

UNIVERSITY OF KWAZULU-NATAL

**An Exploration of the Relationships amongst the Constructs of
the Interpersonal-Psychological Theory of Suicidal Behaviour in
an Outpatient Clinical Population Sample in KwaZulu-Natal,
South Africa**

By

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DECLARATION

I, Nicole Van Wyk, declare that:

- (i) The research reported in this dissertation, except where otherwise indicated, is my original work.
- (ii) This dissertation has not been submitted for any degree or examination at another university.
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Signed:

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To the Lord Jesus Christ, whose grace never fails:

For we walk by faith, not by sight (2 Corinthians 5:7).

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ABSTRACT

Suicidal behaviour presents a significant global concern. Despite several global studies on suicide; there remains a lack of a comprehensive theory of suicidal behaviour. Several theories have been proposed over the years in an effort to conceptualize suicidal behaviour; however to date, no theory has been able to accurately account for the various factors involved in suicidal behaviour. Joiner (2005) proposed a theory of suicidal behaviour – the interpersonal-psychological theory of suicidal behaviour – where he builds upon the strengths of previous theories, as well as the literature on suicide risk factors, to provide, arguably, the most accurate theoretical account of suicidal behaviour to date. According to Joiner's (2005) interpersonal-psychological theory of suicide, an individual will die by suicide because: i) they can, and ii) they want to. The current study explored the relationships amongst the constructs of Joiner's (2005) interpersonal-psychological theory in an outpatient clinical population, with the aim of adding to the body of knowledge on suicide in South Africa, particularly with regards to theoretical understanding. The study enrolled 239 participants receiving psychological services at state hospitals, an outpatient clinic, or private facility. The findings of the current study indicated that the most significant predictors of suicide desire were: symptoms of depression, marital status, and the simultaneous presence of thwarted belongingness and perceived burdensomeness. This finding was expected given the theory's claim that a sense of interpersonal distress is likely to result in suicidal desire, as well as the literature on suicide indicating, that the presence of psychopathology, particularly depression, is a risk factor for suicide. In the current study, acquired capability for suicide was not found to be a significant predictor of suicide risk, which was expected. The constructs of Joiner's (2005) interpersonal-psychological theory have yielded interesting findings in studies conducted abroad thus far. Further research using Joiner's (2005) interpersonal-psychological theory in South Africa would be beneficial, particularly amongst a sample with current / a history of suicide desire.

TABLE OF CONTENTS

CHAPTER ONE	1
INTRODUCTION	1
1.1 Background and Rationale to the Study	1
1.2 Definition of Terminology	2
1.2.1 Thwarted Belongingness	2
1.2.2 Perceived Burdensomeness	3
1.2.3 Suicide Ideation	3
1.2.4 Suicide Desire	3
1.2.5 Suicide Intent	4
1.3 Summary	4
CHAPTER TWO	5
LITERATURE REVIEW	5
2.1 Defining Suicidal Behaviour	5
2.2 Global Prevalence of Suicidal Behaviour	8
2.3 Suicidal Behaviour in South Africa	8
2.4 Suicide and Gender	9
2.5 Suicide and Race	10
2.6 Suicide and Age	10
2.7 Suicide Risk Factors	11
2.7.1 Suicide and Mental Illness	11
2.7.2 Interpersonal Distress	12
2.7.3 History of Suicidal Behaviour	13
2.8 Suicide Protective Factors	14
2.8.1 Coping Skills	15
2.8.2 Social Support	16
2.8.3 Moral Objections to Suicide	17
2.9 The Relationship between Impulsivity, Aggression and Suicidal Behaviour	18
2.9.1 Impulsivity and Environmental / Social Stressors	19
2.9.2 Impulsivity and Psychiatric Comorbidity	19
2.9.3 Theoretical Evidence of Impulsivity in Suicide	20
2.10 Suicide and Acquired Capability	20
2.11 Summary of Key Findings in the Literature	21

CHAPTER THREE	23
THEORETICAL FRAMEWORK	23
3.1 Introduction.....	23
3.2 Review of Suicide Theories	23
3.2.1 Durkheim’s Theory of Suicide	24
3.2.2 Shneidman’s Theory of Suicide	24
3.2.3 Beck’s Theory of Suicide	26
3.2.4 Baumeister’s Theory of Suicide	26
3.2.5 Linehan’s Theory of Suicide	28
3.3 Joiner’s Interpersonal-Psychological Theory of Suicidal Behaviour.....	28
3.3.1 Thwarted Belongingness	29
3.3.2 Perceived Burdensomeness	30
3.3.3 Interaction of Thwarted Belongingness and Perceived Burdensomeness.....	30
3.3.4 Acquired Capability for Suicide	30
3.3.4.1 Lowered Fear of Death	31
3.3.4.2 Increased Physical Pain Tolerance	31
3.4 Rationale for the Study	32
CHAPTER FOUR	33
METHODOLOGY	33
4.1 Introduction	33
4.2 Research Questions	33
4.3 Research Design	34
4.4 Population and Sampling	35
4.5 Data Collection	36
4.6 Instruments	37
4.6.1 Demographic Questionnaire	38
4.6.2 The Interpersonal-Needs Questionnaire (INQ)	38
4.6.3 The Acquired Capability for Suicide Scale (ACSS)	39
4.6.4 The Beck Scale for Suicide Ideation (BSS)	39
4.6.5 The Beck Depression Inventory-II (BDI-II)	39
4.6.6 Clinician Protocol for Rating and Managing Suicide Risk	40
4.7 Data Analysis	40
4.8 Ethical Considerations	41

4.8.1 Risk and Benefits	41
CHAPTER FIVE	43
RESULTS	43
5.1 Introduction	43
5.2 Demographic Variables	43
5.3 Normality Testing	45
5.4 Descriptive Statistics	46
5.5 Reliability Analyses	47
5.6 Correlations amongst the Variables	47
5.7 Gender Differences in Suicidal Desire	49
5.7.1 Gender and Suicide Desire	49
5.7.2 Gender Differences in Acquired Capability for Suicide	49
5.8 One-way Analysis of Variance	50
5.8.1 Impact of Age on Suicide Desire	50
5.8.2 Impact of Race on Suicide Desire	50
5.8.3 Impact of Marital Status on Suicide Desire	51
5.9 Interaction of Age, Race and Marital Status on Thwarted Belongingness and Perceived Burdensomeness	52
5.10 Interaction of Age, Race and Marital Status on Suicide Desire	52
5.11 Predictive Power of the Constructs of the Interpersonal Theory on Suicide Desire	52
5.11.1 Hierarchical Multiple Regression (Model 1)	52
5.8.2 Hierarchical Multiple Regression (Model 2)	55
5.12 Conclusion	57
CHAPTER SIX	58
DISCUSSION	58
6.1 Introduction	58
6.2 Gender, Age, Race and Marital Status and their Relationships with the Constructs of the Interpersonal-Psychological Theory of Suicide	59
6.2.1 Gender and Suicide Desire, Acquired Capability, Thwarted Belongingness, and Perceived Burdensomeness	59
6.2.2 Age and Suicide Desire	60
6.2.3 Race and Suicide Desire	61

6.2.4	Marital Status and Suicide Desire	62
6.3	The Constructs of the Interpersonal-Psychological Theory of Suicidal Behaviour	63
6.3.1	Thwarted Belongingness and Suicide Desire	63
6.3.2	Perceived Burdensomeness and Suicide Desire	63
6.3.3	Acquired Capability, Suicide Desire and Risk	64
6.3.4	Predictive Ability of the Constructs	65
6.3.4.1	Regression Model 1	65
6.3.4.2	Regression Model 2	65
6.4	Conclusion	66
	CHAPTER SEVEN	67
	CONCLUSIONS AND RECOMMENDATIONS	67
7.1	Conclusion	67
7.2	Limitations	69
7.3	Recommendations for Future Research	69
	REFERENCES	70
	APPENDICES	80

TABLES

Table 2.1 Frequently Reported Definitions of Suicide	Pg.7
Table 5.1 Demographic Information of the Participants	Pg. 44
Table 5.2 Skewness and Kurtosis Values for All Variables	Pg. 46
Table 5.3 Descriptive Statistics for Predictor Variables	Pg. 47
Table 5.4 Correlations amongst all Variables	Pg. 49
Table 5.5 Hierarchical Multiple Regression Equation Predicting Suicide Desire, Model 1	Pg. 54
Table 5.6 Hierarchical Multiple Regression Equation Predicting Suicide Risk, Model 2	Pg. 56

CHAPTER ONE

INTRODUCTION

Suicide is a significant global public health concern. Globally, nearly one million people die by suicide, with around 15 million people attempting suicide (World Health Organization, 2014). Low- and middle-income countries (LMICs), such as South Africa, account for 75% of the global burden of suicide (WHO, 2014). Despite suicide being a key concern, there is a lack of empirical evidence in this area, particularly in South Africa. One of the reasons for this lack of empirical knowledge on suicide is due to the difficulty in empirically studying suicidal behaviour (Van Orden, Witte, Cukrowicz, Braithwaite, Selby, & Joiner, 2010). Another possible explanation may be due to a lack of theoretical knowledge concerning suicidal behaviour (Van Orden, Witte, Gordon, Bender, & Joiner, 2008). Numerous theories on suicidal behaviour have been proposed over the years, with influential theorists making significant contributions to the field of suicide. However, to date there has not been a theory which has been able to fully explain the various elements involved in suicidal behaviour. Joiner (2005) proposed the interpersonal-psychological theory of suicidal behaviour which seeks to address the question: “why do people die by suicide”. The theory proposes that people die by suicide for two reasons: “because they can and because they want to” (Van Orden et al., 2010, p. 581). Joiner’s (2005) interpersonal-psychological theory of suicidal behaviour thus proposes that an individual will die by suicide if he/she has both the desire and capability to do so (Joiner, 2005). This study explored the constructs of Joiner’s (2005) interpersonal-psychological theory of suicidal behaviour amongst a psychiatric outpatient sample in the greater Durban area of KwaZulu-Natal, South Africa.

1.1 Background & Rationale to the Study

There is both a lack of empirical evidence on suicidal behaviour in South Africa and a difficulty studying suicidal behaviour. This lack of empirical evidence on suicidal behaviour is a result of several factors, such as the stigma associated with suicidal behaviour (Burrows & Laflamme, 2007), the fear that discussing a sensitive topic such as suicide may result in suicidal behaviour, the difficulty accessing certain suicidal populations, underreporting of

suicidal behaviour (Bantjies & Kagee, 2013), and conceptual difficulties, amongst other factors. Van Orden et al. (2010) report that the difficulty in studying suicidal behaviour may be due to low base rates of suicidal behaviour in the general population, which requires very large samples for study. Suicidal individuals are also often excluded from studies out of concern for their wellbeing on the part of researchers. Furthermore, studies exclude those who have died by suicide, limiting the methods which researchers can use for study. It can also be argued that this scarcity of empirical evidence may be a result of a lack of an adequate theory of suicidal behaviour (Van Orden et al., 2010). Prinstein (2008) argues that there has been an absence of theoretical models which have been able to adequately understand suicidal behaviour in the way that other forms of psychopathology have been studied. In particular, there is a lack of integrative models of suicidal behaviour able to address the dynamic relationship within the individual, with others, and the environment. The application of theory regarding suicidal behaviour may assist health practitioners and those concerned with suicidal behaviour in the prevention, detection, and treatment of this mental health concern. Over the last few decades, several theories have attempted to account for suicidal behaviour; however to date there has not been any theory which has been able to adequately account for all the factors involved in suicidal behaviour. Joiner's (2005) interpersonal-psychological theory of suicidal behaviour can provide a useful model for understanding the dynamic interplay of intrapsychic factors as well as interpersonal/environmental factors. In the context of South Africa, it is imperative that a theory on suicide is able to provide explanations at the intrapsychic, interpersonal and environmental levels.

1.2 Definition of Terminology

1.2.1 Thwarted Belongingness

Belongingness refers to the need to be accepted as a member of a group (Fiske, 2004). Baumeister and Leary (1995) argue that belongingness is a fundamental human need and is found across all cultures and contexts, with serious consequences resulting from a sense of lack of belongingness. Joiner's (2005) definition of belongingness includes two components to feeling a sense of belongingness which include: connections with others and a sense of being cared about by others. According to Joiner (2005), belongingness can be defined as: "the need to belong [which] involves a combination of frequent interaction plus persistent

caring” (p.96). Thwarted belongingness (TB) is thus defined as the deficiency in interactions with others and sense of being cared about.

1.2.2 Perceived Burdensomeness

Burdensomeness is regarded as imposing or the feeling of being a burden to others, causing difficulty or worry. Joiner (2005) proposes that a sense of perceived burdensomeness (PB) occurs when an individual perceives him- or herself to be a burden and that others will benefit from their not being around.

1.2.3 Suicide Ideation

Suicide ideation can be defined as thinking about engaging in suicide. According to Schlebusch (2012), “suicidal behaviour is a process, with suicidal ideation forming part of its evolution” (p. 437). Beck, Kovacs and Weissman (1979) propose that suicide ideation precedes a suicide attempt or completed suicide.

1.2.4 Suicide Desire

Suicide desire can be described as a desire for death and is often classified under the same category as suicidal ideation (Joiner, 2005). Individuals who contemplate suicide versus those who make a suicide attempt differ in their desire for suicide. Suicide desire can be differentiated as active versus passive desire. Joiner (2005) distinguishes between active and passive suicide desire in terms of the action taken by the suicidal individual. As such, passive suicide desire occurs when there is little to no acting on suicidal thoughts. In contrast, active suicide desire occurs when an individual is more likely to act upon suicidal thoughts based on resolved plans and preparations for death, which includes an individual’s ability to enact lethal self-harm (Joiner, 2005). The majority of individuals with passive thoughts of suicide will not experience active suicide desire and will not have thoughts of killing themselves (Van Orden et al., 2010).

1.2.5 Suicide Intent

Suicide intent is the part of suicide desire that is most likely to translate into suicidal behaviour. Van Orden et al. (2010) have found that intent to engage in suicidal behaviour forms part of a group of symptoms which the authors termed “resolved plans and preparation”. The theory proposes that suicide intent results from habituation to the fear involved in suicidal behaviours to the extent that an individual is able to think about, plan, and engage in suicidal behaviour (Joiner, 2005).

1.3 Summary

It is a well recognized fact that suicidal behaviour is a major concern globally, with far-reaching economic, social, physical, and psychological consequences. Despite this, there is a scarcity of empirical evidence on suicidal behaviour. It can be argued that this may be due to a lack of a theory on suicidal behaviour able to adequately account for the various interacting factors which result in suicidal behaviour. Joiner’s (2005) interpersonal-psychological theory of suicidal behaviour provides a comprehensive model for understanding the various risk and protective factors for suicidal behaviour. The current research aimed to explore the constructs of Joiner’s (2005) theory in a clinical outpatient sample. This study will provide an overview of the current literature on suicide, which will include a review of the evolution of the definition of suicidal behaviour; the prevalence of suicidal behaviour; and the various risk and protective factors of suicidal behaviour. A discussion of the various theories on suicidal behaviour and how Joiner’s theory encompasses elements of these theories in providing a comprehensive theory of suicidal behaviour follows. The constructs of Joiner’s theory will then be discussed. The methodology employed in the current study, followed by the results, is then presented. Thereafter, this study will link the findings of the current study to previous studies conducted exploring the constructs of Joiner’s theory. Finally, the limitations of the current study will be discussed, along with recommendations for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Defining Suicidal Behaviour

“Regarding knowledge about suicide and its prevention, much remains to be learned and done” (Joiner, 2005 p.27).

There have been many attempts to define suicidal behaviour. According to De Leo, Burgis, Bertolote, Kerkhof, and Bille-Brahe (2006), each person instinctively knows what is meant when the topic of suicide arises; however the definition of suicide is more difficult than simply “killing oneself”. A definition of suicide should be value-free and culturally accepted. If suicide is regarded as a crime, or as immoral, then research on suicide is obstructed (Mayo, 1992). Despite the difficulty in constructing universally accepted criteria to characterize suicidal behaviour, it is essential that definitions of suicidal behaviour are explicit and generalizable (De Leo et al., 2006). Cultural definitions of suicide can instil a value judgement. In a multicultural society, such as South Africa, cultural definitions and views of suicide can be diverse. Such cultural diversity in the attitudes towards suicidal behaviour raises questions regarding the adequacy of a universal definition. Inconsistent definitions of suicidal behaviour have several implications for public health, research, and clinical practice. Adopting a standard definition of suicidal behaviour will contribute to an understanding of the risk factors for suicide and in turn target at risk individuals.

The word “suicide”, derived from the Latin words *sui* (of oneself) and *caedere* (to kill), was introduced in 17th century by physician and philosopher, Sir Thomas Browne (De Leo et al., 2006). Historically suicidal behaviour has been perceived negatively, spurred by both law and religious influence. Suicide was once regarded as a crime, with those attempting suicide being placed on trial. During the Middle Ages, harsh penalties for suicide survivors and their families existed. The conception of suicide shifted progressively away from criminality as a result of influential thinkers such as Emile Durkheim and Edwin Shneidman, which resulted in a focus on the interpersonal and intrapsychic influences and embraced a more sociological and psychological notion of suicide. The differences in the definitions of

suicide over the years stem from the theoretical paradigms of the authors of the time (see Table 2.1). For example, Durkheim's characterization of suicide is social; which is different from Shneidman, whose definition is psychological; and Baechler who focuses on an existential definition (De Leo et al., 2006). A review of relevant theories will be addressed further on. As can be seen in Table 2.1, several authors agree that suicidal behaviour is self-initiated, and varies with regards to the intent to die and the physical injury resulting from the act (Van Orden et al., 2010). The crucial elements used to differentiate between suicidal, accidental or homicidal acts are: "(a) the locus of origin (self-initiated) and (b) the intention (to cause, or not to cause, death)" (De Leo et al., 2006, p.18). Furthermore, suicide can be differentiated between fatal and non-fatal suicidal behaviours. Suicide refers to all cases in which a suicide attempt results in death. For those who do not die as a result of their suicide attempt, they are often disabled by the physical, psychological, and social consequences of their suicidal behaviour.

A definition of suicide should thus be vast enough to include a range of belief systems, and at the same time, it should specify the characteristics involved in suicide. The definition used in this study is that of Schlebusch (2005) who proposes that suicidal behaviour is a process, which involves thinking about suicide, talking about it, or planning it (Schlebusch 2005). According to Schlebusch (2005) suicidal behaviour includes a wide range of behaviours which are self-destructive or self-damaging, resulting from different levels of distress or psychopathology which is further divided into both non-fatal and fatal behaviours (Schlebusch, 2005).

Table 2.1

Frequently Reported Definitions of Suicide

Theorist	Definition of Suicide
Durkheim (cited in De Leo et al., 2006)	Any positive or negative act of the self, either directly or indirectly, which the individual knows will result in death.
Baechler (cited in De Leo et al., 2006)	A solution to an existential problem that involves making an attempt to end the life of the individual.
Shneidman (cited in De Leo et al., 2006)	A conscious act of self-annihilation for an individual who perceives suicide as the best solution to their problem.
Rosenberg et al. (cited in De Leo et al., 2006)	An intentional, self-inflicted act which results in death.
Ivanhoff (cited in De Leo et al., 2006)	Intentional death which is self-initiated.
Mayo (cited in De Leo et al., 2006)	Self-initiated death with an active or passive intention of ending one's own life.
Silverman & Maris (cited in De Leo et al., 2006)	Suicide is not a disease, but is intentional self-inflicted action or behaviour which results in death.
WHO (1999)	Self-initiated killing of oneself deliberately, with knowledge and expectation of the lethality of the behaviour.
Schlebusch (2005)	Suicide includes a wide range of self-destructive or self-damaging behaviours whereby one attempts to hasten his/her own death as a result of distress or mental illness, with the expectation of a fatal outcome.

2.2 Global Prevalence of Suicidal Behaviour

In 2012 suicide was the 15th leading cause of death worldwide, accounting for 1.4% of all deaths. Approximately 804 000 people around the world commit suicide every year and approximately 15 million people attempt to do so (WHO, 2014). Available data on suicide indicates that globally each year, more people die from suicide than from war, violence, homicide, and traffic accidents. In high income countries, the ratio of male-to-female suicide is 3:1; however this ratio is lower in low-to-middle income countries (LMICs), whereby the male-to-female ratio is 1.6:1 (WHO, 2014). Globally suicide is the second leading cause of death amongst individuals in the 15 to 29 year age group (WHO, 2014) and suicide rates peak in middle age (Shah, Bhat, Zarate-Escudero, DeLeo, & Erlangsen, 2015) with most suicides occurring in the 15 to 34 year age group (Burrows & Laflamme, 2007).

2.3 Suicidal Behaviour in South Africa

In South Africa, suicidal behaviour is a significant public health concern. LMICs in Africa account for approximately 8% of global suicides (WHO, 2014). However, research and service delivery in this area have not received adequate attention. In Africa, suicidal behaviour has increased significantly, but is often not recognized as the significant problem it is. There are several reasons for the lack of awareness, including: different religious and cultural conceptions of suicide – in some contexts, suicide is regarded as a social taboo, or a crime, and is treated with secrecy or negative socio-cultural sanctions; and poor research design and assessment instruments, resulting in reduced trustworthiness of statistics and data compilation (Schlebusch 2005). Thus, available data does not adequately reflect the problem of suicide in South Africa. In South Africa, there is a significant loss of lives as a result of suicide in relation to the population of the country. In a national household survey in South Africa conducted in 2003, the annual suicide rate was 25 deaths per 100 000 people (Shilubane, Ruiter, van den Borne, Sewpaul, James, & Reddy, 2013) with suicide being the second leading cause of death in the 15 to 29 year age group (WHO, 2014). Of the large metropolitan areas in South Africa (Cape Town, Johannesburg, Pretoria and Durban) surveyed in a study conducted by The National Injury Mortality Surveillance System (NIMSS), the suicide rates for Durban were 14 per 100 000 which was second only to Johannesburg (15 per 100 000), giving Durban the second highest suicide rate in the country

(Schlebusch, 2005). Suicide statistics between 2000 and 2012 have indicated a 38% increase in suicide rates in LMICs in the African region (WHO, 2014). This may reflect actual increases or may be a result of improved reporting of suicide, increased awareness of suicide and less stigmatization.

2.4 Suicide and Gender

Studies have shown that globally, more males than females commit suicide. Globally, men are three times as likely as women to die by suicide (WHO, 2014). Although men are three times more likely than women to die by suicide; women attempt suicide at a rate of approximately three times more than that of men. Women thus attempt suicide more frequently; however these attempts are less violent. The exception is China where roughly as many women as men die by suicide (Joiner, 2005). In LMICs, such as South Africa, the male to female ratio is much lower than global statistics and is 1.6:1 indicating that men die by suicide at a rate of 57% more than women (WHO, 2014). Non-lethal suicidal behaviour outnumbers lethal suicide attempts at a ratio of 25:1. Therefore every day, more females than males engage in suicidal behaviour (Van Orden et al., 2010). The literature indicates that it is more common for women to desire and attempt suicide than men, although the attempts are less lethal than those of men. The male lethality of suicidal behaviour is related to the tendency toward violent behaviour which is more common in men than in women. In a study conducted by Anestis, Bender, Selby, Ribeiro, and Joiner (2011), the males in their study possessed higher levels of the acquired capability for suicide (ACS) than females, and distress tolerance interacted with gender such that those at greatest risk for suicide were males with high distress intolerance. Furthermore, the results of a study conducted by Granato, Smith, and Selwyn (2015), found that masculine gender norms influenced acquired capability in terms of painful and provocative life events which males engaged in. The findings of this study support the literature indicating that men are at greater risk for death by suicide due to their socialization which requires males to adhere to gender norms that encourage them to engage in painful and provocative life events. The greater suicide desire by females can be linked to women experiencing many risk factors that increase their vulnerability, such as interpersonal difficulties and a greater prevalence of major depressive disorder. In a study conducted by Crossley and Langdridge (2005), women ranked interpersonal needs as sources of happiness significantly higher than men, which suggests

that women are more likely to perceive interpersonal distress when these needs are thwarted. However, because women have less exposure to painful and provocative events that habituate them to fear of self-injury, women are less likely to develop the acquired capability for suicide (Van Orden, et al., 2010). Thus, although women desire suicide more than men do, they are less likely than men to die from the attempt.

2.5 Suicide and Race

There is a lack of literature on suicide in South Africa, making it difficult to understand the full picture of suicidality in South Africa. Available research indicates that suicidal behaviour amongst Black South Africans is an increasing problem. In a review conducted by Scribante, Blumenthal, Saayman, and Roos (2004) of suicide cases for the period 1997-2000, the authors found that most suicides occurred amongst Whites (56.8%), followed by Blacks (37.5%), Coloureds (2.8%), and Indians (2.3%). These statistics changed drastically a few years later when Stark et al. (2010) investigated suicide cases for the period 2003-2007. The authors reported that most suicides occurred for Blacks (72.1%), followed by Whites (26%), Coloureds (1.1%), and Indians (0.6%), indicating a shift in reported statistics on race and suicide (Stark et al., 2010). In a recent study conducted by Naidoo and Schlebusch (2014), the number of suicides in Durban differed considerably between the races. Suicide was twice as high for Black people as for Indian people; whereas the figures for the mixed race and White individuals were significantly lower. This indicates an increase in the rates of suicide amongst Black individuals, which may be a result of a number of factors, such as acculturation due to urbanisation, moving away from the protection of traditional communities, socio-economic pressures, and high unemployment rates (Naidoo & Schlebusch, 2014). It is also important to consider the increase in statistics on race and suicide may be a result of better reporting and recording strategies, post-apartheid in South Africa.

2.6 Suicide and Age

Globally suicide rates generally increase with age (Shah et al., 2015), with middle-aged men being most at risk of completed suicide, while suicidal thoughts, plans and intent

are more frequently reported by younger women (Cooper et al., 2015). Globally suicide accounts for 8.5% of deaths among young adults 15 to 29 years of age, and is the second leading cause of death for this group (WHO, 2014). For those between 30 and 49 years old, suicide accounts for 4.1% of all deaths and is the fifth leading cause of death in this age group. In LMICs, young adults and elderly women have higher suicide rates than global trends suggest, and in South Africa, suicide is the second leading cause of death in the 15 to 29 year age group (WHO, 2014), with most suicides in South Africa falling within the 15 to 34-year age group (Burrows & Laflamme, 2008).

Research has also documented the association between age and impulsive-aggressive behaviours and suicide (Turecki, 2005). Turecki (2005) reported that suicidal behaviour by young and older individuals may be different, with impulsive-aggressive behaviours playing a significant role in suicides by younger individuals; whereas for older people, major depressive disorder is more commonly associated with suicide.

2.7 Suicide Risk Factors

2.7.1 Suicide and Mental Illness

There is a wealth of literature which indicates that one of the strongest predictors of suicide is the presence of a mental illness (Cavanagh, Carson, Sharpe, & Lawrie, 2003; du Toit et al., 2008; Khasakhala et al., 2011; Nademin, Jobes, Pflanz, Jacoby, 2008; Page, Taylor, Hall, & Carter, 2009; Schlebusch, 2005; Van Orden et al., 2010). In particular, suicide risk is substantially increased in individuals diagnosed with a mood disorder, in particular major depressive disorder and bipolar mood disorder (Combs & Romm, 2007). Substance abuse is a common co-morbidity in many psychiatric diagnoses and also presents a significant risk factor for suicide. In a review of suicidal behaviour and alcoholism, alcoholism was found to be a strong risk factor for suicide; and when it was co-morbid with major depressive episodes, interpersonal difficulties, poor social support, high aggression and impulsivity, and prior suicidal behaviour, its strength increased (Sher, 2006). The relationship between mental illness and suicidal behaviour is consistent with not only research findings, but theory as well. Shneidman (1993) proposed that suicide always results from “psychache”, which is a strong psychological pain which makes life intolerable. According to Cavanagh et

al. (2003), approximately 95% of those who die by suicide suffer from psychopathology. More recent research by Khasakhala et al. (2011) indicated that 61% of people who had seriously contemplated suicide reported a prior diagnosis of a DSM-IV disorder. The following mental disorders have been linked to suicide: major depressive disorder – suicide ranging between 2% and 6% (Bostwick & Pankratz, 2000); bipolar disorder – with a 15-fold increased risk of suicide (Harris & Barraclough, 1997); borderline personality disorder – with suicide ranging between 4% and 5% (Duberstein & Witte, 2008); schizophrenia – with suicide ranging between 1.8% and 5.6% (Palmer, Pankratz, & Bostwick, 2005); substance abuse – with a 5-fold increased risk of suicide (Harris & Barraclough, 1997); anorexia nervosa – with suicide 58 times more likely (Herzog, et al., 2000); and conduct disorder in youth – with a 6-fold increased risk of suicide (Van Orden et al., 2010). The literature indicates that depression is associated with the development of suicide desire, with disorders characterized by agitation or impulsivity associated with an increased risk of acting on the suicide desire (Van Orden et al., 2010). However, it is important to note that it is not a diagnosis of a mental disorder itself that results in suicidal behaviour. Suicidal behaviour includes aspects of psychological, biological, social, cultural, existential, and philosophical variables.

2.7.2 Interpersonal Distress

Many authors have reported on the role of social factors in suicidal behaviour. In a study conducted by du Toit et al. (2008), the authors reported interpersonal distress (problematic relationships) as the main precipitating factor for suicidal behaviour, with interpersonal distress accounting for 55.4% of suicide attempts (du Toit, et al., 2008). In a study conducted by Beekrum, Valjee, and Collings (2011), interpersonal distress was found to be significantly related to non-fatal suicidal behaviour. Interpersonal risk factors for suicidal behaviour include significantly higher rates of recent stressors, such as: marital problems, partner relational distress, and socio-economic pressures in the family. Suicide occurs more frequently in persons who are socially isolated than those who feel a sense of social belongingness (Van Orden, et al., 2010). In particular, single, never married individuals are most at risk for suicide and attempt suicide at rates nearly double that of married persons (Sadock, Sadock, & Ruiz, 2014). Furthermore, divorce increases the risk of suicide, particularly for men, with divorced men three times more likely to commit suicide as

divorced women (Sadock et al., 2014). The literature on interpersonal distress as a suicide risk factor is consistent with a need to experience a sense of belongingness. Belongingness is inferred by married status and is regarded as a suicide buffer, whereas thwarted belongingness, as indicated by non-married status, represents a risk factor for suicide (Joiner, 2005).

2.7.3 History of Suicidal Behaviour

A significant risk factor for suicide which has been cited in the literature is a history of suicidal behaviour (Joiner, 2005; Joiner et al., 2009; Tidemalm, Langstrom, Lichtenstein, & Runeson, 2008; Tidemalm et al., 2014; Van Orden et al., 2008). The risk of later suicidal behaviour is further exacerbated by psychiatric comorbidity. In a study conducted by Tidemalm et al. (2014), the authors found that psychopathology and self-harm increased the long-term risk for suicide across all ages among self-harm patients. Differences in suicide risk across diagnostic categories were found, with schizophrenia and bipolar mood disorder and major depressive disorder being cited as the most at-risk group for later suicide (Tidemalm et al., 2014). Furthermore, in an earlier study by Tidemalm et al. (2008), the authors found that amongst those who had previously engaged in suicidal behaviour, the presence of an affective disorder had a significant impact on the risk of suicide. The authors proposed that this may be due to the intense, symptom-rich phases of the individual's psychiatric condition.

Joiner et al. (2009) provide an explanation for this increased risk of future suicide for those who have previous suicidal behaviour, apart from psychiatric co-morbidity and family history. According to the authors, past suicidal behaviour habituates an individual to the fear and pain involved in self-harm behaviour, which increases the likelihood of future suicidal behaviour (Joiner et al., 2009), referred to as acquired capability for suicide (ACS). In a test of ACS, Van Orden et al. (2008) found that ACS was significantly increased by the number of past suicide attempts. In addition to exposure to suicidal behaviour, the lethality of the attempt was also regarded as increasing one's risk of later suicide. Tidemalm et al. (2014) found that for all age and gender groups (except young females) a violent first episode of self-harm increased the risk of suicide within one year, and repeated non-fatal self-harm increased the long-term risk more in younger individuals. It is likely that this self-inflicted

violence contributes to habituating an individual to the pain and fear of suicide which increases the likelihood of future suicidal behaviour.

2.8 Suicide Protective Factors

In discussing suicidal behaviour, it is important to consider both protective and risk factors. The combination of protective and risk factors best estimates the probability of an individual engaging in suicidal behaviour (McLean, Maxwell, Platt, Harris, & Jepson, 2008). Dervic et al. (2011) report that the main focus on risk, and not resilience, of researchers, has resulted in ineffective suicide interventions. The authors argue that knowledge of risk as well as protective factors will increase the efficacy of suicide interventions. By focusing on just one aspect of suicidal behaviour, one runs the risk of inaccurately assessing an individual's suicide risk which may result in either an over- or under-estimation of suicide risk. It is also important to note that the absence of a risk factor does not imply a protective factor, and vice versa. An individual's reasons for living are affected by one's culture and environment (Malone et al., 2000). Protective factors thus differ with regards to age, sex, race, and culture, and the protective factors discussed below reflect a review of the most common protective factors derived from the literature. The protective factors discussed below are amongst the commonly cited protective factors and is not an exhaustive list.

In a study by Linehan, Goodstein, Nielson, and Chiles (1983), the authors found that individuals can create many reasons for staying alive when contemplating suicide. The importance of family and children, religious values, beliefs in one's own capabilities and the value of living, in general, as well as fears one may have about what others would think, and about the actual pain involved in a suicidal act are important considerations for many who are contemplating suicide. Of note, Linehan et al.'s study (1983) found that attitudes towards coping, family and children, differentiate suicidal and non-suicidal groups. In Linehan et al.'s (1983) Reasons for Living Inventory, a self-report instrument which assesses the importance of various reasons for living, the following six subscales were identified as significant to individual's reasons for living and thus can be related to protective factors against suicide: (1) beliefs regarding coping and survival; (2) family responsibility; (3) child concerns; (4) fear of suicide; (5) fear of stigma; and (6) moral objections to suicide. Furthermore, in a study conducted by Malone et al. (2000), participants diagnosed with major depressive disorder

who had not made a suicide attempt expressed more feelings of responsibility towards loved ones, fear of social stigma, moral objections to suicide, greater beliefs towards coping and survival, and greater fear of suicide than those with major depressive disorder who had made a suicide attempt.

2.8.1 Coping Skills

Several studies have identified positive coping skills as a protective factor against suicidal behaviour (Bazrafshan, Jahangir, Mansouri, & Kashfi, 2014; Cha & Nock, 2009; McLean et al., 2008; Mirkovic, et al., 2015; Nock, et al., 2013). Coping as a protective factor against suicidal behaviour originates largely from the field of positive psychology, which focuses on an individual's strengths. In understanding why some people are more able to cope with stressful events than others, it is important to consider the constructs of resilience, temperament, life satisfaction, self-esteem, autonomy, hope, sense of purpose, and ability to form healthy relationships (Nock, et al., 2013). The literature on suicide regards the presence of specific personal characteristics, such as positive coping and religiousness, as factors which encourage adaptive coping following stressful events (Nock et al., 2013). Furthermore, studies have linked emotional intelligence – the ability to perceive, understand, and manage one's emotions – as a significant factor which buffers against stressful life events and suicide attempts (Cha & Nock, 2009). Effective coping skills thus increase self-control, which prevents suicidal behaviour (Bazrafshan et al., 2014). Similar results have been found with regards to positive coping and suicidal behaviour by Bazrafshan et al. (2014). In particular, coping skills with an element of self-control have been found to be protective against suicidal behaviour amongst adolescents (McLean et al., 2008). In a study conducted by Mirkovic et al. (2015), healthy coping was found to be a protective factor against both depression and suicide ideation amongst adolescents. It was found that amongst adolescents, non-productive coping was found to be associated with suicidal thoughts, and productive coping was found for those adolescents who no longer had thoughts of suicide.

2.8.2 Social Support

Just as the lack of social support is a significant risk factor for suicide, the presence of social support is a significant protective factor against suicidal behaviour. Studies have consistently demonstrated that positive social support and connectedness, which can be conceptualized as belongingness, protects against the risk of suicide in a variety of different groups, including adolescents, soldiers, and minority groups such as African American, transgender, and transsexual individuals (Compton, Thompson, & Kaslow, 2005; Molock, 2000; Nock et al., 2013). In particular, marriage has been regarded as a significant protective factor against suicide (McLean et al., 2008).

Social support can be regarded as that which results in an individual believing that “he [or she] is cared for and loved, esteemed, and a member of a network of mutual obligations” (Cobb, 1976, p.300). Social support is a protective factor against suicide as it involves the presence of others who can help an individual cope with stress (Kleiman & Liu, 2013). Durkheim’s (1897) social theory, which regards suicidal behaviour as a social act, can be used to understand the protective nature of social support against suicidal behaviour. According to Durkheim (1897), suicide is always driven by social causes, and the literature on social support and suicide supports Durkheim’s focus on social factors of suicide. The findings of Compton et al.’s (2005) study indicated that social connectedness is an important characteristic of the social environment in terms of protecting one against suicidal behaviour. The authors found that social support is a particular protective factor amongst African Americans (Compton et al., 2005). In a study conducted by Harris and Molock (2000), the authors found that among African American college students, family support was associated with lower levels of suicide ideation. Furthermore, amongst adolescents, those who have been sexually abused, and those with learning disabilities, good parent-child relationships have been found to be a protective factor against suicide risk (McLean et al., 2008). Results from a study conducted by Moody and Smith (2013) indicated that a sense of social support, emotional intelligence, and having children were associated with lower rates of suicidal behaviour amongst transgender and transsexual individuals; and Nock et al. (2013) found that social support amongst soldiers within their unit is a significant protective factor against suicide. The results of Kleiman and Liu’s (2013) study provides further evidence for the association between social support and protection against suicidal behaviour. In particular, the authors found social support to result in a 30% decreased likelihood of lifetime risk for

suicidal behaviour in comparison to those with lower social support, even after considering a range of known suicide risk and protective factors (Kleiman & Liu, 2013). In addition to the empirical evidence that support may be a protective factor in suicide, there is strong theoretical support as well. For example, the presence of social support may increase feelings of belongingness, which is negatively associated with suicide risk within Joiner's (2005) interpersonal-psychological theory of suicide (Joiner, et al., 2009; Van Orden, et al., 2010).

2.8.3 Moral Objections to Suicide

Moral objections to suicide refer largely to religious influence on society and can therefore be regarded as a social factor which protects one from suicide. Durkheim's (1897) social theory has been used to understand the protective benefit of religious affiliation in that religious affiliation provides a sense of belonging and social integration, which has previously been discussed as a protective factor. Several studies cite religion as a protective factor against suicidal behaviour (Bhugra, 2010; Dervic et al., 2011; McLean et al., 2008; Soloff, Lynch, Kelly, Malone, & Mann, 2000). One's beliefs and expectations of relationships and society, affected by religion, shapes an individual's coping and help-seeking behaviour (Bhugra, 2010).

Religious affiliation is a protective factor against suicide not only as a social factor, but as a moral factor as well. Religious attitudes towards suicide have been reflected in the definitions of suicidal behaviour over time, as discussed earlier. For example, in the Middle Ages it was believed that suicide was a result of "temptations by the Devil" (Bhugra, 2010). Religion thus places moral objections against suicidal behaviour, which acts as a protective factor for individuals who are affiliated with such religions. Dervic, Oquendo, & Grunebaum (2004) studied 371 depressed inpatients according to their religious or non-religious affiliation. The authors found significantly more suicidal behaviour amongst those who reported no religious affiliation. In a later study by Dervic et al. (2011), the authors found that the bipolar mood disorder patients in their study who reported religious affiliation had less suicidal behaviour than those who reported no religious affiliation. This relationship between religion and suicidal behaviour was not due to religious affiliation per se, but was related to the moral objection to suicide characteristic of many religions (Dervic, et al., 2011). Of note, those who scored higher on moral or religious objections to suicide on the Reasons for Living

Inventory (Linehan et al., 1983) made fewer suicide attempts, regardless of the presence of a mental illness. In Malone et al.'s (2000) study, the authors found moral objections to suicide differentiated patients with or without a history of suicidal behaviour; rather than religion.

2.9 The Relationship between Impulsivity, Aggression and Suicidal Behaviour

It has increasingly been recognized that people who engage in suicidal behaviour have certain personality traits, such as impulsive-aggressive behaviours (Mann, Waternaux, Haas, & Malone, 1999; Moeller & Swann, 2001; Simon, et al., 2001; Soloff, et al., 2000; Turecki, 2005). Studies are inconsistent regarding the role of impulsivity in suicidal behaviour; however most studies report that those who engage in suicidal behaviour have higher levels of impulsive behaviours than those who do not engage in suicidal behaviour (Turecki, 2005). Impulsivity includes a wide range of high-risk behaviours which often results in undesirable outcomes (Turecki, 2005). Impulsivity is regarded as a tendency toward unplanned, hasty, reactions to internal or external stimuli, regardless of the consequences of these actions to the self or others (Moeller & Swann, 2001). In a study conducted by Williams, Davidson, and Montgomery (1980), 24% of the survivors in their study had spent less than five minutes between deciding to attempt suicide and making an actual attempt. Amongst those who engaged in an impulsive suicide attempt (i.e. within five minutes of deciding to attempt suicide), they were less likely to have considered their method of suicide, expected to be found by others, and had a lower expectation of the fatality of their attempt (Simon, et al., 2001). Despite the fact that impulsive attempters had a lower expectation of death, their impulsive attempt often resulted in lethal or near-lethal consequences, which indicates that for those who do not die by suicide, they experience physical, psychological, and social disabilities as a result of their attempt – impulsive or not. For example, in Simon et al.'s (2001) study, those who made an impulsive attempt were just as likely to experience severe injury, have a poor outcome, and require special treatment and intensive care as those whose attempt was not impulsive. These findings suggest that impulsive suicide attempts, despite lower expectations of the fatality of the outcome, are a significant risk for serious injury and does not represent a less harmful outcome than planned attempts (Simon, et al., 2001).

2.9.1 Impulsivity and Environmental / Social Stressors

Impulsive-aggressive behaviours have been linked to stressors in childhood, particularly abuse and neglect. Studies of individuals who have committed suicide, indicate that for those whose behaviour was regarded as impulsive-aggressive, they are likely to have had a life characterized by negative life stressors and abuse, suggesting that for some who commit suicide, it may be a result of the development of a dysfunctional set of coping mechanisms (Turecki, 2005). Comparing impulsive and non-impulsive suicide completers, Turecki (2005) found that for those who made impulsive suicide attempts, they were more likely to have a history of parental rejection, negligence, and abuse. The authors thus propose that early life stressors may result in dysfunctional behaviours, resulting in an abnormal expression of distress characterized by impulsive and/or aggressive behaviours (Turecki, 2005).

In terms of social stressors, impulsive suicidal behaviour has also been linked to interpersonal conflict. In a study conducted by Simon et al. (2001), the authors found that impulsive suicide attempts were preceded by an interpersonal conflict, which suggests that impulsive suicide attempts may also be a way of dealing with an interpersonal conflict, rather than a desire to die.

2.9.2 Impulsivity and Psychiatric Comorbidity

Impulsivity has been associated with negative experiences in childhood, including a history of physical or sexual abuse which may also be associated with risk of personality disorders, such as borderline personality disorder, and self-destructive behaviours in adulthood. For example, studies have found suicidality to be associated with impulsivity in individuals diagnosed with borderline personality disorder. In a study by Soloff et al. (2000), individuals diagnosed with borderline personality disorder were found to have higher levels of impulsivity-aggression and hopelessness than were those diagnosed with major depressive disorder alone. Similarly, in a previous study conducted by Soloff, Lis, Kelly, Cornelius, and Ulrich (1994), individuals with a history of suicide attempts who had been diagnosed with borderline personality disorder had more impulsive behaviours, major depressive episodes, and were diagnosed with antisocial personality disorder co-morbidity more than those without a history of suicidal behaviour. Furthermore, in a study exploring the most important

predictive factors of suicide, Mann et al. (1999) found impulsivity and aggression to be greater in suicide attempters, particularly amongst those diagnosed with borderline personality disorder. The relationship between impulsive-aggressive behaviours and suicide has been demonstrated by other studies, such as that of Moeller and Swann (2001) who discovered that those with bipolar mood disorder were at increased risk for suicidal behaviour as a result of impulsivity; and Simon et al. (2001) who reported that individuals who had made a suicide attempt were more likely to be involved in a physical fight than to be depressed. Involvement in physical fights was the only impulsive behaviour in Simon et al.'s (2001) study which was associated with impulsive suicide attempts, indicating that impulsive suicide attempts may more likely be associated with an inability to control aggressive drives rather than generalized impulsivity (Simon, et al., 2001). These findings suggest that an inability to control aggressive impulses might be a better predictor of risk for impulsive suicidal behaviour than depression.

2.9.3 Theoretical Evidence of Impulsivity in Suicide

The relationship between impulsive-aggression and suicidal behaviour has not only been empirically supported, but has been theoretically supported too. Joiner's (2005) interpersonal-psychological theory proposes that impulsivity plays a role in one engaging in painful and provocative events. Impulsive individuals are more likely to engage in painful and provocative events, which habituates the individual to lethal self-injury. He argues that impulsivity is not related to suicide as a "spur-of-the-moment" attempt; but is implicated in suicide in the sense that it leads to experiences that allow people to get used to pain. Through repeated impulsive acts, whether suicidal or not, an impulsive individual may become fearless and thus capable of attempting suicide (Joiner, 2005).

2.10 Suicide and Acquired Capability

Joiner (2005) proposed that exposure to painful and provocative events, such as through impulsive-aggressive behaviours, diminishes the fear associated with suicidal behaviour, which weakens one's self-preservation instinct through habituation to the pain and fear involved in dying. Thus, the ACS includes lowered fear of death and increased pain

tolerance (Van Orden, et al., 2010). According to opponent process theory (Solomon, 1980), through repetitive involvement in painful and provocative events, the fear involved in the act diminishes and the opposite effect becomes strengthened. Thus, those with a higher pain tolerance may be more likely to engage in painful and provocative events, such as suicidal behaviour, as they develop less aversiveness to pain (Franklin, Hessel, & Prinstein, 2011).

Suicidal behaviour is one of the strongest ways to habituate to pain, but it is not the only way. Exposure to other provocative experiences may also serve to habituate an individual to pain, such as: reckless behaviour, impulsivity, a history of childhood physical and sexual abuse, tattooing and piercing, engaging in violent acts, substance abuse, and psychiatric conditions characterized by pain and provocation, such as borderline personality disorder. For example, in a study conducted by Bryan, Morrow, Anestis, and Joiner (2010), the authors found that acquired capability was significantly higher for their military sample in comparison to the non-military sample. The construct of acquired capability allows one to understand the relationship between a history of suicidal behaviour and risk for future suicidal behaviour (Van Orden et al., 2010). In a study conducted by Franklin et al. (2011), individuals with a history of non-suicidal self-harm behaviours had higher pain tolerance and had a greater capability for suicide. However, although ACS is predictive, it does not necessarily indicate that the individual desires suicide and therefore it does not assume suicidality if one possesses ACS – an individual needs to possess both the ability to engage in suicidal behaviour, along with the desire for suicide. This will be elaborated further using Joiner's (2005) interpersonal-psychological theory of suicide.

2.11 Summary of Key Findings in the Literature

Suicide is a global concern, accounting for 1.4% of all deaths globally (WHO, 2014). Furthermore, South Africa has seen an increase of 38% in suicidal behaviour over the past decade (WHO, 2014). Definitions of suicide have evolved through the decades based on the dominant ideology of the time and the definition of suicide has shifted from moralistic and religious views of suicide as a crime as a result of progressive thinkers such as Durkheim and Shneidman, who focused on the social and psychological factors associated with suicidal behaviour. Today, suicidal behaviour is understood to encompass a broad range of self-

destructive behaviours as a result of distress (psychologically and interpersonal) or mental illness, which results in death.

Suicidal behaviour is influenced by various risk factors, with gender being cited as a strong predictor of suicidal behaviour. Suicide rates differ for females and males, with females more than three times as likely as males to attempt suicide, whereas males are three times more likely to die by suicide than females. The literature cites the higher prevalence of female suicide attempts as related to increased risk factors for (passive) suicide desire, such as interpersonal distress. The higher prevalence of deaths by suicide for males is related to higher rates of capability for engaging in lethal behaviours, such as suicide, as a result of increased exposure to painful and provocative events. Apart from gender, the presence of mental illness is a significant predictor of suicide, particularly the diagnosis of a mood disorder, such as major depressive disorder or bipolar mood disorder. Furthermore, high rates of interpersonal distress (relational problems) accounts for more than half of all suicide attempts. Another important risk factor for suicidal behaviour is a history of suicidal behaviour, as increased exposure to suicidal behaviour habituates one to the pain and fear involved in suicide, resulting in an acquired capability for suicide. Those who engage in suicidal behaviour are also more likely to engage in impulsive, aggressive behaviour. In discussing suicide, it is equally important to focus on protective factors as it is to acknowledge the various risk factors. The most commonly cited protective factors against suicide include, but are not limited to, positive coping skills; the presence of social support; and religion. This chapter provided an overview of the literature on suicidal behaviour and discussed the various risk and protective factors. A theoretical framework which acknowledges the literature on suicidal behaviour will now be discussed. A comprehensive theory of suicidal behaviour is one which is able to account for the various risk and protective factors. Therefore Joiner's (2005) interpersonal-psychological theory will be discussed as it relates to the literature on suicidal behaviour.

CHAPTER THREE

THEORETICAL FRAMEWORK

“Some facts of suicide are established, but even for these, fitting the facts into a coherent overarching theory has proven elusive” (Joiner, 2005 p. 27).

3.1 Introduction

There is a relative lack of theoretical understanding of suicide. According to Joiner (2005) there has not been a compelling enough theory of suicide for almost three decades. He argues that a theory is required that extends upon the existing models of suicide; one that is able to provide a rich account of suicidal behaviour. A theory that could account for the diverse factors of suicide would deepen clinicians’ understanding of suicidal behaviour and would advance scientific knowledge, improving suicide prevention, risk assessment, and suicide treatment (Joiner, 2005).

3.2 Review of Suicide Theories

“It is unlikely that any one theory will ever explain phenomena as varied and as complicated as human self-destructive behaviours” (Shneidman & Leenaars, 1999, p.177).

Suicidal behaviour has been studied for centuries and many have proposed theories on the nature and causes of suicidal behaviour (see Table 2.1). Many researchers have made valuable contributions to the study of suicidal behaviour; however to date, no single theory has been able to adequately describe the multiple interacting elements involved in suicide. Joiner’s (2005) interpersonal-psychological theory of suicidal behaviour is best able to capture the essence of previous theories and provides the most concise explanation of suicidal behaviour to date. The literature on suicide theories is expansive and it is beyond the scope of this study to discuss each in-depth. However, this review will explore some of the major contributors to understanding suicidal behaviour as these relate to Joiner’s (2005) interpersonal-psychological theory of suicidal behaviour. This review will discuss Durkheim’s (1897) sociological theory on suicide, Shneidman’s (1993) psychological theory on suicide, Beck’s cognitive theory on suicide (Beck et al., 1979), Baumeister’s (1990)

social theory on suicide, and Linehan's biological theory on suicide (Linehan et al., 1983). I will then go on to discuss Joiner's (2005) interpersonal-psychological theory of suicidal behaviour.

3.2.1 Durkheim's Theory of Suicide

Durkheim (1897) provided one of the first and most widely accepted theories of suicide to date, which regarded suicide as a result of the social forces around the individual, i.e. the extent to which one feels integrated and regulated by society. Durkheim (1897) argued that a strong bond between the individual and society is necessary, with a lack of a strong bond resulting in an increase in suicide as life would become meaningless. Durkheim was concerned with two kinds of regulation: social integration and moral regulation. In terms of social integration, Durkheim (1897) argued that both too little and too much integration are problematic. Low integration results in an increase in "egoistic" suicides; humans need something that transcends and he argued that the only thing that is transcendent enough is human society. When society breaks down, people lack purpose and suicide rates increase. Too much integration, on the other hand, is associated with higher rates of suicide but of a different type, namely "altruistic" suicides. Too much integration results in a loss of individuality and people sacrifice themselves to commit to a bigger goal.

Although a useful model in understanding suicidal behaviour, and a pioneer thinker of the time, Durkheim's theory does have its limitations. One of Durkheim's goals was to study social forces, often to the exclusion of other factors, of which he was at times dismissive (Joiner, 2005). Durkheim did not deny that individual conditions such as psychopathology are related to suicide; but he did claim that most individual factors are insufficiently general to affect the suicide rate of whole societies. Thus a major critique of Durkheim's theory is his dismissive stance on the role of individual factors, such as genes and of mental disorders in suicide.

3.2.2 Shneidman's Theory of Suicide

"I believe that suicide is essentially a drama in the mind, where the suicidal drama is almost always driven by psychological pain, the pain of negative emotions—what I call psychache. Psychache is at the dark heart of suicide; no psychache, no suicide"

(Shneidman, 2001, p. 200).

In contrast to Durkheim's sociological theory of suicide, psychological theories focus on intrapsychic factors of suicide. Edwin Shneidman (cited in Holmes & Holmes, 2005) described several common characteristics of suicide, namely: unbearable psychological pain, feelings of isolation, and a feeling that death is the only solution. Excluding biological causes of suicide, Shneidman argued that suicide results from psychological distress (Leenaars, 2010). He did not propose that psychological pain was entirely related to suicide; however he stated that it is psychological pain that can be studied and explained. Shneidman (2001) proposed that the main factor in all cases of suicide is psychological pain, what he termed "psychache". All psychological states are thus relevant to suicide only to the extent that they are related to unbearable psychological pain (Leenaars, 2010). Shneidman consistently discussed the cognitive aspects of suicide (Jobes & Nelson, 2006). He was amongst the first to study in-depth the cognitive processes of the suicidal person, which he termed "logic of suicide". According to Shneidman's theory, how one reasons, thinks, and believes, shapes suicidal behaviours. In Shneidman's last book whereby he reflected on suicide, *A Commonsense Book of Death* (2008), he proposed that there are ten common characteristics of suicide: "Thousands of observations can be distilled into as few as ten psychological commonalities of the suicidal states. One finds these attributes in almost every suicidal person. These attributes provide a fresh template for viewing the suicidal process (and the suicidal person) and they have direct implications for how an earnest therapist can act as an effective ombudsman" (Shneidman, 2008, pp. 139-140).

1. Suicide is an attempt to solve a problem.
2. The goal of suicide is the end of awareness.
3. Suicide is the result of psychological pain.
4. A disturbed psychological need is a common stressor in suicide.
5. Suicide results from a sense of hopelessness-helplessness.
6. Cognitively, suicide results from a state of ambivalence.
7. Suicide results from a perception of restriction.
8. The act of suicide is a form of escape.
9. Interpersonally, the suicidal individual attempts to communicate intention.
10. Suicide results from one's style of coping with distress.

Arguably, one of Shneidman's greatest contributions to understanding suicide is that of focusing on thwarted psychological needs (Joiner, 2005). Shneidman also identified

lethality as a key component of serious suicidality – similar to the concept of ACS. Despite providing a significant contribution to the study of suicide, Shneidman's model can be criticised for proposing an extensive list of basic needs.

3.2.3 Beck's Theory of Suicide

"The patients who ultimately committed suicide seemed to be among those who were the most hopeless" (Goldsmith, 2001, p.11).

The cognitive theory of suicide regards suicide as the result of ineffective thinking and problem solving. Beck's cognitive theory of suicide proposes that hopelessness is the key psychological factor that drives people to suicide (Joiner, 2005). According to the cognitive theory of suicide, the cognitive distortion expressed in suicidal behaviour is a sense of hopelessness. Beck also found that hopelessness was more associated with suicidal behaviours in individuals diagnosed with borderline personality disorder. For individuals diagnosed with borderline personality disorder, the perception of abandonment affects the individual's self-concept, emotion, thoughts, and behaviour (American Psychiatric Association, 2013), which is consistent with the idea of failed belongingness. Furthermore the cognitive theory proposes that psychological mechanisms underlie and escalate the course of suicidal behaviour over time. With repetition, suicide-related thoughts and behaviours become favoured – termed cognitive sensitization.

Beck's theory has been criticized for its focus on hopelessness above other factors (Joiner, 2005), and it has been argued that the emphasis on hopelessness alone is not enough to explain suicide. According to Joiner (2005), "what in particular are suicidal people hopeless about? If hopelessness is key, why then do relatively few hopeless people die by suicide?"(p. 39).

3.2.4 Baumeister's Theory of Suicide

According to Baumeister (1990) suicide is an escape from aversive self-awareness. Awareness of one's inadequacies causes negative emotions, which the individual tries to escape from (Baumeister, 1990). In order to escape, the individual tries to achieve a state of

“cognitive deconstruction” which allows the person to escape from self-awareness and emotion by limiting meaningful thoughts. This deconstructed state then results in disinhibition and irrational behaviours, such as suicide. Suicide is the final step to escape from self and the world. Suicide thus begins with events which the individual regards as failures. These failures are attributed internally, which then makes self-awareness painful, resulting in suicide.

Baumeister’s theory revolves around six main principles (Gunn, Lester, Haines, & Williams, 2012):

1. Suicide involves an experience that falls below standards as a result of unrealistically high expectations, recent problems and setbacks, or both.
2. The individual views these disappointments as being the fault of the self and attributes negative qualities to the self because of this.
3. The individual then enters a state of high self-awareness caused by comparing him- or herself to certain standards, which are usually high, and this compounds the self-blame that stems from the recent disappointments mentioned in the first point.
4. This negative self-awareness causes negative affects to arise which are a result of comparing the self to the high standards discussed earlier.
5. Because of the negative affect caused by the negative self-awareness, the individual goes through a state of cognitive deconstruction, but the cognitive destruction is an ineffective means of escaping the negative affect.
6. Due to the cognitive deconstruction, there is a decrease in inhibition, which may cause an increased willingness to engage in risky behaviour, such as suicide.

Although Baumeister’s theory added to the body of knowledge on suicide, it can be criticized for its limited view on suicide, in that it can be used only to explain certain cases of suicide, and does not provide an account that is able to account for the social and interpersonal aspects of suicide. Baumeister himself acknowledged that his theory cannot be used to explain all those who engage in suicidal behaviour: “it would be naïve to propose that all suicides result from a single psychological process” (Baumeister, 1990, p.90).

3.2.5 Linehan's Theory of Suicide

According to Linehan's biosocial theory of suicide, suicide is a result of a biological vulnerability and a learned method for coping with acute emotional suffering (Brown, 2006). Biological deficits, exposure to trauma, and the failure to acquire adaptive ways of dealing with negative emotion all contribute to suicidal behaviour according to this approach (Joiner, 2005). According to the biological view of suicide, suicide results from a genetic defect, an injury or infection. Biological factors are not only affected by genes, but by the environment as well. The biological view of suicide thus argues that suicide is largely due to factors which are beyond an individual's control, such as the brain and body one is born with, and the environment in which they live. According to Linehan's theory, emotion dysregulation is a core problem in suicidal behaviour (Joiner, 2005). Self-injury is seen as an attempt to regulate emotions because the usual emotion regulating mechanisms did not develop adequately to begin with, or have broken down.

The biological theory of suicide can be criticized for its over-reliance on biological drives. Although it is well known and accepted that there are biological and genetic aspects to mental illness and behaviour, it is not sufficient to regard suicidal behaviour as simply a biological consequence. It is the interaction between biological drives and environment which provide more adequate accounts of behaviour. Perhaps the biological theory of suicide best explains suicide in the way that it accounts for the presence of mental illness.

3.3 Joiner's Interpersonal-Psychological Theory of Suicidal Behaviour

Joiner (2005) proposed a theory of suicidal behaviour that expands on numerous theories which preceded, such as that of Durkheim, Shneidman, Beck, Baumeister, and Linehan. Van Orden et al. (2010) argue that previous theories are able to explain only part of the factors involved in suicidal behaviour; and those who commit suicide have numerous risk factors which contribute to their suicide, thus a theory which accounts for a single risk factor only does not provide an adequate account of suicidal behaviour. The interpersonal theory provides a rich account of suicidal behaviour and is able to explain the numerous factors associated with suicidal behaviour as indicated by the literature. According to Joiner (2005), an adequate theoretical model of suicide should be able to account for the various interacting factors of suicidal behaviour. Such factors include: a history of past trauma, history of

suicidal behaviour, relationship distress, psychological distress, and risky behaviours. In this regard, Joiner's (2005) interpersonal-psychological theory is useful.

At the centre of Joiner's (2005) interpersonal-psychological theory is the premise that individuals die by suicide "because they can and because they want to" (Van Orden et al., 2010, p581). Three constructs are central to Joiner's (2005) interpersonal-psychology theory of suicide: TB and PB, which are related to suicide desire, and ACS. According to Joiner's (2005) interpersonal-psychological theory, one can possess suicide capability without desiring suicide and vice versa: "People are not born with the developed capacity to seriously injure themselves (although they are born with factors, including certain genes that may facilitate the future development of this capacity). In fact, if anything, they are born with the opposite – the knee-jerk tendency to avoid pain, injury and death. That is, people have strong tendencies toward self-preservation; evolution has seen to that" (Joiner, 2005 p. 22).

3.3.1 Thwarted Belongingness (TB)

The literature on suicide, along with Durkheim's theory, consistently cites a lack of social support as one of the strongest predictors of suicidal behaviour across the lifespan (Van Orden et al., 2010). Social connectedness is associated with suicidal behaviour because it is an essential human psychological need. According to Joiner's (2005) interpersonal-psychological theory, when this interpersonal need is unfulfilled, TB develops, which results in passive suicide ideation. In order to meet the need for belongingness, an individual requires frequent and positive interactions with others. Interactions that occur within a stable relationship are thus able to satisfy the need to belong more than interactions which occur in the context of changing partners. In contrast to Shneidman's (1993) model, and consistent with the literature on suicide, the need to belong, as achieved by social connectedness, is at the centre of suicide desire. According to Joiner's (2005) interpersonal-psychological theory, TB is a changing cognitive-emotional state, which is influenced by both intrapersonal and interpersonal factors (Van Orden et al., 2010). These include the individual's social setting, i.e. the number of people in the individual's social network; interpersonal schemas, i.e. how one interprets others' behaviour; and current affective states. Thus, one's perception of belongingness varies over time. According to Joiner's (2005) interpersonal-psychological theory, when TB is prolonged, suicidal ideation is likely to result.

3.3.2 Perceived Burdensomeness (PB)

Another component of Joiner's (2005) interpersonal-psychological theory is the construct of PB. Joiner's (2005) interpersonal-psychological theory proposes that PB is often a result of interpersonal distress, physical illness, and unemployment, which leads to suicidal desire (Van Orden et al., 2010). According to Joiner's (2005) interpersonal-psychological theory, PB encompasses two dimensions of interpersonal functioning: beliefs that one is a liability to others as a result of one's flaws, and feelings of self-hatred.

3.3.3 Interaction of Thwarted Belongingness and Perceived Burdensomeness

TB and PB are separate, but related constructs. In a study conducted by Van Orden et al. (2008), a significant relationship existed between self-reported TB and PB, which predicted higher levels of passive suicidal ideation. The results of Van Orden et al.'s (2008) study found that high levels of suicidal ideation were evident only in the presence of TB and PB. These findings suggest that, although either state may result in suicide ideation, it is the simultaneous presence of these states which result in suicide desire. Joiner (2005) argues that even for a person who has acquired the capability for suicide and perceives him- or herself to be a burden, there remains one "saving grace" – belongingness. Furthermore, TB and PB are dynamic factors, amenable to change via psychotherapy (Van Orden, Cukrowicz, Witte, & Joiner, 2012). Joiner's theory goes on to propose that in order for passive suicide desire to transform to active suicide desire, one must perceive TB and PB to be stable and permanent – the individual must be hopeless about their perceived interpersonal status. Van Orden et al. (2010) thus propose that hopelessness acts as a moderating factor in suicide desire as it is only hopelessness regarding complete and pervasive TB and PB that will transform suicide desire into active desire as it is at this point of mental states that one sees no possibility of positive change. Although a significant moderating factor in suicidal behaviour, it was not the scope of the current study to explore the moderating role of interpersonal hopelessness.

3.3.4 Acquired Capability for Suicide

According to Joiner (2005), suicide desire is insufficient for lethal suicidal behaviour to result. To die by suicide, the individual must lose the fear associated with suicide. Joiner's

(2005) interpersonal-psychological theory extends on evolutionary models of fear and anxiety and proposes that people are “biologically hardwired” to fear suicidal behaviour because it involves exposure to threats to survival. Thus, to die by suicide is not easy as it goes against our hardwired, self-preservation drives. It is, however, possible to acquire the capability for suicide. Joiner’s (2005) interpersonal-psychological theory proposes that the ACS is gained from repeated exposure to painful and provocative life events, which explains why men are at a greater risk of completing suicide than women as a result of the greater likelihood of males to engage in risky behaviours. As is the case with TB and PB, ACS is necessary, but not sufficient, for suicide – desire for suicide needs to be present. Thus, the majority of individuals with a high suicide capability will not engage in an attempt unless desire is present (Joiner, 2005; Van Orden et al., 2010).

3.3.4.1 *Lowered Fear of Death*

One of the common reasons people provide for not engaging in suicidal behaviour is fear of suicide. Joiner’s (2005) interpersonal-psychological theory proposes that suicide desire or ideation is insufficient to result in suicidal behaviour. Suicide desire or ideation needs to occur in the context of reduced fear of suicide. According to Joiner (2005), it is possible to habituate to the fear involved in dying. With frequent exposure to suicidal behaviour, one habituates to suicide – the taboo element of suicidal behaviour diminishes, along with the fear and pain associated with self-harm.

3.3.4.2 *Increased Physical Pain Tolerance*

Death by suicide is not only fear-provoking, but is also physically painful (Van Orden et al., 2010). According to Joiner’s (2005) interpersonal-psychological theory, the cognitive appraisal of the pain involved in dying is the most common facilitator or barrier to suicidal behaviours. Van Orden et al. (2010) propose that frequent cognitive or physical exposure to painful stimuli results in a habituation process which results in a greater likelihood of lethal methods of suicide. Through practice, suicidal behaviour which may originally have been a fear-inducing or painful experience becomes less frightening, resulting in a higher capability to engage in behaviours that were previously frightening and painful. Thus, childhood abuse,

exposure to war, impulsivity, and previous suicidal behaviours are hypothesized to increase the risk of fatal suicidal behaviors by habituating the individual to the pain and fear involved in suicidal behaviour (Van Orden et al., 2010).

3.4 Rationale for the Study

In the review of the literature, it is clear that suicidal behaviour is a major concern globally, and South Africa is no exception. Suicidal behaviour affects communities both socially and economically, and therefore sound empirical research on the factors which contribute to suicidal behaviour is imperative. In particular, sound theoretical understanding of suicidal behaviour is required to adequately understand the relationship between protective and risk factors which result in suicide. The literature consistently cites social support as both an important risk and protective factor in terms of suicidal behaviour. When one lacks a sense of social connectedness, or perceives oneself to be a burden on others, one is at an increased risk for desiring suicide. Conversely, a sense of positive social support, or connectedness, serves to protect against many factors of suicidal behaviour and is a significant protective factor. Psychiatric co-morbidity is a well established risk factor for suicidal behaviour, with evidence reporting affective disorders as the most at-risk psychiatric condition. Impulsivity has also been consistently linked to increased risk for engaging in risky behaviours, such as suicide. To date, there has been a lack of an adequate theoretical framework to adequately account for the various factors associated with suicidal behaviour. Joiner's (2005) interpersonal-psychological theory of suicidal behaviour provides a rich account of suicidal behaviour that is able to account for many of the risk factors associated with suicidal behaviour. Joiner's (2005) interpersonal-psychological theory has undergone more than twenty direct empirical tests, the results of which have generally substantiated the main predictions of the theory. In the present study, the relationships between the constructs of Joiner's (2005) interpersonal-psychological theory of suicidal behaviour were explored using a sample of psychiatric outpatients consulting with a mental health practitioner at a state hospital, clinic, or private facility.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

This chapter outlines the study's research questions, describes the research design and rationale thereof, the sampling method, and the data collection and data analysis methods used, followed by the ethical considerations adhered to in this study. The present study was part of a larger study by the Principal Researcher, who was also the Supervisor of this study.

4.2 Research Questions

The aim of the present study was to explore the relationship amongst the constructs of Joiner's (2005) interpersonal-psychological theory of suicidal behavior amongst a psychiatric population attending an outpatient clinic, state hospital, or private facility in the greater Durban area of KwaZulu-Natal, South Africa. This study aims to add to the existing knowledge and research on suicidal behavior and attempts to contribute towards greater theoretical knowledge and understanding of why people engage in suicidal behaviour.

The specific questions investigated in this study relative to Joiner's (2005) interpersonal-psychological theory of suicidal behaviour were:

1. Is there a relationship between the interpersonal states of TB and PB and suicide desire?
2. Is there a relationship between ACS and suicide risk?
3. How well does the simultaneous presence of TB and PB predict suicide desire?
4. How well does the simultaneous presence of suicide desire and ACS predict suicide risk?
5. Are there race, gender, age and marital status differences among these constructs?

4.3 Research Design

This study followed a quantitative research design which is consistent with the positivistic paradigm based on empiricism, objectivity and deductive reasoning. Positivist social science is an “organized method for combining deductive logic with precise empirical observations of individual behaviour in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity” (Neuman, 2014, p.97). From the perspective of this paradigm, the main purpose of research is scientific clarification of human behaviour. A positivist explanation is nomothetic, based on an organization of general principles. A nomothetic approach suggests that there are comparisons that can be made across cultures and values that affect all cultures (Balnaves & Caputi, 2001). Science provides an explanation of society by discovering causal laws. Positivist explanations must meet two conditions: “they must (1) have no logical contradictions and (2) be consistent with observed facts” (Neuman, 2014, p.100). A quantitative paradigm is applicable to this study as it allows the researcher access to larger samples efficiently and leads to greater generalizability of results.

With social science research, the possibility of error is always present, which can be errors of human intolerance, observation errors, and premature termination of enquiry (Balnaves & Caputi, 2001). The inferences from researchers’ observations may be directly affected by one’s beliefs about the phenomenon being studied. However the public nature of social science – its openness to critique – is intended as a protection against the abuse of research (Balnaves & Caputi, 2001). Positivism argues for objectives of value-free science, which means: “(1) that observers must agree on what they see and (2) that scientific knowledge is not based on values, opinions, attitudes, or beliefs” (Neuman, 2014, p.101). This is particularly important in suicide research where the topic of suicide is stigmatized - it is important that researchers do not distort information through bias so that participants feel they may be open and honest without any stigmatization. However, despite the greater protection against a sense of stigmatization for participants, when researchers try to elicit complex information through large-scale surveys there is no guarantee that participants will provide the information the researcher wants (Balnaves & Caputi, 2001). Although questionnaires administered to participants ask specific questions related to the topic of inquiry, it is important to consider that participants may not understand the items of the questionnaires, or may distort their responses by either responding randomly or faking

good/bad responses. It is thus beneficial to consider the results of this study with this in mind, and to understand the findings of this study in relation to one's context.

This study investigated the constructs of Joiner's (2005) interpersonal-psychological theory. McNeill (1985) argues that "a theory remains theoretical until it is tested against the real world, with empirical evidence" (p.2), which was the objective of this study. This study aimed to empirically investigate the relationships of the constructs of Joiner's (2005) interpersonal-psychological theory of suicidal behaviour amongst an at-risk sample in order to aid better understanding, prevention and management of suicidal behaviour.

4.4 Population and Sampling

The participants in the current study were recruited from three state hospital outpatient units within the greater area of Durban, KwaZulu-Natal (King Edward VIII Hospital, Addington Hospital, and Prince Mshiyeni Hospital), the University of KwaZulu-Natal's (UKZN) Psychology Clinic, and Private Practitioners located in Durban. The Department of Health (DoH) and the heads of department at the respective sites were approached for permission to conduct this study. Once permission was granted, participants were assessed by their treating practitioner using a structured clinical intake interview as part of their psychological treatment before being invited to participate in the current study. Participants were selected based on them having a psychiatric diagnosis; but were not screened for history of suicidal behaviour; that is, a past history of suicidal behaviour was not used as a criterion for selection, nor were participants excluded who did not have a history of suicidal behaviour. Participants over the age of 18 years old, assessed to be currently psychologically stable, and not actively psychotic, were invited to participate in the present study. Once informed consent was obtained, the questionnaires were administered by the treating practitioner or researcher after the clinical intake interview and/or mental status examination was conducted as part of the participant's treatment. Participants were monitored by the researcher or psychologist administering the questionnaires for any distress. At the completion of the questionnaires, participants were given the opportunity to address any concerns related to the study or voice any distress they may have experienced as a result of their participation.

According to the guidelines set out by Emanuel, Wendler, and Grady (2008) the selection of research participants should ensure the scientific validity of the research, while minimizing the risk to participants and maximizing the possibility for collaborative partnership and social value. In this study, the researcher acknowledges the vulnerability of the participants in that they may have believed that refusal to participate in the research would bias their psychological / psychiatric treatment. However, the researcher ensured that participants were aware of their right to refuse participation and/or withdraw from the study at any time without any prejudice. Furthermore, the researcher ensured that vulnerable participants were protected by making use of a screening process for psychotic, severely depressed and/or suicidal individuals. This screening process was conducted by the participant's psychologist who had conducted a clinical interview prior to participation in the study. The participants were closely monitored and made aware of services offered (i.e. debriefing and counselling services) should the study cause any psychological distress. None of the participants reported distress related to their participation in the study.

Purposive sampling, a non-probability sampling technique, was used to select participants in this study. Not all populations are accessible; therefore researchers often use non-probability techniques as a way of ensuring that every individual in the population has an equal chance of being selected (Barnaves & Caputi, 2001). Purposive sampling selects participants who meet the criteria for a specific purpose of the research (Neuman, 2014). According to Barnaves and Caputi (2001) good sampling achieves representativeness, reduces errors and maximizes external validity. Populations must be accessible, quantifiable and related to the purpose of the research. Two hundred and thirty nine participants were included in this study. Barnaves and Caputi's (2001) criteria on the required sample size for multivariate research which argues that the sample size should be more than ten times as large as the number of variables in the study indicated that approximately 90 participants were required in this study in order to conduct multivariate analyses with greater confidence.

4.5 Data Collection

According to Emanuel et al. (2008), research design, methodology and data analysis should lead to valid answers to the research questions and should be rigorous, justifiable, and feasible. The researcher sought scientific validity by using a large sample to increase the

generalizability of the findings, and rigorous methods were utilized. This ensured that scarce resources were not wasted and increased the likelihood of the validity of these results.

In line with the positivist approach, data were collected using structured scales. This method makes possible the analysis of large populations. Quantitative methods place prominence on objective measures and numerical analyses of data, which can be generalized across groups (Babbie, 2010). Questionnaires were applicable to this study as they can be used to collect data about phenomena that are not directly observable, i.e. suicide. Barnaves and Caputi (2001) argue that the “time to use surveys is when you cannot observe directly what you want to study” (p.75). Suicidal behaviour is difficult to observe directly for many reasons, some of which include the stigma around suicidal behaviour which results in individuals engaging in suicidal behaviour in secret, and the possible lethality of suicidal behaviour – it is both difficult and unethical to directly observe suicidal behaviour without intervening. The questionnaire method is also a convenient method of data collection, which allowed the researcher to collect data from a large sample, increasing the generalizability of the findings. Furthermore questionnaires use standardized questions, which is an advantage as it is cost effective and relatively quick.

Once participants were identified by the researcher / psychologist as suitable for the study following the screening process in the clinical interview, the nature and purpose of the research was explained to participants, who were then given the choice to participate in the study. Once informed consent was obtained (see Appendix 3), the instruments were administered to the participants. The researcher / psychologist was present in order to monitor distress and address any concerns raised by the participants.

4.6 Instruments

Data were collected using five scales along with a Clinician Protocol for Rating and Managing Suicide Risk, which was completed by the participant’s treating psychologist. The battery of questionnaires took between 20 – 30 minutes to complete.

4.6.1 Demographic Questionnaire

A demographic questionnaire was used to gather biographical and contextual information regarding participants (see Appendix 4).

4.6.2 The Interpersonal Needs Questionnaire (INQ)

The INQ was developed by Van Orden et al. (2008) as a measure of the interpersonal constructs (TB and PB) of Joiner's (2005) interpersonal-psychological theory of suicidal behaviour (see Appendix 5). The INQ is a 12-item self-report scale with two subscales that measure attitudes of how connected to others individuals feel (i.e. TB) and the degree to which they feel they may be burden on others (i.e. PB). Participants rated statements on how they currently felt on a scale from 1 (completely untrue) to 7 (completely true), which is the same for both subscales. Some items on both scales were reverse coded so that a higher score reflects higher levels of TB and PB. Examples of items included: "People in my life would be better off if I were gone" and "People in my life would be happier without me".

In a previous study by Van Orden et al. (2008), good internal consistency coefficients were found for the TB items ($\alpha = .85$) and the PB items ($\alpha = .89$).

4.6.3 The Acquired Capability for Suicide Scale (ACSS)

Acquired capability for suicide was measured using the ACSS, developed by Bender and Gordon (2007) (see Appendix 6). The ACSS is a self-report measure of acquired capability and consists of five items that assesses participant's fearlessness about lethal self-injury. This scale was used in order to assess participant's acquired capability for suicidal behaviour. Participants responded to each item on a 0 (not at all like me) to 4 (very much like me) scale. Item 4 was reverse scored such that a higher score reflected greater ACS. Examples of items included "Things that scare most people don't scare me" and "I can tolerate more pain than most people".

The ACSS has been found to be negatively correlated with the Fear of Suicide subscale of the Reasons for Living Inventory (Linehan et al., 1983) and has been found to be positively correlated with the Beck Suicide Scale (BSS) item that taps into the courage to kill

oneself (Bender & Gordon, 2007). Internal consistency in studies have been found to be good ($\alpha = .88$, Smith, Cukrowicz, Poindexter, Hobson, & Cohen, 2010; $\alpha = .71$, Bryan et al., 2010). Van Orden et al. (2008) found discriminant validity for the scale as well as a reliability of .67.

4.6.4 The Beck Scale for Suicide Ideation (BSS)

The BSS, developed by Beck and Steer (1988) was used to assess suicide desire and behaviour (see Appendix 7). The BSS is a 21-item self-report measure and items 1-19 are used as a measure of current suicide desire. Items 20 and 21 of the BSS assess past suicide attempts and were not used in the present analyses. According to Beck and Steer (1988) participants who endorsed items 1-5 indicated suicide ideation and those who endorsed items 6-19 indicated suicide desire. Only participants who endorsed item 4 or item 5 are required to complete items 6-19. Higher scores on the BSS indicate increased suicide desire.

The BSS is the most regularly used self-report scale of suicide ideation and suicidal behaviour. Studies have reported sound psychometric properties of the BSS (Beck, Brown, & Steer, 1997; Beck, Steer, & Ranieri, 1988). In a study conducted by Van Orden et al. (2008) internal consistency for the scale was found to be high ($\alpha=.90$) for their sample.

4.6.5 The Beck Depression Inventory-II (BDI-II)

The BDI-II, developed by Beck et al. (1997), was used to assess the presence and severity of depressive symptoms (see Appendix 8). Several studies have linked suicidal behaviour with mental illness, in particular depression. The BDI-II was used in order to assess participant's level of depressive symptoms, which was used as a controlled variable. The BDI-II is a 21-item self-report scale which assesses the extent to which participants demonstrate a two-week duration of depressive symptoms. Participants were requested to rate items on a scale of 0-3. Higher scores on the BDI-II indicate greater presence and severity of depressive symptoms.

The BDI-II is widely used as a measure of depressive symptoms and studies have shown that it possesses good psychometric properties – internal consistency of .9 and retest reliability ranging from .73 to .96 (Wang & Gorenstein, 2013).

4.6.6 Clinician Protocol for Rating and Managing Suicide Risk

The Clinician Protocol for Rating and Managing Suicide Risk, adapted from Joiner, Walker, Rudd, & Jobes (1999) was used as a measure of suicide risk based on symptomatic presentation (see Appendix 9). The treating psychologist was required to provide a DSM-5 diagnosis of the participant and rate the participant's level of suicide risk on a scale of low, moderate, or high, based on risk factors, plans and preparation for suicide, and suicide desire and ideation as described by Joiner et al. (1999).

4.7 Data Analysis

The data were analyzed using SPSS version 23.0 (IBM, 2015). The constructs of Joiner's (2005) interpersonal-psychological theory of suicidal behaviour and their relationships with each other were explored using quantitative analyses. The data were examined to ensure that all assumptions were met in this data set before conducting the below analyses. The following analyses were conducted:

- Descriptive statistics or frequency tables were used to describe the demographic and clinical variable such as age, race, gender, marital status, and symptoms of depression. The measures of central tendency (Mean), the location of the distribution, as well as the measures of dispersion (standard deviation, minimum, maximum) were used to show the variation of the values.
- Independent-samples t-tests were conducted to compare the differences between males and females in terms of suicide desire (BSS) and ACS (ACSS). It was hypothesized that females would demonstrate higher levels of suicide desire than males; whereas males would exhibit higher levels of ACS, consistent with the literature on suicide.
- In order to determine whether suicide desire varied as a function of the demographic variables of age, race, and marital status several one-way analyses of variances (ANOVA) were conducted.
- A three-way between-groups multivariate analysis of variance (MANOVA) was performed to investigate whether the demographic variables of race, age, and gender interact to influence TB and PB.

- A three-way factorial ANOVA was performed to determine whether there is an interaction effect between the three independent variables of age, race, and marital status on suicide desire.
- Pearson's correlations were performed to examine the relationships of the variables to each other.
- Hierarchical multiple regression was used to identify which variables would better predict suicide desire and suicide risk.

4.8 Ethical Considerations

Ethical clearance to conduct this study was granted by the University of KwaZulu-Natal Humanities & Social Sciences Research Ethics Committee (see Appendix 1). Approval was also obtained from the DoH, heads of department at state hospitals, the University of KwaZulu-Natal Psychology Clinic and independent practitioners (see Appendix 2). According to Emanuel et al. (2008) the community in which the research takes place should approve of the research, and should be involved. The community's involvement and approval ensures that the community's interests and needs are addressed and ensures that the community is not exploited by the research/researcher. In this research, the researcher received approval from the state hospitals, clinics and private practitioners prior to the research being conducted. This collaborative partnership between the researcher and the community ensured that the community's customs and values were respected (Emanuel et al., 2008).

4.8.1 Risk and Benefits

According to Emanuel et al. (2008), research should have a favourable risk-benefit ratio: the risks associated with the study should be balanced by the potential benefits to the participants and/or the community involved in the study (Emanuel et al., 2008). In this study, the researcher attempted to minimize the risks and maximise the benefits. One such risk was that individuals may experience psychological distress as a result of participating in this research; however this risk was minimized using the following steps:

- Formal screening of participants prior to the study in order to identify distress was conducted with the intention being to preclude these participants and refer them to the treating practitioner.

- Constant monitoring of participants took place for the duration of the study to identify any distress. No distress was indicated by participants during the study; however participants were made aware of the availability of services should participants experience any distress at a later stage related to participating in this study.
- Participants were made aware of the sensitive nature of the study and were informed of their right to withdraw from the study at any time without any prejudice.

The benefits of the study were maximised using the following:

- Ensuring the scientific validity of findings in order to inform suicide risk identification and management programs.
- Participants were psycho-educated regarding the avenues which they could pursue if experiencing emotional distress in future, thereby contributing to reducing the incidence of suicidal behaviour in KwaZulu-Natal, South Africa.

CHAPTER FIVE

RESULTS

5.1 Introduction

This chapter discusses the results of the study relative to the constructs of Joiner's (2005) interpersonal-psychological theory of suicidal behaviour. As discussed earlier the relationships between the constructs of the interpersonal-psychological theory were investigated. Inferential and descriptive analyses were carried out using SPSS version 23 (IBM, 2015) and the results of the research are presented below.

5.2 Demographic Variables

The demographic information of the participants can be found in Table 5.1. As can be seen in Table 5.1, the sample was comprised mainly of female participants. The majority of the participants were between the ages of 18 and 44 years old, with a mean age of 36.49 years. In the current sample, 40.2% of the sample comprised of Black participants; 50.2% were single; and 51.5% were diagnosed with an affective disorder (major depressive disorder or bipolar mood disorder). Analyses were run in order to explore the relationships between the demographic variables and the constructs of the interpersonal theory as well as to explore the relationships amongst the constructs in relation to the research questions. The results of these analyses are briefly presented below.

Table 5.1

Demographic Information of the Participants

Variable	N	%	Have made a suicide attempt %	Mean	SD
Gender				1.67	.47
Female	161	67.4	53.4		
Male	78	32.6	43.2		
Age Group				36.49	11.95
18-26	58	24.3	50		
27-34	63	26.4	57.1		
35-44	57	23.8	52.6		
45-54	40	16.7	40		
54 and above	21	8.8	42.9		
Race				2.07	1.07
Black	96	40.2	47.9		
Indian	61	25.5	52.5		
White	51	21.3	47.1		
Coloured	31	13	58.1		
Marital Status				1.82	1.03
Single	120	50.2	53.3		
Married	70	29.3	44.3		
Divorced	27	11.3	59.3		
Widowed	17	7.1	35.3		
Separated	5	2.1	60		
DSM-5 Diagnosis				4.65	4.04
Major depressive disorder	79	33.1	50.6		
Bipolar mood disorder	44	18.4	61.4		
Anxiety disorder	17	7.1	11.8		
Partner relational difficulties	17	7.1	47.1		
Substance use disorder	15	6.3	46.7		
Borderline personality disorder	15	5.9	85.7		
Bereavement	14	5.9	50		
Schizophrenia	9	3.8	88.9		
Impulse control disorder	8	3.3	50		
Adjustment disorder	5	2.1	40		
Trauma related disorder	5	2.1	20		
Other personality disorder	5	2.1	40		
Other	7	2.9	28.6		

5.3 Normality Testing

Normality testing was conducted on all scales. The skewness and kurtosis values, taken together with a review of the histograms, were examined in normality testing. West and Finch (1995) proposed that for skewness, a departure from normality is an absolute value > 2 . The authors also proposed that for kurtosis a departure from normality is an absolute value of > 7 . The skewness and kurtosis values of all scales fell within these acceptable ranges, indicating that the data is relatively normally distributed for the scales. The skewness and kurtosis values for all variables can be found in Table 5.2. This distribution of scores warranted parametric analyses.

Table 5.2

Skewness and Kurtosis Values for All Variables

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Age	.503	.157	-.567	.314
Marital Status	.508	.157	-1.158	.314
Gender	-.745	.157	-1.457	.314
Race	.510	.157	-1.048	.314
Perceived Burdensomeness	.452	.157	-1.011	.314
Thwarted Belongingness	.263	.157	-.895	.314
Suicide Desire	1.006	.157	-.447	.314
BDI scores	.426	.157	-.791	.314
Suicide Capability	-.109	.157	-.712	.314

5.4 Descriptive Statistics

Descriptive statistics were performed on all the scales. The descriptive statistics for the scales can be found in Table 5.3.

Table 5.3

Descriptive Statistics for Scales

Variable	N	Minimum	Maximum	Mean	Std. Deviation	α
Perceived Burdensomeness	239	7	49	22.59	12.50	.93
Thwarted Belongingness	239	5	35	17.53	8.34	.93
Suicide Desire	239	.00	33	7.72	10.19	.89
BDI scores	239	.00	62	25.23	15.93	.95
Suicide Capability	239	.00	20	9.61	4.93	.62

5.5 Reliability Analyses

Reliability analyses of the scales were run in the current study. DeVellis (2003) recommends that Cronbach alpha coefficients above .7 indicate good internal consistency. As can be seen in Table 5.2, all the scales showed good internal consistency except for the ACSS.

5.6 Correlations amongst the Variables

Correlation analyses amongst all the variables were performed using Pearson's correlation. Preliminary analyses were performed on all variables to ensure no violation of the assumptions of normality, linearity and homoscedasticity. Scatterplots were examined for outliers, distribution of data, homoscedasticity, and the strength of the relationship. There were no outliers indicated and the data were relatively normally distributed. Furthermore, the Normal Probability Plot (P-P) of the Regression Standardized Residual was examined to assess normality. The data represented a reasonably straight diagonal line, suggesting no major deviations from normality.

The correlations amongst all the variables can be found in Table 5.4. There was a strong positive correlation between TB and BSS, with high levels of TB associated with higher levels of BSS. There was also a strong, positive correlation between PB and BSS, with

high levels of PB associated with higher levels of BSS. In terms of BDI-II and BSS, there was a strong, positive correlation between the two variables; with high levels of BDI-II associated with higher levels of BSS. There was a strong positive correlation between PB and TB, with high levels of PB associated with high levels of TB. There was also a weak positive correlation between PB and ACSS, with high levels of PB associated with higher levels of ACSS. There was a strong, positive correlation between TB and BDI-II, with high levels of TB associated with high levels of BDI-II. Finally, there was a strong, positive correlation between PB and BDI-II, with high levels of PB associated with high levels of BDI-II.

Table 5.4

Correlations amongst all Variables

Variable	1	2	3	4	5
1. Thwarted Belongingness	1				
2. Perceived Burdensomeness	.722**	1			
3. Suicidal Desire	.644**	.753**	1		
4. Acquired Capability for Suicide	.068	.153*	.215**	1	
5. BDI scores	.634**	.704**	.730**	.012	1

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

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

5.7 Gender Differences in Suicidal Desire

5.7.1 Gender and Suicide Desire

An independent-samples t-test was conducted to compare the suicide ideation scores for males and females. Levene's test for equality of variances was examined to determine which t-value was the correct one to be used. Since the Sig. value for Levene's test was larger than .05 (Sig. .247), equal variances was assumed. There was no significant difference in the scores for males ($M = 8.00$, $SD = 10.67$) and females ($M = 7.58$, $SD = 9.99$; $t(237) = .295$, two-tailed). The magnitude of the differences in the means (mean difference = .42, 95% CI: -2.36 to 3.19) was very small (eta squared = 0.003).

5.7.2 Gender Differences in Acquired Capability for Suicide

An independent-samples t-test was conducted to compare the acquired capability of suicide scores for males and females. Levene's test for equality of variances was examined to determine which t-value is the correct one to be used. Since the Sig. value for Levene's test was larger than .05 (Sig. .886), equal variances was assumed. There was no significant difference in the scores for males ($M = 10.35$, $SD = 4.97$) and females ($M = 9.25$, $SD = 4.89$; t

(237) = 1.62, two-tailed). The magnitude of the differences in the means (mean difference = 1.10, 95% CI: -.24 to 2.43) was very large (eta squared = 0.011).

5.8 One-way Analysis of Variance

5.8.1 Impact of Age on Suicide Desire

A one-way analysis of variance (ANOVA) was conducted in order to explore the impact of age on suicide desire, as measured by the BSS. Participants were classified into five groups, according to their age (Group 1: 18-26 years, Group 2: 27-34 years, Group 3: 35-44 years, Group 4: 45-54 years, and Group 5: 54 and above). Levene's test for homogeneity of variance was examined to ensure that the assumption of homogeneity was not violated. The Sig. value (.125) was greater than .05, indicating that the assumption of homogeneity of variance was not violated. There was no statistically significant difference in BSS scores among the five age groups: $F(4, 234) = .933, p = .445$.

5.8.2 Impact of Race on Suicide Desire

A one-way ANOVA was conducted in order to explore the impact of race on suicide desire. Participants were classified into four groups, according to their race (Group 1: Black, Group 2: Indian, Group 3: White, and Group 4: Coloured). Levene's test for homogeneity of variance was examined to ensure that the assumption of homogeneity was not violated. The Sig. value (.000) was less than .05, indicating that the assumption of homogeneity of variance was violated. Since the assumption of homogeneity of variance was violated, Welch's statistic was examined. There was no statistically significant difference in BSS scores for the four racial groups: $F(3, 235) = 2.798, p = .062$.

However, when plotting the regression equation using race as a covariate, this variable was found to significantly predict suicide risk. The mean scores of the various race groups were thus examined and it was found that the Coloured group had a higher mean score ($M = 11.13, SD = 12.99$) indicating higher scores of suicide desire. A new racial category was

thus designated for the remainder of the analyses, which was Group 1: Coloured, and Group 2: Non-coloured (which included the racial groups of Black, Indian and White).

An independent-sample t-test was subsequently performed using these new categories. Levene's test for equality of variances was examined to determine which t-value was the correct one to be used. Since the Sig. value for Levene's test was less than .05, equal variances was not assumed. There was no significant difference in the scores for Coloureds ($M = 11.13$, $SD = 12.99$) and non-Coloureds ($M = 7.21$, $SD = 9.64$; $t(1.61) = .115$, two-tailed). The magnitude of the differences in the means (mean difference = 3.92, 95% CI: -1.01 to 8.85) was small (eta squared = 0.010).

5.8.3 Impact of Marital Status on Suicide Desire

A one-way ANOVA was conducted in order to explore the impact of marital status on suicide desire. Participants were classified into five groups (Group 1: single, Group 2: married or in a domestic partnership, Group 3: divorced, Group 4: widowed, and Group 5: separated). Tests of normality indicated outliers for the marital status variable. The categories were thus collapsed. The new groups were: Group 1: single; Group 2: married or domestic partnership; and Group 3: divorced / widowed / separated. Levene's test for homogeneity of variance was examined to ensure that the assumption of homogeneity was not violated. The Sig. value (.000) is less than .05, indicating that the assumption of homogeneity of variance was violated. Since the assumption of homogeneity of variance was violated, Welch's statistic was examined. There was a statistically significant difference at the $p < .05$ level in BSS scores for the three marital status groups: $F(2, 239) = 4.43$, $p = .008$. The effect size calculated, using eta squared, was .04, indicating a small effect (Cohen, 1988). Post-hoc comparisons using the Tukey test indicated that participants who were single ($M = 9.49$, $SD = 11.12$) differed significantly from those who were married or in a domestic partnership ($M = 5.03$, $SD = 8.14$, $p < .05$). Thus single participants recorded higher scores on suicide desire than married participants. The divorced / widowed / separated group ($M = 7.23$, $SD = 9.74$) did not differ significantly from the other two groups.

5.9 Interaction of Age, Race and Gender on Thwarted Belongingness and Perceived Burdensomeness

A three-way between-groups multivariate analysis of variance (MANOVA) was performed to investigate age, race, and gender differences in TB and PB. A MANOVA was selected due to PB and TB being theoretically related constructs. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity. The Sig. value for Levene's Test of Equality of Error Variances was less than .05 (.026) indicating that the assumption of equality of variance was violated for TB. In order to deal with this, a more conservative alpha level for TB of .01 was used, according to the guidelines set out by Tabachnick and Fidell (2007). There was no statistically significant difference for age, race and gender on the combined variable of TB and PB, $F(4, 440) = .388$, $p = .817$; Wilk's Lambda = .993, partial eta squared = .004.

5.10 Interaction of Age, Race and Marital Status on Suicide Desire

A three-way between-groups ANOVA was performed to investigate the main effects of age, race, gender and marital status and the interaction between age, race, gender and marital status on suicide desire. Preliminary assumption testing was conducted and the assumption of equality of variance was violated as the Sig. value for Levene's test for homogeneity of variance (.000) was greater than .05. As a result, a significance level of .01 was used in evaluating the results. The interaction effect between age group, race and marital status was not statistically significant, $F(3, 214) = .114$, $p = .952$.

5.11 Predictive Power of the Constructs of the Interpersonal Theory on Suicide Desire

5.11.1 Hierarchical Multiple Regression (Model 1)

In the first model, a hierarchical multiple regression analysis was run to assess the ability of the variables TB, PB, and the interaction of TB and PB to predict suicide desire, after controlling for the influence of the demographic variables of gender, age, race, and marital status, and BDI scores (see Table 5.5). Preliminary analyses were conducted to ensure

no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. Gender, age, race, marital status, and BDI scores were entered at Step 1, explaining 55.2% of the variance in suicide desire. After entry of TB and PB at Step 2, the total variance explained by the model as a whole was 66.2%, $F(7, 231) = 64.52$, $p < .001$. After entry of the interaction between TB and PB at Step 3, the total variance explained by the model as a whole was 68.4%, $F(8, 230) = 62.28$, $p < .001$. The variables of TB and PB explained an additional 10.9% of the variance, after controlling for the covariates, R^2 change = .109, F change (2, 231) = 37.37, $p < .001$. The interaction between TB and PB explained an additional 2.3% of the variance, after controlling for the covariates and TB and PB separately, R^2 change = .023, F change (1, 230) = 16.43, $p < .001$. In the final model, three variables were statistically significant, with the interaction between TB and PB recording the highest beta value ($\beta = .618$), followed by BDI-II ($\beta = .362$), and race ($\beta = -.074$). After the interaction of TB and PB, and BDI scores, belonging to the coloured race group is a significant risk factor for suicide desire.

Next, the interaction term between TB and PB was added to the regression model, which accounted for a significant proportion of the variance in suicide desire, $R^2 = .0211$, $F(1, 230) = 13.81$, $p = .0003$. The interaction between TB and PB was subsequently examined. The relationship between TB and suicide desire was not statistically significant. Levels of suicide desire were not significantly associated with levels of TB ($\beta = .406$, $t = 1.897$, $p = .059$). However, the combined presence of high TB and high PB was associated with higher levels of suicide desire ($\beta = .618$, $t = 4.054$, $p < .000$). Thus, the combined presence of high TB and high PB is linked to the development of suicide desire.

Table 5.5

Hierarchical Multiple Regression Equation Predicting Suicide Desire, Model 1

Predictors	<i>F</i>	<i>R</i> ²	<i>t</i> for Predictors	<i>df</i>	Partial correlation	<i>p</i>
1	57.45	.552		5, 233		
Marital status			.657		.043	.512
Race			-1.476		-.096	.141
Gender			-.927		-.061	.355
Age			-2.105		-.137	.036
BDI scores			16.244		.729	.000
2	64.52	.662		7, 231		
Marital status			-.395		-.026	.693
Race			-2.119		-.138	.035
Gender			-.587		-.039	.558
Age			-1.398		-.092	.163
BDI scores			6.552		.396	.000
Burdensomeness			6.469		.392	.000
Belongingness			1.897		.124	.059
3	62.28	.684		8, 230		
Marital status			-.301		-.020	.764
Race			-1.977		-.129	.049
Gender			-.389		-.026	.698
Age			-1.665		-.109	.097
BDI scores			6.597		.399	.000
Burdensomeness			.304		.020	.762
Belongingness			-1.806		-.118	.072
Burden X Belonging			4.054		.258	.000

5.11.2 Hierarchical Multiple Regression (Model 2)

In the second model, a hierarchical multiple regression analysis was run to assess the ability of the variables of suicide desire, ACSS, TB, PB, the interaction of TB and PB, and the interaction between ACSS and suicide desire to predict suicide risk, after controlling for the influence of the demographic variables of gender, age, race, and marital status, and the clinical variable of BDI (see Table 5.6). Suicide risk was measured by the Clinical Protocol for Rating and Managing Suicide Risk and was used as the criterion variable. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. Gender, age, race, marital status, and BDI scores were entered at Step 1, explaining 34.7% of the variance in suicide risk. After entry of the ACSS and suicide desire at Step 2, the total variance explained by the model as a whole was 62.4%, $F(7, 90) = 21.298$, $p < .001$. After entry of the interaction between suicide desire and ACSS at Step 3, the total variance explained by the model as a whole was 62.7%, $F(8, 89) = 18.665$, $p < .001$. Finally, after entry of the interaction between TB and PB at Step 4, the total variance explained by the model as a whole was 63.8%, $F(9, 88) = 17.220$, $p < .001$. In the final model, only suicide desire was statistically significant ($\beta = .857$, $p < .001$).

Table 5.6

Hierarchical Multiple Regression Model Predicting Suicide Risk, Model 2

	Predictors	F	R²	t for Predictors	Df	Partial correlation	p
1		9.769	.347		5, 92		
	Age			-.594		-.062	.554
	Gender			.476		.050	.635
	Race			1.258		.130	.212
	Marital Status			-1.479		-.152	.143
	BDI scores			6.184		.560	.000
2		21.298	.624		7, 90		
	Age			-.611		-.064	.543
	Gender			1.316		.137	.191
	Race			.115		0.12	.909
	Marital Status			.727		.076	.469
	BDI scores			.309		.033	.758
	Suicide Desire			7.861		.638	.000
	Acquired capability			-.427		-.045	.670
3		18.665	.627		8, 89		
	Age			-.774		-.082	.441
	Gender			1.426		.149	.157
	Race			.149		.016	.882
	Marital Status			.891		.094	.375
	BDI scores			.394		.042	.695
	Suicide Desire			4.569		.436	.000
	Acquired Capability			.633		.067	.528
	Desire X Capability			-.843		-.089	.401
4		17.220	.638		9, 88		

Age	-.863	-.092	.391
Gender	4.650	.173	.102
Race	.295	.031	.769
Marital Status	.904	.096	.369
BDI scores	.013	.001	.989
Suicide Desire	4.128	.403	.000
Acquired Capability	.609	.065	.544
Desire X Capability	-.800	-.085	.426
Burden X Belonging	1.656	.174	.101

5.12 Conclusion

This chapter outlined the results of the research. These results indicated the significant factors which contribute to suicide desire and suicide risk in the current sample. The factors which were found to be significantly related to suicide desire included the interpersonal states of TB and PB, symptoms of depression, and marital status. Symptoms of depression and marital status were found to be the most significant predictors of suicide desire. The ACS was not significantly related to suicide risk.

CHAPTER SIX

DISCUSSION

6.1 Introduction

The constructs of Joiner's (2005) interpersonal-psychological theory of suicidal behaviour has stood up to at least twenty empirical tests, with the theory's main predictions generally substantiated. To date, there are no published studies examining the theory's constructs in South Africa. The current study is the first to explore the relationship between the constructs of Joiner's (2005) interpersonal-psychological theory (i.e. TB, PB, and ACS) in an outpatient clinical sample. This sample and setting were selected to address one of the biggest challenges facing clinicians and researchers in the field of suicide – providing a comprehensive theoretical framework able to explain the various risk and protective factors involved in suicidal behaviour, and exploring what the interacting factors are that lead to suicidal behaviour.

A comprehensive model related to suicide risk and protective factors was explored, including the constructs of Joiner's (2005) interpersonal-psychology theory, as well as the various demographic and clinical risk factors known to be related to suicidal behaviour (i.e. age, gender, race, marital status, and symptoms of depression). This study concerned the relationships between the constructs of Joiner's (2005) interpersonal-psychological theory of suicide, known risk factors, and suicide desire. It was expected that a sense of interpersonal distress, as indicated by TB and PB, would be related to higher levels of suicide desire. Furthermore, it was expected that the interaction between TB and PB would be a better predictor of suicide desire than either construct on its own. It was also expected that ACS would not be related to suicide desire, as indicated by the literature which indicates that although acquired capability is necessary, it is not sufficient for suicidal behaviour to occur. The desire for suicide needs to be present. In terms of demographic and clinical variables, it was expected that the variables of gender, age, race, marital status and symptoms of depression would all be related to suicide desire, as cited in the literature. This chapter outlines the individual results of the constructs of Joiner's (2005) interpersonal-psychological theory, discusses the overall results of the variables, and links the results with the literature on suicide.

6.2 Gender, Age, Race and Marital Status and their Relationships with the Constructs of the Interpersonal-Psychological Theory of Suicide

Several demographic variables have been highlighted in the literature as risk factors relevant to suicidal behaviour. In particular, the variables of gender, age, race, and marital status have been consistently linked to suicidal behaviour as significant risk factors.

6.2.1 Gender and Suicide Desire, Acquired Capability, Thwarted Belongingness, and Perceived Burdensomeness

The results of the current study did not indicate any significant gender differences in terms of suicide desire, ACS, TB and PB.

According to the literature on suicide, females make more frequent, yet less violent, suicide attempts. Although females make more suicide attempts, males are three times more likely than females to die by suicide (WHO, 2014), which is a result of more lethal methods involved in the suicidal behaviour of males (Van Orden et al., 2010). The lethality of male suicide may be related to gender socialization which results in men engaging in more painful and provocative events. As a result of their more frequent exposure to risky and painful behaviours, males are more likely to acquire the capability for suicide through a habituation process whereby repeated exposure to events that are painful and provocative habituates individuals to the fear and pain involved in dying. It was thus expected that in the present study, females would exhibit higher levels of suicide desire; whereas males would exhibit greater acquired capability. However, there was no significant finding in the present study regarding gender, suicide desire and acquired capability. In a recent study conducted by Donker, Batterham, Van Orden and Christensen (2014), the authors reported similar findings to the current study in terms of acquired capability and gender. The authors found no interaction effect between gender and acquired capability. In the present study 43.6% of males and 53.4% of females had made previous suicide attempts, mainly two or more attempts (25.6% for males and 29.8% for females). As a result of over half of the current sample having made a previous suicide attempt, there may be no gender differences in terms of acquired capability as the males and females in the current study may possess equal acquired capability as a result of their attempts. It is important to note that the gender difference of suicide in LMICs such as South Africa is lower than global trends, and this

lower distribution may be reflected in the present study. It is also possible that the theory's assumption that males engage in more painful and provocative experiences than females is not applicable to the South African population and further studies are needed to explore this relationship further. Furthermore the gendered stereotype of male impulsivity and aggression may not be an accurate reflection of South African society.

In a study by Crossley and Langdridge (2005), the authors found that the females in their study ranked interpersonal needs higher than males did, indicating that females are more likely than males to experience the interpersonal states of TB and PB which, according to Joiner's (2005) interpersonal-psychological theory of suicide, results in suicidal desire. In contrast, a study conducted by Christensen, Batterham, Soubelet, and Mackinnon (2013) found TB to be a stronger predictor of suicide ideation in males than in females. The current study did not find any significant gender differences in terms of TB and PB. It is possible that the lack of association between gender and the constructs of TB and PB is a result of the characteristics of the current sample. The current sample is a clinical population, all of whom were in contact with a mental health professional. It is thus possible that this interaction between the participants and their treating practitioner may have provided a buffer against a sense of TB and PB, and thus, no gender differences would be found. Furthermore in the present study, male and female desire for suicide was similar (60.3% for males and 62.1% for females) and it is thus possible that the male and female participants equally experience a sense of interpersonal distress, as defined by TB and PB.

6.2.2 Age and Suicide Desire

The results of the current study do not find any significant age differences in suicide desire.

Globally, the literature indicates a shift in suicide rates from older towards younger individuals, with suicide being most prevalent in the 15 to 34 year age group (Burrows & Laflamme, 2007). Furthermore, the literature reports age differences in terms of suicide and behaviour. Impulsive-aggressive behavior has been linked to suicide in younger individuals, whereas the presence of depression has been linked to suicide in older individuals (Turecki, 2005). The literature thus suggests not only a difference in terms of suicide and age; but a difference in the causal pathway. The sample in the present study was composed of

participants ranging from 18 to 68 years, with a mean age of 36.49 (SD = 11.95). Given the literature on the relationship between suicide and age, it would be expected that younger individuals would exhibit higher levels of suicide desire than older individuals, and may attempt suicide as a result of impulsive behaviours.

In a study conducted by Christensen et al. (2013) the authors found an association between age and suicide desire in terms of the constructs of TB and PB. The authors found that for young adults, TB and PB were significant predictors of suicide ideation; whereas for their middle-aged participants, TB alone did not predict suicide ideation unless paired with PB. The authors suggest that this gender difference in the interpersonal states and suicide ideation may be because middle-aged participants are more likely to be married / have children and thus may experience higher rates of belongingness than younger adults.

The lack of a significant association between age and suicide desire may be a result of the characteristics of the sample in the present study. Firstly, the present study did not intentionally recruit participants who were presently suicidal and there may thus be age differences in a sample that is currently suicidal. Secondly, the current sample was a clinical sample and thus it is possible that the age differences in suicide desire may not hold true for clinical samples, i.e. those with a mental disorder. Finally, the type of behaviour associated with the suicide attempt (i.e. impulsive or long-standing depression) was not examined.

6.2.3 Race and Suicide Desire

The current study did not find any overall significant racial differences in suicide desire; however Coloured individuals recorded higher mean values of suicide desire. In analyses investigating race and suicide desire, there were no significant findings; however in the regression analysis race was found to be a significant predictor of suicide desire.

Recent literature on race and suicide in South Africa indicates a racial difference in suicidal behaviour in South Africa. In a study conducted by Stark et al. (2010), racial differences were found for suicide in their sample, with Blacks recording the highest rates of suicide (72.1%), followed by Whites (26%), Coloured (1.1%), and Indian (0.6%). Recent research has reported that in Durban, South Africa, suicidal behaviour is mostly prevalent amongst Blacks, and Indians, followed by Whites and Coloureds (Naidoo & Schlebusch,

2014). In the present study, Coloureds recorded the most suicide attempts (58.1%), followed by Indians (52.5%), Blacks (47.9%), and Whites (47.1%). This finding is similar to that of Joe, Stein, Seedat, Herman and Williams (2008) who recorded the highest rates of suicide attempts for Coloured individuals. This higher prevalence of suicide attempts by Coloured individuals may be a result of the stressors unique to Coloured individuals. The Coloured category is characterized with unique stressors in post-apartheid South Africa whereby one classified as Coloured may at times find it difficult to identify in a society that defines groups as polar opposites: one is either Black or White, and to be somewhat in-between, may leave one with a decreased sense of belonging.

It is possible that the inconsistent results regarding race and suicide desire in the present study is attributable to a Type 1 error. When conducting multiple statistical analyses, as was done in the present study, the risk of a Type 1 error increases. It is also possible that there were no overall significant racial differences when considering race and suicide desire separately as a result of the similar rates of suicide attempts, suggesting that all the racial groups in the current study possessed equal levels of suicide desire. This finding may also be due to the sampling technique of the current study that did not intentionally recruit a suicidal population, and thus the results may be different for a suicidal sample. Furthermore, suicide has largely been stigmatized in many cultures in South Africa, and it is likely that participants may have responded in a socially desirable manner.

6.2.4 Marital Status and Suicide Desire

The present study found a significant difference for marital status in terms of suicide desire, with marital status contributing significantly to suicide desire. Non-married participants reported higher levels of suicide desire than married participants.

The literature on suicide consistently cites marriage as a protective factor against suicide, with single and divorced status being cited as suicide risk factors (Corcoran & Nagar, 2010; Joiner, 2005; Masocco, Pompili, Vichi, Vanacore, Lester & Tatarelli, 2008; Roskar, Podlesek, Kuzmanic, Demsar, Zaletel & Marusic, 2011; Sadock et al., 2014). In a study conducted by Masocco et al. (2008), non-married status was associated with higher suicide rates for both men and women in their sample. This finding has been replicated by authors across contexts (Corcoran & Nagar, 2009; Roskar et al., 2011). In the current sample, married

participants reported lower levels of suicide desire (30%) in comparison to non-married participants (42%). This finding is consistent with what was expected given the empirical and theoretical evidence on suicidal behaviour and marital status. Married status is likely a significant protective factor against suicide by providing greater social support as compared to non-married status. According to Van Orden et al. (2010), suicide is more likely to occur in those who do not feel a sense of belongingness. In order to feel a sense of belongingness, individuals require frequent meaningful interactions with significant others, which is implied by married status. Therefore, the married participants in the current study are likely to experience a greater sense of belongingness than the non-married participants, and thus exhibit less suicide desire. This finding is consistent with that of Christensen et al. (2013) who report marital status as a significant contributing factor towards a sense of belongingness.

6.3 The Constructs of the Interpersonal-Psychological Theory of Suicidal Behaviour

6.3.1 Thwarted Belongingness and Suicide Desire

The current study found a strong relationship between TB and suicide desire, such that high levels of TB were associated with high levels of suicide desire.

TB has been cited as one of the strongest predictors of suicidal behaviour in the literature (Durkheim, 1897; McLean et al., 2008; Van Orden et al., 2010). Joiner's (2005) interpersonal-psychological theory of suicide proposes that the interpersonal need of belongingness is vital to the development of suicide desire, and when TB is prolonged, suicide desire is more likely to develop. The current finding is consistent with the literature and amongst the participants who indicated active suicide desire; they also indicated a greater sense of TB than those who did not indicate active suicide desire.

6.3.2 Perceived Burdensomeness and Suicide Desire

The current study found PB to be strongly associated with suicide desire, such that those with higher levels of suicide desire were likely to report higher levels of PB.

In addition to TB, Joiner's (2005) interpersonal-psychological theory proposed that high levels of PB are associated with higher levels of suicide desire. The current finding was expected given the literature on suicide.

Further analyses found the interaction between TB and PB to be a significant contributing factor to suicide desire. TB on its own was not found to be a significant contributor to suicide desire; however the interaction of TB and PB significantly predicts suicide desire. Similar findings were reported in other studies (O'Keefe et al., 2014; Pfeiffer et al., 2014). This finding was expected given the literature on Joiner's (2005) interpersonal-psychological theory of suicidal behaviour. According to the interpersonal-psychological theory of suicide, TB on its own is likely to result in passive suicide ideation; however the simultaneous presence of TB and PB, when perceived as stable, results in active suicide desire (Van Orden et al., 2010). The present finding is consistent with the literature, for example Van Orden et al.'s (2008) study, found high levels of suicidal ideation evident only in the presence of TB and PB.

6.3.3 Acquired Capability, Suicide Desire

The current study found no relationship between ACS and suicide desire. The regression analysis indicated that ACS was not a significant predictor of suicide risk.

According to Joiner's (2005) interpersonal-psychological theory of suicide, the simultaneous presence of suicide desire and ACS serves as the condition whereby suicide desire transforms to suicide intent. Joiner's (2005) theory proposes that although acquired capability is necessary for lethal suicidal behaviour, the presence of the acquired capability alone is insufficient for suicide – one needs to have a desire for suicide. Therefore, it was hypothesized that acquired capability, on its own, would not be related to suicide desire.

6.3.4 Predictive Ability of the Constructs

6.3.4.1 *Regression Model 1*

In Model 1 of the regression analysis, the interaction between TB and PB, symptoms of depression, and race were found to be statistically significant predictors of suicide desire. This finding is consistent with previous studies which have found TB, PB, and symptoms of depression to be significant predictors of suicide desire (Barzilay et al., 2015; Christensen et al., 2013; Pfeiffer et al., 2014).

The interaction of TB and PB provided the most significant explanation of suicide desire. This was expected since Joiner's (2005) interpersonal-psychological theory of suicidal behaviour proposes that the simultaneous presence of TB and PB is likely to contribute to suicide desire more so than either construct on its own, particularly when these interpersonal states are perceived to be stable. Similar findings have been reported in previous studies which found the interaction between TB and PB to significantly predict suicide ideation above and beyond either construct alone (Anestis, Khazem, Mohn & Green, 2015; Barzilay et al., 2015; Christensen et al., 2013; O'Keefe et al., 2014).

6.3.4.2 *Regression Model 2*

In Model 2 of the regression analysis, only suicide desire was found to be a statistically significant predictor of suicide risk.

According to Joiner's (2005) theory, lethal suicidal behaviour is most likely to occur in the presence of suicide desire and ACS. It was thus expected that acquired capability on its own would not predict suicide risk; but the interaction of acquired capability with desire, would predict suicide risk. This was not found in the current study. Rather, suicide desire alone proved to be the greatest predictor of suicide risk. It is possible that the scale used to measure acquired capability – the ACSS – is not an accurate measure of acquired capability as it only consists of five items, and has a reliability value $< .7$.

The regression analyses explored to what extent the presence of the constructs of Joiner's (2005) interpersonal-psychological theory were able to predict greater suicide desire

and risk, when controlling for the covariates. It was expected that the interaction of TB and PB would provide the greatest risk of suicide desire, which was found in this study. It was also expected that the interaction of ACS and suicide desire would predict suicide risk. However, this was not found in the current study. This finding is in contrast with that of Anestis et al. (2015) whereby the authors found that the interactions of PB, TB and ACS predicted prior suicide attempts. However the study by Anestis et al. (2015) found that only at high levels of ACS and interpersonal distress (as measured by TB and PB) that suicide attempts occur. The lack of a significant finding between ACS and suicide risk in the current study may be attributed to the low rates of ACS in the current sample as the sample was not comprised of a population of previous suicide attempters. Furthermore, the sample in Anestis et al.'s (2015) study was comprised of military personnel and, according to Joiner's theory, exposure to war is hypothesized to habituate an individual to the pain and fear involved in suicidal behaviour and thus increases the risk of suicidal behaviour (Van Orden et al., 2010).

6.4 Conclusion

The present study highlights the factors associated with suicide desire and risk among an outpatient psychiatric sample in the greater Durban area of KwaZulu-Natal. In particular, the constructs of Joiner's (2005) interpersonal-psychological theory were investigated. Joiner's (2005) theory provides a comprehensive framework of suicidal behaviour, which includes the interplay of the various suicide risk and protective factors. It was expected that the constructs of Joiner's (2005) interpersonal-psychological theory would be associated with suicide desire in the current sample. The results of the current study indicated that the interaction of TB and PB was related to suicide desire, with the most significantly associated covariates being symptoms of depression and marital status. ACS was not related to either suicide desire or suicide risk, whilst suicide desire predicted suicide risk. It is expected that acquired capability would not be related to suicide desire as Joiner's (2005) theory proposes that acquired capability alone does not result in suicide, it is the combination of acquired capability and suicide desire that results in suicide and thus should predict greater suicide risk. The latter however was not the finding of this study. It is possible that the measure of acquired capability in the current study does not accurately measure acquired capability as the instrument has a low reliability ($\alpha = .62$).

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

The main objective of the current study was to explore the relationships between the constructs of Joiner's (2005) interpersonal-psychological theory of suicidal behaviour in order to add to the body of knowledge on suicide by exploring a comprehensive theoretical understanding of the various factors involved in suicidal behaviour. In particular, this study examined the relationships between the constructs of Joiner's (2005) interpersonal-psychological theory, which included the constructs of TB, PB, and ACS. The current study involved an outpatient clinical sample as the literature on suicide consistently cites psychiatric comorbidity, particularly depression, as a significant risk factor for suicide. The current sample is thus able to provide insight into one of the most at-risk groups. Such research is required to add to the understanding of suicide, and for the development and implementation of relevant suicide prevention and treatment programs for at-risk groups.

In South Africa, there is a lack of empirical studies able to provide a conceptual understanding of suicidal behaviour. Joiner's (2005) theory has been empirically tested abroad in several studies; however is yet to be tested in South Africa. South Africa is a diverse, multicultural society and as such, views of suicide within this context are vast. As a result of multiple views of suicide, suicide can often be ill-understood at best and mistreated at worst. A lack of a comprehensive theoretical framework on suicide makes prevention, detection, and treatment of suicidal behaviour difficult. It is thus desirable in a context such as South Africa to be able to provide a comprehensive theoretical understanding of suicidal behaviour, that is diverse enough to be able to explain the multiple factors involved in understanding suicidal behaviour in a multicultural society, and specific enough to provide an accurate account of the interplay between the relevant risk and protective factors. This, however, is no easy task. One of the challenges of a multicultural society is a multitude of contradicting views on suicide. It is possible that these views toward suicide are reflected in the current study and participants may have felt a level of discomfort or an internalized stigmatizing of suicidal thoughts and behaviours which may have impacted on the results of the current study. Despite research indicating that suicide is increasingly prevalent in South

Africa, particularly among non-White individuals; suicide is still largely a stigmatized topic in many cultures, particularly amongst traditional African cultures, and this may have affected participants' responses to sensitive questions. Furthermore, many cultures in South Africa are collectivist cultures who value togetherness and a collective identity, as evidenced in sentiments such as *ubuntu* ("I am what I am because of who we all are"). In such collectivist cultures, it may be uncommon for one to express interpersonal distress such as a sense of TB.

ACS was not found to be a significant factor in predicting suicide desire or risk in the current study. It was expected that acquired capability would not predict suicide desire in the current study as acquired capability is theoretically linked to suicide only in combination with suicide desire present. It was however expected that the interaction between acquired capability and suicide desire would be the greatest predictor of suicide risk. However, this was not found in the current study.

Given the literature on suicide, which reports gender, age, and racial differences in suicidal behaviour, it was expected that these variables would be related to suicide desire. However, the current study did not find any significant differences amongst these demographic variables and suicide desire, other than the higher rates of suicide desire amongst the Coloured individuals in this study. This may be a result of the sample chosen for study, which may not represent the general population of suicidal individuals. This may also be a result of factors such as stigmatization around the topic of suicide, which may be regarded as taboo in many cultures. Although there was no significant finding between age, gender, race, and suicide; there was a significant finding between marital status and suicide desire, such that non-married status was linked to greater rates of suicide desire than married status. Consistent with the literature on suicide, symptoms of depression was found to be significantly linked to suicide desire.

According to Joiner's (2005) interpersonal-psychological theory, TB and PB (as well as hopelessness concerning these states) are frequently dynamic factors; whereas ACS, once acquired, is relatively stable and unchanging (Van Orden et al., 2010). According to the theory, interventions that directly or indirectly address TB and PB should produce the best outcomes for suicidal individuals. Whilst ACS is difficult to modify as one cannot modify past experiences; if TB and PB can be identified early, given that they are linked to suicide

desire and amenable to psychotherapy, this has clinical implications for preventing the transformation of suicide desire into attempt.

7.2 Limitations

The findings of the current study should be interpreted in the context of the following limitations:

- The majority of the participants did not endorse active suicide desire, and thus, it is difficult to explore factors contributing to suicide desire amongst a sample with no current suicide desire.
- Participants were provided with self-report measures and it is possible that participants may have reported in a socially desirable manner. This is especially true due to the sensitive nature of the topic. Furthermore, it is possible that participants may have misunderstood question items.
- The present study was located in the greater Durban area of KwaZulu-Natal, and thus the results cannot be generalized to other areas of South Africa.

7.3. Recommendations for Future Research

Based on the results of the current study, the following is recommended:

- Future research on Joiner's (2005) interpersonal-psychological theory of suicidal behaviour amongst a sample with suicide desire, present or past, and/or a history of suicidal behaviour would add to the refinement of Joiner's theory.
- Future research on the psychometric properties of the ACSS as a measure of acquired capability of suicide.
- Future research on the constructs of Joiner's (2005) interpersonal-psychological theory of suicidal behaviour, in particular, hopelessness, in relation to the constructs of TB and PB.

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APPENDICES

List of Appendices:

Appendix 1: Ethical Clearance Letter

Appendix 2: Permission Letters

Appendix 3: Informed Consent Form

Appendix 4: Demographic Questionnaire

Appendix 5: The Interpersonal Needs Questionnaire

Appendix 6: The Acquired Capability for Suicide Scale

Appendix 7: The Beck Scale for Suicide Ideation

Appendix 8: The Beck Depression Inventory-II

Appendix 9: Clinician Protocol for Rating and Managing Suicide Risk

Appendix 1: Ethical Clearance Letter



02 November 2015

Miss Nicole Van Wyk 207525889
School of Applied Human Sciences
Howard College Campus

Dear Ms Van Wyk

Protocol reference number: HSS/0090/015M

Project title: An exploration of the relationships amongst the constructs of The Interpersonal-Psychological Theory of Suicidal Behaviour: In an outpatient clinical population sample in KwaZulu-Natal, South Africa

Full Approval – Committee Reviewed Protocol

This letter serves to notify you that your application in connection with the above has now been granted full approval.

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project; Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study. Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

.....
Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

cc Supervisor: Sarojini Naidoo
cc. Academic Leader: Prof Sabine Marschall
cc. School Administrator: Ms Nancy Mudau

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: ximbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za

Website: www.ukzn.ac.za



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Appendix 2: Permission Letters



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM77/15
NHRD Ref.: KZ_2015RP_14_769
Enquiries : Ms G Khumalo
Telephone : 033 – 395 3189

Dear Mrs S Naidoo

Subject: Approval of a Research Proposal

1. The research proposal titled 'Testing the Interpersonal - Psychological theory of suicidal behaviour in the South African context' was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

The proposal is hereby **approved** for research to be undertaken at King Edward VIII, Addington & Prince Mshiyeni Memorial Hospitals.

2. You are requested to take note of the following:
 - a. Make the necessary arrangement with the identified facility before commencing with your research project.
 - b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

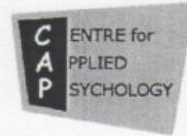
For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

Dr E Lutge
Chairperson, Health Research Committee
Date: 17/04/15

uMnyango Wezempilo. Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope



Psychology, School of Applied Human Sciences

PSYCHOLOGY, UNIVERSITY OF KWAZULU-NATAL, DURBAN 4041, SOUTH AFRICA. TEL: +27 (0)31 260 2527 FAX: +27 (0)31 260 2618.

12 December 2014

Ms Sarojini Naidoo

Discipline of Psychology

UKZN

Dear Ms Naidoo

Re: **Permission to undertake research: Testing the validity of the Interpersonal- Psychological theory of suicide in the South African context**

Permission is hereby granted to undertake research in the Psychology Clinic. Kindly ensure that all ethical considerations with regards to the care of patients are complied with. I look forward to the dissemination of the research findings.

Yours faithfully

A handwritten signature in black ink, appearing to read 'D. Cartwright', written over a horizontal line.

Prof D Cartwright

Letter of permission: Clinics/Centres for outpatients

The Director

Student Counselling Centre / Psychology Clinic

UKZN / DUT

Dear Sir/Madam

Permission to undertake research: Masters project

I am a Masters student in the discipline of Psychology at the University of KwaZulu-Natal. My research is in the area of suicidal behavior, an increasingly serious mental health issue. The World Health Organization (2010) estimates that 1 million people die by suicide every year and based on current trends, estimates are that this figure is likely to double by 2020. The aim of this research is to investigate the relevance of Joiner's (2005) Interpersonal-Psychological theory of suicidal behavior in the South African context. Finding relevance for the theory and validating the instruments based on the theory will provide health care practitioners with a useful tool for conceptualizing suicidal behavior and measuring suicide risk in our context. As part of my research I wish to administer a battery of questionnaires tapping into clients' feelings about various aspects of mental wellbeing. Given the sensitivity of the topic, I will undertake to ensure that the questionnaires are administered by trained psychologists/intern psychologists who are engaged in counselling with these clients to ensure that any distress that may arise from their participation is attended to immediately. Ethical clearance from the university has been applied for and I will ensure that all ethical issues are considered in the execution of the project.

I thank you in advance for permission to include your clients in this research. I may be contacted on 031-2602612 or 0761687003 for further information about the project. My supervisor's details are also contained below.

Nicole Van Wyk

Masters Student


Permission granted.
1/06/2015

Sarojini Naidoo

Supervisor (031-2607615)

Date: 30/03/2015

The Director/Psychologist/Psychiatrist

Permission to undertake research at site: PhD project

I am a PhD student in the discipline of Psychology at the University of KwaZulu-Natal. My research is in the area of suicidal behavior, an increasingly serious mental health issue. The World Health Organization (2010) estimates that 1 million people die by suicide every year and based on current trends, estimates that this figure is likely to double by 2020. The aim of this research is to test Joiner's (2005) Interpersonal- Psychological theory of suicidal behavior in the South African context. Finding relevance for the theory and validating the instruments based on the theory will provide health care practitioners with a useful tool for conceptualizing suicidal behavior and measuring suicide risk in our context. The data collection will include a short suicide risk screening measure and the administration of a battery of six questionnaires tapping into patients' feelings about various aspects of their emotional wellbeing. It is envisaged that the questionnaires will take 30- 40 minutes to complete and will not interfere with treatment protocols. Given the sensitivity of the topic, I undertake to ensure that the questionnaires are administered by trained psychologists/intern psychologists to ensure that any distress that may arise from patient participation is attended to immediately in the way of debriefing or follow-up counselling. Ethical clearance from the university has been applied for and I undertake to ensure that all ethical requirements as stipulated by the University's Biomedical Research and Ethics Committee are complied with in the execution of the project.

I thank you in advance for permission to include your patients in this research. I may be contacted on 031-2607615 or 0828920049 for further information about the project. My supervisor's details are also contained below.

Sarojini Naidoo (Ms)

PhD Student

Steven Collings (Prof)

Supervisor (031-2607414)

Permission granted:  (Signature of practitioner)

Date: 30/03/2015

The Director/Psychologist/Psychiatrist

Permission to undertake research at site: PhD project

I am a PhD student in the discipline of Psychology at the University of KwaZulu-Natal. My research is in the area of suicidal behavior, an increasingly serious mental health issue. The World Health Organization (2010) estimates that 1 million people die by suicide every year and based on current trends, estimates that this figure is likely to double by 2020. The aim of this research is to test Joiner's (2005) Interpersonal- Psychological theory of suicidal behavior in the South African context. Finding relevance for the theory and validating the instruments based on the theory will provide health care practitioners with a useful tool for conceptualizing suicidal behavior and measuring suicide risk in our context. The data collection will include a short suicide risk screening measure and the administration of a battery of six questionnaires tapping into patients' feelings about various aspects of their emotional wellbeing. It is envisaged that the questionnaires will take 30- 40 minutes to complete and will not interfere with treatment protocols. Given the sensitivity of the topic, I undertake to ensure that the questionnaires are administered by trained psychologists/intern psychologists to ensure that any distress that may arise from patient participation is attended to immediately in the way of debriefing or follow-up counselling. Ethical clearance from the university has been applied for and I undertake to ensure that all ethical requirements as stipulated by the University's Biomedical Research and Ethics Committee are complied with in the execution of the project.

I thank you in advance for permission to include your patients in this research. I may be contacted on 031-2607615 or 0828920049 for further information about the project. My supervisor's details are also contained below.

Sarojini Naidoo (Ms)

Steven Collings (Prof)

PhD Student

Supervisor (031-2607414)

Permission granted:  (Signature of practitioner)

Appendix 3: Informed Consent Form

Information Sheet and Consent to Participate in Research

Project Title: An exploration of the relationship amongst the constructs of the Interpersonal-Psychological Theory of Suicidal Behaviour in an outpatient clinical population sample in KwaZulu-Natal, South Africa.

Dear Patient / Client

My name is Nicole Van Wyk, a Masters student in the discipline of Psychology at the University of KwaZulu-Natal.

You are being invited to consider participating in a study that involves suicidal behaviour. The aim and purpose of this research is to investigate the relevance of Joiner's interpersonal-psychological theory of suicidal behaviour in the South African context. The study is expected to enrol between 150-200 participants attending an outpatient centre or hospital within KwaZulu-Natal. It will involve: the administration of a battery of seven short questionnaires investigating various aspects of suicidal behaviour and capability. The duration of your participation, if you choose to enrol and remain in the study, is expected to be one session – approximately 25 minutes.

The study may involve the following risks and/or discomforts: being exposed to a sensitive topic such as suicide may elicit uncomfortable thoughts or memories. I hope that the study will create the benefit of providing knowledge regarding what motivates suicidal behaviour which will assist in better provision of knowledge regarding suicidal behaviour and will assist in prevention and detection programs.

In the event that you feel distressed by the content of the questionnaires in any way, please let your psychologist know and debriefing/counselling will be provided to you.

This study has been ethically reviewed and approved by the UKZN Humanities & Social Sciences Research Ethics Committee.

In the event of any problems or concerns/questions you may contact the researcher at 0761687003 or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001 Durban 4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

You are under no obligation to participate in this study and may withdraw from this study at any time, without penalty. This means that your treatment / counselling will not be affected in any way.

CONSENT

I _____ (Name) have been informed about the study entitled: An exploration of the relationships amongst the constructs of The Interpersonal-Psychological Theory of Suicidal Behaviour: in an outpatient clinical population sample in KwaZulu-Natal, South Africa

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any treatment or care that I would usually be entitled to.

I have been informed about any available compensation or medical treatment if injury occurs to me as a result of study-related procedures.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at 0761687003.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001 Durban 4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Signature of Participant

Date

Appendix 4: Demographic Questionnaire

DEMOGRAPHIC QUESTIONNAIRE

1. Age: ____years
2. Sex: Male ☐ Female ☐
3. Race: Black ☐ Indian ☐ White ☐ Coloured ☐ Other ☐
4. Marital status: Single (never married) ☐ Married/domestic partnership ☐ Divorced ☐
Widowed ☐ Separated ☐
5. Do you have children? Yes ☐ No ☐
6. Religion: (tick one) Hindu ☐ Christian ☐ Muslim ☐ Buddhist ☐ Shembe ☐
Other ☐ Please specify _____
7. Highest level of education: No formal schooling ☐ Primary school ☐
High school ☐ Diploma/degree ☐ Postgraduate diploma/degree ☐
8. Employment status: Employed ☐ Unemployed but looking for work ☐
Unemployed but not looking for work ☐ Homemaker ☐ Student ☐ Retired ☐
Other ☐ Please specify _____
9. Where do you live most of the time? Home ☐ University Residence ☐ Hostel ☐
Other ☐ Please specify _____
10. Who do you live with? Alone ☐ Partner ☐ Parent/s ☐ Sibling ☐ Child ☐ Other ☐
Please specify _____

Appendix 5: The Interpersonal Needs Questionnaire (INQ)

INQ

The following questions ask you to think about yourself and other people. Please respond to each question by using your own **CURRENT** beliefs and experiences, **NOT** what is true for you in general or what might be true for other people. There are no right or wrong answers: we are interested in what you think and feel.

For each statement, use the rating scales provided to **circle a number** that best matches:

1. How you feel about the statement today?
2. And whether you feel that things are likely to be any different in the future.

- | |
|----------------------|
| 1. Completely untrue |
| 2. Mostly untrue |
| 3. A little untrue |
| 4. Undecided |
| 5. A little true |
| 6. Mostly true |
| 7. Completely true |

- | |
|---------------------------------------|
| 1. Things will get a lot worse |
| 2. Things will get quite a bit worse |
| 3. Things will get a little worse |
| 4. Things will remain unchanged |
| 5. Things will get a little better |
| 6. Things will get quite a bit better |
| 7. Things will get a lot better |

	How true is this of how you feel today?		Do you believe that things will get better or worse in the future?
1. People in my life would be better off if I were gone.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
2. People in my life would be happier without me.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
3. I feel I have failed the people in my life.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
4. I feel I contribute to the well-being of people in my life.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
5. I feel I am a burden to the people in my life.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
6. The people in my life wish they could get rid of me.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
7. I think I make things worse for the people in my life.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
8. Other people care about me.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
9. I feel disconnected from other people.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
10. I feel there are people I can turn to in times of need.	1 2 3 4 5 6 7		1 2 3 4 5 6 7
11. I am close to other people	1 2 3 4 5 6 7		1 2 3 4 5 6 7
12. I have at least one satisfying interaction with people a day.	1 2 3 4 5 6 7		1 2 3 4 5 6 7

Appendix 6: Acquired Capability for Suicide Scale

ACSS

Please read each item below and indicate to what extent you feel the statement describes you. Rate each statement using the scale below and tick the number that applies to you

0 1 2 3 4
Not at all like Very much like
me me

No	Items					
1	Things that scare most people don't scare me	0	1	2	3	4
2	I can tolerate more people than most people	0	1	2	3	4
3	People describe me as fearless	0	1	2	3	4
4	The pain involved in dying frightens me	0	1	2	3	4
5	I am not at all afraid to die	0	1	2	3	4

Appendix 7: The Beck Scale for Suicide Ideation



Date: _____

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

Directions: Please carefully read each group of statements below. Circle the one statement in each group that **best** describes how you have been feeling for the **past week, including today**. Be sure to read all of the statements in each group before making a choice.

Part 1

- 1** 0 I have a moderate to strong wish to live.
 1 I have a weak wish to live.
 2 I have no wish to live.
- 2** 0 I have no wish to die.
 1 I have a weak wish to die.
 2 I have a moderate to strong wish to die.
- 3** 0 My reasons for living outweigh my reasons for dying.
 1 My reasons for living or dying are about equal.
 2 My reasons for dying outweigh my reasons for living.

- 4** 0 I have no desire to kill myself.
 1 I have a weak desire to kill myself.
 2 I have a moderate to strong desire to kill myself.
- 5** 0 I would try to save my life if I found myself in a life-threatening situation.
 1 I would take a chance on life or death if I found myself in a life-threatening situation.
 2 I would not take the steps necessary to avoid death if I found myself in a life-threatening situation.

If you have circled the zero statements in both Groups 4 and 5 above, then skip down to Group 20. If you have marked a 1 or 2 in either Group 4 or 5, then open here and go to Group 6.

_____ Subtotal Part 1

- 20** 0 I have never attempted suicide.
 1 I have attempted suicide once.
 2 I have attempted suicide two or more times.

If you have previously attempted suicide, please continue with the next statement group.

- 21** 0 My wish to die during the last suicide attempt was low.
 1 My wish to die during the last suicide attempt was moderate.
 2 My wish to die during the last suicide attempt was high.

_____ Subtotal Part 2

_____ Total Score

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Part 2

<p>6 0 I have brief periods of thinking about killing myself which pass quickly.</p> <p>1 I have periods of thinking about killing myself which last for moderate amounts of time.</p> <p>2 I have long periods of thinking about killing myself.</p> <p>7 0 I rarely or only occasionally think about killing myself.</p> <p>1 I have frequent thoughts about killing myself.</p> <p>2 I continuously think about killing myself.</p> <p>8 0 I do not accept the idea of killing myself.</p> <p>1 I neither accept nor reject the idea of killing myself.</p> <p>2 I accept the idea of killing myself.</p> <p>9 0 I can keep myself from committing suicide.</p> <p>1 I am unsure that I can keep myself from committing suicide.</p> <p>2 I cannot keep myself from committing suicide.</p> <p>10 0 I would not kill myself because of my family, friends, religion, possible injury from an unsuccessful attempt, etc.</p> <p>1 I am somewhat concerned about killing myself because of my family, friends, religion, possible injury from an unsuccessful attempt, etc.</p> <p>2 I am not or only a little concerned about killing myself because of my family, friends, religion, possible injury from an unsuccessful attempt, etc.</p> <p>11 0 My reasons for wanting to commit suicide are primarily aimed at influencing other people, such as getting even with people, making people happier, making people pay attention to me, etc.</p> <p>1 My reasons for wanting to commit suicide are not only aimed at influencing other people, but also represent a way of solving my problems.</p> <p>2 My reasons for wanting to commit suicide are primarily based upon escaping from my problems.</p> <p>12 0 I have no specific plan about how to kill myself.</p> <p>1 I have considered ways of killing myself, but have not worked out the details.</p> <p>2 I have a specific plan for killing myself.</p>	<p>13 0 I do not have access to a method or an opportunity to kill myself.</p> <p>1 The method that I would use for committing suicide takes time, and I really do not have a good opportunity to use this method.</p> <p>2 I have access or anticipate having access to the method that I would choose for killing myself and also have or shall have the opportunity to use it.</p> <p>14 0 I do not have the courage or the ability to commit suicide.</p> <p>1 I am unsure that I have the courage or the ability to commit suicide.</p> <p>2 I have the courage and the ability to commit suicide.</p> <p>15 0 I do not expect to make a suicide attempt.</p> <p>1 I am unsure that I shall make a suicide attempt.</p> <p>2 I am sure that I shall make a suicide attempt.</p> <p>16 0 I have made no preparations for committing suicide.</p> <p>1 I have made some preparations for committing suicide.</p> <p>2 I have almost finished or completed my preparations for committing suicide.</p> <p>17 0 I have not written a suicide note.</p> <p>1 I have thought about writing a suicide note or have started to write one, but have not completed it.</p> <p>2 I have completed a suicide note.</p> <p>18 0 I have made no arrangements for what will happen after I have committed suicide.</p> <p>1 I have thought about making some arrangements for what will happen after I have committed suicide.</p> <p>2 I have made definite arrangements for what will happen after I have committed suicide.</p> <p>19 0 I have not hidden my desire to kill myself from people.</p> <p>1 I have held back telling people about wanting to kill myself.</p> <p>2 I have attempted to hide, conceal, or lie about wanting to commit suicide.</p>
<p>Go to Group 20.</p>	



Appendix 8: Beck Depression Inventory-II



Beck Depression Inventory

Baseline

V 0477

CRTN: _____

CRF number: _____

Page 14

patient inits: _____

BDI-II

Date: _____

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

- 0 I do not feel sad.
- 1 I feel sad much of the time.
- 2 I am sad all the time.
- 3 I am so sad or unhappy that I can't stand it.

2. Pessimism

- 0 I am not discouraged about my future.
- 1 I feel more discouraged about my future than I used to be.
- 2 I do not expect things to work out for me.
- 3 I feel my future is hopeless and will only get worse.

3. Past Failure

- 0 I do not feel like a failure.
- 1 I have failed more than I should have.
- 2 As I look back, I see a lot of failures.
- 3 I feel I am a total failure as a person.

4. Loss of Pleasure

- 0 I get as much pleasure as I ever did from the things I enjoy.
- 1 I don't enjoy things as much as I used to.
- 2 I get very little pleasure from the things I used to enjoy.
- 3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

- 0 I don't feel particularly guilty.
- 1 I feel guilty over many things I have done or should have done.
- 2 I feel quite guilty most of the time.
- 3 I feel guilty all of the time.

6. Punishment Feelings

- 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel I am being punished.

7. Self-Dislike

- 0 I feel the same about myself as ever.
- 1 I have lost confidence in myself.
- 2 I am disappointed in myself.
- 3 I dislike myself.

8. Self-Criticalness

- 0 I don't criticize or blame myself more than usual.
- 1 I am more critical of myself than I used to be.
- 2 I criticize myself for all of my faults.
- 3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

- 0 I don't have any thoughts of killing myself.
- 1 I have thoughts of killing myself, but I would not carry them out.
- 2 I would like to kill myself.
- 3 I would kill myself if I had the chance.

10. Crying

- 0 I don't cry anymore than I used to.
- 1 I cry more than I used to.
- 2 I cry over every little thing.
- 3 I feel like crying, but I can't.

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San Diego • Philadelphia • Austin • Fort Worth • Toronto • London • Sydney

Subtotal Page 1

Continued on Back

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NR15645



Beck Depression Inventory

Baseline

V 0477

CRTN: _____ CRF number: _____

Page 15

patient initials: _____

11. Agitation

- 0 I am no more restless or wound up than usual.
- 1 I feel more restless or wound up than usual.
- 2 I am so restless or agitated that it's hard to stay still.
- 3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

13. Indecisiveness

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

14. Worthlessness

- 0 I do not feel I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as compared to other people.
- 3 I feel utterly worthless.

15. Loss of Energy

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

- 0 I have not experienced any change in my sleeping pattern.
- 1a I sleep somewhat more than usual.
- 1b I sleep somewhat less than usual.
- 2a I sleep a lot more than usual.
- 2b I sleep a lot less than usual.
- 3a I sleep most of the day.
- 3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

18. Changes in Appetite

- 0 I have not experienced any change in my appetite.
- 1a My appetite is somewhat less than usual.
- 1b My appetite is somewhat greater than usual.
- 2a My appetite is much less than before.
- 2b My appetite is much greater than usual.
- 3a I have no appetite at all.
- 3b I crave food all the time.

19. Concentration Difficulty

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than usual.
- 2 I am too tired or fatigued to do a lot of the things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

3 4 5 6 7 8 9 10 11 12 A B C D E

Subtotal Page 2

Subtotal Page 1

Total Score

NR15645

Appendix 9: Clinician Protocol for Rating and Managing Suicide Risk

Clinician protocol for Rating and Managing Suicide Risk

DSMV diagnosis: _____

Use the symptomatic presentation to rate the level of suicide risk of the patient. Then please ensure you complete the actions listed.

Risk	Symptomatic presentation	Actions
Low	No current identifiable suicide symptoms Multiple attempter with no other Notable risk factors ⁱ A single attempter with suicide ideation of limited intensity and duration No or mild symptoms of the Resolved Plans and preparation factor ⁱⁱ	Give emergency numbers Create a coping card Complete a suicide contract Document and monitor risk
Moderate	A multiple attempter with any other Notable risk factor A single attempter with moderate to severe symptoms of the Resolved Plans and Preparation factor A single attempter with moderate to severe symptoms of the Suicidal Desire and Ideation factor ⁱⁱⁱ (but mild or no Resolved plans and preparation) and at least TWO notable risk factors	Actions listed above Activate support systems Midweek phone check ins
High	A multiple attempter with any two or more Notable risk factors A single attempter with moderate to severe symptoms of the Resolved Plans and Preparation factor and at least ONE Notable risk factor. A multiple attempter with severe symptoms of the Resolved Plans and Preparation factor A single attempter with severe symptoms of the Resolved Plans and Preparation factor and TWO or more Notable risk factors	Actions listed above Consult supervisor before client leaves to consider options Client to be accompanied and monitored at all times If hospitalization is not warranted, follow steps from Moderate category

Adapted from Joiner, Walker, Rudd & Jobes (1999).

ⁱ Notable Risk factors: DSMV pathology, history of physical/sexual abuse, hopelessness about current situation, interpersonal problems that involve loss or disruption, serious physical illness.

ⁱⁱ Resolved Plans and Preparation factor: courage to make attempt, competence to engage in attempt, specific plan, preparation to engage in plan, availability of means, suicide notes

ⁱⁱⁱ Suicidal desire and Ideation factor: wish to die, frequency of ideation, wish not to live, passive attempt, desire for attempt, talk of suicide.