correlation between hopelessness depression and suicidal ideation. Abramson et al. (1989) proposed that hopelessness depression may be the central component mediating between suicidal ideation and successful suicide. This speculation has been supported by

In their research with suicidal patients, O’Connor et al. (2000, p. 160) found that “negative cognitive style is associated with hopelessness independent of depression”. Furthermore they explain that negative cognitive style and positive future thinking are features within the aetiology of hopelessness.

Internal, stable and global associations seem to be prevalent with individuals who are depressed and suicidal (O’Connor & Sheehy, 2001). The internal association relates to the individual blaming themselves for negative events; the stable inference relates to the negative experience always being present; and the global association infers that the negative experience will impact all areas of the individual’s life. O’Connor and Sheehy (2001) identify that “this pattern of thinking is more potent when it is applied to explaining negative interpersonal events (e.g. relationship crises), rather than negative achievement-related events (e.g. job failure)”. This negative way of thinking impacts negatively on the depressed individual’s ability to problem solve, maintaining that individual’s state of hopelessness and increasing the risk of suicide (O’Connor & Sheehy, 2001).

Conclusion

Within the literature reviewed, negative attributional style tends to give rise to depressogenic cognitive schema, creating a vulnerability to depression, and hopelessness, a component of the cognitive triad of depression which Beck (1967) refers to as negative view of the future. This sense of hopelessness is specifically triggered by stressful or negative stressful events and has been proved to be correlated to suicidal ideation.
Having explored some of the existing literature on the theories of depression and hopelessness, as well as the implications to vulnerability and the symptomatic impact on depression on individuals the specific aims relating to this study can be addressed. Measurements relating to levels of depression, hopelessness and negative inferential style will be explored and compared between a depressed and normal sample. Gender specificity will also be identified regarding levels of depression, negative inferential style and hopelessness.
In the present study the researcher has sought to identify depressogenic cognitive schema of both a depressed and normal sample by using the Inferential Style Questionnaire (ISQ), (Rose et al., 1994). Depressogenic Cognitive schema are also referred to as negative inferential styles or negative attributional style. These negative inferences are inferred consequences an individual creates about the possibility that the “presented outcome will lead to additional, similarly valenced outcomes” and feature as a diathesis for negative cognition within hopelessness depression (Rose et al., 1994, p.422). The researcher has also sought to identify the levels of depression and the levels of hopelessness.

This chapter introduces each of the measures identifying psychometric values of each measure and the motivation for use within this sample. The specific aims of the research are introduced, the procedure followed, the research design as well as the sampling method undertaken to generate the two samples. The ethical considerations in undertaking this research are also clarified.

Primary Objectives of the Research

This study aims to describe the depressogenic cognitive schema of both a depressed sample as well as the cognitive schema of a normal (undiagnosed) sample and determine the relationship between said schema, levels of depression and hopelessness.
Research Aims

Aim 1
To describe the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of individuals within a sample diagnosed with depression.

Aim 2
To describe the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of individuals within the general population who have not been diagnosed with depression, normal sample.

Aim 3
To compare the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of the diagnosed depressive sample with that of the non-diagnosed, normal sample.

Aim 4
To compare the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of the diagnosed depressive sample with that of the non-diagnosed, normal sample with reference to gender.

Research Design

The research design falls within the broad classification of quantitative research and takes the form of an exploratory-descriptive study with the aim of gaining understanding into the relationship between depressogenic cognitive schema, levels of depression and hopelessness.

Quantitative research is the “formal, objective, systematic process in which numerical data are utilised to obtain information about the world” (Burns & Grove in Cormack, 1991, p.51). The study is explorative in nature as it is the first
such study to be undertaken with these two types of samples and these particular aims within the Nelson Mandela Metropolitan area. It is also descriptive in that it aims to describe the profiles of the participants and identify the relationship between depressogenic cognitive schema, levels of depression and hopelessness between a depressed and normal sample. Cozby (1997) explains that descriptive research designs offer a synopsis and explanation of a fairly large set of data.

Sampling Method

Convenience sampling was used to draw from the general adult population within the Nelson Mandela Bay metropolitan area. The total sample comprised 109 adults, 40 males over the age of 18 and under the age of 66 as well as 69 females over the age of 18. The non-depressed sample consisted of 69 adults, 26 males and 43 females over the age of 18. Snowball sampling was used to fulfil the quota needed by the researcher of the non depressed sample. Initially verbal requests to participate in the research study were extended by the researcher to family and known acquaintances. These individuals in turn invited their known acquaintances to participate and the quota was fulfilled in this manner.

The psychiatric, depressed sample was generated from patients currently using the facilities at the Hunterscraig Psychiatric Hospital either as an inpatient or outpatient diagnosed with depression. Due to the fact that Hunterscraig Psychiatric Hospital did not have enough patients to satisfy the quota of participants needed for the purposes of this study, snowball sampling was also employed. The depressed participants were asked to refer people they thought might like to participate in the research to the researcher. The depression and
anxiety support group of Port Elizabeth was also approached to participate in the research. The depressed sample comprised 40 adults, 13 males as well as 27 females over the age of 18. These sample sizes fulfil the criteria needed to undertake the necessary data analysis for testing the statistical significance of difference between the non-depressed and depressed samples’ in general and with reference to gender.

Demographic Questionnaire

All participants selected for the research had to be proficient in English as a first language. The question relating to education level and occupation was not comprehensively completed by the majority of the participants and as a result this criterion cannot be validated for either sample. A question pertaining to occupation and highest education obtained exists on both the BDI and the BHS. A reason for this oversight could be that it forms part of the header of both the BDI and the BHS, which requests the participants name, age and gender. This information was however captured in the biographical questionnaire which preceded the measures. Where possible, the researcher endeavoured to use individuals who were perceived as middle or working class. Although no formal valid or reliable measure was implemented for this purpose, the researcher ascertained through questioning whether the participant was a member of a medical aid and as such able to afford private health care should the need arise.

The demographic components of the questionnaire contain reference to name, age, gender, marital status, hospitalisation, diagnosis relating to depression, parental psychopathology as well as previous prescription of medication for depression. The inclusion of previous medication relating to depression serves to identify whether the depression is a first diagnosis or
repetitive diagnosis. A question relating to suicidal ideation has also been included with the intention of possible future research relating to the comparison of levels of hopelessness with suicidal ideation. The same demographic questionnaire was used for both the depressed and the normal (undiagnosed) sample. Gender differences have been identified in order to compare and measure the prevalence of depression among males and females. Age has been identified as a construct in order to categorise the participants as adults. The biographical questionnaire is included as appendix B.

Measures

The depressogenic cognitive schema have been measured using the Inferential Style Questionnaire (ISQ), the levels of depression using the Beck Depression Inventory (BDI) and the levels of hopelessness using the Beck Hopelessness Scale (BHS).

A variation of the Cognitive Style Questionnaire (CSQ), used in the Temple-Wisconsin Cognitive Vulnerability to Depression longitudinal project (CVD), namely the ISQ has been incorporated into the current study. The ISQ has been normed on an adult population as opposed to the college population of the CSQ.

Each question on the ISQ is rated with positive and negative events on a 7 point Likert-type scale along inferential dimensions relating to internalisation, stability and globality (Rose et al., 1994). Cognitive vulnerability or negative inferential style is computed by calculating a composite. This composite (sum) is undertaken of stability/globality, negative consequences, and negative inferences about self. The corresponding answers are matched to questions c, d, e and f of the negative scenarios only. The lowest score achievable on the ISQ is 36 and
the highest score is 252. The negative scenario questions are questions 2, 3, 5, 8, 10, 12, 13, 15 and 18. As an explanation, if an individual scores 1 on each of the four answers relating to the 9 negative scenarios, their score will be 36, the lowest possible score. Should they score 7 on each of the four answers relating to the 9 negative scenarios their score will be 252, the highest possible score. The range of 36 to 252 indicates the cognitive vulnerability to depression of the individual who has completed the measure. The higher the score on the ISQ, the greater the negative inferential style and by implication the cognitive vulnerability.

In three studies undertaken by Joiner (2001, p. 146), findings indicated that “attributional style was more associated with hopelessness depression symptoms than with endogenous depression symptoms”. These results support Abramson et al.’s, (1989) theory, purporting that negative attributional style creates vulnerability for hopelessness depression. The BDI as well as a variation of the ISQ was used by Joiner in these studies, further motivating the use of the measures.

Beck’s Depression Inventory

The Beck Depression Inventory (BDI) is a 21-item self report measure presented in a 4 point Likert-type scale format. The objective of the measure is to assess the presence and levels of depression in those individuals taking the inventory (Rose et al., 1994). BDI scores have been validated with both psychiatric (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and normal (Bumberry, Oliver & McClure, 1978) samples (Rose et al., 1994). Each of the 21-items of the BDI attempts to assess a specific symptom or attitude related to depressed patients. The BDI has been designed to assess depression independent of any particular theoretical bias (Rose et al., 1994).
Each of the inventory items corresponds to a specific category of depressive symptom and/or attitude. Each category purports to describe a specific behavioural manifestation of depression and consists of a graded series of four self-evaluative statements. The statements are rank ordered and weighted to reflect the range of severity of the symptom from neutral to maximum severity. Numerical values of 0, 1, 2, or 3 are assigned to each statement in order to indicate degree of severity. The 21 categories identified in the BDI are:

<table>
<thead>
<tr>
<th>Question</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sadness or Mood</td>
</tr>
<tr>
<td>2</td>
<td>Hopelessness or Pessimism</td>
</tr>
<tr>
<td>3</td>
<td>Sense of Failure</td>
</tr>
<tr>
<td>4</td>
<td>Anhedonia or Lack of satisfaction</td>
</tr>
<tr>
<td>5</td>
<td>Guilty Feelings</td>
</tr>
<tr>
<td>6</td>
<td>Sense of Punishment</td>
</tr>
<tr>
<td>7</td>
<td>Self-dislike</td>
</tr>
<tr>
<td>8</td>
<td>Self-blame or Self-accusations</td>
</tr>
<tr>
<td>9</td>
<td>Suicidal Ideation</td>
</tr>
<tr>
<td>10</td>
<td>Crying</td>
</tr>
<tr>
<td>11</td>
<td>Agitation or Irritability</td>
</tr>
<tr>
<td>12</td>
<td>Loss of Interest in Activities or Social Withdrawal</td>
</tr>
<tr>
<td>13</td>
<td>Indecisiveness</td>
</tr>
<tr>
<td>14</td>
<td>Distortion of Body Image</td>
</tr>
<tr>
<td>15</td>
<td>Work Inhibition or Loss of energy</td>
</tr>
<tr>
<td>16</td>
<td>Insomnia or Sleep Disturbance</td>
</tr>
<tr>
<td>17</td>
<td>Fatigability or Irritability</td>
</tr>
</tbody>
</table>
- 18  Loss of Appetite
- 19  Weight Loss
- 20  Somatic Preoccupation or Fatigue
- 21  Loss of Libido

(Beck, 1967, p. 189)

The categories identified by Beck (1967, p. 193) relating to cognitive style or “thought content” are: Mood, Helplessness, Pessimism, Feelings of Inadequacy and Inferiority, Somatic Preoccupation, Conscious Guilt and Suicidal Ideation. For the purposes of this research study, these categories identified as the cognitive component of the BDI are measured independently and correlated with the other instruments administered in this research study, namely Beck’s Hopelessness Scale and Inferential Style Questionnaire.

Scores on the BDI are interpreted as follows:

<table>
<thead>
<tr>
<th>Score</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 15</td>
<td>Mild Depression</td>
</tr>
<tr>
<td>15-30</td>
<td>Moderate Depression</td>
</tr>
<tr>
<td>Greater than 30</td>
<td>Severe Depression</td>
</tr>
</tbody>
</table>

The BDI is a measure related specifically to Beck’s (1967) cognitive theory of psychology and also appears to be one of the most comprehensively used measures both nationally and internationally in identifying the levels of depression. It is for this reason that the BDI was chosen as an instrument for the measurement of levels of depression or depressive ideation with reference to this study.
Psychometric Properties of the Beck Depression Inventory

The validity and reliability of the BDI scores is extensively documented (Beck, Steer & Garbin, 1988; Endler & Parker, 1990; Shaver & Brennan, 1991). According to Pillay (2001), the BDI has not been standardised for South African samples. Faure and Loxton (2003) however identify that the BDI has recently been used successfully in studies undertaken in South Africa. Although not officially documented, the researcher has observed that practitioners and psychiatric institutions within the Nelson Mandela Metropolitan area extensively use the BDI. The BDI is used to identify the severity of depressive ideation and is regarded as valid and reliable (Kendall, Hollan, Beck, Hammen & Ingram, 1987). The BDI is an international measure used in much of the literature researched with reference to depression (Abela et al., 2004; Beck & Steer, 1989; Hankin & Abramson, 2002; Rose et al., 1994; Solomon & Haaga, 2003; Carver, 1998).

With reference to means and standard deviation scores of the Beck's Depression Inventory, Table 2 identifies the higher mean scores of each depth of depression category, none, mild, moderate and severe. With each increment relating to the severity of depth of depression, a higher score on the BDI is identified. Beck (1967) identifies that the Kruskal-Wallis One-way Analysis of Variance by Ranks was implemented in order to evaluate the statistical significance of these differences. The $p$-value of the differences was evaluated at $p<0.001$
Table 2: Distribution of means and standard deviations of the BDI scores according to depth of depression

<table>
<thead>
<tr>
<th>Depth of depression</th>
<th>Beck’s study</th>
<th>British study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
</tr>
<tr>
<td>None</td>
<td>115</td>
<td>10.90</td>
</tr>
<tr>
<td>Mild</td>
<td>127</td>
<td>18.70</td>
</tr>
<tr>
<td>Moderate</td>
<td>134</td>
<td>25.40</td>
</tr>
<tr>
<td>Severe</td>
<td>33</td>
<td>30.0</td>
</tr>
</tbody>
</table>

Beck’s study (n=409); British study (n=120)

(Beck, 1967, p. 196)

Beck’s Hopelessness Scale

The Beck Hopelessness Scale is a 20-item, true or false scale which measures negative attitudes about the future (O’Connor, Connery & Cheyne, 2000). The maximum score obtainable on the BHS is 20. Each item is assigned a score of either 1 or 0 with 1 specifying a pessimistic perception and 0 specifying a non-pessimistic perception (Beck & Steer, 1989). Of the 20 true or false statements, 9 are assigned as false, and 11 are assigned as true. This serves to reinforce pessimism or hopelessness regarding the future. The scores are totalled to indicate a total score that can range from 0 to 20 with higher scores identifying greater degrees of hopelessness (Solis, Lotufo, Pannuti, Brunheiro, Marques & Lofuto-Neto, 2004). The cut-off score of 9 was used to identify the hopelessness subjects (Beck and Steer, 1988).

The BHS was initially developed by Beck in order to predict suicidal vulnerability in adults (Beck & Steer, 1988). Scoring is uncomplicated; each of
the items is added up and a score allocated. Interpretation is based on the total scale score obtained.

Although the Beck Hopelessness scale has not been standardised for a South African population, the researcher has observed that it is widely used in practise and psychiatric institutions around the Nelson Mandela Metropolitan area in order to establish a measure of suicidality in patients. O’Connor and Sheehy (2000) identify that the BHS “almost exclusively operationalizes” the degree to which hopelessness mediates the relationship between depression and suicidal behaviour (p.155). The BHS is also extensively used in research involving hopelessness related to depression and suicide (Beck & Steer, 1989; O’Connor et al., 2000; Joiner, Rudd & Rajab 1997).

Scores on the BHS are interpreted as follows:

<table>
<thead>
<tr>
<th>Score</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 3</td>
<td>None or Minimal</td>
</tr>
<tr>
<td>4 to 8</td>
<td>Mild</td>
</tr>
<tr>
<td>9 – 14</td>
<td>Moderate. May not be in immediate danger but requires frequent and regular monitoring. Is the life situation stable?</td>
</tr>
<tr>
<td>15 or greater</td>
<td>Severe. Definite suicidal risk</td>
</tr>
</tbody>
</table>

The BHS is also a measure directly related to Beck’s (1967) cognitive theory of psychology and appears to be one of the most comprehensively used measures of hopelessness in the literature reviewed. As a result it has been selected as a measure for suicidal ideation with reference to the present research.
Psychometric Properties of the Beck Hopelessness Scale

The BHS was developed by Beck et al. (1974) from 2 different sources. Nine items were gathered from a test on future attitudes and 11 from empirically well known pessimistic statements from psychiatric patients. The reliability and validity of the scale was evaluated on 294 hospitalised suicide attempters (Beck, Weissman, Leister & Trexler, 1974).

Reliability and validity of the BHS have been demonstrated to reveal satisfactory results relating to levels of hopelessness within the sample groups (Beck & Steer, 1988, Beck et al., 1974, Holden & Fekken, 1988, Zigmond & Snaith, 1983, & Young, Halper, Clark, Sheftner & Fawcett, 1992). A study of psychiatric outpatients with either mood or anxiety disorders showed that individuals with a score of 9 or higher were at a higher risk (11 times higher) of future suicide than those with a BHS score lower than 9 (Beck, Brown, Berchick, Stewart & Steer, 1990).

The BHS has also been used to detect hopelessness in populations of normal adults and adolescents (Alford, Lester, Patel, Buchanan & Giunta, 1995; Durham, 1982; Thackston-Hawkins, Compton & Kelly, 1994).

Although the BHS has been validated internationally, the researcher has not been able to obtain reliable documentation to indicate that any cross-cultural evaluation of the BHS has been undertaken in South Africa.

Inferential Style Questionnaire

Cognitive theories of depression have identified a subtype of depression, “negative cognition depression” or hopelessness depression, which is determined in part by cognitive styles or schema (Abramson et al., 1989, Beck, 1967, 1987). Abramson et al., (1989) hypothesised that three inferential styles
exist which create a vulnerability for this negative cognition depression. These
inferential styles are identified as firstly the inferential style of attributing negative
events to stable, global causes; secondly the inferential style of inferring negative
consequences given the occurrence of negative events; and thirdly the inferential
style of inferring negative characteristics about the self given the occurrence of
negative events. Conclusions from both Beck’s (1967, 1987) theories of cognitive
depression and Abramson et al’s (1989) hopelessness theory is that individuals
with depression, should exhibit negative cognitive styles to a greater degree than
non-depressives.

The Inferential Style Questionnaire (ISQ) (Rose et al., 1994) is a
modification of the Attributional Style Questionnaire (Seligman, Abramson,
Semmel & von Baeyer, 1979) and was developed for non college adult samples
as well as psychiatric inpatients and community volunteers. The ISQ identifies
and measures the three inferential styles purported within the hopelessness
theory (Abramson et al., 1998) with reference to cause, consequence and self.
The questionnaire essentially presents the sample with a hypothetical event,
either positive or negative. These events are related to achievement and
interpersonal interaction which should be relevant to an adult sample (Rose et
al., 1994). Each question is rated positive and negative events on a 7 point
Likert-type scale along inferential dimensions relating to internalisation, stability
and globality (Rose et al., 1994). Personal correspondence with Professor
Abramson (2005) revealed how the cognitive vulnerability scores on the ISQ are
computed. A composite (sum) is undertaken of stability/globality, negative
consequences, and negative inferences about self. The corresponding answers
are matched to questions c, d, e and f of the negative scenarios only. The lowest
score achievable on the ISQ is 36 and the highest score is 252. The negative scenario questions are questions 2, 3, 5, 8, 10, 12, 13, 15 and 18. As an explanation, if an individual scores 1 on each of the four answers relating to the 9 negative scenarios, their score will be 36, the lowest possible score. Should they score 7 on each of the four answers relating to the 9 negative scenarios their score will be 252, the highest possible score. The range of 36 to 252 indicates the cognitive vulnerability to depression of the individual who has completed the measure. The higher the score on the ISQ, the greater the negative inferential style and by implication the cognitive vulnerability.

The measure has not been standardised for a South African population and it appears as if the present research study is the first to utilise the ISQ with a South African population. The measure was adopted with caution and in the knowledge that the sample had to be as homogenous possible with an American sample.

The motivation for utilising the ISQ is based on extensive international use of the ISQ, by researchers wanting to identify attributional or inferential style of target samples with reference to hopelessness depression (Abramson et al., 1989). The ISQ is drawn off of the Adolescent Cognitive Style Questionnaire (ASQ), which was initially developed by the authors for use with an adolescent sample. Variations of the ISQ relating to adolescent and child samples are also used (Abela & Sarin, 2002; Abramson et al.; Hankin & Abramson, 2002; Gladstone & Parker, 2000; Rose et al., 1994). This measure, to the knowledge of the researcher as well as that of Professor Abramson, is being used with a South African population for the first time (personal communication, 2005). As noted earlier various cautionary factors need to be taken into account and a South
African version of the ISQ would be beneficial, should further research relating to inferential style be forthcoming.

*Psychometric Properties of the Inferential Style Questionnaire*

The ISQ was developed for use with an adult sample in both a psychiatric setting as well as a community setting with individuals who have not been institutionalised (Rose et al., 1994). With reference to the cognitive triad, which states that a negative inferential style exists within depressed individuals with reference to themselves, their world and the futures, the ISQ was correlated with the BDI to identify whether any correlation exists between the two measures. The ISQ scores correlated as follows: negative stable-global 0.31 ($p<0.001$); inferred negative consequences, 0.35 ($p<0.001$); and inferred negative self characteristics 0.50 ($p<0.001$). Inferential style is internally consistent with a coefficient alpha of 0.93 (Rose et al., 1994). These findings indicate that a high correlation exists between the ISQ and the BDI. The researcher hopes to achieve similar findings with reference to the BDI and the BHS.

Procedure

The battery of questionnaires distributed to all participants, included a covering letter, see appendix A, by the researcher, together with a consent form which each participant completed before participating in the research study. Consent from each individual participating in the research was obtained before any data gathering took place.

The covering letter and consent form were attached together and placed on top of the battery of questionnaires. The BDI, BHS and ISQ questionnaires were attached separately. Each battery also contained an empty envelope.
identifying the contact details of the researcher, should the participant need to clarify problems, together with instructions to seal the envelope once completed. Each participant was asked to complete the biographical questionnaire first, after which they were requested to complete the BDI, BHS and ISQ.

Each battery of questionnaires was distributed to the participants personally by the researcher except in the case of the Depression and Anxiety Support Group. The four participants from this group received the battery of questionnaires and instructions from a registered psychologist. A clear description of how to complete each questionnaire was presented by the researcher to each participant within the depressed sample. With the exception of the individuals from the Depression and Anxiety Support Group, each individual within the depressed sample completed the measures with the researcher present.

With reference to the normal sample, it was requested that each participant complete the battery within ten days, after which the researcher collect the completed measures.

For explanatory purposes, the researcher and two volunteers completed the questionnaires in order to estimate how long it would take to complete, the battery. It was estimated that it would take approximately 45 minutes to complete. Several participants within the depressed sample however took longer than the anticipated to complete the battery. Feedback from both samples identified that the ISQ took long to complete. Special attention was paid to those depressed individuals who needed to take a time-out during the completion of the tests, so as not to augment any stress that they might already have been subject to. This also added to the duration of the administration procedure.
In the case of the normal sample, the battery of measures was distributed by the researcher to the participants; however no personal observation was undertaken during the completion of the measures. Each individual completed the measures within a ten-day period after which the enveloped protocols were personally collected by the researcher.

With reference to the sample, although every effort was made to use a homogenous sample as far as possible, it was not always possible. On investigation, many participants failed to complete the level of education question identified in the BDI and the BHS. English was also not identified as the home language for all 109 participants of the research sample. Proficiency in English was however preferred in order to participate in the research study and all participants were screened by the researcher in order to ascertain whether the measures presented in this research study were understood. The researcher spent time discussing each measure with the participants of the depressed sample in order to ascertain whether the measures were understood adequately. The researcher was not able to discuss the measures with the entire normal sample. The researcher’s telephone numbers were included if any problems were encountered by the participants. The majority of the participants however did identify English as their home language. It is noted that one participant within the depressed sample indicated Xhosa as their home language. This individual however is known to the researcher and English was identified as a dual first language with Xhosa.

Data Analysis

Once the researcher had collected the completed questionnaires, each protocol was collated and the data captured on EXCEL by the researcher. Each
protocol was re-checked by the researcher once a batch of ten questionnaires was captured.

For the purposes of this research study, a series of questions were asked within the demographic questionnaire in order to describe the depressed and non-depressed samples. These questions refer to age, gender, home language, parental depression, previous diagnosis for depression, current medication status and suicidal ideation. Statistical analysis of central tendency is presented relating mostly to the number of scores within a specific category and percentages for that sample. Mean, minimum and maximum scores are identified where relevant and modal or most frequent scores identified where beneficial for analysis. The mean is the most commonly used statistic of central tendency and serves to give a better understanding of the average score relating to a specific variable (Harris, 1998). Where ordinal data is presented, the mode will serve as a better measure of central tendency. Multimodal scores will not be presented as significance for analysis is lost. The mode is the most frequent score within a frequency distribution.

In order to achieve the stated research aims 1 and 2, which is to describe the depressogenic cognitive schema, the severity of depression as well as the level of hopelessness of individuals within a sample diagnosed with depression (aim 1) and a sample not diagnosed with depression (aim 2), the researcher made use of descriptive statistics. This yielded frequencies as well as the related percentage with reference to the relevant sample.

Independent sample t-tests were employed to identify the mean scores, the standard deviation, and the minimum and maximum scores of the BDI and the BHS with reference to the depressed sample.
The mean is a measurement of central tendency while the standard deviation is a measure of variability that computes the average deviation from the mean (Struwig & Stead 2001). Standard deviation is defined as the positive square root of variance (Howell, 1995; Sheskin, 2000).

In order to achieve aim 3 which is to compare the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of the diagnosed depressive sample with that of the normal sample, descriptive statistics, a Hotelling’s $T^2$ test was employed. In order to identify any statistically significant correlations between the depressed and normal samples, a Pearson product-moment correlation coefficient was employed.

Descriptive results were obtained by employing frequency tests. Statistical significance between the two samples, depressed and normal, was undertaken by administering a Hotellings $T^2$ to control for type 1 errors. A type 1 error involves rejecting the null hypothesis when it is true.

This post hoc $t$ test was employed to control for problems related to the homogeneity of variance. The test yielded the means of both the depressed and normal sample together with the $t$ value, degrees of freedom and the significance score of all three measures for both the depressed and normal samples.

A Pearson product-moment correlation coefficient is a measure of correlation that “represents the degree of relationship between two or more variables” (Sheskin, 2000, p.759). With reference to this research study, the two independent variables are the depressed and normal samples.

A Hotelling’s $T^2$ test is a multivariate analogue test for two independent variables. The term multivariate is used with reference to procedures that evaluate experimental designs in which there are multiple independent or
dependant variables (Sheskin, 2000). According to Sheskin (2000), Hotelling’s $T^2$ can also be employed to analyse data for an experiment that involves a single independent variable, comprised of two levels with multiple dependant variables. With reference to this research study, the BDI which measures levels of depression, the BHS which measures levels of hopelessness and the ISQ, which measures levels of negative inferential style are the dependant variables and the sample type comprising of two levels, depressed or normal is the independent variable.

Aim 4, serves to compare the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of the diagnosed depressed sample with that of the normal sample with reference to gender.

Tests identifying statistical significance of each measure relating to the two samples with reference to gender were achieved by using 2 x 2 factorial analysis of variance. A mixed factorial design involves two or more independent variables in which at least one of the independent variables is measured both between and within subjects (Sheskin, 2000). With reference to this research study, the independent variables were: depressed male, normal male, depressed female and normal female.

Subsequent post hoc analyses employing the Bonferroni-Dunn test to conduct all possible pair wise comparisons was employed. This would also serve to identify between which variables the significant differences might occur.

Ethical Considerations

All the necessary permission to undertake this research study was acquired before the commencement of any testing. Permission to conduct the study was obtained from the Nelson Mandela Metropolitan University (Vista
Campus), the private managed health care units as well as each participant completing the research measures. A covering letter as well as a consent form was attached to each battery of tests, see appendix A and B. The research coordinator at the private managed health care units requested that any interested participant could complete the questionnaires during their spare time within a group. The depressed sample received an introduction to the research study and an explanation of the aims and purpose of the study was given. The researcher also spent time explaining how to complete each measure within the test battery. An explanation of how the data would be captured was also addressed. The opportunity to participate anonymously was offered to each participant. Only the researcher had access to the data, ensuring privacy and confidentiality with reference to the completed measures. No external data capturers were used to capture data for the purposes of this research project.

Feedback has been provided in the form of a general feedback report which has been made available to the private health care units. No identifying data was included in the results.

All behavioural assessment allows for the possibility of invasion of privacy and a level of accountability exists in how the assessment was administered, what it is used for, how it is interpreted and the method used for disseminating the results (Grieve, 2001). With reference to this study, specific guidelines were followed with the objective of maintaining professional ethics and accountability. All participation in the research was undertaken with informed consent and on a voluntary basis. No bias was ascribed toward any participant who at any point felt the need to withdraw from the research while completing the tests. This was included in writing to each participant before any tests were administered. The
participants were requested to contact the researcher or supervisor for referral to a counsellor should they feel emotionally vulnerable as a result of completing the research questionnaires and need to discuss any emotional issues relating to the completed questionnaires.

By obtaining informed consent from the individuals in the sample, the researcher endeavoured as comprehensively as possible to present adequate information on the goal of the research, the procedures that were followed, the possible advantages and dangers to which the respondents may be exposed to as a result of participating, as well as to ascertain the credibility of the researcher, (De Vos, Stydom, Foche & Delport, 2004).

Conclusion

The research methodology and primary objectives were highlighted as core components of this chapter. The research design as well as sampling method and procedure of the research was elaborated upon extensively. Each measure was introduced with psychometric properties and the motivation for using each measure acknowledged. Ethical consideration was also discussed in relation to the individuals who participated in this research study.

With the methodological component of this research study firmly grounded in the theoretical application already undertaken and validation of the measures used also presented, an investigation into the results of this study can now be undertaken.
CHAPTER 5
RESULTS AND DISCUSSION

Chapter Overview

Descriptive statistics is a branch of statistics in which data are only used for descriptive purposes in order to describe the sample being studied and not used to make predictions about the sample (Sheskin, 2000). The research design for this study falls within the category of exploratory-descriptive. The objective is to describe the relationship of depressogenic cognitive schema, levels of depression and hopelessness between a depressed and normal sample.

Within this chapter the findings of the research study are presented and discussed. The demographic results are addressed firstly, describing the sample as a whole and subsequently differentiating between the depressed sample and non depressed or normal sample.

Aim 1 and 2 follow on from the demographic results. These aims endeavour to describe the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of individuals within a sample diagnosed with depression (aim 1) and a sample not diagnosed with depression (aim 2). The results with reference to aim 3 are then presented. Aim 3 serves to compare the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of the diagnosed depressive sample with that of the normal sample. Finally the results and discussion surrounding aim 4 which aims to compare the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of the diagnosed depressed sample with
that of the normal sample with reference to gender are presented. The chapter is
summarised within a brief conclusion.

Biographical Data of Sample

Within this section, the results and discussion of each of the questions
within the demographical questionnaire are presented.

Gender

The total sample comprised 109 individuals. Of these 109 individuals, 39
were male and 70 were female. Within the depressed sample 13 were male and
27 female. The normal sample consisted of 26 males and 43 females. The
researcher found that there was a greater willingness among females to
participate in this research study than males. This phenomenon was relevant for
both the depressed and the non depressed samples. Within the psychiatric
institution, male patients were more heavily medicated than the female patients
and as such could not participate in the study. Access to the patients’ medical
files was prohibited and as such the researcher was not able to assess whether
the male patients were newly admitted and as such needed a more stringent
medication regime.

The American Psychiatric Association (APA) in their report on the Summit
on Women and Depression, identified the need for further research focusing on
the effects of gender on the aetiology, diagnosis, treatment and prevention of
depression (Mazure, Keita, & Blehar, 2002). It was strongly suggested that
researchers conduct gender-related data analyses in order to improve
understanding of the effects of gender on depression. Consistently, research
indicates that there is a greater prevalence of depression among women than in
men (Nolen-Hoeksema, 1987). The results of this research study seem to be consistent with the findings of current literature. This finding could also have been the reason that more females participated in this research study than males. If one compares the South African statistics with reference to the Eastern Cape more females than males are identified with emotional disorders within the white sample. It beholds the researcher however to acknowledge that the difference is slight in comparison to the sample size. What is also prevalent is that with the total sample, comprising all race groups, the male group is significantly larger (2000 more males) than that of the female group.

Age

The ages of the participants ranged from 19 to 67 with the mean ages similar between the two samples. The age distribution, minimum and maximum ages, the mean and standard deviation of participants is presented in the table below.

Table 3: Mean, range & standard deviation report: Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td>39.83</td>
<td>19</td>
<td>67</td>
<td>12.36</td>
</tr>
<tr>
<td>Depressed Sample</td>
<td>41.65</td>
<td>19</td>
<td>64</td>
<td>11.78</td>
</tr>
<tr>
<td>Normal Sample</td>
<td>37.78</td>
<td>19</td>
<td>67</td>
<td>12.65</td>
</tr>
</tbody>
</table>

Total Sample (n=109); Depressed Sample (n=40); Normal Sample (n=69)

These results identify a slightly older group as the depressed sample although the total sample indicates a mean age slightly younger. The size of the samples should be taken into consideration, identifying the normal sample (n=69) as significantly larger than the depressed sample (n=40). The distribution of mean ages is very close, and no significant trends occur within the sample.
### Table 4: Demographic detail

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td><strong>Home Language</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>91</td>
<td>83.50</td>
<td>31</td>
<td>77.50</td>
</tr>
<tr>
<td>Afrikaans</td>
<td>17</td>
<td>15.60</td>
<td>8</td>
<td>20.00</td>
</tr>
<tr>
<td>Xhosa</td>
<td>1</td>
<td>0.90</td>
<td>1</td>
<td>2.50</td>
</tr>
<tr>
<td><strong>Current Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>26</td>
<td>23.85</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Married</td>
<td>69</td>
<td>63.30</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>Separated</td>
<td>1</td>
<td>0.93</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Divorced</td>
<td>10</td>
<td>9.17</td>
<td>7</td>
<td>17.50</td>
</tr>
<tr>
<td>Widowed</td>
<td>3</td>
<td>2.75</td>
<td>3</td>
<td>7.50</td>
</tr>
<tr>
<td><strong>Parental Depression</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes Biological Mother</td>
<td>21</td>
<td>19.27</td>
<td>9</td>
<td>22.50</td>
</tr>
<tr>
<td>Yes Other Mother</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Yes Biological Father</td>
<td>12</td>
<td>11.00</td>
<td>6</td>
<td>15.00</td>
</tr>
<tr>
<td>Yes Other Father</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Yes Biological Mother &amp; Father</td>
<td>5</td>
<td>4.59</td>
<td>4</td>
<td>10.00</td>
</tr>
<tr>
<td>None</td>
<td>71</td>
<td>65.14</td>
<td>21</td>
<td>52.50</td>
</tr>
<tr>
<td><strong>Previous Medication</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>55</td>
<td>50.46</td>
<td>39</td>
<td>97.50</td>
</tr>
<tr>
<td>No</td>
<td>54</td>
<td>49.54</td>
<td>1</td>
<td>2.50</td>
</tr>
<tr>
<td>Previous Medication</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>---------------------</td>
<td>----</td>
<td>-----</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>Yes</td>
<td>40</td>
<td>36.70</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>No</td>
<td>69</td>
<td>63.30</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suicidal ideation</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularly</td>
<td>6</td>
<td>5.50</td>
<td>6</td>
<td>15.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Seldom</td>
<td>34</td>
<td>31.20</td>
<td>17</td>
<td>42.50</td>
<td>17</td>
<td>24.64</td>
</tr>
<tr>
<td>Only once</td>
<td>26</td>
<td>23.90</td>
<td>9</td>
<td>22.50</td>
<td>17</td>
<td>24.64</td>
</tr>
<tr>
<td>Never</td>
<td>43</td>
<td>39.40</td>
<td>8</td>
<td>20.00</td>
<td>35</td>
<td>50.72</td>
</tr>
</tbody>
</table>

Total Sample (n=109); Depressed Sample (n=40); Normal Sample (n=69)

**Language Distribution**

Much of the research reviewed within this research study was undertaken either in the United States of America or the United Kingdom. Within these regions English is the predominant home language. Within this research study English features as the predominant home language for the participants within the total, depressed and normal samples, contributing in part to the homogeneity of the sample.

**Marital Status**

Within the total sample, 63% of the individuals participating in the research were married. The married category was the largest within both the depressed and the non depressed samples.

These results identify that a significantly larger proportion of depressed individuals, 17.5% were divorced as opposed to only 4.35% of the normal sample. By categorising divorce as a negative life event, this finding is congruent with those of Parker et al (2000, p.210), Abramson et al’s, (1978) and Beck’s
(1979) finding’s which postulate that life events which fulfil “negative cognitive biases have a depressogenic impact” on certain cognitively vulnerable individuals.

*Parental Depression*

Question: Have either of your parents been diagnosed or hospitalised for depression?

This question was posed in order to give an indication of any trend which might arise relating to the vulnerability of depression and parental depression within either of the samples.

The largest category within this specific demographic is identified as individuals whose parents have never been diagnosed with or hospitalised for depression. Within the total sample, 65, 10%; within the depressed group 52, 50%; and within the normal group 72, 50% have not had either parent diagnosed with depression. 19.30% of the total sample indicated that their biological mother had been diagnosed or hospitalised with depression. This figure represented 22.50% of the depressed sample and 17.40% of the normal sample. 10% of the depressed sample identified that both their mother and father had been diagnosed or hospitalised with depression in the past.

The construct of vulnerability is progressively becoming the main focus of research surrounding depression (Ingram, 2003). This predisposition has been identified in many ways from genetics to schema framework. According to Eley (2003), there is significant genetic influence on depression. Prior research has indicated that children of parents who are depressed are at an increased risk of developing depression (Alloy et al., 1999). Results of research undertaken by Abramson et al. (1998) conclude that a mother’s depression may contribute to
the development of cognitive vulnerability to depression of their children. Alloy et al. (1999) identify that children may learn their cognitive styles from significant others even if it is only in part. They clarify that a process of modelling may occur in that children model the cognitive styles of their parents. They further identify that if children modelling parents’ cognitive styles is a contributor to the development of cognitive vulnerability to depression, then children’s cognitive styles should correlate with those of their parents (Alloy et al., 1999).

In identifying vulnerability for depression, children who are socialised with one or more parents’ who suffer from depression, could develop these depressogenic schema and in so doing create a vulnerability for depression. Parents may teach their children inferences or attributions to behaviour either in an implicit or explicit way. If this feedback contributes to the child’s cognitive risk, the inferential communication of the parents’ should correlate with the cognitive style of the child (Alloy et al., 1999).

Vulnerability based on this predisposition seems to be supported within the present research study. Results relating to this question indicate that 47.5% of the depressed sample has either a parent or parents who have been diagnosed or hospitalised for depression. This is compared with only 27.54% of the normal sample. Within the depressed sample, 22.5% have identified that their mothers have been depressed as opposed to 17.39 of the normal sample. This is further reinforced by 10% of the depressed sample indicating that both their mother and father have previously been medicated or hospitalised for depression as opposed to 1.4% of the normal sample.
**Previous Medication for Depression**

Question: Have you ever been prescribed medication for depression?

Of the 109 participants in this research study, 50.50% had previously been prescribed medication for depression. Within the depressed sample, 97.50% of individuals as opposed to the normal sample’s 23.20% of individuals had previously been prescribed medication for depression.

With reference to previous depressive episodes, the finding of the present research study support Parker et al.’s. (2001, p.121) research which states that “depressogenic cognitions as vulnerability factors are more relevant for recurrent depressions than first episodes”. Beck (1967), Abramson & Rose (1992), Parker et al. (2000), Hankin et al. (1998), Lewenson et al. (1999) all conclude that earlier adverse life experiences create a cognitive framework which may manifest as depressogenic schema and be activated by some experience later on in life. With 97.5% of the depressed sample indicating that they have previously been prescribed medication for depression the findings of the present research study seems to support the conclusions of Beck (1967), Abramson & Rose (1992), Parker et al. (2000), Hankin et al. (1998), and Lewenson et al. (1999).

**Current Medication**

Question: Are you currently on any form of medication for depression?

The criteria for differentiation between the depressed and normal sample was identified by this demographic. As indicated in the subsequent results, 100% of the depressed sample as opposed to 0% within the normal sample identified that they were on medication for depression at the time of participating in this research study.
Suicidal Ideation

Question: Have you ever had thoughts about committing suicide

Fifteen percent of the depressed sample as opposed to 0% in the normal sample identified that they think about committing suicide regularly. 50.70% of the normal sample identified that they have never thought about committing suicide. Within the total sample the most frequent answer was “never”. Within the depressed sample multiple modes exist but within the normal sample the most frequent answer was also “never”.

Eighty percent of the depressed sample indicated that they have had some form of suicidal ideation as opposed to 49.28% of the normal sample. What is significant is that no one in the normal sample indicated that they regularly think about committing suicide and 15% within the depressed sample did. Correlating suicidal ideation with hopelessness, it was found that within the normal sample no severe hopelessness ideation was identified as opposed to f=9 within the depressed sample. According to Beck (1967) a rating of severe hopelessness indicates a definite suicide risk. O’Connor et al. (2000) found that negative cognitive style is associated with hopelessness. O’Connor & Sheehy (2001) conclude that a negative cognitive style impacts negatively on a depressed individual’s ability to solve problems, which maintains the state of hopelessness and increases the risk of suicide. The construct of hopelessness has been identified as the most frequently implicated construct relating to suicidal behaviour (O’Connor & Sheehy, 2001). Both Beck (1967) as well as O’Connor & Sheehy (2001) identify suicide as a possible consequence of depression. The results of the present research study would support these findings based on the statistics tabulated above.
Research Aims

Research Aim 1 - Depressed Sample

Aim 1 serves to describe the depressogenic cognitive schema, levels of depression as well as the sense of hopelessness of individuals within a sample diagnosed with depression. The levels of depression were measured by the Beck’s Depression Inventory (BDI) and the sense of hopelessness was measured by the Beck’s Hopelessness Scale (BHS). The depressogenic cognitive schema of the samples also identified as negative inferential style was measured by the Inferential Style Questionnaire (ISQ).

Levels of Depression

The BDI has been employed to measure levels of depression within the depressed sample. An independent sample t test was employed to identify the mean scores, the standard deviation, minimum and maximum scores of the BDI within the depressed sample.

There are three ratings ascribed to scores obtained on the BDI. A rating of mild depression is given for scores less than 15; a rating of moderate depression is ascribed for scores between and including the values of 15 to 30; and a rating of severe depression is ascribed for scores greater than 30. Although these ratings have not been standardised for a South African population there seems to be congruence between the standardised scores identified in the BDI and those of the sample used for the purposes of this research study.

In table 5, the frequencies relating to the BDI are identified, followed by the descriptive statistics in table 6, relating to the scores obtained by the depressed sample on the BDI.
### Table 5: Frequency report: Depressed sample - BDI

<table>
<thead>
<tr>
<th>Levels of Depression</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>15</td>
<td>37.50</td>
</tr>
<tr>
<td>Moderate</td>
<td>18</td>
<td>45.00</td>
</tr>
<tr>
<td>Severe</td>
<td>7</td>
<td>17.50</td>
</tr>
</tbody>
</table>

Depressed Sample (n=40)

### Table 6: Mean, range & standard deviation report: Depressed sample - BDI

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>19.68</td>
<td>2</td>
<td>47</td>
<td>11.11</td>
</tr>
</tbody>
</table>

Depressed Sample (n=40)

The majority, 62.5%, of the depressed sample were rated with moderate and severe depression on the BDI. 45% obtained a rating of moderate depression and 17.5% obtained a rating of severe depression. There were no scores of 0 within the depressed sample.

The mean score ($M=19.68$) for the depressed sample relating to levels of depression falls within the moderate depression category. An important consideration is that all individuals within the depressed sample were on medication for depression, possibly influencing this statistic and lowering the levels of depression of this sample. Another factor to consider is that within the sample from the Psychiatric Hospital, the more heavily medicated patients could not participate in the study as they were heavily sedated.

Segal et al. (2002, p.9) define depression succinctly as a “combination of elements”, an experience where “a loss of interest occurs together with other
reliable physical and mental signs, such as difficulty sleeping, poor appetite, impaired concentration, and feelings of hopelessness and worthlessness". Beck (1967) identifies low subjective mood, pessimistic and nihilistic attitudes, loss of spontaneity and specific vegetative signs as behaviour manifest by depressed individuals. In keeping within the cognitive dominion of the present research study, and having reviewed both Segal et al. (2002) and Beck’s (1967) research on depression, one could argue that with reference to the findings of the present research study, the majority of individuals within the depressed sample may manifest a loss of interest, impaired concentration, and feelings of hopelessness and worthlessness. They may also show low subjective mood, pessimistic and nihilistic attitudes, loss of spontaneity as well as specific vegetative signs within the severely depressed group. In order to empirically establish whether these variables exist for any individuals within a depressed sample, a qualitative study which researches the subjective nature and experience of depression would be recommended.

Levels of Hopelessness

The BHS has been employed to measure levels of hopelessness within the depressed sample. The BHS has four ratings, no hopelessness ideation, mild hopelessness, moderate hopelessness and severe hopelessness with suicide risk. Descriptive statistics were employed to identify the mean scores, the standard deviation, and minimum and maximum scores within the BHS.

The Beck Hopelessness Scale is a 20-item, true or false scale which measures negative attitudes about the future (O’Connor, Connery & Cheyne, 2000). The maximum score obtainable on the BHS is 20. Each item is assigned a score of either 1 or 0 with 1 specifying a pessimistic perception and 0 specifying
a non-pessimistic perception (Beck & Steer, 1989). The scores are totalled to indicate a total score that can range from 0 to 20 with higher scores identifying greater degrees of hopelessness (Solis, Lotufo, Pannuti, Brunheiro, Marques & Lofuto-Neto, 2004). Scores on the BHS are interpreted as follows: 0 to 3 indicates a score of no or minimal hopelessness; a score between 4 and 8 indicates a mild degree of hopelessness; a score between 9 and 14 indicates a moderate degree of hopelessness where the individual may not be in immediate danger but requires frequent and regular monitoring; and a score of between 15 and 20 indicates severe hopeless and a definite suicide risk.

**Table 7: Frequency report: Depressed sample - BHS**

<table>
<thead>
<tr>
<th>Levels of Hopelessness</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample (N=109)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Mild</td>
<td>13</td>
<td>32.50</td>
</tr>
<tr>
<td>Moderate</td>
<td>10</td>
<td>25.00</td>
</tr>
<tr>
<td>Severe (suicide risk)</td>
<td>9</td>
<td>22.50</td>
</tr>
<tr>
<td><strong>Depressed Sample (n=40)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 8: Mean, range & standard deviation report: Depressed sample - BHS**

<table>
<thead>
<tr>
<th>Range</th>
<th>Measure</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BHS</td>
<td>9.15</td>
<td>0</td>
<td>20</td>
<td>5.90</td>
</tr>
</tbody>
</table>

Depressed Sample (n=40)
A total of 9 individuals within the depressed sample scored a rating of severe hopelessness (suicide risk), constituting 22.5% of the depressed sample and 8.26% of the total sample. 13 individuals, constituting 32.5%, of the depressed sample fell within the category of mild hopelessness. An interesting observation is that 8 individuals identified no hopelessness ideation, constituting 20% of the depressed sample.

Abramson et al. (1989) revised the learned helplessness theory and emphasized a sense of hopelessness as the most important component of numerous types of depression. The depressed sample indicates a moderate level of depression and a mild level of hopelessness. The mean score of hopelessness for the depressed sample is $M=9.15$, indicating mild hopelessness ideation. Although this score falls within the mild range, it is only 0.85 away from the moderate category. What is significant to the researcher is that 22.5% of the depressed sample scored a severe rating on the BHS, a close relationship with the 17.5% of individuals who were rated with severe depression on the BDI.

As with the BDI, an important factor to consider is that all individuals within the depressed sample were on medication and as a result, the hopelessness score could have been influenced to reflect less hopelessness. The researcher also considered that the depressed sample was made up of individuals from a psychiatric hospital, the anxiety and depression support group and other depressed individuals from the community. It can therefore be deduced that a significant proportion of the sample were in some way receiving support through established organisations, which could have negated some of the hopelessness ideation and as a result reduced the sense of hopelessness that those individuals might have been experiencing.
Depressogenic Cognitive Schema

Each question on the ISQ is rated with positive and negative events on a 7 point Likert-type scale along inferential dimensions relating to internalisation, stability and globality (Rose et al., 1994). Cognitive vulnerability or negative inferential style is computed by calculating a composite score. This composite score comprises of stability/globality, negative consequences, and negative inferences about self. The corresponding answers are matched to questions c, d, e and f of the negative scenarios only. The lowest score achievable on the ISQ is 36 and the highest score is 252. The negative scenario questions are questions 2, 3, 5, 8, 10, 12, 13, 15 and 18. As an explanation, if an individual scores 1 on each of the four answers relating to the 9 negative scenarios, their score will be 36, the lowest possible score. Should they score 7 on each of the four answers relating to the 9 negative scenarios their score will be 252, the highest possible score. The range of 36 to 252 indicates the cognitive vulnerability to depression of the individual who has completed the measure. The higher the score on the ISQ, the greater the negative inferential style and by implication the cognitive vulnerability.

Conversely, the lower the ISQ score or the closer to 36 a score might be, the lower the negative inferential style of that individual. Frequencies relating to each measure are also identified, initially for the total sample and subsequently for the depressed and normal samples. Independent sample t tests were employed to identifying the mean scores, standard deviation as well as the minimum and maximum scores within the ISQ.
Table 9: Frequency report: Depressed sample - ISQ

<table>
<thead>
<tr>
<th>Score</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>43 - 100</td>
<td>1</td>
<td>2.50</td>
</tr>
<tr>
<td>101 - 150</td>
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<td>37.50</td>
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<tr>
<td>151 – 200</td>
<td>23</td>
<td>57.50</td>
</tr>
<tr>
<td>201 – 252</td>
<td>1</td>
<td>2.50</td>
</tr>
</tbody>
</table>

Depressed Sample (n=40)

Table 10: Mean, range & standard deviation report: Depressed sample - ISQ

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISQ</td>
<td>155.75</td>
<td>43</td>
<td>224</td>
<td>33.98</td>
</tr>
</tbody>
</table>

Depressed Sample (n=40)

Rose et al. (1994, p.422) identify inferential consequences as inferences made about the possibility that a hypothesised result or outcome will lead to “additional and similarly valenced outcomes”.

Results relating to the scores of the ISQ of the depressed sample identify that the majority of individuals making up this sample scored between 151 and 252 with a mean score of $M=155.75$. The percentage value of the sample with scores between 151 and 252 is computed at 60%. The mean score of Rose et al’s (1994) depressed sample measured $M=160.1$. With reference to this research study, only 1 individual within the depressed sample scored more than 200 and only 1 individual scored below 100 on the ISQ. As a result of these findings, the present researcher can conclude that a negative inferential style exists within the majority of the depressed sample as measured by the ISQ.
With reference to the depressed sample, the highest levels of depression measured with the BDI fell within the moderate range, $M=19.68$. Scores relating to levels of hopelessness fell within the mild range $M=9.15$. The mean score of the ISQ obtained by this sample was identified at, $M=155.75$.

The present researcher can therefore deduce that the depressed sample with reference to the present research study revealed moderate levels of depression, mild levels of hopelessness and higher levels of negative inferential style than the normal sample.

*Research Aim 2 – Normal Sample*

Aim 2 serves to describe the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of individuals within the general population who have not been diagnosed with depression, identified as the normal sample.

As with aim 1, the levels of depression were measured by the Beck’s Depression Inventory (BDI) and the sense of hopelessness was measured by the Beck’s Hopelessness Scale (BHS). The depressogenic cognitive schema of the depressed sample also identified as inferential style was measured by the Inferential Style Questionnaire (ISQ).

*Levels of depression*

The BDI has been employed to measure levels of depression within the depressed sample. There are three ratings ascribed to scores obtained on the BDI. A rating of mild depression is given for scores less than 15; a rating of moderate depression is given for scores between and including the values of 15 to 30; and a rating of severe depression is ascribed for scores greater than 30.
Initially frequencies relating to each measure are identified, followed by the descriptive statistic relating to the BDI.

**Table 11: Frequency report: Normal sample - BDI**

<table>
<thead>
<tr>
<th>Levels of Depression</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>64</td>
<td>92.76</td>
</tr>
<tr>
<td>Moderate</td>
<td>5</td>
<td>7.24</td>
</tr>
<tr>
<td>Severe</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Normal Sample (n=69)

**Table 12: Mean, range & standard deviation report: Normal sample - BDI**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>6.14</td>
<td>0</td>
<td>20</td>
<td>4.738</td>
</tr>
</tbody>
</table>

Normal Sample (n=69)

The majority, 92.76%, of the normal sample were rated with mild depression on the BDI. Only 5 individuals, 7.24% obtained a rating of moderate with no one scoring within the severe depression range. 5 Individuals were scored with a zero rating for depression.

Within the present research study, the mean score of the normal sample $M=6.14$ is considerably lower than that of the depressed sample, $M=19.68$. The mean score of the normal control group n=40 used by Rose et al. (1994) measured $M=3.5$ and $M=27$ for the depressed sample n=28, also indicating a considerable difference in scores.

With reference to this research study the researcher concludes that the majority of individuals within the normal sample manifest with mild depressive symptoms identified by Segal et al. (2002) and Beck (1967), which may be
identified as a loss of interest, difficulty sleeping, signs of poor appetite and impaired concentration or feelings of hopelessness and worthlessness. They may also show mild signs of low subjective mood, pessimistic and nihilistic attitudes and possibly a loss of spontaneity.

*Levels of Hopelessness*

The BHS has four ratings, no hopelessness ideation, mild hopelessness, moderate hopelessness and severe hopelessness with suicide risk. An independent sample t test was employed to identify the mean scores, the standard deviation, minimum and maximum scores within the BHS. Non parametric statistics were used for this analysis.

The Beck Hopelessness Scale is a 20-item, true or false scale which measures negative attitudes about the future (O’Connor, Connery & Cheyne, 2000). The maximum score obtainable on the BHS is 20. Each item is assigned a score of either 1 or 0 with 1 specifying a pessimistic perception and 0 specifying a non-pessimistic perception (Beck & Steer, 1989). The scores are totalled to indicate a total score that can range from 0 to 20 with higher scores identifying greater degrees of hopelessness (Solis, Lotufo, Pannuti, Brunheiro, Marques & Lofuto-Neto, 2004). Scores on the BHS are interpreted as follows: 0 to 3 indicates a score of no or minimal hopelessness; a score between 4 and 8 indicates a mild degree of hopelessness; a score between 9 and 14 indicates a moderate degree of hopelessness where the individual may not be in immediate danger but requires frequent and regular monitoring; and a score of between 15 and 20 indicates severe hopeless and a definite suicide risk. Although these ratings have not been standardised for a South African population there seems to
be congruence between the standardised scores identified in the BHS and those of the sample used for the purposes of this research study.

**Table 13: Frequency report: Normal sample - BHS**

<table>
<thead>
<tr>
<th>Levels of Hopelessness</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>54</td>
<td>78.26</td>
</tr>
<tr>
<td>Mild</td>
<td>10</td>
<td>14.49</td>
</tr>
<tr>
<td>Moderate</td>
<td>5</td>
<td>7.25</td>
</tr>
<tr>
<td>Severe (suicide risk)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Normal Sample (n=69)

**Table 14: Mean, range & standard deviation report: Normal sample - BHS**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHS</td>
<td>2.87</td>
<td>0</td>
<td>14</td>
<td>3.04</td>
</tr>
</tbody>
</table>

Depressed Sample (n=40)

By far the majority of the normal sample, 78.30% identified no hopelessness ideation. 10 individuals, constituting 14.49% of the normal sample fell within the mild range and on 5 individuals, 7.25% were rated with moderate hopelessness ideation. No one scored within the severe hopelessness (suicide risk) category. The results of the present research study indicate that only 21.74% of individuals within the normal sample identified any form of hopelessness.

The researcher can therefore report that within the normal sample, only 15 of the 69 individuals were found to have hopelessness ideation.

The mean score of hopelessness for the normal sample is $M=2.87$, indicating no or minimal hopelessness.
Depressogenic Cognitive Schema

Each question on the ISQ is rated with positive and negative events on a 7 point Likert-type scale along inferential dimensions relating to internalisation, stability and globality (Rose et al., 1994). Cognitive vulnerability or negative inferential style is computed by calculating a composite. This composite (sum) is undertaken of stability/globality, negative consequences, and negative inferences about self. The corresponding answers are matched to questions c, d, e and f of the negative scenarios only. The lowest score achievable on the ISQ is 36 and the highest score is 252. The negative scenario questions are questions 2, 3, 5, 8, 10, 12, 13, 15 and 18. As an explanation, if an individual scores 1 on each of the four answers relating to the 9 negative scenarios, their score will be 36, the lowest possible score. Should they score 7 on each of the four answers relating to the 9 negative scenarios their score will be 252, the highest possible score. The range of 36 to 252 indicates the cognitive vulnerability to depression of the individual who has completed the measure. The higher the score on the ISQ, the greater the negative inferential style and by implication the cognitive vulnerability.

Frequencies relating to each measure are identified, initially for the total sample and subsequently for the depressed and normal samples. This is followed by a table identifying the mean, minimum and maximum scores as well as the standard deviation for the ISQ.
Rose et al. (1994, p.422) identify inferential consequences as inferences made about the possibility that a hypothesised result or outcome will lead to “additional and similarly valenced outcomes”.

Results relating to the scores of the ISQ of the normal sample identify that the majority of individuals making up this sample scored between 100 and 200 with a mean score of $M=137.75$. The percentage value of the sample with scores between 100 and 200 is computed at 89.85%. The mean score of Rose et al’s (1994) normal sample measured $M=136.8$. With reference to the present research study, only 1 individual within the normal sample scored more than 200 with 6 individuals scoring between 1 and 100. As a result of these findings, the researcher can conclude that a negative inferential style exist within the majority of the depressed sample as measured by the ISQ.
In conclusion, the highest levels of depression measured with the BDI fell within the mild range, $M=6.14$. Scores relating to levels of hopelessness fell within the none to minimal range $M=2.87$. The mean ISQ score obtained by this sample identified as $M=137.75$.

It can therefore be deduced that the normal sample with reference to this research study revealed mild levels of depression, none or minimal levels of hopelessness and a mean ISQ was lower than the depressed sample.

*Research Aim 3 – Comparison of Depressed with Normal Sample*

In order to achieve aim 3 which is to compare the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness of the diagnosed depressive sample with that of the normal sample, descriptive statistics, a Hotelling’s $T^2$ test as well as a post hoc $t$ test were employed. In order to identify any statistically significant correlations between the depressed and normal samples, a Pearson product-moment correlation coefficient was employed.

Descriptive results were obtained by employing frequency tests. Statistical significance between the two samples, depressed and normal, was undertaken by administering a Hotellings $T^2$ test, in order to control for type 1 errors. A type 1 error involves rejecting the null hypothesis when it is true.

A post hoc $t$ test was subsequently employed to control for problems related to the homogeneity of variance. The $t$ test yielded the means of both the depressed and normal sample together with the $t$ value, degrees of freedom and the significance score of all three measures for both samples.

A Pearson product-moment correlation coefficient is a measure of correlation that “determines the degree to which a linear relationship exists
between two variables” (Sheskin, 2000, p.759). With reference to this research study, the two independent variables are the depressed and normal samples.

A Hotelling’s $T^2$ test is a multivariate analogue of a test for two independent variables. The term multivariate is used with reference to procedures that evaluate experimental designs in which there are multiple independent or dependant variables (Sheskin, 2000). According to Sheskin (2000), Hotelling’s $T^2$ can also be employed to analyse data for an experiment that involves a single independent variable, comprised of two levels with multiple dependant variables. With reference to this research study, the BDI which measures levels of depression, the BHS which measures levels of hopelessness and the ISQ, which measures levels of negative inferential style, are the dependant variables and the sample type comprising of two levels, depressed or normal is the independent variable.

The statistical analysis of these measures is identified in table 17 on the following page, comparing each against the depressed and normal sample.
Table 17: Frequency report: Total sample, depressed sample & normal sample

<table>
<thead>
<tr>
<th>BDI</th>
<th>Total</th>
<th>Depressed</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Levels of depression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>79</td>
<td>72.48</td>
<td>15</td>
</tr>
<tr>
<td>Moderate</td>
<td>23</td>
<td>21.10</td>
<td>8</td>
</tr>
<tr>
<td>Severe</td>
<td>7</td>
<td>6.42</td>
<td>7</td>
</tr>
<tr>
<td>BHS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levels of hopelessness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>62</td>
<td>56.88</td>
<td>8</td>
</tr>
<tr>
<td>Mild</td>
<td>23</td>
<td>21.10</td>
<td>13</td>
</tr>
<tr>
<td>Moderate</td>
<td>15</td>
<td>13.76</td>
<td>10</td>
</tr>
<tr>
<td>Severe suicide risk</td>
<td>9</td>
<td>8.26</td>
<td>9</td>
</tr>
<tr>
<td>ISQ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levels of negative inferential style</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43 - 100</td>
<td>7</td>
<td>6.40</td>
<td>1</td>
</tr>
<tr>
<td>101 - 150</td>
<td>55</td>
<td>50.47</td>
<td>15</td>
</tr>
<tr>
<td>151 – 200</td>
<td>45</td>
<td>41.29</td>
<td>23</td>
</tr>
<tr>
<td>201 – 250</td>
<td>2</td>
<td>1.84</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Sample (n=109); Depressed Sample (n=40); Normal Sample (n=69)
**Table 18: Mean & standard deviation report: Total sample, depressed sample & normal sample**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Total</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>BDI</td>
<td>11.11</td>
<td>10.08</td>
<td>19.68</td>
<td>11.11</td>
<td>6.14</td>
<td>4.74</td>
</tr>
<tr>
<td>BHS</td>
<td>5.17</td>
<td>5.26</td>
<td>9.15</td>
<td>5.90</td>
<td>2.87</td>
<td>3.04</td>
</tr>
<tr>
<td>ISQ</td>
<td>144.36</td>
<td>31.51</td>
<td>155.75</td>
<td>33.98</td>
<td>137.75</td>
<td>28.17</td>
</tr>
</tbody>
</table>

Total Sample (n=109); Depressed Sample (n=40); Normal Sample (n=69)

The mean score for the total sample for the BDI is $M=11.11$. This constitutes a rating of mild depression for sample in total. A mean score of $M=19.68$ is identified for the BDI in relation to the depressed sample, ascribing a rating of moderate depression. A mean score of $M=6.14$ for the normal sample is identified constituting a rating of mild depression.

A mean score of $M=5.17$ is identified for the BHS, in relation to the total sample. This constitutes a rating of mild hopelessness for the total sample. Similarly a rating of mild hopelessness was identified for the BHS, in relation to the depressed sample, $M=9.15$. With reference to the normal sample a rating of none or minimal hopelessness was ascribed on the BHS, $M=2.87$. With reference to the total sample, a mean score of $M=144.36$ was identified for the ISQ. The lowest score obtainable on the ISQ is 36 and the maximum is 252. A mean score of $M=155.75$ was identified for the depressed sample and $M=137.75$ for the normal sample.

The results of table 18 indicate that a trend in the mean scores of the depressed sample was consistently higher on all measures, the BDI, the BHS and the ISQ than those within the normal sample. This allows the researcher to
deduce that within this research study, the depressed sample has higher levels of depression, hopelessness and negative inferential style than the normal sample.

Similar trends with reference to the BDI and ISQ scores were found in a study undertaken by Rose et al. (1994) between a depressed and normal adult sample. The depressed sample scored higher on both the BDI ($M=27$) and the ISQ ($M=160.1$) as opposed to the normal sample’s mean score of $M=3.5$ on the BDI and $M=136.8$ on the ISQ.

*Relationships between test scores*

In order to identify if any correlation exists between the scores on the three measures employed for the total sample, a Pearson product-moment correlation coefficient was employed. Significant correlations were obtained at the 0.01 level ($p<0.01$).

Table 19 identifies the correlation between the three measures, the BDI, BHS and ISQ for the total sample.

**Table 19: Pearson product-moment correlation coefficient report: BDI, BHS & ISQ**

<table>
<thead>
<tr>
<th>Measure</th>
<th>BDI</th>
<th>BHS</th>
<th>ISQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHS</td>
<td>0.811**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>ISQ</td>
<td>0.505**</td>
<td>0.508**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

** Pearson correlation is significant at the 0.01 level (2-tailed)

Total Sample (n=109)
According to Guilford's table of correlations (1946), a high correlation exists between the BDI and the BHS and a moderate correlation exists between the BDI scores and those of the ISQ. A moderate correlation (p<0.01) or substantial relationship also exists between the scores of the BHS and the ISQ for the total sample.

This implies that results from the BDI should correlate with those of the BHS. Where a substantial relationship exists, as it does between the BDI and the ISQ as well as between the BHS and the ISQ, there should be a moderate correlation between the scores (Guilford, 1946, p.435).

**Table 20: Guilford’s table of correlations**

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 0.20</td>
<td>Slight almost negligible relationship</td>
</tr>
<tr>
<td>0.20 to 0.40</td>
<td>Low correlation with definite but small relationship</td>
</tr>
<tr>
<td>0.40 to 0.70</td>
<td>Moderate correlation indicating a substantial relationship</td>
</tr>
<tr>
<td>0.70 to 0.90</td>
<td>High correlation indicating a marked relationship</td>
</tr>
<tr>
<td>0.90 to 1.00</td>
<td>Very high correlation and dependable relationship</td>
</tr>
</tbody>
</table>

(Guilford, 1946)

The Hotelling’s $T^2$ test yielded results identifying that there is a statistically significant difference between the scores obtained by the two different samples, depressed and normal on all of the measures employed (p<0.000). The statistical significance of the ISQ, measuring negative inferential style, is slightly lower, than the scores between the BDI and the BHS, it however remains significant at the 0.01 level (p<0.01).
This test was employed to control for problems related to the homogeneity of variance. The Hotellings $T^2$ yielded the t value, degrees of freedom and the significance score of all three measures for both the depressed and normal samples.

**Table 21: Hotellings $T^2$ report: BDI, BHS & ISQ**

<table>
<thead>
<tr>
<th>Measure</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>-8.51</td>
<td>107</td>
<td>0.000**</td>
</tr>
<tr>
<td>BHS</td>
<td>-7.33</td>
<td>107</td>
<td>0.000**</td>
</tr>
<tr>
<td>ISQ</td>
<td>-2.98</td>
<td>107</td>
<td>0.004**</td>
</tr>
</tbody>
</table>

**Statistically significant p<0.01

This post hoc analysis was undertaken in order to control for type 1 errors, having to test for statistical significance on the three measures.

**Research Aim 4 – Gender Comparison of Depressed and Normal Samples**

Aim 4 serves to compare the depressogenic cognitive schema, the severity of depression as well as the sense of hopelessness with reference to gender of the diagnosed depressed sample and that of the normal sample. Independent sample $t$ tests were employed to identify the mean, minimum and maximum scores as well as the standard deviation of each measure with reference to the depressed and normal samples.

In order to identify the statistical significance of each measure relating to the two samples with reference to gender the researcher employed 2 x 2 factorial analysis of variance. A mixed factorial design involves two or more independent variables in which at least one of the independent variables is measured both between and within subjects (Sheskin, 2000). The most notable advantage for employing the factorial analysis of variance is due to the limited size of both the
depressed and normal samples. With reference to this research study, the independent variables were: depressed male, normal male, depressed female and normal female.

**Table 22: Mean & standard deviation report: Total sample - gender**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>BDI</td>
<td>11.18</td>
<td>9.93</td>
</tr>
<tr>
<td>BHS</td>
<td>5.56</td>
<td>5.42</td>
</tr>
<tr>
<td>ISQ</td>
<td>150.31</td>
<td>31.50</td>
</tr>
</tbody>
</table>

Total Sample \((n=109)\); Total male \((n=39)\); Total female \((n=70)\)

The post hoc analyses tabulated below is that of the Bonferroni-Dunn test employed to conduct all possible pair wise comparisons. This test would also serve to identify between which variables any significant differences might occur.

**Table 23: Bonferroni-Dunn report: BDI**

<table>
<thead>
<tr>
<th>Effect</th>
<th>BDI</th>
<th>BHS</th>
<th>ISQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td>21.07</td>
<td>9.91</td>
<td>10.15</td>
</tr>
<tr>
<td>Normal</td>
<td>6.23</td>
<td>5.13</td>
<td>3.27</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td>19.00</td>
<td>11.76</td>
<td>8.67</td>
</tr>
<tr>
<td>Normal</td>
<td>6.09</td>
<td>4.54</td>
<td>2.63</td>
</tr>
</tbody>
</table>

Depressed male \((n=13)\); Depressed female \((n=27)\)

A trend observed in the mean scores of the depressed sample identified in tables 22 and 23 is that males obtained higher scores on each measure.
compared to females. This trend allows the researcher to deduce that within this research study, depressed males tend to have higher levels of depression, higher levels of hopelessness and increased negative inferential styles than do the depressed females. As is evident, the female sample (n=27) is more than double the size of the male sample (n=13), which could have influenced this result in that a larger sample may manifest a larger range of depressive behaviour than a smaller sample. Further analysis using the factorial ANOVA however indicated no statistically significant differences between the scores of the males and females.

Table 24: Factorial ANOVA report: Total sample - BDI

<table>
<thead>
<tr>
<th>Description</th>
<th>SS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>27.92</td>
<td>1</td>
<td>0.47</td>
<td>0.497</td>
</tr>
<tr>
<td>Gender type+</td>
<td>21.41</td>
<td>1</td>
<td>0.36</td>
<td>0.551</td>
</tr>
</tbody>
</table>

* Depressed male, normal male, depressed female and normal female

Table 25: Factorial ANOVA report: Total sample - BHS

<table>
<thead>
<tr>
<th>Description</th>
<th>SS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>25.79</td>
<td>1</td>
<td>1.38</td>
<td>0.242</td>
</tr>
<tr>
<td>Gender type+</td>
<td>4.07</td>
<td>1</td>
<td>0.22</td>
<td>0.641</td>
</tr>
</tbody>
</table>

* Depressed male, normal male, depressed female and normal female

Table 26: Factorial ANOVA report: Total sample - ISQ

<table>
<thead>
<tr>
<th>Description</th>
<th>SS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>2890</td>
<td>1</td>
<td>3.16</td>
<td>0.079</td>
</tr>
<tr>
<td>Gender type+</td>
<td>273</td>
<td>1</td>
<td>0.30</td>
<td>0.586</td>
</tr>
</tbody>
</table>

* Depressed male, normal male, depressed female and normal female
Despite the difference in mean scores on each measure identified in tables 22 and 23, there is no statistically significant difference between the scores of the male sample compared to those of the female sample in both the depressed and normal samples.

According to Murray & Lopez in Mazure (2002), depression is the leading cause of disability among women in the world today. Despite Nolen-Hoeksema’s (1987) findings that research consistently indicates that there is a greater prevalence of depression among women than in men, Mazure (2002) identifies that although absolute rates of depression vary during adulthood, the relative difference in the rates of depression between women and men are maintained.

The results of this research study with reference to gender identify that no significant statistical difference was evident in the levels of depression, levels of hopelessness nor levels of negative inferential style between males and females.

With reference to the South African context, and specifically the Eastern Cape, more males were identified as having psychological or behavioural problems than females (http://www.statssa.gov.za/census01/Census/Database/Census%202001/Provincial%20Level/Persons/Metap.doc). Within the South African context, it was also found that more males than females have psychological or behavioural problems than women, 142 951 males as oppose to 125 762 females. As is evident, although the number is higher, it accounts for approximately a 12% difference between genders.

Although the present research study is not definitive in any way for a South African population, it is hoped that the findings will lead to interest on the
subject of cognitive vulnerability relating to depression and gender within South Africa.

Summary

Within the current post modern era, it is becoming increasingly relevant to understand depression and those antecedents relevant to depression even more thoroughly. Depression is by its very nature subjective and every individual's experience of depression differs in some way. With the ever increasing research being undertaken within the area of depression, vulnerabilities and variables which could have a significant impact on the individual are being gradually understood. The exploratory descriptive nature of this research study is to pioneer research with reference to levels of depression, hopelessness and depressive cognitive schema and describe these in relation to both a normal and depressed sample.

The work of Beck (1967) and Rose and Abramson (1992) identify cognitive frameworks or schema as a vulnerability to depression. These schema are developed over time as a result of negative experiences and the assimilation of these experiences into a framework which is rigid and depressogenic. Within the present research study, we find that within the depressed sample, more individuals have experienced parents with depression than those within the normal sample. It is also evident from this research study, that within the depressed sample, many more have previously been diagnosed with depression and prescribed medication for depression than with the normal sample. This supports findings by Parker et al. (2001, p.121) who conclude that “depressogenic cognitions as vulnerability factors are more relevant for recurrent depression than first episodes”. Added to this support is that within the present
research study, a statistically significant difference exists between the scores of the depressed sample on all three measures, BDI, BHS and ISQ as compared to the scores of the normal sample.

Socialisation of the individual within an environment where one or even both parents have experienced depression could have been a vulnerability factor which predisposed that individual to depression. The results of this research study with reference to parental depression, support Eley (2003) who states that there is significant genetic influence on depression.

Beck (1967), Abramson & Rose (1992), Parker et al. (2000), Hankin et al. (1998), Lewenson et al. (1999) all conclude that earlier adverse life experiences create a cognitive framework which may manifest as depressogenic schema and be activated by some experience later on in life. Spence et al. (2002) found that inferential style had a direct effect on predicting future increases in depression. Specifically, individuals who identified negative inferential styles were more likely to report increased levels of depression in a year follow up study, irrespective of negative life events. What this research highlights is that a significant number of individuals 97.5% within the depressed sample have previously been treated for depression.

With reference to depressogenic cognitive schema, Ruehlman et al. (1995) compared the individual schema content of a sample of depressed and non-depressed participants and found that the content of the non-depressed sample reflected largely positively oriented self-schema. A mildly depressed sample tended to show neither positive nor negatively based self-schema but within the severely depressed sample, a negative bias relating to self-schema was identified. Within the present research study the normal sample identified a
lower mean scores relating to depressogenic cognitive schema than the depressed sample. Because of subjective nature of each individual's experience of depression, future research of a qualitative nature pertaining to the content of depression will add greatly to the understanding of this psychopathology.

Abramson et al. (1989), Afford et al. (1995), Beck (1967) and Joiner (2001) conclude that hopelessness was found to predict life events over and above negative stressors within the life of an individual. Within the present research study, the levels of hopelessness in the depressed sample are high in comparison to those of the normal sample. Individuals within the normal sample indicate no hopeless ideation where the depressed sample indicates moderate levels of hopelessness (Beck, 1967).

O’Connor et al. (2000) found that negative cognitive style is associated with hopelessness. O’Connor & Sheehy (2001) conclude that a negative cognitive style impacts negatively on a depressed individual’s ability to solve problems, which maintains the state of hopelessness and increases the risk of suicide. The construct of hopelessness has been identified as the most frequently implicated construct relating to suicidal behaviour (O’Connor & Sheehy, 2001). Both Beck (1967) as well as O’Connor & Sheehy (2001) identify suicide as a possible consequence of depression. Within the depressed sample 22.5% as opposed to no one in the normal sample were rated with severe hopelessness.

Several studies have endeavoured to identify a cognitive vulnerability to depression (Alloy et al., 1999; Alloy, Abramson, Hogan, Whitehouse, Rose et al, 2000; Beck, 1967,1987; Abrason et al., 1989; Dykman and Johll, 1988; Hamilton & Abramson, 1983). In Beck (1987), dysfunctional attitudes are identified as
cognitive vulnerabilities. Abramson et al.’s (1989) hopelessness theory identifies negative inferential style as a cognitive vulnerability. The framework of cognitive schema identified in this study, include the constructs of dysfunctional attitudes and inferential style, correlating the theories for the purposes of measurement to ensure empirical validity. Both Beck’s (1967) theory and Abramson et al.’s (1989) theories have supported that negative cognitions are significant vulnerability factors in the occurrence of depressive symptoms (Hankin & Abramson, 2001; Ingram, Miranda, & Segal, 1998; Peterson, & Seligman, 1984).

Ruehlman and West (1985, p.86) conclude that “severely depressed individuals appear partially to confirm the traditional view of practicing clinicians that depressives have a pessimistic cognitive style”. Kwon and Laurenceau (2002, p.1317) found that negative attributional styles lead to an increase in “reactivity to stressors over time” as well as a “correspondence between levels of depressive symptoms and the severity of stressors experienced at a particular point in time”. Gladstone and Parker (2000, p.215) conclude that research involving “depressogenic core beliefs or schema” are of importance in “reinforcing the relevance of cognitive-based interventions” with reference to recurrent depressive disorders as well as to “confirm the potential of cognitive risk in some depressive disorders”. McClain and Abramson (1995, p.429) concluded their research on self schema, stress and depressed mood stating that “specific, negative, self-schema are related to exacerbation of depressive symptoms”.

Alloy et al. (1999) identify that children may learn their cognitive styles from significant others even if only in part. They clarify that a process of modelling may occur where children model the cognitive styles of their parents.
They further identify that if children modelling parents’ cognitive styles is a contributor to the development of cognitive vulnerability to depression, then children’s cognitive styles should correlate with those of their parents (Alloy et al., 1999).

In identifying vulnerability for depression, children who are socialised with one or more parents’ who suffer from depression, could develop these depressogenic schema and in so doing create a vulnerability for depression. Parents may teach their children inferences or attributions to behaviour either in an implicit or explicit way. If this feedback contributes to the child’s cognitive risk, the inferential communication of the parents’ should correlate with the cognitive style of the child (Alloy et al., 1999).

Vulnerability based on this predisposition seems to be supported within the present research study. Results relating to this question indicate that 47.5% of the depressed sample has either a parent or parents who have been diagnosed or hospitalised for depression. This is compared with only 27.54% of the normal sample. Within the depressed sample, 22.5% have identified that their mothers have been depressed as opposed to 17.39 of the normal sample. This is further reinforced by 10% of the depressed sample indicating that both their mother and father have previously been medicated or hospitalised for depression as opposed to 1.4% of the normal sample.

In a study conducted at Temple University and the University of Wisconsin, commonly known as the Temple-Wisconsin Cognitive Vulnerability to Depression Project (CVD project), it was found that high risk participants’ who exhibited a negative cognitive style, were consistently found to have an elevated likelihood of developing depressive disorders (Alloy et al., 2000).
Concomitant with all of the findings identified above, this research study established that the depressed sample exhibited higher levels of depression, hopelessness and negative inferential style compared to the normal sample. It also identified significant differences between the depressed and normal samples’ scores and verified that a significant correlation exists between the BDI, measuring levels of depression, the BHS, measuring levels of hopelessness and the ISQ, measuring negative inferential style.

The researcher therefore concludes that the opportunity does exist that within this research study, negative inferential style could have been a vulnerability factor in the development of depression and hopelessness relating to the depressed sample but not the normal sample.

Conclusion

Within this chapter, the findings of the research study were presented and discussed. The demographic results were addressed followed by the frequencies and descriptive statistics relating to each measure with reference to the depressed and normal samples. Each aim was individually addressed and results pertaining to each aim, presented. A discussion of the results of this research study relating to the literature review was also undertaken.
CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Chapter Overview

Within this chapter, the conclusions of the present research study will be presented. The implications of the present research findings will be explored and the limitations relating to the study will also be addressed. Recommendations for future research will also be included.

Conclusions of the Study

The exploratory descriptive nature of this research study is to pioneer research with reference to levels of depression, hopelessness and depressive cognitive schema as well as describe these variables in relation to both a normal and depressed sample.

With reference to this research study, it was found that the depressed sample comprised of individuals with higher levels of depression than those within the normal sample. It is also evident from the present research study, that within the depressed sample, many more individuals have previously been diagnosed with depression and prescribed medication for depression than within the normal sample. This factor relates to the vulnerability of depression and is supported by the result that a significant number of individuals 97.5% within the depressed sample have previously been treated for depression.

Supporting these observations, the results of the present research study indicate that a statistically significant difference exists between the scores of the depressed sample over all three measures as compared to the scores of the normal sample.
Conclusions relating to this research study identify that the depressed sample scored higher levels of depression, hopelessness and negative inferential style than the normal sample.

Internationally, much research has been undertaken to identify depressogenic cognitive schema or negative inferential style as a vulnerability factor in the development of depression and hopelessness. It would seem that within South Africa, little if any empirical research relating to depressogenic cognitive schema or negative inferential style as a vulnerability factor in the development of depression and hopelessness has existed up until now.

The present researcher was confident that high correlations would be identified between levels of depression, levels of hopelessness and negative inferential style. Findings of the present research study do support that negative inferential style could be a vulnerability factor for the development of depression and hopelessness relating to the depressed sample but not the normal sample.

An objective of this study was to reinforce the cognitive vulnerability hypothesis purported by Beck (1967, 1987) and Abramson et al. (1989), which asserts that negative thinking predisposes or creates a vulnerability to depression. Although the study is not inferential by design, it concludes that a statistically significant correlation exists between the BDI, BHS and ISQ used within this research study. It also serves to reinforce that a statistically significant difference exists between the scores of the depressed sample and the normal sample in relation to levels of depression, levels of hopelessness and negative inferential style. A further finding is that no statistically significant difference exists between the results of the male sample compared to the female sample within
and between the depressed and normal samples relating to levels of depression, levels of hopelessness and negative inferential style.

Implications of the Present Research Findings

This present research study has pioneered empirical research with reference to the exploration and description of depressogenic cognitive schema, levels of depression and hopelessness among depressed and non depressed adults. The researcher has strived to align the present research study with international trends and create relevance in answer to de la Rey and Ipser’s (2004) call for relevance addressed to the South African psychological fraternity.

Within the South African context, concerning statements have been made regarding the future trends relating to depression (Peltzer, 1998). It is hoped that the present research study will create and interest in and lead to further research being undertaken with reference to cognitive vulnerabilities relating to depression as well as possible intervention strategies. It is also hoped that the research results of the present study will lay the foundation for establishing norms for a South African population with reference to Beck’s Depression Inventory and Beck’s Hopelessness Scale, used extensively within South Africa.

Limitations and Suggestions for Future Research

A limitation of this study was the limited sample size. A larger and more homogenous sample may have yielded different results. The researcher is of the opinion that scores obtained relating to levels of depression and hopelessness could have been influenced by the fact that the depressed sample was on medication. This would however not relate to scores obtained on the ISQ, as cognitive styles are empirically proved to be stable and global (Beck, 1967;
Abramson et al., 1989). If at all possible, future research should comprise the use of BDI and BHS protocols completed by health professionals in order to establish levels of depression and hopelessness before patients are admitted to psychiatric institutions or administered medication for depression.

A challenge which faces the South African researcher is that research takes place within diverse cultures and cultural belief systems prevalent within the country. Aetiological factors of particular relevance to the South African context are based on cultural explanations as opposed to psychological pathologies. In contextualising this phenomenon words like amafufunyane (evil spirits), ukuthwasa (calling to become a traditional healer by ancestors), ukuphaphazela (hallucinations in children), isimnyama eskoli (brain fag) and ukuphambana (madness due to possession by evil spirits) are identified (Baumann, 1998). These are Xhosa words explaining psychological symptoms, and would be treated by traditional healers in traditional ways. These examples are language specific and it is important to note that when one ventures north or even south of the areas inhabited by the Xhosa speaking nation, meanings and cultural influences change with the words.

This cultural dynamic creates complexities within the realm of psychology which are unique to the South African context. Although not all relate to mood disorders exclusively, these components are not taken into account within the current research project. The findings of the current research project however may lay the foundation for future research in the area of vulnerabilities to depression, negative inferential style, levels of depression and hopelessness with specific reference to at least one homogenous group within the South African context.
A further suggestion for future research, relates to a longitudinal study which could track the levels of depression and hopelessness as well as the negative inferential style of patients in therapy. This would add greatly to the body of knowledge which serves to identify negative cognitive schema as a vulnerability to depression. If these negative cognitive inferences could be reduced through therapy, vulnerability to depression may be reduced.

In many of the sources referenced within this research study, the topic of low self-esteem as a vulnerability factor was identified. Further research on this variable would add greatly to the limited body of knowledge relating to the vulnerabilities to depression within the South African context.

Conclusion

Within this chapter, the conclusions of the present research study were presented. The implications of the present findings explored and the limitations relating to the study were addressed. Recommendation for future research concluded the chapter.

As a mental health discipline, psychology faces the challenge of helping to reconstruct and develop a nation rendered psychologically dysfunctional by apartheid. Many South Africans today bear testimony to the psychological ravages of a brutal, and brutalising, past. Political transformation does not necessarily equal social transformation. Neither ‘....can social transformation be considered without resource to the complex set of social and economic processes and personal behaviours that shape, constrain, deny, inhibit, and facilitate mental health and well-being. (Mkatshwa in van Niekerk and Prins, 2001).
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Dear participant

I am currently completing my Masters degree in Counselling Psychology at the Nelson Mandela
Metropolitan University and need to complete a research dissertation as part of the requirements for the
degree. A literature review has indicated that while some research has been done in the field of cognitive
schemas in relation to depression, very little if any exists in South Africa.

Participation in this research requires you to complete a biographical questionnaire as well as three other
questionnaires aimed at identifying cognitive style, level of depression and a sense of hopelessness. The
completion of these questionnaires will take approximately 45 minutes.

Your participation in this study is completely voluntary, and should you choose, you have the right to
withdraw at any time. Confidentiality and anonymity of your answers will be maintained at all times
including the analysis and presentation of the research findings. It is important to know that your name will
not be referred to in the report and serves merely as authentication of your participation. Including your
name on the questionnaires is optional.

Should you feel emotionally vulnerable as a result of the questions asked, please contact me. If requested, I
can refer you to a counsellor who will be available if you need to discuss any emotional issues relating to
the questionnaires. My contact number at the university is (041) 504 2511. If I am not available please
leave a message in order for me to return your call.

A summary report of the results of the study will be provided to the management at Hunterscraig Private
Hospital. A copy of the dissertation will also be available in the Nelson Mandela Metropolitan University
library.

Your cooperation and participation is valued and appreciated

Kind regards

Mr. Alan Ahlfieldt
Intern Psychologist

Prof. J.G. Howcroft
Supervisor
APPENDIX B
EXPLORING AND DESCRIBING DEPRESSOGENIC COGNITIVE SCHEMA, LEVELS OF DEPRESSION AND HOPELESSNESS AMONG DEPRESSED AND NON DEPRESSED ADULTS

DECLARATION BY PARTICIPANT

<table>
<thead>
<tr>
<th>I the undersigned _______________________________ (name)</th>
<th>Please initial against each paragraph in the designated area</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I.D. No: ________________________________)</td>
<td></td>
</tr>
</tbody>
</table>

A. HEREBY CONFIRM THE FOLLOWING:

1. I was invited to participate in the above mentioned research project being undertaken by Alan Ahlfeldt of the Department of Psychology in the Faculty of Health Sciences, Nelson Mandela Metropolitan University.

2. This research project aims to explore and describe the depressogenic cognitive schemas, levels of depression and hopelessness among depressed and non depressed adults. The information will be used as part of the requirements for a MA Counselling Psychology degree. The results of this study may be presented at scientific conferences or in specific publications.

3. I understand that I need to complete the four questionnaires as well as this consent form.

4. My identity will not be revealed in any documentation, discussion, description or scientific publication by the researcher.

5. My participation is voluntary. My decision whether or not to participate will in no way affect my present or future employment/lifestyle/medical care.

6. No pressure was exerted on me to consent to participation and I understand that I may withdraw at any stage without penalization in any manner.

7. Participation in this study will not result in any additional cost to me.
<table>
<thead>
<tr>
<th>B.</th>
<th>I VOLUNTARILY CONSENT TO PARTICIPATE IN THE ABOVE-MENTIONED PROJECT.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I grant this as a voluntary contribution in the interests of professional training and scientific knowledge.</td>
</tr>
<tr>
<td></td>
<td>Signed at _________________ on _____________ 2005</td>
</tr>
<tr>
<td></td>
<td>Signature of participant __________________________</td>
</tr>
</tbody>
</table>
APPENDIX C
EXPLAINING AND DESCRIBING DEPRESSOGENIC COGNITIVE SCHEMA, LEVELS OF DEPRESSION AND HOPELESSNESS AMONG DEPRESSED AND NON DEPRESSED ADULTS

Demographic Questionnaire

Age ______________________ Gender _____________________________

Home Language _________________________________________________

1. Current Marital Status
   Single
   Married
   Separated
   Divorced
   Widowed

2. Have either of your parents been diagnosed or hospitalised for depression?
   Yes Biological Mother Other Mother
   Yes Biological Father Other Father
   No

3. Have you ever been prescribed medication for depression?
   Yes
   No

4. Are you currently on any form of medication for depression?
   Yes
   No

5. Have you ever had thoughts about committing suicide?
   Regularly
   Seldom
   Only once
   Never