CHAPTER ONE: INTRODUCTION

There is but one truly serious philosophical problem, and that is suicide. Judging whether life is, or is not worth living amounts to answering the fundamental question of philosophy.
Albert Camus (1913 - 60).

1.1. INTRODUCTION

The main theme of this research project is adolescent suicidal behaviour. The study deals with white adolescents from Germany and South Africa, and highlights different opinions, knowledge, views, beliefs and attitudes of three major categories which are related to suicide. These three categories include the perceived social support that adolescents receive from family and friends, personal assertion in social situations, and familial and demographic background characteristics. The study explores whether there are any differences or cross-cultural similarities between German and South African adolescents in the variables associated with suicidal behaviour and risk or if there are cross-cultural similarities.

1.2. THE IMPORTANCE OF RESEARCH IN SUICIDE

Most people feel that suicidal behaviour constitutes a tragedy that should be prevented - however, how does one prevent such a tragedy when the understanding of the underlying aetiology and prediction is still imperfect (Schlebusch, 1995); and when the factors leading to suicidal ideation, and attempted or completed suicide are diverse and touch on every part of our life. There has been much development in trying to understand the phenomenon of suicidal behaviour throughout the world but, despite the accomplishments, much remains to be done in the field of management, prediction and prevention (Grossman & Kruesi, 2000; Schlebusch, 1995). Given the inordinate persistence of self-destructive lifestyles, one can hardly deny that the struggle against such behaviour is far from being won. If one considers the example provided
by the struggle against many other diseases from a medical perspective, one cannot but admit the fact that, in the long run, many diseases were conquered, sometimes even by measures such as improved education, nutrition and socio-economic conditions. In many instances this could also work to bring down the stress on families and friends associated with suicidal behaviour. Such examples suggest that prevention rather than cure is the best hope for combating the sharp rise in suicidal behaviour. To prevent suicide effectively, the risks and causes of suicide have to be known and understood - and how these impact on the adolescent. It is important to know if the risk factors and attitudes of suicide are universal or similar - or if they differ from country to country and culturally to develop and apply effective and relevant prevention strategies.

If one takes into account the spiralling health care bill of South Africa (Schlebusch, 1995; South African Health Review, 2000), the need to prevent suicidal behaviour becomes more acute. This high health care cost does not take into account post-hospital treatment and treatment of the devastated family members or loved ones.

Most people are not aware of how widely pervasive suicidal behaviour in South Africa has become. The truth of the matter is that it has reached almost epidemic proportions (Flisher, 1999; Flisher, Ziervogel, Chalton, Leger, Robertson 1993; Mayekiso, 1995; NIMSS, 2003; Pillay, 1995a; Schlebusch, 1995). It is widely recognised that official suicide rates conceal the real scale of non-accidental self-injurious fatal behaviour due to constraints of registration policy and practice (data on suicide is not available on a national level in South Africa); uncertainty about the circumstances surrounding a death (a suicide might be recorded as an “accident”); an unwillingness to affix a suicide label on youth deaths; and the belief that the term “suicide” is not quite accurate. One of the main problems in this regard is
that there is a prevalent attitude surrounding suicide which construes it as being a matter of social taboo. As such, suicidal behaviour is often seen as a shameful act and a cop-out and the persons who might be considering it may, accordingly, not feel free to discuss their thoughts and emotions openly with a professional health worker, teacher, friend or family member. The consequences of this are that many people who feel depressed and hopeless imagine themselves to be cut of from others. This makes it more difficult for family members and health care workers to intervene and help prevent the ensuing tragedy. The said social stigma often also makes recovery for those who survive suicidal behaviour a problem.

1.3. THE RESEARCH PROBLEM AND OBJECTIVES

A high number of research findings and data in the field of suicidology is obtained by using hospital and psychiatric settings and by using patients as subjects. There are no recent statistics about suicide and no estimates of suicide attempts in South Africa. The focus is almost exclusively on mortality data and hospital patients. This is because records and statistics about suicidal behaviour are not common or consistent and can not easily be compared to records of other countries. Trends are mostly obtained from suicidal deaths, which are more likely to be documented. As a result, there is little knowledge and information about the views and beliefs and behaviours about suicide for the “normal” adolescent population - which is needed to apply and develop prevention strategies.

Therefore, it would be of considerable importance to assess the attitudes of South African teenagers toward suicide and suicidal behaviour and compare the findings to teenagers of European countries, by looking at normal populations in a number of school settings. Are there any differences between South African adolescents and adolescents of European countries in their behaviour toward suicide or are there cross-cultural similarities in the variables associated with adolescent suicidal behaviour and risk? Is lack of friend support
more important than lack of family support in adolescent suicidality? Is adolescent suicidal
behaviour more prevalent in South Africa than in European countries? And, is there a
relationship between adolescent suicidal and risk and different dimensions of personal
assertion? These are some of the questions that this research explores.

1.4. **DEFINITION OF KEY TERMS**

Suicidology, the scientific study of suicide and suicide prevention, includes not only
completed suicide and non-fatal attempted suicide but also partial self-destruction, suicidal
gestures and ideation, para-suicide, deliberate self-harm, self-mutilation, and a panorama of
related self-destructive behaviours and attitudes (Maris, 1992d). The terms “suicide”,
“suicidal”, “suicidal behaviour”, “attempted suicide”, “para-suicide”, “suicidal intent”,
“suicide ideation”, “completed suicide” and “deliberate self-harm” (or deliberate self-injury)
are used inconsistently and interchangeably in the literature of suicidology. For this study the
term “suicidal behaviour” is used as far as possible to refer to an episode of deliberate self-
harm or a non-fatal injury (suicide attempt) which may be serious enough to warrant medical
attention (Maris, 1992d).

It is important to distinguish between self-destructive behaviours, attempted suicide
(deliberate self-harm) and suicide. Many people who think about suicide never attempt or
complete suicide. Included here are individuals who plan, obsess, save their pills, consider
special circumstances for suicide (e.g., AIDS), ruminate, talk about suicide, fantasize, and so
forth. Not all self-destructive behaviours are overt, explicit or intentional. In fact, probably
the majority of self-destructive actions are partial, chronic, long-term and even unconscious.
Perhaps the largest group of self-destructive behaviours is what Farberow (1980) has labelled
indirect self-destructive behaviour (ISDB), which he defined as behaviour in which there is
neither suicidal intention nor awareness or expectation of any suicidal outcome. ISDBs include excessive smoking, alcoholism, risky sports, stress seeking, dangerous occupations, sexual promiscuity, anorexia and bulimia, medical non-compliance, compulsive gambling, drug addiction, accident proneness and even chronic overwork.

O’Carroll, Bermann, Maris, Moscicki, Tanney and Silverman (1996) proposed a standard nomenclature, offering descriptive terminology that falls into two broad categories: instrumental behaviour (that is, zero intent to die with other motivation such as help seeking, punishing others, or attention seeking) and suicidal acts (that is, with the intent to die). “Suicide attempt without injuries” is defined as a potentially self-injurious behaviour with a non-fatal outcome for which there is evidence (either implicit or explicit) that the person intended at some level to kill him- or herself (O’Carroll et al., 1996). “Suicide attempt with injuries” is defined as an action resulting in non-fatal injury, poisoning, or suffocation where there is evidence (either implicit or explicit) that the injury was self-inflicted and that the person intended at some level to kill him- or herself (O’Carroll et al., 1996). It causes self-harm, or without intervention from others will do so. Beyond it, the act of self-harm is possibly carried out in expectation of such a non-fatal outcome and thus probably considered to communicate a wish to change social relations (Maris, Berman, Silverman, 2000).

“Suicide” is an act of self harm with a fatal outcome which the deceased, with the knowledge and expectation of a fatal outcome, had themselves intended and carried out with the purpose of bringing about the changes desired by the deceased (Maris et al., 2000).

According to the International Classification of Diseases (ICD-10) as provided by the World Health Organisation as a diagnostic tool for psychiatric illnesses, “para-suicide is defined as an act with non fatal outcome in which an individual deliberately initiates a non-
habitual behaviour that, without intervention from others will cause self-harm, deliberately ingests a substance in excess of the prescribed or generally recognised therapeutic dosage and which is aimed at realising changes which the subject desired via the actual or expected physical consequences” (Platt et al., 1992, p. 99). Self-harmful acts by people who do not understand the meaning or consequences of their own actions (for example because of mental insanity) are excluded.

Despite the ever-increasing number of diagnostic categories found in the Diagnostic and Statistical Manuals (DSM IV; American Psychiatric Association, 1994) issued by the American Psychiatric Association there is no explicit diagnosis for suicide. The term is not found in the index for DSM IV. The closest DSM IV comes is the category of impulse-control disorders, which include intermittent explosive disorder, kleptomania, pyromania, pathological gambling, and trichotillomania. Suicidal thoughts are only mentioned as a possible symptom of depression, dysthymia or borderline personality disorder. Because of these omissions, several authors have suggested the need for a diagnostic nomenclature for the various forms of suicide (Eichelman & Hartwig, 1993; O' Carroll, 1993).

“The term 'para-suicide' or 'suicide attempt' covers behaviours that vary from non-suicidal self-harm, to serious attempts to kill oneself. It refers to any deliberate act with non-fatal outcome that results in self-harm, or any act that in the absence of intervention, would have resulted in self-harm.” (Thompson & Bhugra, 2000, p. 37). It includes acts of substance intake in excess of that generally recognized to be a prescribed or therapeutic dosage (Kreitman, 1977). Hurry (2000) defines the term “deliberate self-harm” as an implied act, not merely thoughts about suicide. However, it does not necessarily include the wish to kill oneself. This is why the term “deliberate self-harm” is often preferred to attempted suicide. In
as far as possible, the term “deliberate self-harm” is used in the present study to refer to “attempted suicide” and “para-suicide”.

“Suicidal ideation” on the other hand refers to cognition's that can vary from fleeting thoughts that life is not worth living, concrete well-thought-out plans for killing oneself, to an intense delusional preoccupation with self-destruction (Thompson & Bhugra, 2000). These definitions imply that depressed mood and suicidal ideation are not synonymous. The first is a necessary condition for the second; suicidal ideation occurs with the greatest frequency when depressive disorder is severe (Thompson & Bhugra, 2000). Suicidal ideation is far more frequent than deliberate self-harm, and deliberate self-harm is considerably more frequent than acts of completed suicide, suggesting that these behaviours characterize overlapping but non-identical populations.

1.5. **MOTIVATION FOR THE RESEARCH**

The motivation for this study has a number of reasons. First of all, and most importantly, was the fact that research in suicide in general and especially with adolescents in a “normal” setting in South Africa is very limited (Casteleijn, 1994; Flisher, 1999; Flisher, 1995; Flisher et al., 1993; Gangat, 1990; Ludman, 1996; Mayekiso, 1995; NIMSS, 2003; Pillay, 1995a; Pillay, 1995b; Roberts, 1999; Schlebusch, 1995). Little attention has been paid to the subject and there are virtually no statistics to point out the potential severity of the problem (Federal Statistical Office Germany; Flisher, 1992, 1995, 1999; Herman, 1991; Ludman, 1996; NIMSS, 2003; Roberts, 1999; Schlebusch, 1995; Schmidtke, 1998; South African Health Review, 1999, 2000; WHO, 1997; WHO, 1993; TZS, 2003). Secondly, cultural comparisons in the study of suicidal behaviour in adolescents to document possible similarities and differences are as scarce as the statistics for suicide in South Africa and Germany. The
opportunity to do cross-cultural study amongst white learners in South Africa and Germany presented itself. And thirdly, this study was motivated by a previous study I did, which compared the attitudes of South African and Kenyan students toward suicide (Sommer, 1997 unpublished). The most disturbing finding of the study was the high percentage of the Kenyan sample (29%) and South African sample (57.5%) who would consider suicide as an option. It is hoped that this study will contribute towards strengthening the capacity and necessity for appropriate research and interventions in South Africa.

1.6. STRUCTURE OF DISSERTATION

Chapter one (the current chapter) outlines the importance of the study and the research problem and major objectives in general terms. It defines important key terms in the field of suicidology and gives a motivation for the research project. Chapter two and three consist of an extensive literature review about adolescent suicidal behaviour and provides a review of current knowledge in this field. The focus is on the incidence and prevalence of suicide amongst adolescents and factors associated with suicidality. Chapter four looks at the theories of suicide. Chapter five outlines the method of study. In Chapter six the statistical results are presented. Chapter seven consists of a discussion of the results of the study and includes recommendations for further research. Chapter eight provides a conclusion of the study.

CHAPTER TWO: OVERVIEW OF SUICIDE STATISTICS

I take it that no man is educated who has never dallied with the thought of suicide. William James (1842 - 1910).
2.1. **INTRODUCTION**

The literature review will focus on recent knowledge available on adolescent suicidal behaviour. Suicide statistics of adolescents are presented first to point out the severity of the problem. The adolescent, adolescent development and relationship with parents is discussed next. A number of factors related to adolescent suicidal behaviour are then put forward, including social support, assertiveness, hopelessness and depression, stress, gender, the role of culture in suicide, risk-taking behaviour and substance abuse. Attention is then given to the role the secondary school plays in adolescent suicidal behaviour, presenting recent research findings and examining prevention and intervention programs. The literature review then moves to a discussion of biological, sociological and psychological theories on suicide to understand the concepts, meanings and research findings in suicidology. A tentative prediction and prevention model is put forward to end the chapter.

2.2. **SUICIDE STATISTICS OF ADOLESCENTS**

2.2.1. **Introduction**

The World Health Organisation (WHO, 1997) and the World Bank estimated that each year, some 786 000 people commit suicide around the world. This produces an effective suicide incidence of around 10.7 per 100 000 people per year globally. In the year 2000 an estimated 815 000 people died from suicide around the world (WHO, 2002). This represents an annual global mortality incidence of about 14.5 per 100 000 population. To put this statistic in perspective, that is the equivalent of one suicide every forty seconds, somewhere in the world. Table 2.1. shows the severity of suicide by comparing it to other global violence-related deaths. Nearly half of the

*Table 2.1. Estimated global violence-related deaths, 2000*
<table>
<thead>
<tr>
<th>Type of violence</th>
<th>Number¹</th>
<th>Rate per 100 000 population²</th>
<th>Proportion of total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide</td>
<td>520 000</td>
<td>8.8</td>
<td>31.1</td>
</tr>
<tr>
<td>Suicide</td>
<td>815 000</td>
<td>14.5</td>
<td>49.1</td>
</tr>
<tr>
<td>War-related</td>
<td>310 000</td>
<td>5.2</td>
<td>18.6</td>
</tr>
<tr>
<td>Total³</td>
<td>1659 000</td>
<td>28.8</td>
<td>100</td>
</tr>
<tr>
<td>Low- to middle-income countries</td>
<td>1510 000</td>
<td>32.1</td>
<td>91.1</td>
</tr>
<tr>
<td>High- income countries</td>
<td>149 000</td>
<td>14.4</td>
<td>8.9</td>
</tr>
</tbody>
</table>

WHO (2002)

Note:
¹ Rounded to nearest 1000
² Age-standardized
³ Includes 14 000 intentional injury deaths resulting from legal intervention

global violence-related deaths were suicides. Over sixty percent of all suicides occurred among males, over half of these occurring among those aged 15 to 44 years (WHO, 2002).

2.2.2. Reporting Practices And Limitations Of Suicide Data

Information on the incidence of actual suicides is derived from mortality data. There are no world-wide, standardized criteria for the classification and reporting of suicide deaths. Some nations report age-adjusted rates, others report crude rates, while still others report numbers of deaths but not the death rates (WHO, 1993, 2002). Also, countries differ widely with regard to their death certification procedures, ranging from a coroner system in the United States of America and the United Kingdom to the possibility that every general practitioner can sign the death certificate (for example, Germany and South Africa). The quality of data on suicide and suicidal behaviours varies tremendously, and can affect estimates of occurrence within as well as between nations. The variability in data quality also affects the accuracy of information on risk factors, and thus decisions about preventive intervention strategies.
The objective determination of suicide can be complicated by the emotion and social stigma associated with the act of killing oneself, by the cultural and professional (medical doctor or coroner) views on the suicidal event and by the impact a suicide death has on the family and community of the deceased. Numerous authors have therefore asserted that suicide deaths are vastly under-reported, but without providing empirical evidence to support their claims. Jobes, Berman, and Josselson (1987) on the other hand, analysed the reliability and validity of suicide reporting and concluded that systematic misreporting does exist, and in fact the increase in adolescent suicides (ages 15 to 24) is even greater than initially estimated figures. It could be argued that the increase in the suicide rate may simply reflect a change in reporting practices - that is, the increased attention to adolescent suicide may have encouraged medical examiners to use the suicide classification more often in questionable cases. By analysing the patterns of the rates of undetermined, accidental, and suicidal death across years, some investigators have concluded that suicide is somewhat under-reported but that reporting practices have not changed significantly in the past few decades and therefore that the rate increase is not an artefact of changed reporting practices (Brent, Perper, & Allman, 1987; Cooper & Milroy, 1995; Kleck, 1988; Shaffer & Fisher, 1987). Despite all these caveats, it has been argued that the relative ranking of national suicide rates is reasonably accurate (WHO, 2002).

2.2.3. International Suicide Rates

There are considerable regional differences in rates of suicide. These differences are shown among the WHO regions (WHO, 2002). In the African region and the region of the Americas, homicide rates are nearly three times greater than suicide rates. However, in the

*Figure 2.1. Homicide and Suicide rates by WHO region 2000*
European and South-East Asia regions, suicide rates are more than double the homicide incidence (19.1 per 100,000 against 8.4 per 100,000 for the European region, and 12.0 per 100,000 against 5.8 per 100,000 for the South-East Asia region), and in the Western Pacific region, suicide rates are nearly six times greater than homicide rates (20.8 per 100,000 against 3.4 per 100,000) (WHO, 2002). Large differences within countries also exist between urban and rural populations, between rich and poor groups, and between different racial and ethnic groups (WHO, 2002). Among countries reporting suicide to the WHO, the highest suicide rates are found in Eastern European countries (for example, Belarus 41.5 per 100,000, Estonia 37.9 per 100,000, Lithuania 51.6 per 100,000, and the Russian Federation 43.1 per 100,000) (WHO, 2002). Globally, suicide rates tend to increase with age, although some countries such as Canada have also recently seen a secondary peak in young people aged 15 to 24 years (WHO, 2002). Figure 2.2 shows the global rates recorded by age and sex in 1995.

**Figure 2.2. Global suicide rates by age and sex, 1995**

Adolescent suicide continues to be a great societal concern. In the United States of America (USA) suicide is currently the 2nd leading cause of death among Caucasian adolescents, and the 3rd leading cause of death among African American adolescents (Kalafat
& Elias, 1995; National Institute of Mental Health [NIMH], 2004). According to the Centres for Disease Control (CDC) (1995a) the rate of suicide in adolescent ages 15 to 19 increased 28.3% from 1980 to 1992. Although the base rate of adolescent suicide is relatively low, approximately 11 per 100,000 (CDC, 1995a), it ranks as a leading cause of death for this age group in the USA (NIMH, 1992). Peters, Kochanek and Murpy (1998) reports that the suicide rate for adolescents and young adults, ages 15-24 years of age, was 12 per 100,000 population in the USA. Latest statistics indicate that the suicide rate among children ages 10 to 14 was 1.3 per 100,000 or 272 deaths among 21 million children in this age group (NIMH, 2004). The gender ratio for this age group was 3:1 (males : females) (NIMH, 2004). The suicide rate among adolescents aged 15 to 19 was 7.9 per 100,000 or 1611 deaths among 20 million adolescents in this age group (NIMH, 2004). The gender ratio for this age group was 5:1 (males : females) (NIMH, 2004). The rates for completed suicides continue to increase with age (King, 1997). Evidence is emerging that the increase in the rate of completed suicide is accompanied by an increase in the rate of attempted suicide (Hawton, Fagg, Simkin, Bale, and Bond, 1997). The male to female ratio for completed suicide in the USA for 2001 is 4:1, whereas the ratio for attempted suicide is estimated at 1:3 (NIMH, 2004).

### 2.2.4. Suicide Rates In Germany

In Germany, approximately 13,000 suicides are reported per year; this includes 1200 to 1300 children and adolescents. Latest available suicide statistics for Germany are for the year 2001 and 2002 and are represented in table 2.2. The ratio of the suicide rate of male to female in 2001 is 2.9:1 (Federal Statistical Office Germany). The following two figures (figure 2.3 and figure 2.4) represent the total suicides and the suicide rate in Germany. The total number of suicides ranges from 18,825 in 1981 to 11,100 in 2000. More important, however, is the suicide rate, which in 2002 was 12.0 per 100,000 population and, which from its highpoint in
1982 has been declining steadily over the years, and has remained stable for the last four years. The dimension of suicide becomes apparent when comparing other figures for 1999 to suicide - it is the highest cause for non-natural deaths in Germany:

- Suicide: 11157
- Traffic accidents: 7772
- Drug abuse: 1565
- Homicide: 1357
- Aids: 587

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Suicides</th>
<th>Suicide (male)</th>
<th>Suicide (female)</th>
<th>Total rate per 100 000</th>
<th>Rate (male) per 100 000</th>
<th>Rate (female) per 100 000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>11163</td>
<td>8104</td>
<td>3059</td>
<td>12.0</td>
<td>N/a</td>
<td>N/a</td>
</tr>
<tr>
<td>2001</td>
<td>11156</td>
<td>8188</td>
<td>2968</td>
<td>13.5</td>
<td>20.4</td>
<td>7.0</td>
</tr>
<tr>
<td>2000</td>
<td>11100</td>
<td>8100</td>
<td>3000</td>
<td>13.5</td>
<td>20.2</td>
<td>7.2</td>
</tr>
<tr>
<td>1999</td>
<td>11157</td>
<td>8080</td>
<td>3077</td>
<td>13.6</td>
<td>20.2</td>
<td>7.3</td>
</tr>
<tr>
<td>1998</td>
<td>11648</td>
<td>8579</td>
<td>3069</td>
<td>14.2</td>
<td>21.5</td>
<td>7.3</td>
</tr>
<tr>
<td>1997</td>
<td>12265</td>
<td>8841</td>
<td>3424</td>
<td>14.9</td>
<td>22.1</td>
<td>8.1</td>
</tr>
<tr>
<td>1996</td>
<td>12225</td>
<td>8728</td>
<td>3497</td>
<td>14.9</td>
<td>21.9</td>
<td>8.3</td>
</tr>
</tbody>
</table>

There is no one specific cause or explanation for this development but, contributors are: the demographic development in Germany (that is, a decrease in the number of adolescents and an ageing population), increased medical services for special risk groups, and a displacement of recorded suicides to other causes of deaths, especially substance abuse and “unknown” causes of death. The last-mentioned categories of death both increased significantly during the past four years. The suicide rate varies significantly between the old and new federal states as well as between all federal states. A separate statistics for the old and new federal states was only kept from 1980 to 1997, and hence a comparison can only be done for this time period, indicating the total (“ges”), male (“m”) and female (“w”).

Figure 2.3. Suicides In Germany 1980–2001
One has to keep in mind that the region of the former German Democratic Republic is a result of the turning point in 1989 or the high number of unemployment in the new federal states. However, caution should be taken to jump to conclusion (that is, the difference in the suicide rate is a result of the turning point in 1989 or the high number of unemployment in the new federal states). One has to keep in mind that the region of the former German Democratic Republic has had a higher suicide rate, even prior to 1938.

**Table 2.3. Suicide rates of old and new German Federal States in 1997**

( per 100 000 population )

<table>
<thead>
<tr>
<th>States</th>
<th>Total</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old federal states (1997)</td>
<td>14.2</td>
<td>20.8</td>
<td>7.9</td>
</tr>
<tr>
<td>New federal states (1997)</td>
<td>18.2</td>
<td>27.6</td>
<td>9.2</td>
</tr>
</tbody>
</table>

The suicide rate in the new federal states is significantly higher than in the old federal states.
2.2.5. Suicide Rates In South Africa

South Africa appears to be following a similar trend with suicidality in adolescents emerging as an important mental health issue that needs to be addressed (Roberts, 1999). Ludman (1996) reported that the spectre of teenage suicide in South Africa is spreading, it is now the third highest cause of non-natural death of teenagers, after homicide and transport deaths (NIMSS, 2003). Once considered a White and Asian phenomenon, it has grown - with urbanisation, families shattered by violence, and more and more orphaned and abandoned children - to encompass all race groups (Ludman, 1996). In South Africa, there is a wide variation in the incidence of suicide between the population groups (Flisher, Joubert, Yach, 1992; NIMSS, 2002). Table 2.4 outlines this incidence for the year 2001. Among Whites 10.7 % of all death in the 15 to 19 year group during the period 1984 to 1986 were caused by suicide (Flisher et al., 1992).
However, in recent years, HIV/AIDS (Acquired Immune Deficiency Syndrome) has become an even greater health issue in South Africa. It is estimated that approximately four million episodes of STDs (sexually transmitted diseases) occur each year in South Africa, with over half these infections occurring among adolescents and young adults (South African Health Review, 2000). There are many reasons why adolescents are particularly vulnerable to sexually transmitted diseases. Apart from physiological vulnerability, they are very susceptible to peer pressure, have a tendency to engage in risk-taking behaviour, are less able to negotiate safe sex practices, and have difficulties accessing health information and services. The Human Science Research Council (HSRC) survey in 2002 and the Reproductive Health Research Unit (RHRU) survey in 2003 suggest that HIV prevalence is about 15% of young women and 5% of young men aged 15 to 24 years of age (South African Health Review, 2003). The RHRU survey highlights that one in ten young people is currently infected with HIV. Seventy seven percent of these are women. Nearly one in four women age 20 to 24 years is infected with HIV compared to roughly one in fourteen of males of the same age (South African Health Review, 2003).

Data on death due to suicide are not available at a national level in South Africa (NIMSS,

### Table 2.4. External causes of suicide by population group in 2001 (N = 2481)

<table>
<thead>
<tr>
<th></th>
<th>Asian n</th>
<th>%</th>
<th>African n</th>
<th>%</th>
<th>Coloured n</th>
<th>%</th>
<th>White n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanging</td>
<td>72.0</td>
<td>54.5</td>
<td>761</td>
<td>54.7</td>
<td>74</td>
<td>35.4</td>
<td>140</td>
<td>18.7</td>
</tr>
<tr>
<td>Firearm</td>
<td>30.0</td>
<td>22.7</td>
<td>317</td>
<td>22.8</td>
<td>48</td>
<td>23.0</td>
<td>337</td>
<td>45.0</td>
</tr>
<tr>
<td>Poisoning</td>
<td>19.0</td>
<td>14.4</td>
<td>151</td>
<td>10.9</td>
<td>58</td>
<td>27.8</td>
<td>112</td>
<td>15.0</td>
</tr>
<tr>
<td>Gassing</td>
<td>5.0</td>
<td>3.8</td>
<td>43</td>
<td>3.1</td>
<td>9</td>
<td>4.3</td>
<td>118</td>
<td>15.8</td>
</tr>
<tr>
<td>Jumping</td>
<td>3.0</td>
<td>2.3</td>
<td>36</td>
<td>2.6</td>
<td>4</td>
<td>1.9</td>
<td>16</td>
<td>2.1</td>
</tr>
<tr>
<td>Burn</td>
<td>1.0</td>
<td>0.8</td>
<td>33</td>
<td>2.4</td>
<td>3</td>
<td>1.4</td>
<td>4</td>
<td>0.5</td>
</tr>
<tr>
<td>Other</td>
<td>2.0</td>
<td>1.5</td>
<td>50</td>
<td>3.6</td>
<td>13</td>
<td>6.2</td>
<td>22</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>132</td>
<td>100.0</td>
<td>1391</td>
<td>100.0</td>
<td>209</td>
<td>100.0</td>
<td>749</td>
<td>100.0</td>
</tr>
</tbody>
</table>

NIMSS (2002)
2002, 2003; South African Health Review, 1999). The recording of deaths and other vital national statistics can be very difficult, and is often incomplete in many developing countries; this is also true for South Africa (South African Health Review, 2000). However, the reported death statistics can be used to identify the main causes of death if it is assumed that the deaths that were not reported follow the same pattern (South African Health Review, 2000). The highest proportion of deaths among young people are seen to be as a result of injuries, including all forms of accidents, homicide, and suicides. The proportion of deaths due to injuries is particularly high amongst young men. These deaths account for approximately 78% and 41% of deaths amongst teenage males and females respectively. The figures for deaths due to injury among young people aged 20 to 24 years are similar, 82% (men) and 34% (women). HIV/AIDS may be also the underlying cause in many of the deaths among young people, as well as suicide.

However since the inception of the National Injury Mortality Surveillance System (NIMSS) these are starting to become available for mainly urban areas; 2 500 and 2 211 suicides were recorded in South Africa in 2001 and 2002 respectively. The male to female suicide ratio in South Africa for 2001 was 4.7:1, with males accounting for 82.4% of suicides (NIMSS, 2002). Table 2.5 outlines the external causes by sex. For males, hanging (46.4%) and firearms (31.4%) were the highest external causes, whereas for females, poisoning (35.1%) and hanging (22.7%) were predominant.

The South African national suicide incidence is 19.52 per 100 000 for white males and 5.14 per 100 000 for white females; and the annual suicide incidence for the age group of 15 to 24 years is 2.94 per 100 000 (Schlebusch, 1995). The suicide incidence for the age group of 15 to 24 years is very low and may be a result of the lack of and incomplete statistical
Table 2.5. External causes of suicide by sex in 2001 (N = 2482)

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>M:F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanging</td>
<td>948 (46.4)</td>
<td>99 (22.7)</td>
<td>9.6:1</td>
</tr>
<tr>
<td>Firearm</td>
<td>643 (31.4)</td>
<td>90 (20.6)</td>
<td>7.1:1</td>
</tr>
<tr>
<td>Poisoning</td>
<td>184 (9.0)</td>
<td>156 (35.7)</td>
<td>1.2:1</td>
</tr>
<tr>
<td>Gassing</td>
<td>142 (6.9)</td>
<td>33 (7.6)</td>
<td>4.3:1</td>
</tr>
<tr>
<td>Jumping</td>
<td>41 (2.0)</td>
<td>18 (4.1)</td>
<td>2.3:1</td>
</tr>
<tr>
<td>Burn</td>
<td>19 (0.9)</td>
<td>22 (5.0)</td>
<td>0.9:1</td>
</tr>
<tr>
<td>Other</td>
<td>68 (3.3)</td>
<td>19 (4.3)</td>
<td>3.6:1</td>
</tr>
<tr>
<td>Total</td>
<td>2045 (100.0)</td>
<td>437 (100.0)</td>
<td>4.7:1</td>
</tr>
</tbody>
</table>

NIMMS, 2002

Data available for this age group. Figure 2.5 shows the recorded suicides in South Africa for 2002 by age.

Figure 2.5.: Suicide by age, 2002

Schmidtke (1998) reported suicide figures and suicide rates for 83 countries and comments:

“For South Africa and Cuba, which delivered dates about causes of death to WHO but not specified the suicide category it was not possible to calculate rates.”

In South Africa, a total of 61 adolescents reportedly committed suicide in 1985 and in 1986 this figure increased to 108; reaching 160 in 1987 and 175 in 1988 (Herman, 1991). The old statistical figures are reported to highlight the sparsity of available suicide data in South Africa. The official statistic on suicide in South Africa for the 10 to 19 year group in 1991 was a total of 166 (Schlebusch, 1995). However, researchers believe that because of cultural,
religious and social taboos, along with other factors such as the lack of systematic criteria and infrastructure, the number of suicides in children and youth is significantly under-reported (Schlebusch, 1995).

Table 2.6, 2.7 and 2.8 list the latest available statistics for Germany and South Africa for 1998-2002.

**Table 2.6: Ratio of completed suicide by gender, age and country**

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>5 – 99 years</td>
<td>5 – 14 years</td>
<td>15 – 24 years</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>2.9:1</td>
<td>2.1:1</td>
<td>3.8:1</td>
</tr>
<tr>
<td><strong>South Africa</strong></td>
<td>4.7:1</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Table 2.7: Suicide rate per 100,000 population by gender, age and country**

<table>
<thead>
<tr>
<th></th>
<th>Suicide rate by gender (2001)</th>
<th>Suicide rate by gender and age (1998)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male/ Female/ Total</td>
<td>Male / Female / Total</td>
</tr>
<tr>
<td></td>
<td>5 - 14 / 15 - 24 / Total</td>
<td>5 - 14 / 15 - 24 / Total</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>20.4/7/13.5</td>
<td>0.7/12.7/0.4</td>
</tr>
<tr>
<td><strong>South Africa</strong></td>
<td>N/A / N/A / N/A</td>
<td>N/A / N/A / N/A</td>
</tr>
</tbody>
</table>

Note: *) 1995

**Table 2.8: Suicide deaths by gender, age and country**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male/ Female/ Total</td>
<td>Male / Female / Total</td>
</tr>
<tr>
<td></td>
<td>5 - 14 / 15 - 24 / Total</td>
<td>5 - 14 / 15 - 24 / Total</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>8104/3059/11163</td>
<td>34/589/16/155/744</td>
</tr>
</tbody>
</table>

**2.2.6. Estimates Of Suicide Attempts**

It is important to keep in mind that there are no official statistics for suicide ideation and attempts. All figures and results presented in the next section are estimates and educated guesses based on individual research results. Therefore the actual rates are unknown and can only be estimated. Some researchers in the USA estimate, it may be as high as 50 to 200 times that of completed suicides (Hawton, 1986; Pfeffer, 1986; Weissman, 1974). Although
males complete suicide about four times as often as females, females attempt suicide at least 
three times as often as do males (Berman & Jobes, 1991). This difference has been explained 
primarily in terms of method choice but it may also be due to case-finding methods.

2.2.6.1. Suicide attempts in an international context

Between 6% and 13% of adolescents in USA have reported that they attempted suicide at 
least once in their lives (Dubrow, Kausch, Blum, & Reed, 1989; Meehan, Lamb, Saltzman, 
Previous research documents lifetime attempt rates of 10% to 37% among homeless and 
runtaway adolescents in USA (Yoder, 1999). In contrast, the lifetime prevalence of suicide 
ights ranges from 3% to 14% in samples of adolescents in high schools and communities; 
from 7% to 22% in samples of adolescents in psychiatric units; and 19.4% in a sample of 
jailed delinquent youth (Meehan et al., 1992; Yoder, 1999). A recent large scale survey data 
indicated that approximately 8.7% of adolescent respondents reported at least one suicide 
attempt over a one year period (Centres for Disease Control, 1996), suggesting that as many 
as 1 in 13 adolescents may be at risk for suicidal behaviour in the USA. Community surveys 
reveal that nearly 62 % of high school students in the USA report having some form of 
suicidal ideation (Prigerson & Slimack, 1999). Unfortunately, it is difficult to compare 
ideation rates between studies because researchers conceptualize suicide ideation in a variety 
of ways (King, 1997). Adolescents who make one suicide attempt have an elevated risk for 
future attempts and completed suicide (for example, Rhode, Seeley, Mace, 1997). The 
underlying facts are that about 1 in 10 adolescents has serious suicide ideation and makes 
suicides attempts (Centers for Disease Control, 1995b). It is also known that these rates have 
increased in the last 40 years, with many researchers quoting a 300 % rise in deaths by 
suicide (Hayden & Lauer, 2000).
2.2.6.2. Suicide attempts in Germany

In Germany, estimated attempts for 1996 were 122 per 100 000 for male and 147 per 100 000 for females (Schmidtke, 1998). For every suicide of a male, there are 5.5 attempts, for females this figure is 18. For 1996, this would have meant 48 600 attempts for males and 61 000 for females, the actual figure is probably much higher.

2.2.6.3. Suicide attempts in South Africa

In South Africa, research looking at rates of attempted suicide or suicidal ideation among adolescents is very limited. One study by Flisher et al. (1993), based on hospital statistics in the Western Cape Province, estimated that the rate of non-fatal suicide attempts is 50 to 100 times higher than fatal attempts. Another chilling statistic from the National Council for Mental Health is that 80% of all teenagers who commit suicide have tried and failed at least once before (Ludman, 1996). The South African National Burden of Disease study (NBD) surveyed 10 699 public school learners from grade 8 to 11 in nine provinces, with the majority of the sample (78.7%) aged between 14 and 18 years (54% female and 46% male) as the first school-based study that explores the prevalence of non-fatal suicides. Injuries (intentional and unintentional) accounted for approximately 22% of deaths in the 15-24 years age group. Of these, homicide and violence accounted for 61% followed by traffic accidents 21% and suicide 10% (Bradshaw et al., 2003). The report suggests that in the six months preceding the survey, one in four learners (24.6%) had sad or hopeless feelings that extended for a period of two weeks or more, and of those who attempted suicide, 27.8% required medical treatment as a consequence (South African Health Review, 2003).

Table 2.9.: Attempted suicide of high school students by province in 2002 (N = 10 699)

<table>
<thead>
<tr>
<th></th>
<th>EC</th>
<th>FS</th>
<th>GP</th>
<th>KZN</th>
<th>CP</th>
<th>MP</th>
<th>NC</th>
<th>NW</th>
<th>WC</th>
<th>Total</th>
</tr>
</thead>
</table>
The prevalence of suicide is a test of height in civilization; it means that the population is winding up its nervous and intellectual system to the utmost point of tension and that sometimes it snaps. (Havelock Ellis, 1859-1939)

3.1. ADOLESCENCE AND SUICIDE

3.1.1. Adolescence
A definition of adolescence requires consideration of age and also socio-historical influences. Adolescence is defined as the developmental period of transition between childhood and adulthood that involves biological, cognitive and socio-emotional changes (Santrock, 1996). Although cultural and historical circumstances limit the ability to place an age range on adolescence, in the USA and most other cultures today, adolescence begins at approximately 10 to 13 years of age and ends between the ages of 18 and 22 for most individuals. The biological, cognitive and socio-emotional changes of adolescence range from the development of sexual functions to abstract thinking processes to independence.

Developmentalists increasingly describe adolescence in terms of early and late adolescence periods. Early adolescence corresponds roughly to the middle school or junior high school years and includes most pubertal change; and late adolescence refers to approximately the latter half of the second decade of life, career interest, dating, and identity exploration are often more renounced in late adolescence than in early adolescence (Santrock, 1996). Developmentalists do not believe that change ends with adolescence. Adolescence is part of the life course and, as such, is not an isolated period of development. While adolescence has some unique characteristics, what takes place in adolescence is interconnected with development and experiences in childhood and adulthood.

Before one can understand adolescent suicide and suicide ideation, adolescence has to be understood as a developmental life stage. Being young in an urban-industrialized society is not easy. We tend to forget that in most pre-industrial, agricultural societies, adolescence was not recognized as a life stage. Only recently, with expanding professionalism and greater demand of skilled and technical labour, have childhood and adolescence emerged as full-blown life stages characterized primarily by dormancy, latency, and prolonged preparation for adulthood. Adolescence tends to be a time marked by marginality, confusion, and
ambiguity. In fact, some have contended that the major problem of adolescence is that adolescents are freed from the responsibilities and rights of adults.

Adolescents are expected to defer sexual gratification and meaningful employment. Although sexual maturity is reached in late childhood or early adolescence, young people are not expected to act out sexually. Promiscuity, teenage pregnancy, sexual assault, and rape are in part an outgrowth of the lack of routine, regular, acceptable, socially and institutionally approved sexual outlets for adolescents (Maris et al., 2000).

Children are expected to remain in school much longer now than a hundred years ago. James Coleman (1962) argued that this prolonged isolation of the young in school has contributed to their developing a counter-culture, set against the dominant adult culture. Also, many believe that substance abuse among the young is related to adolescents being shut out of meaningful participation in society, as well as to the pressures and stresses of being forced to live contingently for prolonged periods of time in an achievement-oriented society. Little wonder then that young people in society may have their own special set of social problems, including adolescent suicide.

King (1997) suggests that each suicidal adolescent has a unique life story and, thus there are no predictive equations with definite decision-making rules for determining whether a suicidal behaviour will occur or not. Stressful life events are associated with attempted and completed suicide in adolescence (King, 1997). For example, parent-adolescent arguments as well as difficulties with romantic relationships are common precipitants of suicidal behaviour among adolescents. Poor development of coping strategies in childhood may well carry into later years, contributing to legal and disciplinary problems. Lewinsohn, Rhode, and Seeley (1994) point out that stressful adolescent life events especially predictive of future suicide attempts are arguments or fights, a relative or friend with alcohol or drug abuse
problems, a relative or friend who tried to commit suicide, and the adolescent moving away from or leaving home. Security and comfort in interpersonal relationships seems to be particularly critical. However, stressful life events may function as proximal risk factors. King (1997) suggests that recent stressors, particularly those that are interpersonal or disciplinary in nature, should be seen as red flags for potentially increased suicide risk among adolescents.

King (1997) stresses that we must try to understand adolescent suicidal behaviour within its social or environmental context and remember that although variables related to family functioning and psychosocial stress have not always shown specificity to suicidal behaviour, they are usually critical aspects of the pathway to suicidal behaviour. At the moment adolescents choose to engage in suicidal behaviour, they have crossed their personal threshold for suffering, frustration tolerance, and adaptive coping (King, 1997).

Whereas the number of investigations into the characteristics of youth who commit suicide slowly increases, the profile of adolescent suicide at this point is incomplete. Common precipitants of adolescent suicide include disciplinary crisis (punishment), interpersonal loss, interpersonal conflict (Shaffer, 1974); interpersonal rejection; humiliation (Blumenthal & Kuper, 1988); and, more recently, shame (Lester, 1997b). Shame may play an important role in increasing the risk of suicidal behaviour and other symptoms of emotional disturbance (Lester, 1997b).

3.1.2. Adolescent Development

Understanding the nature of suicidal processes in young people requires an appreciation of the different developmental changes and life-cycle tasks facing youngsters in general. Successfully resolving the challenges that are inherent in the normative developmental stages
of youth, such as identity formation, gaining peer acceptance and approval, and separating from parents and families, can be a stressful and tumultuous experience for many adolescents. For those young people who might be vulnerable to suicide because of other factors, facing these age-appropriate developmental tasks might be enough to precipitate a serious crisis, including suicide. These developmental considerations need to be taken into account when trying to understand youth behaviour in general, and in particular suicidal behaviour. Moreover, the different types of factors that might heighten the risk for suicide and the way in which such factors might interact across various contexts to produce a suicidal outcome clearly need to be better understood (Thompson & Bhugra, 2000).

The achievement of greater interdependency, rather than increased separation, is an important goal for many non-suicidal adolescent girls (Thompson & Bhugra, 2000). Interdependency is a healthy developmental goal during adolescence and the pathway towards increased interdependency has been disrupted in the lives of many adolescent girls who engage in non-fatal suicidal behaviour. Interdependency, reciprocity and mutual empathy are seen as characteristics of a healthy relationship. Relational theorists propose that women and men experience increased psychological difficulties when opportunities to enter into and sustain healthy relationships are unavailable (Thompson & Bhugra, 2000).

Research into the psychology of female (Thompson & Bhugra, 2000) adolescents tends to support the view that increased interdependency is an important goal for adolescent girls, and their psychological development takes place through a process of affiliation and mutuality within relationships. It has also been theorized that suicidal behaviour by adolescent girls signals conflict or failure in their ability to successfully separate and individuate during adolescence. Although it is generally accepted that female adolescent suicidal acts are a desperate form of communication regarding unmet interpersonal needs, it has also been assumed that these interpersonal needs result from an inability to establish more mature
relationships. It appears this inability manifests itself in a need to be with others. Such females are dependent and rely upon others to help, approve and support. Thus the suggestion is that a female's perception of who she is and how she interacts with others can become a “tool” for altering both the relationship and the perception of the relationship (Thompson & Bhugra, 2000).

Support for this notion is found from the suggestion that female non-fatal suicidal acts have been seen as a means of gaining power and control over others (Thompson & Bhugra, 2000). Implicit in this view is the notion that suicidal girls are not simply seeking to create and maintain relationships, but that they are also inappropriately dependent on them. Studies indicate that in the majority of female adolescent non-fatal suicidal acts, the immediate precipitating factors are relational conflict and loss.

Suicidal behaviour in adolescents has commonly been defined as a 'cry for help', arising from unmet interpersonal needs. Rather than being a dependent cry for help, a young person's non-fatal suicidal act can be understood as a cry for connection. The suicidal adolescents unmet need is for greater interdependency in relationships. The relationship needs to be a two-way interaction. Traditionally, theories of development (for example, Clark, 1993; Erikson, 1950; Leonard, 1967) have proposed that adolescence entails a process of separation-individuation. This view theorizes that healthy adolescent development involves becoming less dependent on others; the formation of an independent, autonomously functioning, emotionally self-reliant character is the successful adaptive achievement of a sense of identity. From this perspective, adolescent development involves a linear progression away from dependence towards interdependence.

Understanding the multiple developmental processes that set the child or adolescent at risk for suicide is a complex problem. Risk for suicide may differ depending on developmental
factors, especially social-cognitive processes. For example, children may have immature views of death (for example, misconceptions regarding the performance of death; that death is ultimate and can not be reversed), may not be accurate in their estimates of lethality and may be less proficient in their efforts to kill themselves (Klimes-Dougan, 1999). Adolescents may have feelings of invulnerability that may influence their involvement in high-risk behaviours.

Adolescence has also been described as a time when peer relationships have an especially powerful influence on feelings of self-worth (Morano, Cisler, & Lemerond, 1993). A supportive social network of close interpersonal relationships might be expected to protect against suicidality in both men and women (Nisbet, 1996).

3.1.3. **Parent - Adolescent Relationships**

Family background and early childhood histories of adolescents range from stable, seemingly nurturing environments to those characterized by drug abuse, disruption, separation, psychological and physical abuse (Brook, Whiteman, Shapiro, & Cohen, 1996; Cobb, 1996; David, Steele, Forehand, & Armistead, 1996).

Bowlby theorized that the relationship between infant and parent affects the child's ability to form bonds in later life (Bowlby, 1980). Although recent studies cite genetic and temperamental factors as considerably influencing the parent-child relationship (Kendler, 1996). For example, Goldney (1985) found problems with parental bonding associated with suicide in young females. Also, Orbach and Mikulincer (1998) showed that negative bodily experience may serve as a facilitator of suicidal behaviour, while positive bodily experiences may be a protective factor against self-destruction and an inducer of life enhancement. There appears to be a special relationship between early maternal care, body protection attitudes,
and the suicidal tendency represented by attraction to death (McGarvey, Kryzhanovskaya, Koopman, Waite, & Lanterbury, 1999).

Little is known about the effects of differences between adolescents' bonding styles with their mother and their father. Affectionless relationships might be expected to be manifest among adolescents who are often neglected or abused, and whose behaviour shows poor adjustment. With the Parental Bonding Instrument, an assessment tool useful for attachment research, one can classify the influence of early childhood bonding experiences by the perceptions an individual forms of his or her relationship with parents on two dimensions: (1) level of care or affection and (2) level of control or protection (Parker, Tupling, & Brown, 1979). From these two dimensions, four classifications of parental bonding styles have been identified: optimal bonding, absent or weak bonding, affectionate constraint, and affectionless control (Parker et al., 1979). The affectionless control style of bonding indicates high overprotective behaviour with low care by the parent and has been characteristic of adults with depression (Goldney, 1985; Mackinnon, Henderson, & Andrews, 1993).

Affectionless control has also been associated with poor social support (Sarason, Sarason, Shearin, 1986) and adolescent drug abuse (Claussen, 1996). Also of note is a study conducted in Scandinavia in a normal high school population, which found that affectionless control increased the relative risk for suicidal thoughts, deliberate self-harm, and depression (Martin & Waite, 1994).

McGarvey et al. (1999) in a study that examined the relationship between parental bonding styles and self-esteem, hopelessness, and suicidality found that among incarcerated adolescents, the father's parental bonding style was related to number of suicide attempts and frequency of suicidal thoughts in the past year. Youths whose parents had affectionless control styles reported suicidal thoughts or attempts most often. Among incarcerated
females, no significant relationships were found between frequency of suicidal thoughts and attempts (McGarvey et al., 1999). It is clear from this study and supporting literature that youths whose parental bonding style is affectionless control are at higher risk for low self-esteem, feelings of hopelessness, and suicide (McGarvey et al., 1999).

Links have been identified between parent-adolescent relationships and adolescent psychological health (Farrell & Barnes, 1993), with adolescents at increased risk of suffering from mental disorders when their symptoms are affected and maintained by family factors (Hurd, Wooding, & Noller, 1999). Suicidal adolescents, for example, report high levels of conflict and poor communication with parents (Adams, Overholster, & Lehnert, 1994). Conversely, when adolescents see themselves as involved in a positive parent-adolescent relationship, the relationship seems to serve a protective or buffering function.

Given that the principal task of adolescence is to establish an independent personal identity (Erikson, 1968), the quality of identity resolution during this period impacts on the psychosocial adjustment of the emerging adult (Seiffge-Krenke, 1993).

Despite the frequent assumption that peers are of overriding importance as sources of social influence and personal well-being in adolescence, the quality of the parent-child relationship proves to be of equal, if not greater, importance (Petersen, Sarigiani, & Kennedy, 1991). A recent study of social support in healthy adolescents found that, while peers provided supportive functions in everyday matters, the social support provided by parents had a stress-buffering effect in emergency situations (Frey & Rothlisberger, 1996).

Adolescent depression has been linked to conflict between parents and adolescents, particularly father-adolescent conflict (Cole & McPherson, 1993; D'Angelo, Weinberger, & Feldman, 1995). Difficulties in family relationships have also been shown to differentiate
suicide attempters from non-attempters (Kosky, Silbum, & Zubrick, 1990). Frequent exposure to family violence, conflict, and aggression is evident in samples of suicidal adolescents. There is also evidence that an adolescent's relationship with his or her family is one of the factors most clearly differentiating between adolescents who attempt suicide and those who are depressed but do not self-harm (Kienhorst, de Wilde, Diekstra, & Wolters, 1992; Kosky et al., 1990). Previous research also indicates that self-harming adolescents frequently have parents who are divorced or separated. Kosky et al. (1990) found that both child suicide attempters and those with suicidal ideation were not significantly different, with both groups more likely to come from single-parent families or have parents who were separated or divorced. Perhaps being in a two parent family acts as a protective factor for an adolescents well-being, and may differentiate between non-clinical and clinical adolescents.

The next part of the literature review will discuss factors related to adolescent suicide. Of particular interest are the factors assertiveness, gender and culture, as these will be used to compare South African and German adolescents.

3.2. FACTORS RELATED TO ADOLESCENT SUICIDE

3.2.1. Stress

Suicide is sometimes triggered by undesirable (especially negative) life events or stress over fairly long periods. These events can include blows to self-esteem, guilt, legal problems, economic strain, interpersonal discord, loss of important social relationships, threat of jail or imprisonment, loss of social status, just being repeatedly overworked, and so forth. Most stress is chronic and accumulates slowly. There can be a few intense, acute triggering events preceding a suicide, but without a history of stress and other vulnerabilities most of us tolerate time-limited, single, dramatic life events without resorting to suicide. Also, triggering (acute) life events are usually not substantially different from the chronic stressors in one's life. Thus, when the suicide threshold is crossed, friends and relatives of the suicide may not
notice anything special going on and often express surprise that the person suicided at all or that they suicided when they did.

Often suicidologists refer to negative social events, relationships, or interactions with the terms of stress or negative life events. House (1986) defines stress as when an individual confronts a situation in which his or her usual modes of behaving are insufficient and the consequences of not adapting are serious. Imagine a marginal high school student who has never developed good study habits, has little raw intelligence, and tremendous family pressure to succeed in his first year at a demanding university. In the past the student had crammed for exams; now this practice no longer works. The student is getting Ds and Fs on examinations, instead of the usual high school Cs. Furthermore, the student's parents have made major financial sacrifices for the student to attend a good university. This student who basically finessed high school finds himself in deep trouble and in danger of failing at university, if not in his future career. He is trying his best, but nothing seems to be working. Obviously, this is a stressful situation for the student.

Based on a thorough literature review, Yang and Clum (1996) suggested that one promising pathway in understanding the aetiology of suicidal behaviour involves connections among early negative life events, cognitive functioning, and suicidal behaviours. Specifically, Yang and Clum (1996) hypothesized that negative life events experienced prior to age 18 results in dysfunctional cognitive patterns that impact individuals' suicidal behaviour.

A variety of early negative life events have been related to the aetiology of suicidal behaviour, including (1) child maltreatment, (2) family instability and (3) poor general family environment (Yang & Clum, 2000). Childhood maltreatment, including physical abuse, sexual abuse, and neglect has been related to suicidal behaviour. Moreover, family instability, defined as parental separation, divorce, absence, and death, has also been found related to individuals' suicidal behaviour. Finally, poor general family environment, defined
as deficient parenting skills, negative parent-child relationships, and parental discord and violence, has been related to suicidal behaviour. The possible effects of these early negative life events on suicidal behaviour may be both short-term and long-term (Yang & Clum, 2000). However, the mechanisms by which these events produce suicidal behaviour in adulthood are poorly understood. One possibility is that these early negative life events affect individuals' cognitive functioning, which in turn affects suicidal behaviour when stressors are later encountered.

In a study by Yang and Clum (2000) which examined the aetiology of suicidal behaviour from cognitive and developmental perspectives, it was hypothesized that early negative life events may impact individuals' suicidal behaviour by affecting cognitive functioning. Findings from the study supported this hypothesis. Specifically, when child maltreatment, family instability, and poor general family environment were examined as a combined measure of early negative life events and self-esteem, locus of control, hopelessness, and problem-solving deficits were examined as a combined measure of cognitive deficits, a clear cognitive pathway was identified in the relationship between early negative life stress and later suicide ideation. Based on a series of structural equation analyses, the impact of early negative life events on suicidal behaviour was much stronger via their impact on cognitive functioning than via their direct impact on suicidal behaviour. When individuals' perceived early social support; current social support, and current life stress were included in order to examine their relative impact on suicidality, several interesting findings emerged. First, the direct impact of early negative life events on suicide ideation almost disappeared after indirect links were made through cognitive deficits, current social support, and life stress. Also, the direct link between current life stress and suicide ideation was weak. These findings lead to a conclusion that life stress (early or current) does not lead to suicide ideation directly (Yang & Clum, 2000). Rather, it affects suicide ideation through its impact on other, primarily cognitive, variables. Second, early negative events affected current cognitive
deficits, while current life stress did not (Yang & Clum, 2000). The fact that early negative life events were related to cognitive deficits fits the developmental perspective of Yang & Clum's hypothesis. That is, early negative life events have a long-term impact on suicidal behaviours via their effect on cognitive functioning. The absence of a relationship between current life stress and cognitive functioning with the developmental hypothesis. In this formulation, early stressors produce either stable deficits in cognitive functioning or an increased likelihood that cognitive deficits will develop under certain as yet undetermined conditions (Yang & Clum, 2000).

3.2.2. Hopelessness And Depression

Within the field of psychology and psychiatry, much of the research on factors considered to be related to adolescents' suicidal behaviours has focused on variables such as depression (Brent, 1989; Smith & Crawford, 1986), hopelessness (Cole, 1989; Rotheram-Borus & Trautman, 1988), social support (Hawton, 1986; Lewinsohn, Rohde & Seeley, 1993; Pfeffer et al., 1991; Wagner, Cole & Schwartzman, 1995) and socioenvironmental stressors (Lewinsohn et al., 1993; Rubenstein, Heeren, Housman, Rubin, Stechler, 1989; Wagner et al, 1995). This research has used both clinical and non-clinical samples of adolescents, and, for the most part, has examined concurrent relationships among these variables. Hopelessness may be conceptualized as a relatively stable schema incorporating negative expectations. During psychiatric distress, such as a depressive episode, hopelessness increases, posing an acute risk to suicide. For most, hopelessness decreases as the depression remits. Yet, high hopelessness in one episode is predictive of high hopelessness in subsequent episodes (Beck; Brown, Linnoila, Goodwin, 1992). Hopelessness is defined as a lowered expectation of achieving certain goals and a reduced belief in the likelihood of success. Hopelessness involves feelings of personal futility about the future, loss of motivation and future expectations that one will either fail, continue to suffer or encounter negative consequences (Dori & Overholser, 1999).
Hopelessness, conceptualized as a pessimistic perception of the future, has been studied as it relates to suicidal behaviour in adolescents. In adults, hopelessness has been found to mediate the effects of depression on suicidal behaviour. Studies of hopelessness, depression and suicidal behaviour in adolescents have reported mixed results (Cole, 1989; Lewinsohn et al., 1993; Rich, Kirkpatrick-Smith, Bonner, Jans, 1992). In a study of approximately 1700 high school students Lewinsohn et al. (1993) found that when depression was statistically controlled, other psychosocial variables, including hopelessness, were no longer related to previous suicide attempts. These results are generally consistent with Cole's (1989) findings. Cole, in a study of school-based adolescents, found that when depression was statistically controlled, the relationship between hopelessness and suicidal ideation for males was not statistically significant. Hopelessness in females remained moderately related to suicidal ideation levels when the relationship with depression was controlled. When hopelessness was statistically controlled, depression remained a significant predictor of suicidal ideation in males and females. Somewhat different results were found by Rich et al. (1992), who examined depression, hopelessness and other psychosocial variables, who reported that hopelessness was the best predictor of suicidal ideation.

Mazza & Reynolds (1998), in a longitudinal study of 374 high school students found that, in males, changes in depression and hopelessness were related to the residual changes in suicidal ideation, even with the contribution of the social-environmental factors removed. Similarly, changes in depression and hopelessness for females were also significantly related to the residual changes in suicidal ideation. These findings suggest that changes in depression as well as changes in hopelessness are important risk factors for males and females who are experiencing suicidal ideation. On the other hand, although depression and hopelessness were
related to current severity of suicidal ideation, they were relatively weak in the multivariate prediction of future levels of suicidal cognitions one year later when levels of social support and stressors were also examined (Mazza & Reynolds, 1998). These findings are similar to the results of the Reifman and Windle (1995) 6-month longitudinal study, where hopelessness did not predict future suicidal ideation and depression showed a weak relationship with suicidal ideation.

In contrast to adult patients, among depressed adolescents and children, the role that hopelessness plays in suicidality remains unclear (Dori & Overholser, 1999). Hopelessness may not be a reliable indicator of suicidal risk in youth because of the possible developmental difficulties in conceptualizing the future clearly. In comparison to adults, adolescents often focus more on the immediate present than on the future.

Although depressive symptoms can predict suicide ideation and behaviours during childhood and adolescence, hopelessness has not always been useful in distinguishing between depressed suicide attempters and non attempters (Pinto & Whisman, 1996). In other cases, hopelessness has shown strong relationships with depression and suicidal behaviours throughout adolescence (Hammond & Romney, 1995; Pinto & Whisman, 1996). In several studies on youth, suicidal intent was more consistently correlated with degree of hopelessness than with depression. Also, hopelessness has been related to suicidal behaviour and suicide ideation even after depression severity was controlled (McLaughlin, Miller, & Warwick, 1996). Thus, both hopelessness and depression appear to be strongly related to one another and to contribute to suicidal tendencies in adolescents.

Dori and Overholser (1999), in a study of 90 adolescent psychiatric inpatients, found that adolescents who experience higher levels of hopelessness during a depressive episode are at increased risk for repeatedly engaging in suicidal behaviour. In addition, results showed that
adolescents who had attempted suicide on more than one occasion displayed more severe levels of depression than adolescents who had attempted suicide only once. These findings also suggest that hopelessness plays an important role in discriminating repeat suicide attempters from single attempters (Dori & Overholser, 1999). Thus hopelessness may represent a lasting cognitive vulnerability in certain adolescents that elicits suicidal tendencies during a depressive episode.

It seems that when individuals with poor social problem-solving skills are faced with a problem or external stressors, they are unable to generate solutions to the situations, become overwhelmed and progressively more hopeless, and, as the level of hopelessness increases, become more at risk for depression and, ultimately, suicidal behaviour (Pollock & Williams, 1998). This reasoning is at the basis of Schotte and Clum's (1987) diathesis-stress-hopelessness model of suicidal behaviour.

Hopelessness about the future is an important factor in suicidal behaviour, and has been frequently reported in research as mediating the relationship between depression and suicidal intent within para-suicidal populations. The relationship between hopelessness, problem-solving, and other risk factors is complex (Rudd, Rajab, Dahm, 1994). Hopelessness was thought to be a consequence of cognitive rigidity, dichotomous thinking, and problem-solving deficits. However, Schotte and Clum (1987) compared the responses of suicidal and non-suicidal patients and found that the suicidal subjects were able to provide fewer than half as many potential solutions as the non-suicidal patients. The suicidal patients rated their solutions as being potentially effective but tended to focus more on the negative side-effects of implementation than the control group. The researchers concluded that although hopelessness was an excellent predictor for the level of suicidal intent, the non-significant correlations between the degree of hopelessness and measures of problem-solving skill that they found were an indication of a general maladaptive orientation, or set, toward problems.
Dixon, Heppener, Rudd (1994) have focused on problem-solving appraisal in a study expanding Schotte and Clum's (1987) work. They concluded that hopelessness mediates the relationship between problem-solving appraisal and suicide ideation and argued that their results underscored the usefulness of hopelessness in predicting suicide ideation. Additional research supports these conclusions and suggests that the relationship between self-appraisal of problem-solving ability and hopelessness is important and needs to be examined more closely (Rudd et al., 1994; Wilson et al., 1995). Dixon et al. (1994) suggest that it may be of value to focus clinical investigations on hopelessness and problem-solving appraisal. They point out that when people think they cannot cope with the problems they face, they are at risk for becoming hopeless about the future, and this sense of hopelessness is what leads to suicide ideation.

The role of depression in the assessment of suicide risk is not as direct and simple as it seems (Tomori & Zalar, 2000). The research findings on the importance of depression among the risk factors for suicidal behaviour in adolescents reveal differences depending on whether the data are derived from samples of completed suicides, from clinical samples of adolescents following suicide attempts, or from community-based samples. In his study of completed suicides in adolescents, Shaffer et al. (1996) has confirmed that depressive mood disorder significantly increases the risk of suicide in both sexes. Studies carried out in different countries (Shaffer et al., 1996) often associate the presence of major depression and other affective disorders with completed suicides. Depression has also been confirmed in clinical sample of adolescents after attempted suicide (Kumar & Steer, 1995).

Studies of suicide risk in the community adolescent population have revealed a higher level of depression in suicide attempters, although this correlation is less convincing when one considers that the samples studied comprised a considerable portion of adolescents
whose levels of depression did not reach clinically relevant levels. However, irrespective of whether a significant proportion of adolescent suicide attempters without depressive mood disorder were found among subjects with conduct disorders or among those with impulsive suicidal behaviour, the rate of non-depressed adolescents at risk for suicide should not be ignored. Rotheram-Borus and Trautman (1990) have pointed out a decreased ability to solve interpersonal problems in adolescent suicide attempters, which need not necessarily be associated with depression. According to their opinion, which is confirmed by the literature, depression cannot be attributed to all suicidal adolescents.

Rao, Weissman, Martin, and Hammond (1993) conducted a 10-year follow-up study of 159 children and adolescents who were diagnosed with depression and reported a higher rate of suicide in the depressed group than in a small comparison group previously diagnosed with anxiety disorder. Depression has also been frequently reported in adolescents who exhibit suicidal behaviour (Brand, King, Olson, Ghaziuddin, Naylor, 1996). Research studies examining the relationship between depression and suicidal ideation in adolescent suicide attempters report moderate correlations, (ranging from r=0.40 to r=0.60) (Sadowski & Kelley, 1993). Similarly, in studies of non-clinical adolescents, the relationship between depression and suicidal ideation is of similar magnitude (Mazza & Reynolds, 1998).

Although depression and suicidal behaviour are related, they are not synonymous. Adolescents who exhibit suicidal behaviour are not necessarily depressed, nor are all depressed adolescents contemplating suicide (Mazza & Reynolds, 1998).

Children of depressed parents may be at risk for suicide for a numbers of reasons. Offspring of depressed parents often do not have the support in their home environment to master the developmental challenges they encounter (Klimes-Dougan et al., 1999). Indeed, their home environments are often characterized by emotional unavailability, stress, and
conflict (Wagner, 1997). These children may be at risk because of their exposure to family
members who have attempted or committed suicide.

Several studies have investigated the possible link between parental depression and child
suicidality but few of the studies have found suicidal ideation or behaviour to be significantly
more prevalent in children of depressed parents than in controls. The relatively low base rate
of suicidal thoughts and behaviours, the diversity of the participants (for example, child's age,
parent's diagnosis), and the range of methods used (for example, how and what aspects of
suicidal thoughts and behaviour were assessed), make it difficult to determine whether
children of depressed parents are indeed at risk for suicidality (Klimes-Dougan et al., 1999).
On the other hand, Klimes-Dougan (1999) in a study that compared children and adolescents
of depressed and well mothers, provide evidence that children of depressed mothers are at
risk for suicidal ideation. Children of depressed mothers were more likely than children of
well mothers to (1) report suicidal ideation or behaviour in early childhood through
adolescence, (2) have seriously considered suicide by the time they reached adolescence, and
(3) have persistent thoughts of suicide (report suicide over multiple assessment periods).

3.2.3. Self – Esteem

The relationship between depression and suicide may be moderated by other variables,
such as self-esteem. However, there exists a direct relationship between degree of depression
and negative self-esteem (Hammond & Romney, 1995), with low self-esteem believed to
predispose one to depression (Birmaher et al., 1996). Self-esteem also has related to past
suicide attempts even after gender and depression were controlled (Lewinsohn et al., 1993).
Additionally, adolescents who have attempted suicide have been found to have significantly
lower self-esteem than non-suicidal inpatients (Pinto & Whisman, 1996) and normal controls
(Kienhorst, de Wilde, Van den Bout, Diekstra, & Wolters, 1990). In contrast, high self-
esteeem, even in the presence of depression and hopelessness, has been found to function as a
protective factor against suicidal behaviour (Overholser, Adams, Lehnert, & Brinkman, 1995). When evaluating suicide ideation and attempts in adolescents, self-esteem often does not add unique variance to the prediction of suicidality when depression severity is statistically controlled (Marciano & Kazdin, 1994; Myers et al., 1991; Pinto & Whisman, 1996). Nonetheless, low self-esteem has functioned as a better discriminator of suicidality than hopelessness, particularly with younger children (de Wilde et al., 1993; Marciano & Kazdin, 1994), and self-esteem has been more closely related to presence and severity of suicide ideation than hopelessness (Ryan, Kienhorst, Diekstra, Wolters, 1987).

3.2.4. Assertiveness

Previous research efforts generally conceptualized assertiveness as a unidimensional concept and produced inconsistent results in the study of suicidal behaviour. Different dimensions of assertiveness may be relevant to increased or decreased propensity to suicide (Eskin, 1995a).

Lonely individuals tend to be shy, less assertive, less able to initiate social contacts, and to have difficulty in introducing themselves to others. In view of this, one's assertive and social skills appear to be the major determinants for establishing and maintaining supportive social relations with others. Suicide attempts generally are believed to imply a cry for help and to be manipulative. Taking the nature of personal assertiveness as 'one's ability to appropriately articulate desires and express feelings,' it makes intuitive sense that such assertive and social skills may be deficient or lacking in suicidal adolescents as compared to non-suicidal ones (Eskin, 1995a, p. 202).

However, research efforts to date have failed to document a consistent association between assertiveness and suicidality. For instance, in a study that compared 42 suicidal and 14 non-suicidal affectively disordered adolescents, Brent, Kolko, Allan, and Brown (1990)
found suicidal intent to be related to lack of assertiveness among the suicidal subjects. On the other hand, Linehan, Camper, Chiles, Strosahl, and Shearin (1987) compared psychiatric inpatients admitted for current suicide attempt, serious suicide ideation, or non-suicide-related complaints with a control group of orthopaedic surgery patients. Psychiatric patients in general were found to be less assertive than the surgery group, but no differences were observed as a function of suicidal behaviour status. Also, Eskin (1995a) in a study that compared Swedish and Turkish adolescents, failed to document a relationship between suicide attempts and suicide risk and assertiveness. However, there was a strong relationship between assertiveness and perceived friend support on the one hand and number of friends on the other hand. This assertiveness is related to adolescents' feelings of being supported by their peers and having a larger number of friends. Assertive social-skills can be considered to be a basis for establishing and maintaining meaningful peer interactions and, hence, preventing feelings of depression and social isolation (Eskin, 1995b).

In South Africa there is little information published about assertiveness in adolescents. Casteleijn (1994) in a study that was designed to compare the level of assertiveness in black suicidal and non-suicidal adolescents found that there was no significant difference between the two groups, but also noted that this may have been due to the small sample size of 26 subjects.

**3.2.5. Gender**

Gender differences in suicidal behaviour rates emerge during adolescence, when females are more likely to engage in suicidal behaviour, but are less likely to die as a result of a suicidal act than males. These gender patterns of suicidal behaviour are common but not universal, suggesting cultural influences.
Studies suggest that adolescents in the USA perceive non-fatal suicidal behaviour as more feminine and less potent than killing oneself. Persons who are suicidal in response to a relationship problem are considered more feminine than persons who become suicidal in response to an achievement failure. Males are more critical and avoidant of suicidal persons than females, especially when the suicidal person is a male. These beliefs may play a role in decisions about suicidal behaviour (what kinds of suicidal behaviour are chosen, and under what conditions). Cultural narratives of gender and suicidal behaviour may be particularly influential for adolescents because adolescents are in the process of defining their identity, and often take cultural messages about “appropriate” gender behaviour more seriously and more literally than adults (Canetto, 1997).

Gender is one of the most reliable predictors of suicidal ideation and behaviour among adolescents. Adolescent females are more likely than adolescent males to report suicidal thoughts and to engage in suicidal behaviour. Adolescent females, however, are less likely to die as a result of a suicidal act than adolescent males (King, 1997). This gender difference in rates of suicidal behaviour is not apparent in childhood, when all forms of suicidal behaviour are relatively uncommon (King, 1997; Shaffer et al., 1996). Many explanations for the gender difference in rates of different kinds of suicidal behaviour have been proposed. None of these explanations has been unequivocally supported, mostly because the relevant research has not been performed.

Reflecting on the epidemiology of suicidal behaviours during adolescence in the USA, King (1997) notes that the most striking feature is the high prevalence of suicidal ideation and non-lethal suicidal behaviour. At no other time in the lifespan is the ratio of suicide attempts to completions as high as it is during adolescence. When viewed in terms of the total population of adolescents, suicide is a low frequency event during adolescence, because actually, few adolescents take their own lives (King, 1997).
In the USA, women are overrepresented in the so-called internalizing disorders, namely disorders that are primarily self-destructive, and in which the pain and hostility are turned inward. Men, on the other hand, are overrepresented in the so-called externalizing disorders, namely disorders that involve some degree of external destructiveness, and in which pain and hostility are turned outward. It has also been noted that even when women and men exhibit similar forms of psychological distress (for example, suicidal behaviour), women's problems are conceived of as personal ones and are dealt with via the mental health systems, whereas men's problems are seen as social ones, as an indication of cultural, economic, or social malaise, and are dealt with via social programs and the legal system (Canetto, 1997).

It is not clear how the internalizing - externalizing model may apply to the case of suicidal behaviour. In some ways, all suicidal behaviour is a kind of an 'internalizing' behaviour, a behaviour in which pain and hostility are turned into a form of self-punishment. By this definition we would expect adolescent and young adult females to be overrepresented in all forms of suicidal behaviour, especially since adolescent and young adult females are more likely than males of the same age to suffer from depression, an internalizing disorder that is associated with suicidal behaviour. The life span course of depression, suicidal ideation, and non-fatal suicidal behaviour follow a similar pattern in females: They increase during adolescence and are high during young adulthood (Lewinsohn, Rhode, Seeley, 1996). In other ways, suicidal behaviour looks like an 'externalizing' disorder because it involves a degree of aggression and the defiance of social, religious, and sometimes legal prohibitions. By this definition we would expect adolescent and young adult males to be overrepresented in all forms of suicidal behaviour, especially since adolescent and young adult males are more likely than females of the same age to engage in violent and illegal deviant acts, such as conduct disorders or paraphilias (Canetto, 1997).
Relatively little attention has been paid to the risk factors of age and sex. It is well known that both older age (within adolescence) and male sex convey a 5-fold increased risk of suicide (Centers for Disease Control, 1995), yet there is little empirical data to explain why this is so. An elucidation of the role of these two demographic risk factors may be helpful in understanding the aetiology and in the prevention of adolescent suicide. Explanations for the lower suicide rate in younger adolescents have included lower rates of psychopathology and less of an ability to plan and execute a lethal suicide attempt. Psychological autopsy studies (which can be defined as a procedure for reconstructing an individual's psychological life after the fact, particularly the person's lifestyle and those thoughts, feelings and behaviours manifested during the weeks preceding death, in order to achieve a better understanding of the psychological circumstances contributing to a death [Clark & Horton-Deutsch, 1992]) have indicated that younger adolescents may show lower suicidal intent, are less likely to use substances at the time of the suicide and have lower rates of psychopathology, especially substance abuse (Groholt, Ekeberg, Wichstrom, & Haldorsen, 1998; Shaffer et al., 1996).

Parent-child conflict may be a more significant risk factor for younger adolescent suicide victims as well (Groholt et al., 1998). Groholt et al. (1998) concluded that younger suicide victims were similar in most ways to older victims but had lower rates of risk factors. Shaffer et al. (1996) felt that younger suicide victims were qualitatively different, insofar as fewer of the younger victims truly intended to commit suicide.

Explanations for the higher suicide rate among males include higher suicidal intent, use of more violent methods, higher prevalence rates of antisocial disorder and substance abuse, and greater vulnerability to stressors such as legal difficulties, financial problems, or interpersonal loss (Gould, Fisher, Parides, Flory, & Shaffer, 1996; Shaffer et al., 1996). The co-occurrence of mood, substance abuse, and disruptive disorders is uniquely high in older male adolescents, for whom the highest adolescent suicide rates are observed (Shaffer et al.,
Brent, Baugher, Bridge, Chen, and Chiappetta (1999) identified some possible explanations for the increased risk of suicide in older compared with younger adolescents, and to a lesser degree, some possible factors that might account for the increased risk of suicide in males compared with females. The increased rate of suicide in older adolescents is due in part to greater prevalence of psychopathology, namely substance abuse, and greater suicidal intent. The increased rate in males was less easily explained, but Brent et al. (1999) argue that it may stem from method choice and the greater prevalence of and risk conveyed by conduct disorder in males.

Recently, anxiety has been identified as an important risk factor for suicidal behaviour in adults (Ohring et al., 1996). Several studies indicate that anxiety disorders are associated with an increased risk of suicidal behaviour (Apter, Plutchik, & van Praag, 1993). However, the results of studies of adolescent populations have shown mixed results. For instance, in one study of adolescents admitted to a psychiatric inpatient program after a suicide attempt, anxiety was determined to be a risk factor for suicidal behaviour (Ohring et al., 1996). By contrast, Taylor and Stansfield (1984) did not find any significant relationship between anxiety and suicidality in a study of adolescent suicide attempters, as compared with psychiatric outpatients. Furthermore, when anxiety is compared by gender, differing results have emerged. For example, Ohring et al. (1996) found no gender differences in mean levels of anxiety compared with adolescent psychiatric inpatients without any history of suicide attempts. Bettes and Walker (1986), however, found anxiety to be associated with suicidal behaviour only in male adolescents.

Gender clearly influences suicidal behaviour, but knowledge about the differences between female and male adolescent suicide completer's is scanty (Groholt, Ekeberg, Wichstrom, & Haldorsen, 1999). We do not know why the increase in suicides among adolescent males in the last two decades has not affected females to such an extend, and why
the adolescent suicide rate is lower for females than for males. Several authors have discussed the gender differences in suicide rates, advancing hypothesis related to mental disorders, use of suicide method, and gender determined attitudes. Young, Fogg, Schoftner, and Fawcett (1994) predicted suicide among depressive adults and found that the relationship between gender and suicide disappeared when they controlled for substance abuse and having a child. Different choice of suicide method also may influence suicide rates; males more often display violence and are more likely to engage in masculine self-destructive behaviour such as alcohol and substance abuse, associated with violent suicide methods (Moscicki, 1994). The differential suicide rates have also been attributed to different socialization (Canetto, 1997; Moscicki, 1994). Males may have a greater fear of social disapproval associated with suicidal thoughts than females and may regard suicide attempts as feminine.

The influence of cultural scripts of appropriate suicidal behaviour may be particularly powerful in adolescents (Canetto, 1999). Gender differences in help seeking behaviour and higher treatment rates in depression for females may in part explain the gender difference in suicide rates. For example, in Finland, more females had received psychiatric care prior to their suicide than had males (Marttunen et al., 1995), which may reflect this different help-seeking behaviour. No such differences were found in a study in New York (Shaffer et al., 1996).

So far we have only limited knowledge regarding these hypothesis for adolescents. The most important risk factors for adolescent suicide are psychiatric disorders and substance abuse (Groholt, Ekeberg, Wichstrom, & Haldorsen, 1997; Shaffer et al., 1996). Some findings from autopsy studies indicate that the females committing suicide were slightly more often depressed than the males (Marttunen et al., 1995; Shaffer et al., 1996). Because females, from adolescence onwards, suffer from depression approximately twice as often as males.
(Birmaher et al., 1996), the prevalence of affective disorder is not a likely candidate for explaining the gender differences in suicide rates.

Females completing suicide had disruptive disorders less often than males (Marttunen et al., 1995; Shaffer et al., 1996), but the suicide risk of disruptive disorders did not differ between the sexes (Shaffer et al., 1996). Knowledge about precipitating events and stressors influencing adolescent female and male suicides is also scarce. Gould et al. (1996) found that the impact of psychosocial stressors was similar for males and females with one exception: Interpersonal loss increased the suicide risk in males, but not in females. Brent (1993b) found that substance abusers were vulnerable to loss, which may contribute to the gender difference. Marttunen et al. (1995) stated that family problems were common among females. However, he provided no comparative data.

A wide range of explanations has been proposed to account for why women choose less violent methods than men to commit suicide (Denning, Conwell, King, & Cox, 2000). In a sample of 228 suicide attempters, Canetto and Sakinofsky (1998) examined intent to die and found that females and males reported equal intent on killing themselves and wanting to die. Other evidence supporting the importance of intent was reported by Beautrais et al. (1996), who found that the proportion of men and women in their sample of 302 individuals who made a medically serious attempt was almost equal, even though twice as many women used a non-violent method (Beautrais et al., 1996). In a study by Denning et al. (2000), who studied 141 completed suicides through the psychological autopsy study, the differences in method choice by men and women who died by suicide was also not accounted for by lethality of intent. Although men chose more violent and lethal methods to commit suicide, they did not evidence greater intent. Therefore, other explanations for differences in method choice by gender should be considered.
3.2.6. Culture

Culture and related terms such as ethnicity, subculture, multicultural, ethnic identity, and minority group are difficult to define. Culture refers to the fact that human groups are distinguishable by the manner in which they guide and structure behaviour and the meanings they ascribe to it. Leenaars et al. (1998) stated that our own understanding and, hence, usage of these terms and their underlying concepts are limited or maybe even ethnocentric. Cultural “filters” or “blinders” are ubiquitous. Sensitivity to cultural issues is imperative.

There are several possible explanations for the lack of importance placed on the study of culture. First, it has been suggested that the specific orientation of Euro-American culture has had an impact on the actual definitions (what we call “fact”) used in psychological research and clinical work (Shiang, 1998). Markus, Kitayama, Heiman (1997), in reviewing core principles of social psychology such as motivation, cognitions, interpersonal behaviour, suggested that psychologists may be prematurely settling on one psychology, that is, on one set of assumptions about what are the relevant or most important psychological states and processes, and on one set of generalizations about their nature and function. According to this model there are universal “truths” that exist throughout the world which can explain human behaviour regardless of culture. Much of this model is based on the primary assumption that the end-state of all human potential is an autonomous, individuated person (Shiang, 1998).

Second, culture is so ingrained into our daily functioning and thinking that it is difficult to identify it, much less talk about it - we just do it (Shiang, 1998). It is something taken for granted and therefore not defined. Some people do not even realize that they have a culture. It is often only when a person identifies with a non-dominant segment of the society that he or she perceives having a culture (Shiang, 1998).
Clearly, all people have a culture - whether recognized consciously or not - and this culture has an impact on the study of suicide and other behavioural consequences of profound despair. Past research suggests that cultural practices are much more important than previously thought in determining day-to-day behaviours, including the patterns that a person chooses to complete suicide (Shiang, 1998).

Suicide in Western cultures would be viewed as an independent, autonomous act, whereas, for example in Asian cultures suicide would be assigned a meaning in the context of relationships (Shiang, 1998). Support for this view comes from the differences in the typical response to a suicide in these cultures. In Western cultures, the question commonly asked is: “Why ? Why did this happen ?” The perspective is that the individual has made a choice to commit suicide. In Asian culture the question often asked is “Who caused this death ? Who drove this person to suicide ?”

“Aren't similarities and differences among people really due to biology, the basic temperament, the personality, psychological motivation and environmental forces ? What we know is that there are clear similarities among people everywhere in the world. People generally need to interact with others, need food, need shelter and have emotional experiences. Yet there are obvious differences among people in how they interact, what types of food and shelter they prefer, as well as how they exhibit emotional behaviours. Thus, it is not surprising that we should find in the study of suicide that, although all societies assign meaning to death and suicide, these particular meanings and consequences for living are varied” (Shiang, 2000, p.226).

The culture is the stuff and way of everyday living. It also provides the learnings and solutions to problems in life's trajectories. These solutions can be thought of as culture specific; solutions are promoted through transmission from parent to child and are considered successful adaptions to environmental pressures. However, only certain kinds of solutions are
acceptable in the culture, and these are often gender related. Canetto and Lester (1998) suggest that narratives of suicidal behaviour can be examined through the lens of gender-specific cultural “scripts”. Analysing beliefs in the USA about suicide, they suggest that researchers assumptions of suicidal men and women, while based on fact, are also based on specific cultural “scripts” that are associated with life goals of men and women in the given society. In addition they provide examples of non-western cultures that provide evidence that the gender specific scripts vary across cultures. This type of analysis helps us to understand how it is essential to consider specific life goals, as influenced by cultural beliefs and behaviours, when determining the meaning of suicide within a given population.

Every individual in a particular cultural milieu learns to use cultural specific coping strategies to promote health and development. Cross-cultural studies have shown that responses to stress are culturally relevant (Tanaka-Matsumi & Draguns, 1997). The strategies and behaviours used by people to reduce stress can often be understood as 'logical' within the specific cultural system. The decision to attempt suicide has an understandable culture-specific meaning, especially when psychopathology is absent (Shiang, 2000).

In the societies where the individual is of primary focus, suicide is viewed as an individual's decision; we exhibit concern when we know that someone has ideation, but it is only when he or she tells us they have a plan to act that we have obligations to confine them in order to prevent the act. Within societies that view the self as an interdependent self, there are generally societal interventions that are woven into the fabric of daily interactions (the auntie that drops by or the neighbour who keeps an eye on the person) and yet, when unusual behaviour is exhibited (severe mental health, suicide, suicide due to mental health problems), the person is generally stigmatized and even shunned. One way to understand this is that 'not fitting in' would have greater negative consequences in societies that value the cohesiveness of the larger group; the person is therefore shunned.
In studies of American adolescents, researchers have identified differences in the predictors of suicide ideation across different cultural groups, as well as within cultural groups (Vega, Gil, Warheit, Apospori, & Zimmerman, 1993). Vega et al. (1993) studied the correlates of suicide attempts, specifically drug use, suicide ideation, and previous suicide attempts among a large, ethnically diverse sample of adolescents living in the greater Miami area. They identified differences in the correlates of suicide attempts across the different ethnic groups as well as between the different sub-samples of Hispanics. For example, among Nicaraguans, suicide attempts were associated with previous suicide attempts and use of psychoactive drugs; among Cuban Americans, with previous suicide attempts, previous suicide ideation, and psychoactive drug use; and among non-Cuban Hispanics, with previous attempts, previous suicide ideation, and use of alcohol, cigarettes, and psychoactive drugs.

Zhang and Jin (1996) compared the relationship between religiosity and suicide ideation among 320 mainland Chinese students (attending college in mainland China) and 452 American college students (mostly White and Protestant, attending a college in the Rocky Mountain region of the United States). While religiosity was negatively related to suicide ideation among the American students, it was positively related to suicide ideation among the Chinese students. The authors related this finding to the different roles that religion plays in the two societies. Whereas religion plays an integrative role in Protestant American society, it was repressed in China following the Communist takeover in 1949 and has gradually re-emerged in recent years as a form of deviant behaviour, particularly among youth who have been disappointed by the Communist Party.

Suicide rates are lower in religious than secular countries (Breault, 1986). However, various issues concerning this association remain unresolved. It is unclear whether a negative association between religion and suicidal behaviour also applies at the individual level.
Research in this field often relies on religious affiliation or church membership as variables (Neeleman, Halpern, Leon, Lewis, 1997). Hence, it is also not clear whether a negative association between religion and suicide is attributable primarily to social cohesion provided by religious organizations (Durkheim, 1951) or to an association of religious belief with reduced tolerance of suicidal behaviour. It is often argued that religion protects against suicide because it offers opportunities for social integration for instance through church membership or attendance. In a study by Neeleman et al. (1997) it was found that suicide rates relate more strongly to levels of religious belief and suicide tolerance, than to church membership or attendance. This supports the view that commitment to a set of personal religious beliefs may be more important in guarding against suicidal behaviour than social integration in religious groups.

Several comparative inter-cultural studies (for example, Eskin, 1995a; Eskin, 1995b) have shown that the influence of certain sociocultural determinants on suicide characteristics make generalizations of findings into another sociocultural milieu impossible (Tomori & Zalar, 2000).

The father of contemporary suicidology, Edwin Shneidman, has embedded his widely accepted definition of suicide within a cultural framework. Shneidman (1985, p.203) writes:’’Currently in the Western world, suicide is a conscious act of self-induced annihilation, best understood as a multidimensional malaise in a needful individual who defines an issue for which the suicide is perceived as the best solution.” Shneidman (1985, 1991) stated that his proposed definition is applicable only to the Western world and noted that this caution needed to be given so that cross-cultural comparisons do not make the error of assuming that a suicide is a suicide. The views of suicide commonly held in Western cultures (for example,
as portrayed by the media) are likely not shared by the individual, family, or community outside the Western hemisphere and perhaps even within.

3.2.7. Risk-taking and indirect self-destructive behaviour

Risk-taking behaviour and indirect self-destructive behaviour (ISDB) may be defined as volitional acts that pose significant risk to life. They span a continuum from high-risk sports to unprotected sex, drunk driving, and Russian roulette. While consciously accepting the odds of death and injury, the actors who gamble in these ways operate with defences that defy describing these acts as suicidal in intent. They are either unaware of or in denial of any suicidal wish or goal; outcomes are either left in God’s hands or often believed controllable by preparation, training, and a personal sense of mastery. Concurrently, there is a reckless disregard of potential consequences, in spite of precautionary warnings.

It’s important to distinguish ISDB’s from behaviours more directly suicidal. Self-destructive behaviour takes many forms. Familiar are the behavioural manifestations that result in death, injury or pain intentionally inflicted upon the self or that are voiced in the form of threats that death is intended or planned. For the most part such behaviours are overt and visible and frequently have as an important element in their manifestation a forceful communication of an unhappy, distressed state – so distressing that the person voluntarily intends to leave it.

In contrast, there are a number of behaviours that are self-harmful, frequently injurious, self-negating and self-defeating in which the individual engages but in which there may be no intention to die; in which there is often what seems like complete disregard of the painful and harmful effects of their behaviour and in which the individual does not consider himself
suicidal. These behaviours are called ISDBs to distinguish them from the direct forms of self-destruction.

Classification of suicidal behaviours assumes that direct and indirect forms lie on a linear continuum with one end occupied by completed suicide; that is, death by one’s own hand, clearly intended and often substantiated by a written note or verbally. Less direct or less lethal suicidal behaviours include suicide attempts, para-suicides, threats to kill oneself and continuous rumination about death. At the other end of the continuum is a vast array of ISDBs that includes harmless errors, bungled actions, minor accidents, substance abuse and addictions, gambling, non-compliance with prescribed medical regimen, excessive risk-taking, self-punishment and self-mutilation.

The distinguishing characteristics of ISDBs lie in their dynamics, intentions, defences and social responses. In suicidal behaviour, the motive force is either interpersonal (that is, to change or influence others’ behaviours) or intra-psychic (that is, to escape a painful state). The underlying dynamics are defined by a negative sense of self or of one’s existence, and these feelings are typically described by one or more mental disorders (for example, depression). In ISDBs, psychopathology is less in evidence, the aim of the behaviour is to seek pleasure, increase arousal, and feel in power or in control. The suicidal person seeks death or is willing to harm the body to change his or her human condition. The person who engages in ISDB is willing to face the risk of death in order to overcome his or her anxiety about death, to experience heightened pleasure. In a sense, the suicidal person is attempting to escape dysphoria, whereas the indirectly self-destructive person is attempting to seek euphoria.
Both groups appear to have little investment in the future but for different reasons. The directly suicidal person feels a sense of loss, either anticipated or real, through rejection or abandonment. As a result, suicidal persons question their worth, feel helpless and hopeless, and try, as a goal of their suicidal behaviour, to change their painful condition. People who engage in ISDB have little long-term focus because their investment is in the here-and-now, on arousal and pleasure.

Directly suicidal persons do not have mature coping skills. Rather, they operate with cognitive constriction and solve their problems by regressively acting out (against self and others). Often, the message to others is undeniable – I hurt and, either by your action or inaction, you will feel responsible. Those who engage in ISDB more clearly use denial as a defence and are narcissistically invested in pleasure with little apparent concern for affecting others negatively.

A major area of difference is in social attitudes and behaviours. With suicide, society has long had a stigmatizing attitude. Suicides have been and are condemned, seen as acts of disturbed, narcissistic individuals and to be prevented whenever possible. The only exceptions are under conditions of altruistic self-sacrifice and terminal illness with intractable pain. With ISDB, society respects the rights of the individual to make choices, may or may not intervene, and, with respect to adventure taking, may even glorify those who fail to survive.

Some researchers argue that risk-taking is a part of normal adolescence (Baumrind, 1987). These theorists distinguish developmentally constructive risk-taking (that is, adaptive experimentation to build confidence, enhance competence, and develop initiatives, behaviours that play a role in developing autonomy and mastery, and skills essential for the
transition to adulthood) from pathogenic, deviant, life-threatening risk-taking that potentially jeopardizes health and life. Positive risk-taking is constructive and essential for personal growth. Jessor (1992), for example, views behaviours such as smoking, drinking, illicit substance use, and risky driving as instrumental in gaining acceptance and respect among peers, establishing independence from parental authority and coping with the anticipation of failure.

Suicide ideation may also be related to other, less immediately life-threatening behaviours, such as using tobacco, alcohol and other drugs, and engaging in sexual risk behaviours. Among high school students, suicide ideation has been linked to not using seat belts, driving after drinking alcohol, carrying weapons, and engaging in physical fights. These relationships have rarely been explored among college students, although young people aged 15 to 24 years, an age span that encompasses both high school and college populations, have the highest rate of emergency department visits for attempted suicide. Many young people who report suicide ideation also engage in behaviours that put them at risk for serious injury from motor vehicle crashes, drowning or violence (Barrios, 2000). This link between suicide ideation and other injury-related risk behaviours has important implications for assessment and prevention. Healthcare providers and others who note the presence of any one of these injury-related risk behaviours should screen for the presence of suicide ideation. Students who report suicide ideation can then be identified and referred to assistance.

3.2.8. Substance abuse

Alcohol and drug abuse typically begin in adolescence as alcohol and drug experimentation, to experience “kicks”, to prove oneself in front of or gain acceptance from
peers, or to reduce discomfort. These behaviours must be considered normative and adaptive for the development of identity and social competence. Adolescents who never try cigarettes or take a drink are more socially isolated and have less ego strength than those who do. The danger posed by normative risk-taking is that it is reinforcing; therefore, it is likely to be repeated. With repetition, tolerance is developed; increased doses are needed thereafter to achieve the same desired effects. Without sufficiently competitive alternative methods to accomplish tension reduction, social acceptance, and so on, addiction and abuse and their attendant problems may follow.

Drug abuse and alcoholism are significant single risk factors for suicide. Substance abusers are often also depressed and have significant personality disorders, commonly including conduct disorders and their symptomatic conflicts with the law. Acting-out and aggressive behaviours, impulsive behaviours, and recklessness are all more likely to occur in response to substance abuse. The alcoholic frequently has serious physical health problems and is more likely to have serious accidents, vehicular and otherwise, to suffer serious breakups in significant relationships, to have impaired occupational performance, and to die a premature death. The pathway toward death is littered with broken promises, lying and failures. Underlying the alcoholic process are feelings of worthlessness, guilt, shame and remorse. Further failure to break the cycle of abuse and bad feeling leads only to more abuse and bad feeling. In a sense, then, alcohol abuse as an ISDB may stem the pull of more directly self-destructive urges.

Availability and accessibility of drugs (both prescribed and non-prescribed) and alcohol are known to be high risks for suicide (Charlton, Kelly, Dunnell, 1993; Gunnell & Frankel, 1994). Alcohol abuse impairs judgement, reduces impulse control, and alters moods.
Multiple studies (reviewed by King, 1997) provide massing evidence for the substantial suicide risk associated with alcohol consumption, documenting a significant connection between the severity of suicidal behaviours, alcohol abuse, and major depression (King, Hill, Naylor, Evans, & Shain, 1993; Pfeffer, Newcorn, Kaplan, Mizruchi, & Plutchik, 1988; Robbins & Alessi, 1995). Hawton, Fagg and McKeown (1989) noted that 38% of adolescent suicide attempters had consumed alcohol within 6 hours prior to their attempt. McKenry, Tishler and Kelley (1982) found that 43% of the 46 adolescent suicide attempters they studied had a history of alcohol and substance abuse.

Findings from psychological autopsy studies suggest that more than half the youths who complete suicide had a history of significant alcohol use problems (Abel & Zeidenberg, 1985; Rich, Young, Fowler, 1986; Shafii, Carrigan, Whittinghill, Derrick, 1985). Of course, alcohol or substance abuse with co-morbid depressive illness represents an especially high-risk profile for suicidal behaviour, repetitive suicidal behaviour, and completed suicide among youths (Brent et al., 1993a; Kovacs, Goldston, & Gatsonis, 1993; Rich et al., 1986). For instance, Shafii (1988) found that 62% of suicide victims had alcohol or substance use disorders, 76% had major depression or dysthymia and 38% had co-morbid alcohol/substance use and depressive disorders. The majority of psychological autopsy studies on adolescent suicide to date are generally limited by small sample sizes and the absence of appropriate controls. Gould, Shaffer, Fisher, Kleinman, and Morishina (1992) conducted a psychological autopsy study on 119 persons under the age of 20 who had completed suicide. Their analyses revealed that approximately one-third of the victims had made a previous suicide attempt, with more girls (48%) than boys (27%) having had a history of previous attempts. In addition, symptoms of any affective disorder, alone or in conjunction with antisocial behaviour or substance abuse, were found in nearly 40% of the sample. A considerable amount of time of adolescents is spend at high schools, including extracurricular and sporting
activities. It is therefore of importance to examine and look at the role and influence and relationship the high school has to suicidal behaviour of adolescents. The next section will address research findings of high schools in more detail.

3.3. THE SECONDARY SCHOOL SETTING

Little is known about suicidal behaviours in the youthful non-psychiatric population. Most of the existing data have been derived from the study of (1) general mortality statistics, (2) youths who commit or attempt suicide while under psychiatric care, (3) psychological autopsies of consecutive suicides in a given geographical region, and (4) those attempted suicides reaching medical, police, or social service attention. These statistics do not provide information regarding what is occurring in the wider population, nor do they address the question of how many youths experience suicidal thoughts and behaviours but never seek professional help. Both are important issues, as studies suggest that only a fraction of young suicide attempters do in fact seek medical or other attention (Garrison, 1989). Information on the range of suicidal behaviour in non-patient populations can be important. Such data provide a perspective against which to evaluate suicidal behaviour that occurs in both psychiatric and non-psychiatric population.

The study of suicidal behaviour in school settings is one approach wherein an attempt is made to gather data on so-called normative populations. The major goal of these studies has been to determine the frequency and determinants of suicidal ideas, threats, and attempts, as opposed to completions. Samples have usually included small groups of volunteers, and as such have not clearly represented any larger population. Only a few studies have provided information on the racial and ethnic characteristics of their participants (Garrison, 1989).
For many young people, school can be a stressful experience. School grades relate to students' feelings of self-confidence. Performance in school is important to feelings of success. Poor performance in school can impact negatively on a young person's self-image, which increases the chances of suicidal ideation (Butler, Novy, Kagan, Gates, 1994). And indeed, research points to a link between suicidal behaviours and difficulties experienced at school. For example, in a study of urban adolescents, a substantial relation between poor school performance and increased suicidal activity was found. Other studies indicate that almost twice as many young people who had attempted suicide reported problems relating to school than was true for a control group (Robbins, 1996). De Wilde (1992) reported adolescent suicide attempters were more likely to have repeated a class during the year preceding their suicide attempt than either depressed or normal adolescents.

Suicidal behaviour in adolescence has recently become the focus of considerable research attention. Suicide is one of the most frequent causes of death in this developmental period. Investigations of suicidal behaviour indicate that self-destructive behaviour in adolescence increases the risk of later suicide (Tomori, 1999). This is why the early identification of the adolescents at risk of suicide remains particularly important.

In many studies, suicide ideation is yet another factor more or less frequently associated with suicidal behaviour of adolescents. Although many researchers evaluate suicide ideation as a risk factor for adolescent suicidal behaviour, others maintain that suicide ideation is very frequent in adolescence, and therefore cannot be regarded as a prognostic factor for suicide risk (Tomori & Zalar, 2000).

3.3.1. Suicide Ideation And Behaviour Of Secondary School Students
Studies of suicidal behaviour among elementary, middle, and high school students indicate increasing rates of such behaviour with advancing school grade. Pfeffer, Zuckermann, Plutchik, and Mizruchi (1984) reported on a study of suicidal behaviour in a randomly selected sample of 101 non-patient school children (6-12 years old) from a large urban community in the USA. Among the 101 school children, 8.9% evidenced suicidal ideas or threats, while 3% reported previous attempts. Suicidal school children differed from non-suicidal school children in having greater and more recent depressive symptomatology, more suicidal impulses in their mothers, greater preoccupation with death, and greater tendency to use introjection as an ego defence (introjection is defined as the reception of foreign opinions, views and motives into the “I”, the self). The researchers concluded that suicidal behaviour is not a usual phenomenon among school children, but that among those children in whom suicidal thoughts are detected, the variables identified above can be considered an index of suicidal risk.

Smith and Crawford (1986) studied suicidal behaviours among 318 high school students in the Midwest USA. In the analysis, students were divided into four mutually exclusive groups: non-suicidal (those who reported no suicidal ideation or behaviour), ideators (those who considered suicide but never made a plan or attempt), planners (those who felt suicidal enough to have developed a plan for killing themselves, but had never made an attempt), and attempters (those who had made one or more past suicide attempts). Sixty-three percent of students reported some ideation, 11% reported making one or more attempts. Attempters reported more depressive symptomatology, more chaotic home environments, more problems with both parents, and the highest percentage of unpleasant changes in their lives.
Suicide has been described as the endpoint of a continuum that begins with suicide ideation, followed by planning and preparing for suicide and finally by threatening, attempting, and completing suicide. Although some young people make impulsive suicide attempts, many experience thoughts and engage in behaviours along this continuum. For example, in a study of high school students nationwide in the USA, researchers found that 21% had suicidal thoughts during the past year, 16% had made plans to attempt suicide, and 3% had made a suicide attempt that required medical treatment (Barrios, 2000).

Tomori (1999) compared certain psychosocial factors among 4700 high school students in Slovenia, aged 14 to 19 years, who had already attempted suicide (N = 488) and those who had not (N= 4198). In comparison with non-attempters, when in distress these attempters more often close in, turn to alcohol or console themselves with food, and less often discuss their feelings with their parents or relax with the help of sport and physical activity. The frequency of suicide attempts in the population of high school students was relatively high: according to self-reports, 13.6% of girls and 6.8% of boys attempted suicide. A suicide attempt in adolescence is surely not just a chance occurrence, triggered off by an isolated stressful situation, but is rather a behaviour which is facilitated by several unfavourable factors. The frequency of parental divorce proved to be significantly higher in the suicidal adolescents in comparison with their non-suicidal peers. During the adolescent period the role of the family remains important. Although parental separation itself does not necessarily show the nature of the family relations, it nonetheless indicates a greater possibility of family dysfunction within which these children have grown up. A functional family stimulates not only the development of the child's sense of personal value and self-esteem, but also provides useful modes for stress coping strategies. Findings of the study indicate that suicidal adolescents are confronted with many concurrent unresolved problems and burdens; they
experience (at least subjectively) more problems than their non-self-destructive peers, feel more frequently overburdened at school, feel less healthy, and are less satisfied with their appearance. In addition, they also engage less in physical activities and sports and indicate more frequent resort to harmful and dysfunctional strategies for coping with emotional discomfort.

3.3.2. Suicide Planning Among Secondary School Students

Suicide risk is often described as existing along a continuum from thoughts about suicide to the planning of an attempt and finally to the attempt itself. However, not all adolescents follow the expected progression of suicide risk.

Data from community samples of adolescents indicate that a small percentage of suicide attempts occur without any planning. For example, in a longitudinal study of suicidal behaviour among high school students, more than 27% of the students who attempted suicide during the 12 month follow-up did not report any suicide ideation during this period. Another study found that 18% of the high school students who attempted suicide in the past twelve months did not report planning a suicide attempt during this period (Simon & Crosby, 2000).

Little information is available about how youth who plan and attempt suicide differ from those who attempt without a plan, or how the consequences of these attempts compare (Simon & Crosby, 2000). For example, the extent to which planning is associated with the severity of outcomes is unclear. Adolescents who plan suicide attempts might be at increased risk for serious injury because of the greater opportunity to secure a more lethal method and private location. Similarly, attempters who plan may have higher suicidal intent and therefore be at greater risk for completion and, among survivors, have more severe injury.
Previous research has shown that alcohol, drug use, and aggressive behaviours are strongly associated with suicidal behaviour among adolescents (Putnis, 1995). Some researchers have suggested that these behaviours might co-occur among adolescents because of a common link with poor impulse control. Therefore, one might expect that adolescents who report attempting suicide and do not report planning might be more likely to be involved in substance use and aggressive behaviours than attempters who report planning (Simon & Crosby, 2000). Alternatively, aggressive behaviours and substance use also are positively associated with suicide thoughts and plans, suggesting that adolescents who make planned suicide attempts might be at greater risk for substance use and aggressive behaviours than those who attempt without a plan (Simon & Crosby, 2000). The extent to which substance use and aggressive behaviours distinguish unplanned attempters from attempters who have made plans is unknown. Additional information about the prevalence, consequences, and correlates of suicide attempts made without planning may prove helpful in the development of screening procedures and prevention strategies.

### 3.3.3. Suicide Among Gifted Students

Epidemiological research on suicide among gifted adolescents is largely concerned with the incidence of attempted and completed suicide. Research concerning suicide among adolescents consists primarily of studies of psychiatric inpatients and juvenile offenders (Gust-Brey & Cross, 1999). Little research examines the prevalence of suicide among another group of adolescents, the gifted, but suicide occurs among this population. There are recent reports of multiple suicide attempts at a state supported, residential high school for the gifted in the Midwest of the USA (Gust-Brey & Cross, 1999). Cross (1996) characterized the literature on gifted adolescents and suicide as consisting of a tendency for authors to make conclusions and recommendations about the incidence of suicide without supporting data.
For example, the literature is greatly concerned with discussing the prevalence of suicide among the gifted in comparison with other adolescents. However, the majority of these discussions regarding the prevalence of completed and attempted suicide among gifted students generally lacks empirical evidence.

Dixon and Scheckel (1996) summarized various characteristics of gifted adolescents that are often associated with increased risk of suicide. These characteristics include: unusual sensitivity and perfectionism, isolationism related to extreme introversion, and over excitabilities. Dixon and Scheckel (1996) described the five over excitabilities as: psycho motor (for example, fast games and sports, acting out, impulsive actions), sensual (for example, sensory pleasure, sexual overindulgences), intellectual (for example, introspection, avid reading, curiosity), imaginational (for example, fantasy, animistic and magical thinking, mixed truth and fiction, illusions), and emotional (for example, strong affective memory, concern with death, depressive and suicidal moods, sensitivity in relationships, feelings of inadequacy and inferiority). Emotional over excitabilities are of special concern when it comes to suicide among the gifted (Gust-Brey, 1996). Perfectionism has also been identified as playing a role in suicide among bright individuals.

Furthermore, discussion exist in the literature about potential characteristics, such as sensitivity and over excitabilities, that may make a gifted individual more vulnerable in this area. Warning signs among gifted students have also been discussed. Delisle (1982) reviewed research on the signs of suicide among gifted students and cited lack of friendship, self-deprecation, sudden shift in school performance, total absorption in school work, and frequent mood shifts as possible warning signs. Little empirical research exists examining the
prevalence of suicide among gifted adolescents. There are, however, reports on the occurrence of suicide among this population (Adams, 1996; Cross, Cook, & Dixon, 1996).

Cross (1996) presented the following points as being what researchers can honestly say about the topic of suicide among this population: Adolescents are committing suicide; gifted adolescents are committing suicide; the rate of suicide has increased over the past decade for the general population of adolescents within the context of an overall increase across all age groups; it is reasonable to conclude that the incidence of suicide of gifted adolescents has increased over the past decade, keeping in mind that there are no definitive data on the subject; and given the limited data available, we cannot ascertain whether the incidence of suicide among gifted adolescents is different than in the general population of adolescents.

3.3.4. School Violence And Adolescent Suicide

The connection between violence and suicide is alarming. Research has demonstrated that many of the same negative societal changes are also the components identified as significant contributors to adolescent suicide (Speaker & Petersen, 2000). One societal change is the family structure which has shifted away from the idealized two-parent family with dad working and mom at home with the children. In the USA, 75% of all mothers of school-age children are in the labour force and one in four children live in families with only one parent. As a result of the changing social environment many children may be faced with substantial hurdles on their journey toward adulthood. Dryfoos (1994) refers to these barriers as the “new morbidities” - unprotected sex, drugs, violence and depression in contrast to the “old morbidities” - chronic diseases, nutritional deficiencies, acne and infestation of head lice.

3.3.5. South African Studies In A School Setting
There are only a few published studies of suicidal behaviour of adolescents that were conducted in a school setting in South Africa - which date back (at least) seven years. One of the studies was done by Pillay (1995b), who examined the perceptions of suicide and suicidal behaviour of 318 primary school children aged 10 to 13 years. The results of the study support the concern expressed about the role the media plays in influencing children's behaviours. Seventy percent of students reported becoming aware of suicide via the media, that is television, radio and newspapers (Pillay, 1995a). Despite conflicting views, there is general acceptance that suicide in children and adolescents may be influenced by the media. A small number of students (17.92%) were educated about suicidal behaviour by a significant person, usually a neighbour or friend. Very few parents actually educate their child about suicidal behaviour. A small number (13.84%) also reported learning about suicide as a result of the behaviour occurring among friends or relatives. Research has found that exposure to suicidal behaviours or complete suicide of parents, siblings, peers and neighbours significantly increases the risk of suicide in a vulnerable child or adolescent. The children perceived 'problems' as being the main cause of suicidal behaviour (76.73%). Of which, unfaithfulness in marriage and marital discord were the most common problems endorsed. The other perceived causes were, anger (8.49%), escaping punishment (4.40%), tired of life (3.46%) and alcohol and drugs (2.51%). Again, the influence of media and personal experiences strongly contributed to these perceptions (Pillay, 1995a).

In a study done by Mayekiso (1995) which consisted of 100 Senior Secondary School pupils enrolled in Standard 9 and 10 at Ngangelizwe Senior Secondary School in Umtata, a relatively high percentage of the sample (36%) would consider suicide as an option in cases of parental divorce (17 %), parental death (11 %), parent-child conflict (32 %), loss of contact with parents ( 5 %), love-relationship problems (25 %), and chronic physical illness
(10 %). This finding supports the view that family functioning is important to consider when assessing and treating adolescents with suicidal behaviour. This study also reported that 80% of the sample saw suicide as having a negative impact on the surviving family members. This finding supports the view by Tollman (1988) that the family constellation, and each member within it, is profoundly disturbed by suicide of a family member. According to Corr (1994), someone who completes suicide never dies alone. Survivors of the person who has died from suicide, usually have a difficult time dealing with that death (Mayekiso, 1995). The results in this investigation is indicative of concern about one's parents and fear of punishment from God, as the major factors preventing individuals with suicide ideation from committing suicide. Another finding of this study shows that there are circumstances in society that are so depressing that adolescents consider death as an option for themselves. As one cannot really prevent very determined acts, situations that can precipitate suicide have to be changed.

Another study by Pillay (1995b), examined youth suicidal behaviour over a one year period, among 650 high school students from 13 to 17 years in a low-to-middle class socio-economic area (primarily Indian pupils), south of Durban. Results show that 26 suicide ideations were reported. In most cases (53.84%), the pupils informed the counsellor of the suicidal behaviour. With one exception, the male pupils generally reported directly to the counsellor. Female pupils, on the other hand, confined in other school personnel such as the principal and teachers. In some instances, family members reported the suicidal behaviour to the counsellor. Generally the family took the individual to the general practitioner who, having treated them, sent them home, in most cases, at the request of the family. Family problems was the most common reason (73.08%) for the pupils' suicidal behaviour. Of those with family problems, 13 (68.42%) were associated with problems related to separation or divorce of their parents. In some instances problems were experienced with their step parents.
Other problems were related to their father's substance abuse (15.79%) and relationship problems with parents or siblings (15.79%).

South African studies have been confined almost exclusively to mortality data or hospitalized patients (Flischer et al., 1992). It is necessary to have data regarding the extent of suicidal behaviour among South African adolescents in the community to inform preventive strategies. As a first step, Flischer et al. (1993) conducted a study of 7 340 high school students from 16 schools in the Cape Peninsula. During the previous 12 months, 19% of students had seriously thought about harming themselves in a way that might result in their death, 12.4% had told someone that they intended to put an end to their life (Flischer et al., 1993). There were different trends according to gender, standard and languages spoken at home - as reflected in the tables 3.1., 3.2. and 3.3. below. Of those who had made a suicide attempt during the previous 12 months, 85.7% indicated that they had seriously thought about doing so, while 57.7% had told someone that they intended putting an end to their life (Flisher et al., 1993).

Table 3.1. shows that more females than males thought about harming themselves, regardless of standard and home language. A mixed home language indicated the highest percentages for both sexes.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Males</th>
<th>Females</th>
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<td>6</td>
<td>11.6</td>
<td>19.9</td>
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<td>7</td>
<td>12.8</td>
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<td>8</td>
<td>16.1</td>
<td>25.6</td>
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Table 3.1. Students who thought about harming themselves in a way which might result in their death, by standard, home language, and gender
Table 3.2. Students who had told someone that they intended putting an end to their life, by standard, languages at home, and gender

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
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<td>Standard</td>
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<td>Language(s)</td>
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<td>Afrikaans</td>
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<td>Afrikaans and English</td>
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<tr>
<td>English</td>
<td>9.1</td>
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<tr>
<td>Xhosa</td>
<td>4.6</td>
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</table>

Source: Flisher et al., 1993.

Table 3.2. indicates that more females than males had told someone that they intended putting an end to their life, regardless of standard and home language. Again, a mixed home language revealed the highest percentages for both sexes.

Table 3.3. Students who had tried to put an end to their life, by standard, languages, and gender

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
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<tbody>
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<td>Standard</td>
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<td>10</td>
<td>2.9</td>
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</tbody>
</table>
Table 3.3. shows that more females than males tried to put an end to their life, regardless of standard and home language. A mixed home language indicated the highest percentages for both sexes.

The increasing percentages of suicidal thoughts by standard for both genders may be a function of increasing academic and social developmental demands. The relatively low percentages of Xhosa-speaking students with suicidal thoughts may be related to the adverse social circumstances of these students (Flisher et al., 1993). Lester (1988a) has argued that suicide is less likely to occur when people have an outside source to blame for their misery, since they can attribute their misery to this source. Additional factors that have been suggested in explaining the low incidence of suicidal behaviour in South African blacks include (1) cultural factors, such as taboos; (2) the prevalence of relatively close family ties; and (3) a propensity for expressing emotions in somatic terms (Breetzke, 1988; Cheetham; 1990; Forster & Keen, 1990; and Schlebusch, 1990).

### CHAPTER FOUR: THEORIES OF SUICIDE

*Not that suicide always comes from madness. There are said to be occasions when a wise man takes that course: but, generally speaking, it is not in an access of reasonableness that people kill themselves. Voltaire (Francois-Marie Arouet; 1694-1778)*

#### 4.1. THEORETICAL CONSIDERATIONS TO SUICIDE

The study of suicide and suicidal behaviour has been approached from a wide range of theoretical and empirical models. A broad range of theories have driven both clinical practice...
and empirical studies. The problem of suicide is far too complex to be explained by individual aetiological factors alone such as depression or a psychiatric disorder (Tomori & Zalar, 2000). In this “multidimensional malaise” (Leenaars, 1996), various biological, intra-psychical, interpersonal, sociological, cultural, and philosophical factors are intertwined with each other. This multidimensional malaise can be explained by looking at the ‘overlap model for understanding suicidal behaviour’ by Blumenthal and Kupfer (1990), shown in figure 4.1.

*Figure 4.1. Overlap model for understanding suicidal behaviour*

![Overlap model for understanding suicidal behaviour](source: Blumenthal & Kupfer (1990)).

It may also be important to keep in mind that suicidal behaviour and ideas are complex and may best be explained along a continuum of suicidality. One possible continuum of suicidality is illustrated in figure 4.2.
As Maris et al. (2000) have pointed out, there are many other explanations for the continuum of suicidality. Their model was adapted because “diffuse risky lifestyle” (risk-taking behaviour) is a common generic adolescent trait and sometimes normal part of adolescence, and thus, comes before “suicide ideation” (thought processes about suicide) and not after “suicide like gestures”. The words “non-serious” and “serious” were dropped from “suicide attempt”, as all suicide attempts are seen as serious.

Included among the most frequent cited theoretical approaches to suicidality are the following: sociological (for example, Durkheim, 1897, 1951); psychiatric (for example, Kraeplin, 1883, 1915); psycho-dynamic (for example, Freud, 1917, 1957) and psychological (for example, Shneidman, 1985). Naturally each approach has emphasized a distinctive feature, aspect, or characteristic of suicide and suicidal behaviour, frequently at the purposeful exclusion of others. Epidemiological and sociological approaches have focused on demographic characteristics, philosophical theorists have attempted to answer difficult questions about the nature and purpose of life, and sociocultural and sociological researchers have emphasized the critical role played by societal and cultural variables. Similarly,
psychiatric, psycho-dynamic, psychological, and biological researchers have stressed the importance of mental illness, unconscious conflicts and emotional processes, psychological pain and unmet psychological needs, and biochemical imbalances, respectively.

The traditional psychiatric thesis was the first of various theses on suicide. What is usually called the “psychiatric theory of suicide” is that of a psychiatry whose main aim was, on the one hand, to describe its manifestations and to group them in syndromes (illnesses), and on the other hand, to attach symptoms or syndromes to organic constitutions or disorders (Haim, 1970). Such a starting point had an effect on all later work. The traditional sociological thesis, which emerged later, and which was probably influenced by psychiatric views, has been presented as a reaction to psychiatric theories. It is based on statistical data, and regards the environment as the fundamental and sole cause of suicide (Haim, 1970). Only recently has a concerted effort been made toward theoretical integration in suicidology. Next, I will discuss biological, sociological and psychological theories in more detail.

4.1.1. Neurobiological Theories And Studies Of Suicide

The biology of suicide is a rapidly expanding field of great interest and activity (Stoff & Mann, 1997). There has been a veritable explosion of research and findings in the scientific fields of human genetics, molecular genetics, neurochemistry, neurophysiology, neuroendocrinology and neuroanatomy in the last twenty years. Ground-breaking techniques and new technologies are being discovered and applied to the biology of suicidal behaviours. This section highlights some of the more promising areas of investigation identified at this time. The neurosciences are rapidly evolving areas of intense scientific activity – our level of understanding of the mechanisms of central nervous system (CNS) action are becoming more sophisticated with every new finding and with the development of new techniques. Hence, the findings presented here may well be challenged and refined over time.
4.1.1.1. Family History

Evidence that suicide may have a genetic component comes from many different types of studies, including studies of families, twin and adoption studies. Murphy and Wetzel (1982) reviewed the literature and found that six to eight percent of those who attempted suicide have a family history of suicide. They studied 127 patients hospitalized after attempting suicide and found that when they examined them by psychiatric diagnosis, the personality disorder group had as high a family history of suicide as the affective disorder group. Seventeen percent of those with a primary diagnosis of primary affective disorder had a family history of suicide, and 17 % had a family history of suicide attempts.

Roy (1983), in his review of the existing literature, noted that a family history of suicide had been found in a small but meaningful number of studies. Roy examined the medical charts of 243 psychiatric inpatients who reported 274 suicides among their first-and second-degree relatives. Almost half (118; 48.6%) of these patients had attempted suicide, more than half (137; 56.4%) had a depressive disorder, and more than a third (84; 34.6%) had a recurrent affective disorder. Regardless of the primary diagnosis, the great majority (84.4%) of all the patients with a family history of suicide had had a depressive episode at some time in their lives. During the seven and a half-year study, seven (2.8%) of the 243 patients committed suicide.

Shaffer, Gould, Fisher and Trautman (1985) reported psychological autopsies on twenty adolescent suicide victims in Louisville, USA. They found that significantly more of the suicide victims, as compared to the controls, had a family history of suicide. Shaffer et al.
(1985) subsequently performed psychological autopsies on a consecutive series of suicides under 19 years of age occurring in the New York City area. In a report of the first 52 suicide victims, they noted that 20 (38%) had a relative who had either committed or attempted suicide.

In summary, these and other studies suggest that individuals at risk for suicidal behaviours have a higher than statistically expected family history of an affective disorder (depression or bipolar illness) or a suicide (Linkowski, de Maertelaer, & Mendlewicz, 1985; Malone, Haas, Sweeney, & Mann, 1995; Mitterauer, 1990; Shaffer, 1974). Whether these observations confirm a genetic inheritance is not proven, because of the possible role that a positive identification with parents and siblings and subsequent mimicking behaviour might play in later expression of an affective disorder or suicidal behaviour.

4.1.1.2. Twin Studies

The twin study method may help to address the question of whether a predisposition for suicidal behaviour may be genetically transmitted independent of a psychiatric disorder. Identical twins come from one egg (monozygotic, MZ) and share the same genes, whereas fraternal twins come from two eggs (dizygotic, DZ) and share only 50% of their genes. If suicide is a genetically transmitted behaviour, then concordance for suicide should be found more often among identical twins (MZ) than fraternal (DZ) twins. Roy, Segal, Centerwall and Robinette (1991) studied 176 twin pairs (62 MZ and 114 DZ) in which one or both twins had committed suicide. They found that 7 of the 62 MZ twin pairs were concordant for suicide compared with 2 of the 114 DZ twin pairs (11.3% vs. 1.8%), thus, the MZ twin pairs showed a significantly greater concordance for suicide relative to the DZ twin pairs. In a second study, Roy, Segal, & Sarchiapone (1995) examined suicide attempts among living co-
twins whose twin had committed suicide. They hypothesized that if genetic factors play a part in suicidal behaviour, then significantly more living MZ than DZ co-twins would themselves have attempted suicide. They then collected a group of 35 twins in which one twin had committed suicide and interviewed the living co-twin about whether they had ever attempted suicide. “We found that 10 of the 26 living MZ co-twins had themselves attempted suicide compared with 0 of the 9 living DZ co-twins. We concluded that, although MZ and DZ twins may have some differing developmental experiences, studies show that MZ twin pairs have significantly greater concordance for both suicide and attempted suicide” (Roy, Segal, Sarchiapone, 1995, p.1076).

4.1.1.3. Adoption Studies

The strongest evidence for the presence of genetic factors in suicide comes from the adoption studies carried out in Denmark by Schlusinger, Kety, Rosenthal and Wender (1979) and Kety (1990). The strength of the adoption strategy is that it is the best way to tease apart nature from nurture issues. This is because individuals separated at birth, or shortly afterwards, share their genes – but not subsequent environmental experiences – with their biological relatives. In contrast, adoptees share their environmental experiences through childhood and adolescence with their adopting relatives but share no genes.

The Psykologisk Institute has a register of the 5 483 adoptions that occurred in greater Copenhagen between 1924 and 1947. A screening of the registers for causes of death revealed that 57 of these adoptees eventually committed suicide. They were matched with 57 adopted controls for age, sex, social class of the adopting parents and time spent both with their biological relatives and in institutions before being adopted. Twelve of the 269 biological relatives (4.5%) of these 57 adopted suicides had themselves committed suicide,
compared with only 2 of the 269 biological relatives (0.7%) of the 57 adopted controls. None of the adopting relatives of either the suicide group or the control group had committed suicide.

These results are important because the suicides were largely independent of the presence of psychiatric disorder. Schlusinger et al. (1979) found that 6 of the 12 (50%) biological suicide relatives had had no contact with psychiatric services and thus presumably did not suffer from one of the major psychiatric disorders commonly found among suicide victims. They proposed that there may be a genetic predisposition for suicide independent of, or additive to, the major psychiatric disorders associated with suicide.

Wender, Kety, Rosenthal, and Schulsinger (1986) went on to study the 71 adoptees identified by the Psykologisk Institute's case register as having suffered from an affective disorder. They were matched with 71 control adoptees without affective disorder. Significantly more of the biological relatives of the adoptees with affective disorder had committed suicide than had those of the controls. In particular, adoptee suicide victims with the diagnosis of “affect reaction“ had significantly more biological relatives who had committed suicide than did controls. This diagnosis is used in Denmark to describe an individual who has affective symptoms accompanying a situational crisis (often an impulsive suicide attempt). These findings let Kety (1990) to suggest that a genetic factor in suicide may be an inability to control impulsive behaviour, which has its effect independent of (or additive to) that of psychiatric disorder. Affective disorder and environmental stress may serve “as potentiating mechanisms which foster or trigger the impulsive behaviour, directing it toward a suicidal outcome” (Kety, 1990, p.132).
The existing family, twin and adoption studies suggest that there may be genetic factors in suicide. In many suicide victims, these will be the genetic factors involved in the genetic transmission of bipolar disorder, schizophrenia, and alcoholism. However, the Copenhagen adoption studies strongly suggest that there may be a genetic factor for suicide that is independent of, or additive to, the genetic transmission of affective disorder. Kety’s (1990) suggestion that this may be an inability to control impulsive behaviour is compatible with the data that diminished central serotonin turnover may be associated with poor impulse control.

4.1.1.4. Serotonin

Increasing attention has been paid to the biology of suicide, with particular emphasis on the examination of two neurotransmitters (serotonin and dopamine) and of the hypothalamic-pituitary-adrenal (HPA) axis. This research has pointed to a number of biochemical features that may be common to the seemingly disparate group of psychiatric disorders with which higher incidences of suicide are associated; it may also provide the basis for developing specific treatment approaches for some suicidal patients. The three neurotransmitters associated with affective disorders and suicidal behaviours are serotonin, dopamine and norepinephrine.

Evidence has been accumulating of decreased serotonin levels in three groups of patients: depressed patients, suicide attempters and suicide victims. The role of serotonin as a unifying factor in suicidal behaviour was originally proposed by Åsberg and colleagues, who reported an association between suicidal behaviour and low levels of cerebrospinal fluid (CSF) 5- hydroxyindoleacetic acid (5-HIAA), the principal metabolite of serotonin in depressed patients (Åsberg, Nordstrom, & Träskman-Bendz, 1976).
They reported a bimodal distribution of levels of 5-HIAA in the lumbar CSF of 68 depressed patients. Åsberg et al. (1976) noted that significantly more of the depressed patients in the “low” CSF 5-HIAA group had attempted suicide in comparison with those in the “high” CSF 5-HIAA group. Subsequently, a number of other studies have reported that low CSF levels of 5-HIAA are significantly associated with suicidal behaviour in depressed, personality-disordered and schizophrenic patients, although there have been some negative reports as well (Åsberg, Nordstrom, & Träskman-Bendz, 1986). Although CSF levels of 5-HIAA are an imprecise indicator of serotonin levels in the brain, these data have led to the suggestion that reduced central serotonin metabolism may be associated with suicidal behaviour (Roy & Linnoila, 1988; Roy, Nutt, Virkkunen, & Linnoila, 1987).

Träskman, Åsberg, Bertilsson, Sjostrand (1981) carried out the first follow-up study of patients who had attempted suicide and who had had a lumbar puncture for determination of CSF levels of 5-HIAA. They found that within a year of leaving the hospital, 21% of the patients who had both a suicide attempt and a CSF level of 5-HIAA below 90 nmol/liter had committed suicide. Hence, among patients who had made a suicide attempt, those with low CSF levels of 5-HIAA were ten times more likely to die of suicide than the others.

Roy et al. Carried out a 5-year follow-up study of suicidal behaviour among depressed patients who had earlier determinations of CSF levels of monoamine metabolites (Roy et al., 1986; Roy, De Jong, & Linnoila, 1989). Patients who reattempted suicide during the follow-up period had significantly lower CSF levels of both the serotonin metabolite 5-HIAA and the dopamine metabolite HVA. The findings were most striking among depressed patients with melancholia. Over 50% of those melancholic patients who had attempted suicide and had a CSF level of 5-HIAA below 80 pmol/ml reattempted suicide during the follow-up
period. Two-thirds of those melancholic patients who had attempted suicide and had a CSF level of homovanillic acid (HVA) below 100 pmol/ml reattempted suicide during follow-up.

Exactly what role serotonin plays in the initiation, modulation or regulation of aggression, impulsivity and self-destructive behaviours remains under study. It is most likely that serotonin is involved along the pathway from genetic predisposition and environmental stimulus to expression of psychiatric disorders and suicidal behaviours.

4.1.1.5. Summary

Biological theories attribute risk-taking tendencies to the influence of hormones and to genetic predispositions. Risk-taking behaviours have been observed to cluster within families, producing a higher than expected rate of physical injury among family members. This has led to speculation that genetics may play a role. Alcoholism, for example, has a strong familial loading. Children of alcoholic parents are more likely than children of non-alcoholic parents to have alcohol abuse problems in adulthood. The rise in testosterone in males during adolescence has also been postulated to explain the initiation of increased risk-taking. This is confounded by observations that asynchronous maturation in adolescence (that is, physically maturing earlier than one’s peers) promotes engaging in more adult behaviours sooner, partly because one tends to be more accepted by an older peer group. However, when cognitive development lags behind early physical development, judgement and inexperience make adolescents more vulnerable toward effects from increased risk-taking behaviours.

4.1.2. Sociological Theories

4.1.2.1. Durkheim’s Theory Of Suicide And Anomie
The first major contribution to the study of the social and cultural influences on suicide was made by Emile Durkheim (1952). Durkheim studied suicide as a 'collective phenomenon' in dependence of different social circumstances and developed a typology with which he could describe and explain the social causes of suicides. In an attempt to explain statistical patterns, Durkheim divided suicides into three social categories:

1. Egoistic suicide applies to those who are not strongly integrated into any social group. The lack of family integration can be used to explain why the unmarried are more vulnerable to suicide than are the married and why couples with children are the best protected group of all. Rural communities have more social integration than do urban areas and, thus, less suicide.

2. Altruistic suicide applies to the group whose proneness to suicide stems from their excessive integration into a group, with suicide being the outgrowth of this integration - for example, the Japanese soldier who sacrifices his life in battle.

3. Anomic suicide applies to those persons whose integration into society is disturbed, thereby depriving them of the customary norms of behaviour. Anomie can explain why those whose economic situation has changed drastically are more vulnerable than they were before their change in fortune. Anomie also refers to social instability, with a breakdown of society's standards and values.

4.1.2.2 Powell's Approach

Powell (1958) proposed a theory of suicide based on a reformulation of Durkheim's concept of anomie. The basic idea was that the incidence of suicide varies with social status - the position held by an individual in an organized social system. People's goals are set for them by their social status. If they cannot accept these predetermined goals, a condition of anomie results. The subjective feeling of this state includes feelings of emptiness, apathy and meaninglessness.
So far, Powell's theory is much like Durkheim's. However, he departed radically from the older theory by proposing that there are two distinct forms of anomie. Anomie of dissociation, a characteristic of the lower class, is a dissociation of the self from the culture's conceptual system. The reaction to confronting chaos (the world as seen without a conceptual system) is fear, which results in flight and aggression. On the other hand, anomie of envelopment, which is characteristic of the upper class, involves the envelopment of the self by the culture. There is a lack of spontaneity, a result of an unexamined commitment to the prevailing conceptual framework. Either form of anomie raises an individual's probability of suicide (Lester, 1997a).

Nevertheless, new names do not make a new theory. Upon comparing Powell's two forms of anomie with Durkheim's concepts, (Lester, 1997a) notes that anomie of dissociation is practically the same as Durkheim's idea of anomie, while anomie of envelopment appears to be identical with Durkheim's idea of fatalism. Thus Powell's approach did not really take matters any further than Durkheim had gone.

4.1.2.3. Ginsberg's Approach To Anomie

Ginsberg (1966) reinterpreted the idea of anomie in terms of a psychological rather than a sociological concept. He related anomie to 'level of aspiration', the ambitiousness of a person's goals or intentions. In Durkheim's concept, anomie resulted when lack of social restraints allowed a person's desires to grow without control, and to become insatiable. Ginsberg agreed that anomie arises from the unhappiness or dissatisfaction of individuals. He postulated that anomie was a direct function of dissatisfaction, which was in turn a function of the difference between satisfactions received and one's level of aspiration. In the normal process there are internalized social norms, dependent on people's social position, which regulate changes in their level of aspiration. The level of aspiration thus remains proportional to the rewards, and people feel relatively satisfied. In the anomic process, on the other hand,
there are no constraints on the level of aspiration, and it runs ahead of the rewards, resulting in unhappiness for the individual. Ginsberg (1966) suggested that appropriate changes in aspiration level occur only if people see the relationship between what they do and the rewards they receive. In other words, in order for aspiration level to be flexible, people must have a sense of efficacy, a feeling that they can affect the world. Their aspiration level will increase when they come to believe that through their own efforts they can gain higher rewards in the future. It will decrease when they believe rewards will fall in the future.

It is notable that Ginsberg's approach, like that of Powell, dealt only with reformulating Durkheim's concepts. None of them have explained exactly why anomie should lead to suicide in particular, rather than simply stating that dissatisfaction and unhappiness may be direct causes of suicide.

4.1.2.4. Modernization Theory And Social Integration Theory

a) Modernization

Modernization, or the process of industrialization, urbanisation, and secularization, was at the heart of the classic theories of suicide (Durkheim, 1966). All three processes can erode the ties of the individual to society. During the industrialization process, economic opportunities may be much greater in urban areas, thus luring people away from agricultural areas. Ancestral ties to kin, home places, churches, friendships, and other institutions in the countryside are often severed through the process of urbanization. The nature of work can become far more complex through the process of occupational differentiation, a process that is driven by a quest for efficiency in production. Specialization in the labour force is ultimately associated with an expansion of the educational system, a system that tends to promote questioning religion and weakening of common faith. The research on modernization and suicide has been marked by a recurrent problem. All three indicators tend
to be highly associated, so that they cannot be analytically separated empirically. In a study of France between 1852 and 1914, it was found that the greater the literacy rate, the higher the suicide rate (Gillis, 1994). Gillis speculates that the educational change in this period was part of a broader cultural change. In early modernization, culture perhaps shifts from facilitating an explosion of violence against others to promoting an implosion of violence against the self.

However, Stack (1995) found that the influence of education varied according to race. For Caucasian men, the group that apparently benefits the most from education, each year of education reduced the odds of suicide by 2%. In contrast, for African American men, each year of education increased the risk of suicide by 8%. Stack (1995) speculates that by 1990, society had been substantially secularized for several generations and that education’s effects on secularization had been saturated for some time. The main influence of education on suicide is tied to the extent that it benefits groups in their materialistic quest for better jobs and higher incomes. Groups such as women and minorities, who have not received the same pay-off from education as Caucasian men, will illustrate a positive relationship between education and suicide. This will not be because of secularization, but instead the frustrations associated with discrimination.

Stack (1982) synthesized the conflicting research evidence on urbanization and suicide by hypothesizing a quadratic relationship where suicide rates would first increase in the early stages of urbanization, given the social disruptions of rural to urban migration. Thereafter, suicide rates would plateau and possibly decline as urban dwellers adjusted over generations to living in an urban environment.

Kowalski, Faupel and Starr (1987) note that major sociological theories of suicide assume an urban, industrial environment. In an analysis of USA counties in 1980, they find that sociological explanations of suicide (for example, marital and religious integration, poverty) work only in medium and highly urban counties. The types of relations that mark urban
environments may be better conduits for social structural influences than rural environments (Kowalski et al., 1987). For most urban counties, high percentages of urbanity significantly reduced suicide rates.

b) Social Regulation And Social Integration Theory

Durkheims’s (1966) social integration perspective continues to stimulate sociological work on suicide. Groups marked by a lack of subordination to group life, such as elderly widowers, divorced people, and non-church members, are assumed to have less meaningful lives and be at increased suicide risk. Durkheim’s (1966) perspective on religion has been substantially reformulated in light of recent empirical research that failed to confirm it in terms of the classic Protestant versus Catholic measure.

Taylor (1990) argued that although Durkheim examined the relationship between specific social indices (such as the divorce rate) and suicide rates, he believed that the identified associations revealed a common underlying cause of suicide - namely, social integration and social regulation. Durkheim was searching for underlying and unobservable mechanisms and causes of suicide. Later research has shown that divorce and suicide rates are positively associated. In general, societies with higher divorce rates have higher suicide rates. Some modern sociologists have concluded that divorce causes suicide. Taylor (1990) argued instead that social integration and social regulation, for which divorce rates are one possible social indicator, are the causative elements in suicide.

Moksony (1990) made a similar point. He noted that sociological studies often assume that regions with a high proportion of divorced people have higher suicide rates because of the suicides committed by these divorced people. This is a compositional explanation; it holds that the composition of a society causes its suicide rate. Moksony (1990) noted that when the proportion of divorced people in a region is high, suicide rates tend to be high among the single and the married population as well as the divorced. Moksoy concluded that
the proportion of divorced people is better treated as an index of some abstract characteristic of a society.

i) Age and the life cycle

Recent research on 49 nations has established a link between the age distribution of suicide and level of economic development (Girard, 1993): the lower the level of development, the greater the emphasis placed on kinship relations for economic functions (for example, inheritance of jobs and land); the greater a women’s vulnerability and need to marry to establish an identity and financial security, the greater a man’s need to have sons to support him in old age. Troubles in mate selection, failure to bare male children, and infertility in marriage can lead to suicide risk. Indeed, in an analysis of 49 nations, less developed nations tend to have a suicide peak centred around youthful age cohorts (15 to 34 years) and suicide rates decline thereafter, with the passing of kinship-related life crisis. In contrast, as nations develop, identity becomes less tied to kinship relations and more tied to an achievement orientation in the labour market. Girard (1993) contends, however, that the relationship between age and suicide will change first for men as nations develop. Economic development creates an achievement orientation among men before it does so for women.

After increases by over 200% between 1950 and 1977, adolescent suicide has largely plateaued at a high level (Maris, 1985; Stack, 1985). Sociological work has stressed macro level factors, including the decrease church attendance and religious support systems for the young (Stack, 1983a). Each 1% drop in church attendance was associated with an increase of 0.59% in youth suicide. The youth labour market was increasingly marked by the stressors of unemployment and, more generally, underemployment. Each 1% rise in unemployment was associated with a 0.11% increase in youth suicide (Stack, 1983a).

ii) Religion

Religious influences on suicide constitute an area marked by substantial theoretical and empirical advances in the last fifteen years. Traditional treatments of religion and suicide
have restricted the analysis to Protestant-Catholic differences. Catholicism was conceived of
the religion of the past with many shared beliefs and rituals. In contrast, Protestantism was
the religion of the future with fewer shared beliefs and practices, thus allowing the individual
more freedom in religious life (Durkheim, 1966). Durkheim’s argument that Catholicism
should shield against suicide, whereas Protestantism should aggravate it, has received mixed
support. Although Catholicism was related to suicide rates in the USA (Faupel, Kowalski,
Starr, 1987), a study by the same authors that used the same dataset but added additional
control variables found that Catholicism was not related to suicide rates (Kowalski et al.,
1987).

A substantial amount of research moved beyond the classic Catholic-Protestant debate.
Stack (1983b) contends that only a few core religious beliefs (for example, in an afterlife,
prayer) are all that is needed to help preserve life. This is in contrast to Durkheim (1966),
who thought the sheer number of beliefs and practices was central to suicide prevention.
Pescosolido (1990) in her religious networks theory contends that the impact of religion on
suicide is dependent on special contexts. First, the context of urbanity, where people are more
apt to find co-religionists and construct a strong religious infrastructure, should strengthen
the impact of religion on suicide (Kowalski et al., 1987; Pescosolido, 1990). Second, a
religious structure characterized by non-hierarchical power relations, a conservative
ideology, and tension with mainstream culture is likely to decrease suicide. Such a structure
promotes friendship ties with church members and, hence, reduces suicide risk through
networks of social support (Pescosolido & Georgianna, 1989). Third, the region of the
religion’s historical hub should be the most likely to lower suicide, given the development of
a long-standing religious infrastructure (for example, religious social clubs, schools) that
promotes networking and integration (Pescosolido, 1990).

iii) Status integration
According to status integration theory, any status configuration that is infrequently occupied by persons in a society is apt to be marked by role conflict (Gibbs & Martin, 1964). In contrast, as status configurations (for example, being a wife-mother in the labour force) become more common, people in them experience less stress and their suicide rate should be reduced. A key area of research on status integration theory has focused on female participation in the labour force (FPLF) over time. The status configuration of wife-mother-worker is now a relatively frequent one occupied by an increasing number of women. An analysis of FPLF and suicide from 1948 to 1963 in the USA, a period where FPLF was relatively low, found that FPLF was associated with increases in the rates of both female and male suicide. This was a period of relatively high society antipathy toward FPLF. For example, a working wife-mother can indicate personal failure to a man in a period of traditional gender roles where men are expected to be the sole breadwinner. In contrast, for the period of women’s liberation, 1964 to 1980, when FPLF was becoming a more common place status configuration, it was no longer associated with female suicide. However, FPLF was still positively associated with male suicide. The costs of FPLF (for example, less psychological support available from one’s spouse) still outweighed the benefits (for example, higher household income) for men even in a cultural context supportive of FPLF. In Portugal, where cultural support for FPLF is relatively low, FPLF has been associated with increased levels of female suicide, especially among professionals (Castro, Pimenta, & Martins, 1988).

Research on statistically infrequent occupational status sets has tended to confirm status integration theory. Female chemists, a role set that is infrequent, experienced significantly more social isolation at work than male chemists. Female chemists had a high suicide rate, compared with other women in the labour force. Also, a majority of female chemists had suffered sex discrimination (Seiden & Gleisser, 1990). Female labourers, another infrequent role set, had a suicide rate 7.6 times that of females in general (Stack, 1995b). The stress
associated with many statistically infrequent role sets can contribute to suicide potential. Alston (1986) found that, in general, female suicide rates were the lowest in highly traditional female occupations.

Durkheim (1966) argued that political factors such as wars and political crises decrease the suicide rate by rousing collective sentiments and promoting integration. This thesis continued to receive mixed results in recent research. Although popular wars tend to lower the suicide rate, most recent research has found this effect to be spurious. Three studies of World War 1 found that war reduces suicide mainly through lowering unemployment and lowering alcohol consumption (Stack, 1988; Wasserman, 1989b, 1992). However, one study that used a quantitative index of war found that war reduced suicide independent of its effect on unemployment. It found that a 1% increase in the military participation ratio (military personnel/per 1,000 population) reduced the suicide rate by 0.14% from 1954 to 1978 (Stack, 1983b). However, two other quantitative measures of war (for example, degree of war coverage in the press, battle casualties) were unrelated to suicide during World War 1 in the USA (Wasserman, 1992). Yamamoto (1984) found that both unemployment and suicide decreased during wartime in Japan from 1929-1939. Research continues to be needed on other nations, which probably experienced higher levels of integration during war than the USA, where battles were actually being fought on their soil.

iv) Gibbs And Martin's Theory Of Status Integration

Gibbs and Martin (1964) held that Durkheim's theory was inadequate in many ways and stated their theory in five postulates. First, they proposed that the suicide rate of a population varies inversely with the stability and durability of the social relationships in that population. Since sociological knowledge about social relationships is not advanced enough to allow stability and durability to be tested directly, they proposed a second related idea, namely that
the stability and durability of social relationships vary directly with the extent to which people conform to the patterned and socially sanctioned demands and expectations placed upon them by others.

The demands and expectations of others make up a person's social role. People with a particular status have to conform to a certain role if they want to maintain stable social relationships. But because almost all people maintain several statuses simultaneously, they may come into conflict about how they should act. It is hard, for example, to act like both a father and a son at the same time. When conformity to one role interferes with conformity to another, people have difficulty maintaining their social relationships. This leads to Gibbs and Martin's (1964) third postulate - that the extent to which people conform to the demands and expectations placed upon them by others varies inversely with the extent to which they are confronted with role conflicts.

If two statuses with conflicting roles are occupied simultaneously, they are incompatible. This idea is summed up in the fourth postulate - that the extent to which people are confronted with role conflict varies directly with the extent to which they occupy incompatible statuses.

Finally, Gibbs and Martin (1964) proposed that the extent to which people occupy incompatible statuses varies inversely with their degree of status integration. By means of the five links in their theoretical chain, Gibbs and Martin were able to conclude that the suicide rate of a population varies inversely with the degree of status integration.

Gibbs and Martin have tested their hypothesis against data on suicide rates in a variety of situations. The results of the comparison strongly supported their hypothesis: the higher the status integration of a group, the lower the suicide rate, and vice versa. However, other
sociologists have objected to the simple measures of status integration proposed by Gibbs and Martin, and few researchers have been motivated to explore the usefulness of this well-known reformulation of Durkheim's theory.

4.1.2.5. Henry And Short's Frustration-Aggression Theory

One sociological theory of suicide has been founded on basic ideas other than Durkheim's. Henry and Short (1954) based their theory on a psychological concept, the frustration-aggression hypothesis developed by Dollard, Doob and Miller (1939). This hypothesis suggests that aggressive behaviour does not develop from an internal drive that needs satisfaction (such as hunger), but instead is produced when the environment frustrates people by blocking their approaches to a goal.

Henry and Short (1954) predicted that aggressive behaviours would occur in different patterns, depending on the extent to which the environment produced frustration. For example, they suggested that the business cycle should affect aggressive behaviour because of the frustration it causes. They predicted (1) that suicide rates will rise during times of business depression and fall during times of business prosperity, while crimes of violence against others will rise during times of business prosperity and fall during times of business depression, and (2) that the effect of the business cycle on suicide rates will be greater for high-than for low-status groups, while the effect of the business cycle on homicide rates will be greater for low-than for high-status groups.

Henry and Short interpreted their results in terms of the frustration-aggression hypothesis. In order to do so, they made a number of assumptions. They assumed, first of all, that aggression is a consequence of frustration. Next they assumed that business cycles produce variations in the hierarchical rankings of persons by status. High-status persons lose rank relative to low-status persons during business contractions, while low-status persons lose relative rank during business expansions because they are less able to take advantage of the
prosperity. They also assumed that frustrations are generated by a failure to maintain one's relative position in the status hierarchy. Finally, Henry and Short assumed that suicide occurs mainly in the high-status groups, and homicide mainly in the low-status groups. There has been a great deal of research examining the association between suicide rates and the economy in the forty years since Henry and Short's theory was published, and while some of the studies support their theory, others do not.

4.1.2.6. Cultural Explanations and Learning Theory

Normative considerations, such as the learning of role expectations and beliefs, are at the heart of cultural theories. These include changes in gender role expectations, norms regarding alcohol consumption, and messages in the media that might increase suicide through glamorization and role modelling.

a) Gender Roles Socialization

Men continue to have higher rates of suicide than women. Reasons given for high male suicide rates include the following: (1) The female rate of alcohol abuse is one fifth that of males (Canetto, 1992). (2) The religiosity level, which provides numerous coping devices and negative attitudes towards suicide, is significantly higher for women than for men (Stack, 1983b). (3) Women have stronger negative attitudes than men toward the acceptability of completed suicide and more positive attitudes towards suicide attempts (Canetto, 1992). (4) Women have more flexible coping skills than men because of such factors as their greater number of role changes during the life course (Canetto, 1992; Girard, 1993). (5) Women are more likely to recognize and less likely to deny the warning signs of suicide, such as depression, than men (Canetto, 1992). (6) Women are more likely than men to seek professional help, such as contacting a suicide prevention centre (Canetto, 1992). (7) Women have more extensive social support systems to draw on when they are in crisis than men do (Pescosolido & Wright, 1990). (8) Cultural emphasis placed on being male increase lethal
suicidality and include competitiveness, impulsiveness-decisiveness and being ‘strong’ (Stillion, 1984). (9) Historically, women have had less access to lethal technology (for example, firearms) than men (Kushner, 1985). (10) Failures in the primary adult male role (economic success) is more visible and obvious than failure in the primary adult female role, which is diffuse (success in relationships). Males are more likely to feel like failures in their primary role and therefore are more likely to suicide (Girard, 1993).

b) Race

There has been little sociological research on race and suicide in the last 15 years. Although there is some public controversy over race and suicide, there is little empirical work. Most sociological work on suicide does not, for example, analyse race-specific rates. A recurrent finding is that the suicide rate among Caucasians is double the suicide rate of African Americans (Lester, 1990a). Societal discrimination against African Americans has been associated with a cultural response – the externalization of aggression (Stack, 1982). When confronted with frustration, African Americans are more apt to blame society or others and to externalize aggression in such forms as homicide. In contrast, Caucasians cannot attribute their various social and economic failures to discrimination. As such, when Caucasians are confronted with frustration, they are more apt than African Americans to attribute the frustration to their own inadequacies. Aggression, then, is more likely to be turned against oneself in such forms as suicide. It is contended that as discrimination is reduced, African American suicide should increase because African Americans will be more likely to blame themselves for their failures than to blame society. The historical discrimination against African Americans is said to have created a cultural survival-strategy centred on ties to the African American family and church. They provide a cultural buffer against threats such as racism and impoverishment.

c) Mass Media And Imitation Theory
Research has replicated and developed Phillips’s (1974) imitation theory that widely publicized how suicide stories trigger copycat suicides. Support for a copycat effect was extended to television news stories (Phillips & Carstensen, 1988). Much research was centred around two issues: (1) Which types of stories or suicide victims would spark the greatest identification in the audience and, hence, the greatest increase in copycat suicide? (2) What kinds of social contexts would facilitate a mood ripe for copycat suicide? Both these questions were guided by differential identification theory. A key issue is whether publicized stories need to be concerned with well-known celebrities or ordinary people. Wasserman (1984) reported that for 1948 – 1977, only publicized stories about celebrities produced a copycat effect.

Another point of identification is based on the notion that suicide often involves a wish to kill and a wish to die. Stack (1989) explored the impact of publicized mass murders followed by the killer’s suicide on the suicide rate. An analysis of mass murder – suicides that were covered on two or more television news networks found that coverage was associated with a significant increase in suicides.

Given that many categories of mental disorders tend to be linked to suicide (Lester, 1992a), it is possible that stories concerning the suicides of persons with mental troubles would spark identification. This was indeed found to be the case in a study of celebrity suicides (Stack, 1987). However, physical illness was not found to spark identification and copycat suicide (Stack, 1987).

The extent to which groups of people will copycat suicide depends on mood. This can be related to age. Age categories can be related to level of social integration. Young (15-35 years) and old (more than 65 years) groups are receptive to suicide stories and copycat effects, but middle-aged groups are not (Phillips & Carstensen, 1988; Stack, 1991). Perhaps
middle-aged people are shielded because they are highly integrated into society by having the highest incomes, strongest ties to marriage and family, lowest unemployment rate, and holding most of the power positions in society (Stack, 1991).

A new stream of research found a link between music-based subcultures and suicide risk. The subcultures identified were country and heavy metal music (Stack & Gundlach, 1992; Stack, Gundlach, Reeves, 1994). The study of country music found the presence of themes such as lost loves, lost jobs, financial strain, and use of alcohol as a coping mechanism (Stack & Gundlach, 1992). Participants in the subculture, such as radio listeners, may identify with these themes, thereby increasing suicide risk. An analysis of 49 metropolitan areas in the USA found that the greater the country radio audience, the greater the Caucasian suicide rate (Stack & Gundlach, 1992). Cultural analyses of heavy metal music found that it contained themes with an emphasis on pessimism and fatalism. These psychological states are considered critical to suicide risk (Stack et al., 1994). For example, Beck, Brown, Berchik, Stewart and Steer (1990) found that patients with great hopelessness were 11 times more likely to eventually commit suicide than their hopeful counterparts. An analysis of data from the 50 states in the USA in 1988 found that the higher the number of heavy metal magazine subscriptions, an index of the strength of the metal subculture, the higher the youth suicide rate (Stack et al., 1994).

d) Alcohol Consumption

Cultural values and beliefs surrounding the acceptability of drinking can influence the level of alcohol consumption in a group. Until the 1990's, sociological work had neglected alcoholism as a possible determinant of suicide. This neglect may be because of the influence of Durkheim (1966), who ruled out alcoholism as a social cause of suicide. Recent work has proposed a connection between societal levels of alcohol consumption and the social suicide rate (Norstrom, 1995; Stack & Wasserman, 1993).
A link between alcohol and suicide has been suggested by several arguments. First, Wasserman (1989a) argues that to the extent that alcohol promotes depression (Kendall, 1983), shifts in the national level of alcohol consumption (such as those brought about by war or prohibition) can significantly affect suicide rates by affecting national levels of depression. Depression is a key predictor of suicide (Lester, 1992a). Second, alcohol consumption can also act as an agent of emotional disinhibition, fostering impulsive behaviours, including suicide (Kendall, 1983; Skog, 1991). Third, over time, alcohol abuse can result in lower self-esteem, given that it is associated with such failures as those in marriages, parenting, work, and friendships (Kendall, 1983; Lester, 1992b). Fourth, as the alcoholic loses ties to social networks, the ensuing social isolation and loss of support can increase the odds of suicide. Fifth, there are pharmacological effects. Alcohol can greatly increase the changes that an otherwise safe dose of sedative drugs will become a lethal dose.

4.1.2.7. Criticism Of Sociological Theories

The sociological approach is a useful one in that it provides information about the relationships between social variables and suicide rates. However, sociological theories as a whole have left themselves open to a number of criticisms. It seems that a great deal of time has been spent trying to clarify Durkheim's theory, while the investment of energy could have been better employed in the development of new concepts. In addition to a tendency to make the interpretation of data fit pre-existing assumptions, there have been biases of subject matter (for example, studying only completed suicide) that may have militated against the formation of sound theories. Sociologists have too readily accepted categories for subgroups provided by government agencies (such as "whites" and "non-whites" as informed by apartheid ideology), which do not make sense from a theoretical point of view and which is an abuse of people’s rights, and they have often used official suicide statistics that may not be sufficiently reliable.
4.1.3. Psychological Theories

4.1.3.1. Freud And Neo-Freudian Theory

The first important psychological insight into suicide came from Sigmund Freud with his classical essay “Trauer und Melancholie”. Freud (1940) examined the “unconscious aggressive impulses” of each suicidal person and emphasized that no one could mobilize the energy to kill himself without also killing an object (for example, mother, father, friend) with whom he strongly identifies and which is part of him. The wish to die, which was originally directed towards someone else, has turned towards oneself.

Carl Jung viewed man teleologically, believing that behaviour was conditioned by aims and aspirations, as well as by history. For Freud the pursuit of basic instincts largely determined behaviour. For Jung, the search for wholeness, completion, and self-actualization guided behaviour. According to Jung, when progressive development is thwarted by a frustrating circumstance, the libido makes a regression into the unconscious in an attempt to overcome and proceed (Hall, Lindzey & Campell, 1997). Thus, in a sense, the self-destructive act is an effort at rebirth. For the religious person, this may mean an afterlife or resurrection. For the non-religious person, death often is seen as life was before birth. Maltsberger and Buie (1980) describe this illusory belief that the physical or psychological self will survive suicide and find a setting of warmth or peace as magical. The illusion might involve anticipating the grave as a womb with eternal holding by mother earth or a (re)union with a loved object in heaven.

The psychoanalytic theory of suicide was further extended by Menninger and Henseler. Karl Menninger in ‘Man Against Himself’ conceived of suicide as a retroflexed murder, inverted homicide as a result of the patient's anger toward another person, which is either turned inward or used as an excuse for punishment. He also described a self-directed death
instinct (Freud's concept of thanatos). He described three components of hostility in suicide: the wish to kill, the wish to be killed, and the wish to die. Henseler (1974) argued that a suicidal person is generally unsure of and irritated by their own self-worth. The person feels threatened and is in a state of total isolation, helplessness and hopelessness. In this state, any insult or stress can trigger a catastrophe or the breakdown of the inner equilibrium. Suicide appears as the last way out to save the personal integrity. Another important contribution came from Ringel who formulated the “pre-suicidal syndrome” (Ringel, 1974; 1978). According to Ringel a suicidal person is marked by: (a) an increasing narrowness of perception, feelings and life goals; their circle of friends contracts until total isolation; (b) suppressed aggression; the aggression can not be lived out and eventually turns towards oneself and (c) suicide fantasies and suicide thoughts; the suicide is (almost always) expressed and made known to others. Modern psycho-dynamic theorists (Buie & Malsberger, 1983) attempt to describe the psychological vulnerability that predisposes to suicide. These authors describe two threats that underlie suicide vulnerability. First, the loss of psychological self through mental disintegration arises from an intolerably intense experience ofaloneness. This aloneness is not equated with the loneliness often seen in later years. Rather, it speaks to the capacity to form introjects, especially internalized memories (of images and feelings) of soothing and holding derived from childhood. Suicidal individuals have few such resources; therefore, they are more dependent on external resources. Without them they experience aloneness, isolation, hopelessness, and fear. The extremes of aloneness are experienced as impending annihilation, a loss of self. The second threat is that of overwhelming negative self-judgement. When survival is threatened, homicidal rage may animate an individual's response. Suicide may become the psychological equivalent of killing someone else, the unavailable or depriving hated object.

4.1.3.2. Diathesis – Stress Model Of Suicidal Behaviour
Several investigators (Clum, Patsiokas, Luscomb, 1979; Schotte & Clum, 1982) have proposed a diathesis-stress model of suicidal behaviour whereby cognitive rigidity (that is, a relative inability to identify problems and their solutions) mediates the relation between life stress and suicidal behaviour. Specifically, according to this model, individuals deficient in the capacity for flexible divergent thinking, when placed under naturally occurring conditions of high life stress, are cognitively unprepared to develop the effective alternative solutions necessary for adaptive coping. As a result of their inability to engage in effective problem solving, they are assumed to become hopeless under such circumstances (Neuringer, 1974). This state of hopelessness places the individual at heightened risk for suicidal behaviour. The four factors on which this model focuses – life stress, cognitive rigidity, interpersonal problem solving deficits and hopelessness – have all received empirical support in univariate studies of suicidal behaviour. Suicide ideators report four times as many negative life events in the six months preceding their attempts than do non suicidal people and 1.5 times the number reported by depressed patients for the period before the onset of their depression (Paykel, Prusoff, Myers, 1975). This relation has been shown to exist independently of age, sex and social class variables (Cochrane & Robertson, 1975) and may interact with a lack of social support or other factors in that suicide attempters tend both to be demographically dissimilar to their neighbours and to experience different negative life events (Braucht, 1979).

Hopelessness, as assessed via Beck, Weissman, Lester and Trexler’s (1974) Hopelessness Scale, has been shown to be a better predictor of suicidal intent than is depression in both suicide attempters and suicide ideators (Minkoff, Bergman, Beck, Beck, 1973; Schotte & Clum, 1982). Motto (1977) demonstrated that suicidal ideation and intent increase with increasing levels of hopelessness. In a prospective study of psychiatric inpatients treated for suicide ideation Beck, Steer, Kovacs and Garrison (1985) found hopelessness to be the best
predictor of future suicide. In addition, hopelessness has been shown to be a salient variable in suicide attempts by blacks as well as by whites (Steele, 1977).

4.1.3.3. Interactional Theory Of Suicide

An interactional model of suicidal behaviour (Clum et al., 1979) suggests that life stress interacts with cognitive rigidity or deficient problem-solving ability to result in increased hopelessness, and hence in increased suicidal risk. The critical point proposed by this model is that environmental stress in itself is insufficient to produce suicidal behaviour except in those individuals who perceive few viable options for coping with such stress. Schotte and Clum (1982) studied the effects of all of these variables in a sample of college students suicide ideators. Results indicated that student ideators were under significantly higher levels of stress, and significantly more depressed and hopeless, than non ideators. Poor problem solvers under high stress were found to be at greatest risk for suicidal behaviour. Finally, this study demonstrated that hopelessness was the better predictor of highest levels of suicidal ideation, while depression appeared to be a better predictor at lower levels of ideation. Because suicidal behaviour appears to be an interactional phenomenon, it is theoretically likely that other maladaptive processes of the suicidal individual exacerbate the experience of life stress or restrict his or her ability to cope with such stress or solve life problems effectively.

4.1.3.4. Transactional Model Of Suicide

Bonner and Rich (1987) hypothesized that suicidal behaviour is best conceptualized as a behavioural process occurring as part of ongoing interactions / transactions of a variety of cognitive, social, emotional, and environmental variables. A preliminary attempt of such a model is presented in figure 4.3. First, the model suggests that the interaction of

Figure 4.3. Hypothetical model of environmental, cognitive, and interpersonal variables leading to suicide ideation, attempts, and completions.
environmental stress and cognitive distortions / rigidity results in depression. According to Schotte and Clum (1982), depression is most predictive in low levels of suicidal ideation. At this point, according to the model, loneliness and social support variables become critical. Depressed individuals who have high-quality, confiding relationships are more likely to work through their depression and stress effectively, while lonely and isolated individuals are more likely to develop a sense of hopelessness. Hopelessness is predictive of higher levels of suicidal ideation and behaviour (Schotte & Clum, 1982). However, not all individuals who experience hopelessness and strong suicidal ideation attempt suicide. Therefore, other factors must be involved, and adaptive beliefs or reasons for living constitute a reasonable construct to consider. According to Linehan, Goodstein, Nielsen and Chiles (1983), suicidal individuals lack important beliefs and values for staying alive. According to this preliminary model, individuals without strong adaptive reasons for living are more likely to give up in attempts to resolve their stress and hopelessness, and are therefore more likely to move from suicidal ideation to overt forms of suicidal behaviour.

4.1.3.5. Shneidman's Theory
Shneidman emphasizes the commonalities among suicidal persons (Shneidman, 1993). He argues that there is no youth suicide, adult suicide or elderly suicide. There is just human suicide, and it is characterized by 'psychache', profound psychological pain from thwarted psychological needs. Each suicide is an idiosyncratic event. In suicide, overall, there are no universals or absolutes. The best one can reasonably hope to discuss are the most frequent (common) characteristics that accrue to most committed suicides. The ten commonalities of suicide are:

(a) To seek a solution

Suicide can be seen as life-problem solving. Most suicides are in life situations that seem to demand resolution. Lives are experienced as painful, intolerable, absurd and meaningless – so much so that suicidal death may seem to be the only way out (Maris, 1982). Of course, the key response to this commonality is that there usually are other resolutions short of suicide.

(b) Cessation of consciousness

Shneidman claims that suicides want to interrupt their tortured self-consciousness - to stop the mental pain and anguish. Thus, it is understandable that analogues of suicide - sleep, anaesthesia, psychosis, drug abuse, alcohol abuse, etc. - all involve alteration or cessation of consciousness.

(c) Intolerable psychological pain

Lately, Shneidman has come to see intolerable psychological pain as the key commonality in all suicides. Shneidman writes (1993):

“Nearing the end of my career in suicidology, I think I can now say what has been on my mind in as few as five words: suicide is caused by psychache......Psychache refers to the hurt, anguish, soreness, aching psychological pain in the psyche, the mind. It is intrinsically psychological - the pain of excessively felt shame, or guilt, or humiliation, or loneliness, or fear, or angst, or dread of growing old, or of dying badly, or whatever”. (p.51)

(d) Frustrated psychological needs

Most suicides have been frustrated in meeting some of their basic psychological needs. These include the twenty to thirty needs originally listed by Henry Murray (for example, achievement, affiliation, autonomy, nurturance, play, understanding). They could just as
easily refer to the basic psychological and even physical needs cited by Maslow (1963) for security, love, self-esteem, shelter, food, sleep, sexual tension reduction, status, and so on.

(e) Hopelessness-helplessness

Suicides are not just depressed. As Beck (1986) has demonstrated, suicides tend to have become hopeless that their life quality will ever improve sufficiently, and they feel helpless to do anything about it.

(f) Ambivalence

Suicides both want to die and want to live. It is common for soon-to-be suicides to make appointments (play golf or tennis, take part in a birthday party) for after their death. Freud (1940) claimed that we all have both life (eros) and death (thanatos) wishes.

(g) Constriction Of Alternatives

Shneidman used to ask students in his classes on suicide prevention, 'What's the four letter word in suicidology?' The answer, of course, was 'only' as in 'it (attempted suicide) was the only thing I could do!' One of the salient mental traits of depressed suicidal individuals is the narrowing of their perceived viable alternatives, often to the extreme of dichotomous thinking (Weishaar & Beck, 1992). For example, suicides commonly think to themselves, 'I must be either miserable or dead'.

(h) Egression

Many have tried alternatives short of suicide (for example, alcohol and drug abuse, divorce, religious conversion, leaving town, leaving job, etc.) but are now faced with the ultimate egression (that is, flight from life itself). Sadly, cessation of all experience for many suicidal individuals is seen as preferable to continued existence in this world. The challenge to suicidologists is to stop the egression; to convince the suicidal person that he or she can escape without dying (Shneidman, 1993).

(i) Communication of intent

A lot of suicides will tell someone that they are contemplating suicide, if one listens carefully, are sensitive to indirect behavioural or verbal clues, and generally just pay
attention. These may not be clear, dramatic cries for help, but they will be at least ambiguous signs. Jobes et al. (1987) have attempted to specify some of the indirect evidence or signs of one's intent to suicide. These may include expressions of hopelessness, preparations for death (like making or revising a will or taking out life insurance), serious depression, partially self-destructive behaviours, alcoholism and drug use or abuse, acquiring the method of suicide (for example, buying or locating a gun), open declarations of suicidal intent or saying farewell, being placed in situations of great stress or loss, and isolation and precautions to avoid rescue. Of course, all these pre suicidal signs are ambiguous and most of the time they identify 'false positive' suicides - that is, people who never in fact kill themselves (Jobes et al., 1987).

(j) Lifelong coping patterns

Suicides tend to be chronically self-destructive, with a repeated exhaustion of their adaptive repertoire. Most suicidal crises are only crises because of the long history of partially self-destructive behaviour of the suicidal individual (Shneidman, 1985).

4.1.3.6. Transactional Model Of Development

A transactional model of development emphasizes the constant interplay among influences in our lives over time. Rather than focus on aetiological factors or simple interactions between genetic or early childhood vulnerabilities and later stresses, it emphasizes how individual differences in genetic and constitutional vulnerabilities, care giving environments, life experiences, and societal forces, as well as the constant interplay among these, result in an infinite number of possible pathways and individual outcomes (King, 1998). These variable outcomes are evident in the uniqueness of each human being.

Figure 4.4. illustrates a simplified transactional model of human development in relation to suicide risk. It shows how mental and substance abuse disorders (for example, depression, alcoholism), interpersonal loss, conflict and isolation; and psychological vulnerabilities (for
example, high dependency needs, high impulsivity) may impact each other over time, creating ever-increasing risk. The figure could be expanded to include genetic and constitutional influences, early life experiences, or the impact of later significant life events. Most critical however is to note the continual movement across an individual's life course (King, 1998).

Figure 4.4. A developmental model of suicide risk

Difficulties in one area can easily increase those in another. Strengths in one area may divert someone onto a healthier developmental trajectory. Linehan (1993), for example, uses a transactional model of development in her conceptualization of the repetitive self-harmful and suicidal behaviour characteristics of individuals with borderline personality disorder. Transactional models take into account the complex interplay among risk and protective factors for subsets of suicidal individuals, avoiding simplistic thinking and reductionism (King, 1998).
4.1.3.7. The Cognitive-Behavioural Model Of Suicidality: The Suicidal Mode

This model represents an elaboration of Beck's modal theory of psychopathology. There are consistencies in both theory and empirical findings that provide the necessary foundation for an integrative cognitive-behavioural model of suicidality, one that is flexible enough for application in day-to-day clinical practice and rigorous enough for experimental investigation (Rudd, 2000).

Rudd (2000) identified a number of fundamental assumptions of cognitive theory when applied to suicidality. They are as follows:

(a) The central pathway for suicidality is cognition, that is, the private meaning assigned by the individual. Suicidality is secondary to maladaptive meaning constructed and assigned regarding the self, the environmental context, and the future.

(b) The relationship between the suicidal belief system (that is, cognitive triad [integrated beliefs regarding self, others, the future, and the past] specific to the suicidal mode) and the other psychological (for example, behavioural, emotional, etc.) and biological and physiological systems is interactive and interdependent.

(c) The suicidal belief system will vary from individual to individual, depending on the context and content of the various psychological systems (that is, cognitive content specificity). Nonetheless, there will be some uniformity in terms of identified categories (that is, hopelessness, unlovability, poor distress tolerance), which are all tinged by a pervasive sense of hopelessness.

(d) Individuals are predisposed to suicidality as a function of cognitive vulnerabilities, or faulty cognitive constructions, which covary with specific syndromes. Accordingly, different cognitive vulnerabilities are consistent with different syndromes and patterns of co morbidity, both Axis I and Axis II. [To know which symptoms are characteristic of which mental disorder, most mental health professionals use the DSM-IV - the Diagnostic and Statistical Manual of Mental Disorders, published by the American Psychiatric Association (APA,
which defines a mental disorder by assessing an individual's symptoms on five different axes or separate dimensions]. Axes I and II include all categories of mental disorders, that is schizophrenic disorders, mood disorders, delusional disorders, anxiety disorders, etc.

(e) Suicidality and the suicidal belief system reside at three distinct levels, the preconscious, the conscious level and the meta-cognitive (that is, unconscious - as seen by Rudd) level, with the conscious levels most amenable to psychotherapeutic change (Rudd, 2000). This is a typical cognitivist stance. The structural content of the suicidal belief system, at all three levels, is contained within the 'suicidal mode'.

The Suicidal mode

The theory is built around the concept of the 'mode', the structural or organizational unit that contains schemas. Beck (1996) has defined modes as the following: specific sub-organizations within the personality organization that incorporate the relevant components of the basic systems of personality: cognitive (information processing), affective, behavioural, and motivational. He went on to note that each system is composed of structures identified as schemas (for example, affective schemas, cognitive schemas, behavioural schemas, and motivational schemas). Beck has integrated the physiological system as separate but noted its unique and significant contribution to the overall functioning of the mode. Although Beck (1996) mentioned a suicidal mode, he did not articulate the details nor elaborate on it.

Table 4.1 shows a summary of the suicidal mode, outlining the characteristic features of each system. As indicated, the cognitive system is characterized by the suicidal belief system, incorporating the cognitive triad as well as associated conditional rules / assumptions and compensatory strategies. The core beliefs fall within two primary domains originally identified by Beck (1995), helplessness (for example, 'I can't do anything about my problems') and unlovability ('I don't deserve to live; I'm worthless'). A third category has also
been proposed: poor distress tolerance ('I can't stand feeling this way any more') as shown in Figure 4.5.

### Table 4.1. System Characteristics for the Suicidal Mode

<table>
<thead>
<tr>
<th>System</th>
<th>Structural content (Example of thought / belief)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Suicidal belief system: Suicidal thoughts (<em>I want to kill myself; I'm going to commit suicide.</em>) 1. Components of Cognitive Triad (beliefs about the self, others, the future) incorporate core belief categories: unlovability, helplessness, poor distress tolerance:</td>
</tr>
<tr>
<td></td>
<td>a. Self: inadequate, worthless, incompetent, helpless, imperfect, unlovable, defective. (<em>I'm worthless. Everyone else would be better off if I were dead. I can't change any of this.</em>)</td>
</tr>
<tr>
<td></td>
<td>b. Others: rejecting, abusing, abandoning, judgemental. (<em>Nobody really cares about me.</em>)  c. Future (potential for change): hopeless. (<em>Things will never change and I can't tolerate these feelings.</em>)</td>
</tr>
<tr>
<td></td>
<td>2. Conditional rules / assumptions: (<em>If I'm perfect then people would accept me. If I do what everyone wants then they'll have to like me.</em>)</td>
</tr>
<tr>
<td></td>
<td>3. Compensatory strategies: Overcompensation, perfectionism, subjugation in relationships.</td>
</tr>
<tr>
<td>Affective</td>
<td>Dysphoria (mixed negative emotions): for example, sadness, anger, anxiety, guilt, depression, hurt, suspiciousness, fearfulness, tenseness, loneliness, embarrassment, humiliation, shame.</td>
</tr>
<tr>
<td>Behavioural (motivational)</td>
<td>Death-related behaviours (intent to suicide): preparatory behaviours, planning, rehearsal behaviours, attempts.</td>
</tr>
<tr>
<td>Physiological</td>
<td>Arousal: autonomic, motor, sensory, systems activation.</td>
</tr>
</tbody>
</table>

Source: Rudd (2000)

**Figure 4.5. Suicidal belief system: Core belief categories**

All core beliefs voiced by a given suicidal patient will cut across these three categories or cluster in one or two categories; more often than not, suicidal patients present with core beliefs that cut across all three (Rudd, 2000). Also, as indicated, the future orientation is hopelessness, the primary pervasive feature of an active suicidal mode.

The affective system is distinguished by emotional dysphoria, that is, a mixture of negative emotions. This is in contrast to the sadness characteristic of depression. Empirical findings regarding the often mixed symptom picture present dysphoria as including feelings
of sadness, anxiety, anger, guilt, shame, and humiliation, among others. The behavioural
impulse is to die, which is indicative of clear intent to commit suicide regardless of any
subsequent outcome (for example, a suicide attempt with injuries or no injuries). The
behavioural (motivational) systems help differentiate among suicidal, self-destructive, and
self-mutilatory behaviours and their respective modes. When activated, the suicidal mode is
characterized by behaviour (and motivation) expressing an intent to die by suicide. During a
period in which the suicidal mode is active, the physiological system is aroused, with
autonomic, motor, and sensory activation. By definition, the suicidal mode is acute (that is,
time limited) in nature and characterized by autonomic arousal and activation. Chronic
suicidality is characterized by low threshold for activation of the suicidal mode and broader
range of potential triggers, along with habitual modes that are active and representative of
underlying individual vulnerabilities during inter current periods (Rudd, 2000).

As is suggested by this conceptualization, the suicidal mode is essentially self-limiting.
The physiological arousal necessary can only be maintained for limited periods, with
variations likely dependent on the chronicity of the problem and the complexity of the Axis I
and II diagnostic picture. The duration of time for an active suicidal mode may vary in
accordance with the chronicity of the behaviour (Rudd, 2000). In other words, multiple
attempters are likely to experience longer periods of activation of the suicidal mode in
comparison to single attempters.

The suicidal mode is a conceptual model easily understood and followed by patients,
incorporating relevant empirical findings into the identified systems, and translating them
into a framework to both articulate the content of and guide treatment (Rudd, 2000). Figure
4.6. provides a graphic illustration of the proposed suicidal mode. As is evident, there is

Figure 4.6 A cognitive-behavioural model of suicidality: The suicide mode
reciprocal interaction and interdependence of the various systems. Although the model appears somewhat linear and sequential in nature, Rudd (2000) points out that it is important to note the synchronous interaction of the systems described by Beck (1996). At present the modal theory of suicidality is being refined and attempts are made to validate the theory experimentally.

4.1.3.8. Summary

A broad range of theories have driven both clinical practice and empirical studies. Included among the most frequently cited theoretical approaches to suicidality are the following: (1) epidemiological (for example, Dublin, 1963), (2) philosophical (for example,
Battin, 1982), (3) sociocultural (for example, Hendin, 1964), (4) sociological (Durkheim, 1897/1951), (5) psychiatric (for example, Kraeplin, 1883/1915), (6) psycho-dynamic (for example, Freud, 1940), (7) psychological (for example, Shneidman, 1985), and (8) biological (for example, Bunney & Fawcett, 1965). Naturally, each approach has emphasized a distinctive feature, aspect, or characteristic of suicide and suicidal behaviour, frequently at the purposeful exclusion of others.

Epidemiological approaches have focused on demographic characteristics, philosophical theorists have attempted to answer difficult questions about the nature and purpose of life, and sociocultural and sociological researchers have emphasized the critical role played by societal and cultural variables. Similarly, psychiatric, psycho-dynamic, psychological, and biological researchers have stressed the importance of mental illness, unconscious conflicts and emotional processes, psychological pain and unmet psychological needs, and biochemical imbalances, respectively. Only recently has a concerted effort been made toward theoretical integration in suicidology (Maris, Berman, Maltsberger & Yufit, 1992).

Despite a rich and broad research literature, the narrow and exclusive focus of most theoretical approaches has greatly limited their clinical and practical utility. Accordingly, practitioners often struggle to apply research findings in a meaningful way in their daily clinical work with suicidal patients, opting instead to use multiple theoretical paradigms to understand, explain, and ultimately treat different aspects of a single patient's presentation (Rudd, 2000). This occurs despite the strong possibility of violating stated fundamental assumptions and principles upon which the theoretical approaches were developed.

Empirically derived models have also tended to be restrictive and somewhat exclusive in focus. Although not specific to suicidality, a number of models have been explored and validated for depression, the most extreme manifestation of which incorporates a suicidal component. Researchers have explored the role of a broad range of variables in depression,
including attributional style (for example, Abramson, Metalsky, & Alloy, 1989), hopelessness (Weisshaar, 1996), problem solving (Nezu, Nezu, & Perri, 1989), interpersonal relationships and social reinforcement (for example, Lewinsohn, 1975), and cognitive rigidity and distortion (for example, Beck, Rush, Shaw & Emery, 1979). The majority of the models proposed that are specific to suicide and suicidal behaviour are, essentially, variations of the diathesis-stress-hopelessness paradigm, well articulated by Schotte & Clum (1987). In this paradigm, cognitive rigidity (that is, a relative inability to identify problems and their solutions) mediates the relation between life stress and suicidal behaviour. Specifically, according to this model, individuals deficient in the capacity for flexible divergent thinking, when placed under naturally occurring conditions of high life stress, are cognitively unprepared to develop the effective alternative solutions necessary for adaptive coping (Schotte & Clum, 1987). As a result of their inability to engage in effective problem solving, they are assumed to develop feelings of helplessness and hopelessness under such circumstances. This state of hopelessness places the individual at heightened risk for suicidal behaviour. A range of variables have been identified as underlying diathesis, or vulnerabilities, triggered by stress, both acute and chronic. Among the most frequently cited diathesis are dysfunctional assumptions, cognitive distortions, interpersonal problem solving deficits and cognitive rigidity.

<table>
<thead>
<tr>
<th>Approach:</th>
<th>Theory:</th>
<th>Risk Factors:</th>
<th>Protective Factors:</th>
</tr>
</thead>
</table>

Table 4.2. Summary-Theories of Suicide
| Biological / Neuro-biological: | 1. Family History  
2. Twin Studies  
3. Adoption Studies  
4. Neurotransmitters: serotonin, dopamine, norepinephrine  
5. CSF | History of suicide in the family  
Genetic predisposition  
Low levels of 5-HIAA  
Low levels of CSF HVA | Physical health  
Religious belief  
War  
Social support  
Intact marriage  
Children  
Job satisfaction  
Culture |
|---|---|---|---|
| Sociological: | 1. Durkheim’s Theory  
2. Social Regulation & Status Integration Theory  
3. Status Integration Theory  
4. Frustration-Aggression Theory  
5. Learning Theory  
6. Cultural Theories  
7. Media & Imitation Theory  
8. Modernization Theory | Anomie  
Isolation  
Marital disruption  
Media  
Work problems  
Retirement  
Stress  
Retrenchment  
Specific subculture | Social support  
Friend support  
Family support  
Hopefulness  
Assertiveness  
Cognitive flexibility  
Coping skills  
Prevention & intervention programs |
| Psychological: | 1. Freud’s Theory  
2. Neofreudian Theories  
3. The Suicidal Family Theory  
4. Interactional Theory Of Suicide  
5. Transactional Approach  
6. Shneidman’s Theory  
7. Transactional Model Of Development  
8. Cognitive-Behavioural Model Of Suicidality | Stress  
Depression  
Hopelessness  
Loneliness  
Low self-esteem  
Level of assertion  
Low social support  
Culture  
ISDBs  
Substance abuse  
Impulsivity  
Cognitive rigidity  
Anger  
Suicidal ideas / attempts  
Death as an escape | Social support  
Friend support  
Family support  
Hopefulness  
Assertiveness  
Cognitive flexibility  
Coping skills  
Prevention & intervention programs |

However, one of the primary difficulties for practitioners attempting to employ these models in treatment is their limited person-specific clinical relevance (Rudd, 2000). They often times are difficult to apply in individual treatment cases given subtle but important distinctions and nuances presented by individual patients. Most clinicians agree that suicidal patients are the most diagnostically complex and therapeutically challenging patients they see (for example, Pope & Tabachnick, 1993). This is consistent with the complexity of suicidality itself, a problem that is inarguably the result of a complex web of factors, with precise interrelationships varying from individual to individual. This is true despite consistency in empirical studies regarding the roles of variables like life stress, problem solving, hopelessness, and emotion regulation (Rudd, Joiner, Jobes & King, 1999).

Table 4.2. shows a brief summary of the major theories used in suicidology and indicates the relevant risk and protective factors for the theoretical approach.

### 4.1.4. Predictive And Preventive Models Of Suicide
4.1.4.1. The Suicidal Family Theory

Although a coherence between suicide and family history has always been documented there are few formulated theories. Striking is the similarity of family structure and dynamic of suicidal and psychosomatic families. The particular nearness to death can not be explained adequately enough through a psychological or sociological perspective but, also has to include an interpersonal aspect. Wagner (1997) reviewed the empirical support, or lack thereof, for five aspects of family dysfunction that have provided a conceptual underpinning to understanding suicide risk and families.

(a) Poor family communication and problem-solving skills

It has been alleged that families of suicidal people avoid direct verbal communication, walk out on arguments, have a high degree of secretiveness, feel hostility but discourage its expression to each other, and view transitional events as threats to family stability. In general, Wagner (1997) opined, there is only modest evidence that poor family communication or problem-solving is a risk factor for suicidal behaviour. The better-controlled research does suggest that suicidal children and adolescents do experience more negative family and parent-child relationships and that much of this may be due to the child's psychopathology, particularly with regard to non-fatal suicidal behaviour. In uncontrolled studies, unresolved family problems are the most commonly reported of stressful events in the days prior to both completed and attempted suicide in youths (Wagner, 1997).

(b) Scapegoating

Scapegoating is a family strategy that results in hostile feelings being redirected toward the suicidal child in order to alleviate tension between other family members. A most egregious example of scapegoating involves the physical and sexual abuse of a child. Wagner (1997) reports that retrospective reports of abuse are more common among those who
committed suicide than among normal adolescents and that suicide attempters are more likely
to have been abused than either clinical or control groups.

(c) Threatened or Actual Loss of an Attachment Figure

Death or separation, or the threat of separation, have been presented as promoting wishes
to reunite (in the grave), guilt and a consequent wish to punish the self for causing the loss,
revenge against the lost object, and feelings that one cannot live without the lost object.
Surprisingly, Wagner (1997) reports, there is no evidence that loss of a caregiver to death is a
risk factor for suicidal behaviour. Similarly, parental separation or divorce, when considered
apart from other losses, does not appear to be a significant risk factor for youth suicide
(Wagner, 1997). In contrast, evidence demonstrates that early losses and multiple losses may
influence the emergence of suicidal symptoms and behaviour.

(d) Marital Dysfunction

Pfeffer (1986) described inflexibility, ambivalence, and conflict in the spousal relationship
as common among parents of suicidal children. However, Wagner (1997) reports, there is
weak evidence that marital relationships in these families are any less satisfactory than in
normal controls.

(e) Family Psychopathology

Finally, clinicians have observed that parents of suicidal youth have significant
psychopathology, ranging from their own depression and suicidality to alcoholism and drug
abuse. Pathways, then, might range from genetic (for example, an inherited predisposition to
a disorder) to modelling disturbed behaviour as a coping mechanism to negative (for
example, neglectful) parenting and its effects on self-esteem and psychopathology in
children. Research tends to support this observation in parents of suicidal youth as compared
to families of normal controls but not compared to families of clinical controls (Wagner,
1997). Evidence, here, may be strongest with regard to parental substance abuse problems.
4.1.4.2. Predictive Model Of Suicide Ideation And Behaviour

Traditionally, researchers into suicide have used two theoretical models implicitly: (1) the environmental model and (2) the individual differences (personological) model. In the first case, the model sees suicide as a result of environmental determinants; this leads to research that searches for environmental factors distinguishing suicidal from non-suicidal subjects. In the latter case, the model sees suicide as a result of personological determinants; this leads to research that searches for personal characteristics or traits distinguishing suicidal from non-suicidal subjects. The clinical usefulness of predictions of suicidal behaviour based on either approach appears to be limited on several accounts. First, while research based on the environmental model has demonstrated numerous environmental correlates of suicidal behaviour, it has little practical utility in the assessment of the individual interacting with such factors. Second, research based on the personological model has in general demonstrated equivocal findings, with little utility in the assessment of the suicidal individual as well as his or her environmental interactions. In short, while both models may provide important hypotheses or descriptive information, they are of little value in predicting suicidal risk (Bonner & Rich, 1987).

Investigators have proposed that suicidal behaviours be conceptualized as falling along a continuum of potential that includes suicidal ideations, contemplations, threats, attempts, and completions, as shown in figure 4.2. From this point of view, suicide ideation is presumed to precede and lead to suicide contemplations (plans, preparations, etc.); these in turn is thought to precede and lead to suicide threats and attempts, which then may finally culminate in suicide completions. Hence, the term 'suicidal behaviour' may be used to refer to the entire continuum of suicidal thoughts and actions. Examining this range of suicidal behaviour in the context of environmental and personological factors, then, rather than conceptualizing suicide
as a static and isolated event, may enhance understanding of this process and increase clinical prediction (Bonner & Rich, 1987).

Self-compiled figure 4.7. attempts to demonstrate how complex, varied and interrelated the factors and processes involved in suicidology are. The proposed model is by no means meant to be exclusive. The concepts of self-identity, self-esteem, concepts of self, and cultural identity are crucial in the development of the adolescent individual. Such factors can work as intermediate components when the individual is growing up: identity formation and individuation become vital. The dynamics of deliberate self-harm consist of a discharge of aggressive tendencies towards one's self or others. Rotterstol (1993) suggests that emotional crises which trigger suicide are usually those which provoke insecurity, weaken the person's self-image or threaten loneliness and reduced function in life. Aggression (anger) against one's self or others, appeal and ambivalence all contribute to suicidal gestures as well as completed suicide.

The individual's rejection of culture and family may well contribute to a sense of rage which may become internalized and lead to self-harm. The interrelation of school and parental pressures is noted. Provocative and defiant behaviours towards parents and delinquency are common in adolescents. They may appear sociable in order to deal with their individuation, friendship and social acceptance. However, Hendin (1984) argues that their social contracts remain shallow and they may become uneasy at the possibility of

Figure 4.7. Tentative predictive model of suicidality
intimacy. Their rebellious behaviour may mask the fact that they are depressed and fear separation from their families or friends despite their underlying unhappiness with them. Likewise, factors such as the media, the environment an individual is situated in, a family
history of suicide and a possible psychiatric condition will have an impact on the individual.
Not every suicidal thought or ideation ultimately leads to suicide, but may well develop into more serious conditions. As demonstrated in figure 4.7., some risky behaviour is even seen as normal and socially acceptable to a certain degree. Any preventative strategies have to take a number of varying factors into account for different groups and individuals. An awareness of these factors can highlight where preventative strategies need to be implemented.

It is important to note that the prediction of suicide is somewhat different from the assessment of suicide risk. Suicide prediction refers to the foretelling of whether suicide will or will not occur at some future time, often many months, based on the presence or absence of a specific number of defined factors, within definable limits of statistical probability. Suicide risk assessment, a clinical activity, refers to the establishment of a clinical judgement of risk in the very near future, based on the weighing of a very large mass of available clinical detail. From time to time confused clinicians conclude that because suicide cannot be predicted, clinical risk assessment is a chimerical pursuit, and that one might as well toss a coin. Risk assessment done in a systematic, disciplined way is a reasoned and inductive process. It is a necessary exercise in estimating probability over short periods. But the fact remains that suicide prediction is beyond our reach. Pokorny (1983) states that: “The courts and public opinion seem to expect physicians to be able to pick out the particular persons who will later commit suicide. Although we may reconstruct causal chains and motives after the fact, we do not possess the tools to predict particular suicides before the fact.” (p.505).

4.1.4.3. Introduction To Preventing Suicide

Conceptually, the field of prevention (attempt to intervene before the onset of a problem) has evolved from simple to complex, multi-factorial systems that recognize the complexity of
self-destructive behaviours and individuals. In recent years suicide prevention has come to embrace a melding of mental health and public health thinking. Clinical models assumed that suicide is a behavioural manifestation of underlying pathology, and therefore one treats the underlying disorder (for example, depression). A more complex variation of this model understands that suicidal behaviour is consequent to both distal and proximal antecedent conditions - that is, predisposing and precipitating conditions (for example, depression in males who then increase acute alcohol intoxication leading to relationship conflicts and loss). The more complex public health variation of this approach is to understand the more universal mechanisms and processes that lead to these negative outcomes, then designing preventive interventions to reduce long-term vulnerabilities. The public health approach moves our thinking toward intervening before the 'disorder' develops (primary prevention). It also forces our thinking to focus on the individual at risk and into the realm of the environment and the agents of self-destruction. Thus, early interventions might be designed to increase coping skills in children (host), restrict access to available means such as firearms (agent), or increase community and parent education toward the importance of safe gun storage behaviours (environments).

4.1.4.4. First Generation Prevention Programs

With regard to adolescent suicide, the first generation of prevention programs relied primarily on just two conceptual strategies: (1) recognition and referral of at-risk youth and (2) reduction of risk factors. As critically reviewed by the Centers for Disease Control (1992), these programs too often were seen as stand-alone models, inadequately linking together other community resources and risk-prevention programs; rarely focused on means-reduction efforts that had at least some empirical support; and, in general, rarely measured
desired outcomes and potential effects. Moreover, they rarely had a primary prevention focus. Table 4.3 outlines these programs.

Table 4.3. First generation youth suicide prevention programs

<table>
<thead>
<tr>
<th>Prevention program</th>
<th>Summary description</th>
</tr>
</thead>
<tbody>
<tr>
<td>School gatekeeper training</td>
<td>Education of school personnel (counsellors, teachers, coaches, etc.) to identify and refer at-risk students to mental health caregivers.</td>
</tr>
<tr>
<td>Community gatekeeper training</td>
<td>Education of the non-school community in contact with youth (clergy, paediatricians, police, etc.) to identify and refer at-risk students to mental health caregivers.</td>
</tr>
<tr>
<td>General suicide education</td>
<td>Classroom centred, knowledge-based training of students to increase self-awareness and peer observation of risk and help-seeking / referral skills.</td>
</tr>
<tr>
<td>Screening programs</td>
<td>School-based administration of a screening questionnaire to all students with follow-up triage of identified at-risk students.</td>
</tr>
<tr>
<td>Peer support groups</td>
<td>School - or community-based support groups aimed to foster social and coping competencies, peer relationships, and networking among at-risk youth.</td>
</tr>
<tr>
<td>Crisis centres and hotlines</td>
<td>24-hour anonymous telephone support systems offering non-judgemental listening, problem solving, and crisis intervention to callers.</td>
</tr>
<tr>
<td>Means restriction</td>
<td>Delaying or thwarting access to available and accessible means for self-harm, particularly firearms.</td>
</tr>
<tr>
<td>Postvention / cluster prevention</td>
<td>School and community interventions to reduce potential imitative (&quot;copycat&quot;) suicides after an index suicide.</td>
</tr>
</tbody>
</table>


These preventive efforts have yet to commit resources to promoting protective factors among younger children, targeting developing resiliency in later years. To this end, Berman and Jobes (1995) have outlined a conceptual model of primary prevention interventions that focus on decreasing the individual child's potential for later suicidality. These include skill-based approaches to manage depression, anger and aggression, or loneliness and to enhance competencies such as decision making, social skills, and problem-solving skills. These approaches are educational, thus school-based; manualized, thus teachable without extensive training of trainers; and time-limited (for example, eight sessions), but requiring booster shoots over subsequent years of development.
### 4.1.4.5. Second Generation Prevention Programs

Berman and Jobes (1995) recommend a second generation of youth suicide prevention strategies, with a focus on primary and secondary prevention. These strategies may take many forms, dependent upon whether the target is the individual, the social milieu, or proximal agents. Table 4.4 outlines these strategies.

**Table 4.4. A Conceptual Model Of Prevention Strategies**

<table>
<thead>
<tr>
<th>Individual predisposition</th>
<th>Social milieu</th>
<th>Proximal agents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary prevention</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression management</td>
<td>Drop-out prevention</td>
<td>Gun safety training for parents</td>
</tr>
<tr>
<td>Anger management</td>
<td>Early detection / referral and of parental pathology.</td>
<td>Suicide awareness among health providers.</td>
</tr>
<tr>
<td>Loneliness prevention</td>
<td>Surrogate role models</td>
<td>Federal firearms prevention</td>
</tr>
<tr>
<td>Problem-solving training</td>
<td>Media guidance</td>
<td>care providers.</td>
</tr>
<tr>
<td>Competency enhancement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical viewing skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help-seeking training education.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary prevention</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triage programs</td>
<td>Gatekeeper training</td>
<td>Medication: emetics</td>
</tr>
<tr>
<td>Volunteerism</td>
<td>Peer counselling</td>
<td>Environmental safety</td>
</tr>
<tr>
<td>Outpatient treatment</td>
<td>Parental pathology</td>
<td>Decrease access to guns</td>
</tr>
<tr>
<td>Case finding</td>
<td>Case finding</td>
<td></td>
</tr>
<tr>
<td>Caregiver training</td>
<td>Caregiver training</td>
<td></td>
</tr>
<tr>
<td><strong>Tertiary prevention</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric treatment</td>
<td>Community mental health treatment</td>
<td>Treatment with selective serotonin re-uptake</td>
</tr>
<tr>
<td>Substance abuse inhibitors.</td>
<td>Juvenile justice programs</td>
<td>Psychotherapy for</td>
</tr>
<tr>
<td>Treatment depression.</td>
<td>Case management</td>
<td>Neuroleptic for psychosis</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Berman & Jobes (1995).*

Although there have been many attempts to develop tests, such as psychological inventories, depression scales, and suicide intent scales that predict suicide risk, these tools are imperfect (Leenaars, & Lester, 1995). Furthermore, there are few tests or tools developed specifically for adolescents.
CHAPTER FIVE: METHODOLOGY
**INTRODUCTION**

The chapter on methodology discusses and outlines the steps followed in this study. This includes a description of the subjects (participants) and an explanation of the instruments used. The instruments development, reliability, validity and item format is examined. Attention is then given to the procedure followed in obtaining the data and the techniques of analysis are discussed.

**FOCUS AREA AND RESEARCH QUESTIONS**

The following research questions are addressed in this study:

1. Is adolescent suicidal behaviour more prevalent in the German sample than in the South African sample?
2. Is friend support more important than family support in adolescent suicidality?
3. What is the relationship between adolescent suicidal and risk and different dimensions of personal assertion?
4. Are there cross-cultural similarities in the variables associated with adolescent suicidal behaviour and risk?
5. Is the belief in God more prevalent in the German or in the South African sample; and does it protect against suicide attempts?
6. Which variables are related to previous suicide attempts and do they differ between the two samples?
7. What is the incidence rate of attempted suicide among the German and South African sample?
5.3. **SUBJECTS**

The two samples for this study were drawn from several classes at secondary schools in Germany and South Africa. The schools were all situated in an urban environment and in a middle-class neighborhood. An individual qualified for inclusion into the study by the following set criteria: (1) had to attend a secondary school in Kiel, Germany or Port Elizabeth, South Africa and (2) fall into the age group of 14 to 18 years. In order that subjects met the set criteria, a demographic data sheet was used and subjects older than 18 years of age were excluded from the study. Three hundred and sixty-eight students participated in the German sample of which 50 subjects were excluded from the study, 21 because of incomplete answers on the questionnaire, and 29 because they were older than 18 years of age. In the South African sample, 319 students participated, of which 20 were excluded from the study because of incomplete answers. The two samples consisted of 318 German and 299 South African high school students (N = 617). The German sample consisted of 164 male and 154 female students with a mean age of 16.14 years (SD = 1.17), with a range between 14 and 18 years. The South African sample consisted of 114 male and 185 female students with a mean age of 16.16 years (SD = 0.83), with a range between 14 and 18 years. A more detailed description of the two samples is presented in Table 6.1 in the analysis chapter.

5.4. **PROCEDURE AND ETHICS**

The sites of the study were two cities in Germany and South Africa - Kiel and Port
Elizabeth, respectively. Both cities are situated at the coastal region. To account for seasonal variations in suicidality, the study was carried out during the same season (summer) in both cities.

First, contact was established with the Department of Education in the two cities to obtain the necessary permission for carrying out the study (see Appendix A and B). Thereafter, contact with the local schools was established by the researcher, explaining the study to the principal and in some cases to the guidance teachers. Once schools agreed to participate in the study, the relevant parents of the students were informed about the study through a consent form (see Appendix C) asking permission for participation in the study. Consequently, six high schools in Germany and four high schools in South Africa agreed to participate in the study and were chosen as the sites of the study.

Students were asked to fill in the questionnaire during a regular class hour, which took approximately 40 to 45 minutes to complete. Participation in the study was completely voluntary and participants could withdraw from the study at any time. The subjects were assured full confidentiality - they were not required to write down their names or addresses. This was indicated in written form at the beginning of the questionnaire and explained by the investigator during the study.

5.5. **INSTRUMENTS**

A four part questionnaire was designed to collect the data. The first part included questions about demographic, familial and friend background. The second part included a measure of current suicidal risk (Suicide Probability Scale). The third part consisted of two measures of perceived social support from friends (Perceived Social Support from Friends)
and family (Perceived Social Support from Family). The fourth part contained a measure of
assertiveness (Scale of Interpersonal Behaviour). The SPS, PSS scales and SIB scale were
translated into German by the researcher.

5.5.1. Demographic And Open-Ended Questions

This section included questions about students age, sex, number of siblings, number of
friends with whom they can talk about everything, belief in God, life-expectancy, previous
help seeking behaviour, and a number of open ended questions about: previous suicide
attempts, parental loss and loss of a family member or friend (through death), previous
suicide attempts by family member or friend, suicide by family member or friend, life-
threatening events, where respondents would like to live, and whether respondents would like
to belong to a different cultural or ethnic group. (Please refer to Appendix C for the
questions).

5.5.2. The Suicide Probability Scale

There are few instruments available for assessing the suicide potential of adolescents and
most instruments have been derived from research with adults (Cull & Gill, 1988).
Developmental differences between adolescents and adults call into question the use of adult-
based instruments for assessing suicide potential in adolescence (Lester, 1990b; White,
Murdock, Richardson, Ellis & Schmidt, 1990) and point to the need for separate standards in
the assessment of adolescent suicide potential.

The Suicide Probability Scale (SPS) designed by Cull and Gill (1988) as an adjunctive
screening instrument, is a 36-item inventory measuring an individual's self-reported attributes
and behaviours which have a bearing on suicide risk. Since it is a self report measure, it is not
recommended for use with individuals who are unwilling or unable to cooperate in completing the form. Reading level of scale is at approximately fourth-grade level.

The authors state that the test may be utilized with subjects over the age of 14 years, noting that SPS scores are relatively unaffected by moderator variables such as age, sex, ethnic background and educational level (Cull & Gill, 1988) and thus there is no need for separate norms for any of these groups. The SPS consists of 36 statements describing feelings and behaviours. The respondents rate each item on a 4-point scale ranging from none or a little of the time (1), to most or all of the time (4), to indicate the frequency with which respondents experience a specific emotion or behaviour. The SPS consists of 4 empirically derived sub-scales based on the current theories of suicidal behaviour: (1) hopelessness (12 items); (2) suicide ideation (8 items); (3) negative self-evaluation (9 items) and (4) hostility (7 items). The SPS scale was modified slightly in this research by combining question 26 “I feel close to my mother” and question 35 “I feel close to my father” into a single question to read “I am close to my parent(s)/guardian(s)”. Thus the total number of statements is 35 and the sub-scale of negative self-evaluation carries 8 items instead of 9 items.

The SPS is a standardized instrument that provides t scores and a risk (probability) score. It also provides guidelines for interpreting the probability scores. The scale is intended to be used in clinical settings as a screening instrument, as well as for research purposes. Reliability, as well as content, criterion-related and construct validities, of the SPS is excellent (Cull & Gill, 1988). The SPS gave excellent test-retest reliability coefficients. Cull & Gill (1988) report two studies that assessed the test-retest reliability of the SPS. In one study, the test-retest reliability of the SPS was found to be \( r = 0.92 \) over a 3 week period. In a second study it was found to be \( r = 0.94 \) over a ten day interval. In the SPS manual, separate
test-retest reliabilities for individual sub-scales were not reported. In the Turkish version of the scale (Eskin, 1995b) a somewhat higher test-retest reliability coefficient $r = 0.95$ over a 47.8 day test-retest interval was found. Furthermore, the results of the Turkish version of the scale demonstrated a high level of internal consistency reliability for the SPS, it was $= 0.89$. The authors of the scale reported the internal consistency of the SPS to be $= 0.93$ on both odd-and even-numbered cases. Validity of the SPS is supported by item-scale correlations ranging from $r = 0.51$ to $r = 0.75$ for each sub-scale.

5.5.3. Perceived Social Support From Friends and Family Scales

(*PSS-Fr* and *PSS-Fa*)

Clarifying the distinctions between social network characteristics and perceived social support is one way of refining the social support construct. Social networks refer to the social connections provided by the environment and can be assessed in terms of structural and functional dimensions. For example, size and density, refer to structural network characteristics while network functions include the provision of information, comfort, emotional support, and material aid. On the other hand, perceived social support refers to the impact networks have on the individual. If networks provide support, information, and feedback then perceived social support (PSS) can be defined as the extent to which individuals believe that their needs for support, information, and feedback are fulfilled.

Support-seeking results from appraisals that there is a threat to which one must respond, that information or help is needed to adequately deal with the threat, and that aid is perceived to be available within one's support network. While the perception of support depends upon the availability of supportive structures in the environment, perceived support and support provided by networks are not identical. PSS is probably influenced by within-person factors,
including both long-standing traits on the one hand, and temporal changes in attitude or mood on the other (Procidano & Heller, 1983). Both of these may influence the perception of whether support is available or has been provided.

The PSS measures were designed by Procidano and Heller (1983) to measure the extent to which individuals perceive that their needs for support, information, and feedback are fulfilled by friends (PSS-Fr) and by family (PSS-Fa). The distinction between friend support and family support is considered important. Different populations (for example, different age cohorts) may rely on, or benefit from friend or family support to different extents. At a given time, there might be more change in an individual's friend network (for example, through moving for education) or family network (for example, through death). Friend relationships are often of relatively shorter duration than family relationships. And, while an individual's social competence probably plays a role in the maintenance of their support network, this is probably more true for friend relationships than family relationships since some of the latter are, by definition, ours by birth.

Each 20-item scale consists of declarative statements to which the individual answers “Yes”, “No”, or “Don't know”. (see Appendix C). For each item, the response indicative of perceived social support was scored as +1 so that scores ranged from 0, indicating no perceived social support, to 20, indicating maximum perceived social support, as provided by family or friends. The “Don't know” category is not scored. The first study investigated the potential effects of temporary within-person states, specifically positive versus negative attitudinal sets, on PSS-Fr and PSS-Fa. Subjects were 105 undergraduate students at Indiana University. Result showed that perceived social support measures are relatively stable. PSS-Fa was unaffected by changes in either a positive or negative direction, while the PSS-Fr was
vulnerable only to negative induction. Perceptions of relations with family members, being of longer duration, are more predictable and less vulnerable to temporary changes in attitudinal set (Procidano & Heller, 1983). The changes in the perception of support from friends in the negative self-statement condition does support the cautions voiced by Henderson et al. (1978) concerning the interpretation of correlations between support and depression. There is a general pattern in correlational studies to report an inverse relationship between social support and depression and to interpret these findings as indicating that low support is a causal factor in depression. Another possibility is that depressed individuals may simply perceive less support as part of their negative self-appraisal.

The second study, 105 undergraduate Indiana University students, was intended to provide additional verification of the PSS scales by investigating similarities in perception anxiety level, willingness to disclose, and actual disclosive levels between friends and siblings. Overall, it can be concluded that successful validation of the PSS scales was achieved (Procidano & Heller, 1983).

Procidano and Heller (1983) reported the reliability and validity of the scales to be highly adequate for college students. Factor analysis showed that each scale is composed of a single factor. Both PSS-Fr and PSS-Fa were related inversely to symptoms of distress and psychopathology. Lyons, Perotta and Hancher-Kvam (1988) reported the internal consistency, reliability and construct - and criterion-related validity of the PSS on a psychiatric, a diabetic and a college student sample. As one might expect, the psychiatric sample had lower perceived social support from friends and family than the diabetic and the college samples. Eskin (1993a) undertook an investigation of the reliability of the Turkish version of the PSS scales and found excellent test-retest reliability coefficients; $r = 0.80$ for
PSS-Fr and $r = 0.90$ for the PSS-Fa scale. Moreover the study documented adequate internal consistency reliabilities for the PSS-Fr and the PSS-Fa ($r = 0.76$ and $r = 0.85$ respectively). In the original work by Procidano and Heller (1983), the internal consistency reliability coefficients with university students were found to be $r = 0.88$ for the PSS-Fr and $r = 0.90$ for the PSS-Fa. Eskin (1993b) also documented test-retest reliability of $r = 0.84$ for the PSS-Fr and $r = 0.85$ for the PSS-Fa with the Swedish version on a university student sample. With the Swedish version, Eskin (1993b) found an alpha coefficient of $\alpha = 0.91$ for the PSS-Fr and $\alpha = 0.89$ for the PSS-Fa. Taking the results of all studies into consideration, one can say that the PSS is a stable and homogeneous measure of one's perception of support from one's friends and family.

5.5.4. The Scale for Interpersonal Behaviour (SIB)

The Scale for Interpersonal Behaviour (SIB) is a 50-item multidimensional instrument to assess one's degree of assertiveness (Arrindell & van der Ende, 1985). Forty-six of the 50 items are classified into the following four factorially derived categories of assertive behaviour: (1) display of negative feelings (15 items); (2) expression of and dealing with personal limitations (14 items); (3) initiating assertiveness (9 items) and (4) positive assertion (7 items). A total scale termed the General Assertiveness Scale is also computed on those 50 items as an indication of a person's general level of assertiveness across various situations and various types of assertive behaviour. Each item is rated on a 5-point scale that ranges from "never" to "always" for the frequency of engaging in a specific assertive behaviour (see Appendix C).

Adequate test-retest and excellent internal consistency reliabilities are reported for SIB on different populations, that is, socially phobic, shy, psychiatric outpatients, unassertive
females and normals (Arrindell & van der Ende, 1985; Arrindell, Sanderman, van der Molen, van der Ende & Mersch, 1987). Similarly, excellent construct and factorial validities with different samples and with diverse measures are reported for SIB (Arrindell & van der Ende, 1985; Arrindell et al., 1987). Arrindell and van der Ende (1985) reported test-retest reliabilities for the SIB total scale performance measure to be $r = 0.73$ over a 22 - to 40 - day test-retest interval and $r = 0.43$ over a 41 - to 93 - day interval. During the Turkish translation 2 positive assertive items resulted in the same. As a consequence, this sub-scale consisted of 7 items instead of 8 and 49 items for the total scale (Eskin, 1993b). Eskin (1995b) in a Turkish version of the SIB scale found the test-retest reliability of the SIB to be $r = 0.71$ over a 47.8 - day interval, comparable to the findings of Arrindell & van der Ende (1985). In Arrindell and van der Ende (1985), test-retest reliabilities for SIB subscales ranged from $r = 0.69$ for the display of negative feelings subscale to $r = 0.73$ for the initiating assertiveness sub-scale and from $r = 0.32$ for the expression of and dealing with personal limitations sub-scale to $r = 0.72$ for the display of negative feelings sub-scale. With regard to the internal consistency of the SIB, the coefficients obtained in the Turkish version of the scale are comparable to those of Arrindell and van der Ende (1985).

5.5.5. Relationship of Suicide Probability Scale, Perceived Social Support from Friends and Family Scale, and Scale of Interpersonal Behaviour

The interrelationships between the sub-scales and between the sub-scales and the total scales of the PSS, SIB and SPS were all highly significant (Eskin, 1995b). As for the PSS-Fr and PSS-Fa scales, one might expect them to be correlated with the SIB. However, only the PSS-Fa was found to be correlated with the SIB and the expression and dealing with personal limitations sub-scale of the SIB (Eskin, 1995b). A higher assertiveness level and ease in expressing and dealing with personal limitations were associated with a higher level of
perceived support from family. The SPS measures negative affect and certain suicidal feelings and behaviours, and one might expect it to correlate inversely with the extent to which persons perceive their relationships with their friends and family as supportive. Findings from the Turkish study (Eskin, 1995b) confirmed this expectations.

The adaptation of psychological instruments into different languages (cultures) provides an opportunity to subject these measures to cross-cultural validation and an opportunity to make cross-cultural comparisons.

The SPS, SIB and PSS were translated into Swedish, and highly adequate test-retest and internal consistency reliability estimates were obtained (Eskin, 1993b). Adequate reliability coefficients for the SPS sub-scales of hopelessness $r = 0.74$, hostility $r = 0.58$ and negative self-evaluation $r = 0.49$ were obtained. Coefficients for the PSS-Fr and PSS-Fa were $r = 0.77$ and $r = 0.83$ respectively. Coefficients for SIB expression of and dealing with personal limitation $r = 0.68$ and positive assertion $r = 0.75$ sub-scales were calculated.

5.6. THEMATIC CODING OF OPEN-ENDED QUESTIONS

There are many ways in which a coding can be performed. This study will follow a content analysis to make sense of the qualitative data obtained from the first part of the questionnaire.

Firstly, the predetermined categories are outlined, which are derived from the open-ended questions (numbers 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17 and 18). Before proceeding with the analysis, a record of the sample is kept, listing each respondents relevant particulars on a separate sheet (that is, age, sex, high school, etc.) - and giving each one a coded number.
or letter for reference in the analysis. A separate page is used for each predetermined category (question). Each respondents actual answer is then recorded under the respective category.

After having recorded each respondents actual answer under the predetermined categories (questions) - a first summary is compiled. Under each predetermined category (question) similar trends, comments, or answers are pulled together, giving each grouping a heading. At this stage, the best phrase or title has to be found for each of these emergent categories. Also, at this stage, a record is kept of which respondents made comments or answers related to that category. The frequencies of responses next to each emergent category is noted.

Then, a second summary is compiled, highlighting the major trends arising for each questions. Under each predetermined category (question), the emergent categories are listed (with frequencies in brackets in order of frequency weighting). Finally, a third summary is compiled, aimed at presenting the findings in a logical order. Under each predetermined category (question), a logical framework for the emergent categories is compiled - this may include combining or re-ordering categories or changing the category titles.

CHAPTER SIX: ANALYSIS OF RESULTS

_Suicide cannot be predicted with the means we have at hand. There is no known "tag" (no psychological test, clinical technique, or biological marker) sufficiently specific and sensitive to enable prediction. (Maltsberger & Goldblatt)_

6.1. **DEMOGRAPHIC VARIABLES OF OPEN AND CLOSED QUESTIONS**

Table 6.1 compares the characteristics of both groups to the open-ended questions. As can be seen from Table 6.1, males and females were evenly represented in the German group,
whereas females were over-represented in the South African group ($\chi^2(1) = 11.3, p < .001$).

South African students were more religious than their German counterparts ($\chi^2(1) = 162.8, p < .0001$). More South African students had a previous help seeking contact ($\chi^2(1) = 7.0, p < .02$) and experienced a life threatening event ($\chi^2(1) = 11.3, p < .01$). The South African group had a larger number of siblings ($M = 2.14; SD = 1.39$) than the German group ($M = 1.53; SD = 1.15$). The German students on the other hand reported a higher number of friends ($M = 3.32; SD = 2.91$) than the South African students ($M = 2.96; SD = 2.0$). The males and females in both groups have been compared in regard to students previous psychiatric contact, parental death, suicide attempts, attempted and completed suicide by friends and family, friend and family member death and experience of a life threatening event. The comparisons revealed differences between the two sexes in both groups in regard to previous suicide attempt, previous psychiatric contact and attempted and completed suicide by friends. That is, more female than male students reported having had a previous suicide attempt and psychiatric contact. Furthermore, more females than males know a friend who had attempted suicide; but more males than females had a friend who completed suicide.

**Table 6.1 Demographic characteristics of respondents**

<table>
<thead>
<tr>
<th>Variables</th>
<th>German (n = 318)</th>
<th>South African (n = 299)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>164</td>
<td>51.6</td>
</tr>
<tr>
<td>Female</td>
<td>154</td>
<td>48.4</td>
</tr>
<tr>
<td><strong>Belief in God</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>161</td>
<td>50.6</td>
</tr>
<tr>
<td>No</td>
<td>157</td>
<td>49.4</td>
</tr>
<tr>
<td><strong>Previous help seeking contact</strong></td>
<td>46</td>
<td>14.5</td>
</tr>
<tr>
<td><strong>Suicide attempts</strong></td>
<td>36</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Parents deceased</strong></td>
<td>11</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Suicide attempts in family</strong></td>
<td>45</td>
<td>14.2</td>
</tr>
</tbody>
</table>
Thirty-six German (11.3%; 29 female and 7 male) and forty-eight South African (16.1%; 38 female and 10 male) adolescents reported having previously made suicide attempts. The two student groups did not differ significantly with regard to suicide attempt status ($\chi^2(1) = 2.9, p > .05$).

### 6.1.1. Belief in god

As pointed out in Table 6.2, every second student in the German sample believed in god. More females than males in both groups believe in god. In the South African sample, 96.3 % believed in god, compared to only 50.6 % in the German sample. Table 6.3 shows that for the German sample, a suicide attempt was made more often by males when there was no belief in god; whereas in the South African sample, a suicide attempt was made only while also believing in god.

#### Table 6.2 Believe in god by gender

<table>
<thead>
<tr>
<th></th>
<th>German</th>
<th></th>
<th>South African</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>yes %*</td>
<td>no %*</td>
<td>yes %*</td>
<td>no %*</td>
</tr>
<tr>
<td>Male</td>
<td>66</td>
<td>20.8</td>
<td>96</td>
<td>30.2</td>
</tr>
<tr>
<td>Female</td>
<td>95</td>
<td>29.8</td>
<td>61</td>
<td>19.2</td>
</tr>
<tr>
<td>Total</td>
<td>161</td>
<td>50.6</td>
<td>157</td>
<td>49.4</td>
</tr>
</tbody>
</table>

* % - Percentage of total by country

#### Table 6.3 Believe in god by previous suicide attempts for males

<table>
<thead>
<tr>
<th></th>
<th>German¹</th>
<th></th>
<th>South African²</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>yes %</td>
<td>% Pr.S.Att.</td>
<td>% Pr.S.Att.</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>66</td>
<td>20.8</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>no</td>
<td>96</td>
<td>30.2</td>
<td>5</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>51.0</td>
<td>7</td>
<td>2.2</td>
</tr>
</tbody>
</table>

* % - Percentage of total by country
Table 6.4 points out that more females in the German sample then in the South African sample attempted suicide when not believing in god. More females in the South African sample attempted suicide while believing in god. Overall, more South African females, than German females attempted suicide.

<table>
<thead>
<tr>
<th></th>
<th>German</th>
<th>South African</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>%</td>
</tr>
<tr>
<td>yes</td>
<td>95</td>
<td>29.8</td>
</tr>
<tr>
<td>no</td>
<td>61</td>
<td>19.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>156</td>
<td>49.0</td>
</tr>
</tbody>
</table>

6.1.2. Help-seeking

Table 6.5 shows that more South African than German students in the sample were looking for help. In both samples, psychologists was the primary profession adolescents went to for help; followed by psychiatrists and general practitioners in the German sample, and general practitioners and priests in the South African sample. Both, in the German and South African sample, adolescents attempted suicide most often when previously having sought help from a psychologist.

<table>
<thead>
<tr>
<th>Profession</th>
<th>German</th>
<th>South African</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>% Pr.S.Att.</td>
</tr>
<tr>
<td>Psychologist</td>
<td>18</td>
<td>56.3</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>8</td>
<td>25.0</td>
</tr>
<tr>
<td>General Practitioner</td>
<td>4</td>
<td>12.5</td>
</tr>
<tr>
<td>Priest</td>
<td>2</td>
<td>6.2</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
</tr>
</tbody>
</table>

1 n = 36 previous suicide attempt; ² n = 48 previous suicide attempt

1 n = 46 help-seeking, n = 32 responded to who they saw; ² n = 68 help-seeking, n = 49 responded to who they saw
Table 6.6 demonstrates that more females than males in both groups were seeking help.

Overall, more South African students than German students were seeking help.

**Table 6.6 Gender of those seeking help**

<table>
<thead>
<tr>
<th>Gender</th>
<th>German¹</th>
<th>%</th>
<th>South African²</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>17</td>
<td>37.0</td>
<td>25</td>
<td>36.8</td>
</tr>
<tr>
<td>Female</td>
<td>29</td>
<td>63.0</td>
<td>43</td>
<td>63.2</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>100</td>
<td>68</td>
<td>100</td>
</tr>
</tbody>
</table>

¹ n = 46 help-seeking; ² n = 68 help-seeking

**Table 6.7 Age of those seeking help**

<table>
<thead>
<tr>
<th>Age</th>
<th>German¹</th>
<th>%</th>
<th>South African²</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>5</td>
<td>10.8</td>
<td>3</td>
<td>4.4</td>
</tr>
<tr>
<td>15</td>
<td>13</td>
<td>28.3</td>
<td>9</td>
<td>13.2</td>
</tr>
<tr>
<td>16</td>
<td>9</td>
<td>19.6</td>
<td>33</td>
<td>48.5</td>
</tr>
<tr>
<td>17</td>
<td>11</td>
<td>23.9</td>
<td>19</td>
<td>28.0</td>
</tr>
<tr>
<td>18</td>
<td>8</td>
<td>17.4</td>
<td>4</td>
<td>5.9</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>100</td>
<td>68</td>
<td>100</td>
</tr>
</tbody>
</table>

¹ n = 46 help-seeking; ² n = 68 help-seeking

Table 6.7 shows the age of those seeking help. The age of the majority of the students seeking help in both groups was between 15 to 17 years of age.

**6.1.3. Friends lost through death**

German students lost more friends through death (n = 43) than South African students (n = 33). A car accident was the most common cause of death for a friend in both samples, as shown in table 6.8.

**Table 6.8 Friends lost through death**

<table>
<thead>
<tr>
<th>How</th>
<th>German¹</th>
<th>%</th>
<th>South African²</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car accident</td>
<td>19</td>
<td>59.3</td>
<td>19</td>
<td>61.3</td>
</tr>
<tr>
<td>Earthquake</td>
<td>3</td>
<td>9.4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Homicide</td>
<td>3</td>
<td>9.4</td>
<td>2</td>
<td>6.5</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>2</td>
<td>6.3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
6.1.4. Family members lost through death

Table 6.9 shows that more South African students than German students lost a family member through death. Cancer was the leading cause of death in the German sample, followed by heart attack, natural death and illness. Heart attack was the leading cause of death in the South African sample, followed by natural death, cancer and illness.

<table>
<thead>
<tr>
<th>How</th>
<th>German¹</th>
<th>%</th>
<th>South African²</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drowned</td>
<td>2</td>
<td>6.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Firearm</td>
<td>1</td>
<td>3.1</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Burned</td>
<td>1</td>
<td>3.1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cancer</td>
<td>1</td>
<td>3.1</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>TB</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>AIDS</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Anorexia</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Flood</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
<td>31</td>
<td>100</td>
</tr>
</tbody>
</table>

¹ n = 159 lost a family member, n = 110 knew how; ² n = 171 lost a family member, n = 128 knew how

6.1.5. Life threatening event

Table 6.10 Life threatening event

<table>
<thead>
<tr>
<th>How</th>
<th>German¹</th>
<th>%</th>
<th>South African²</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>How</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>38</td>
<td>34.5</td>
<td>22</td>
<td>17.1</td>
</tr>
<tr>
<td>Heart attack</td>
<td>22</td>
<td>20.0</td>
<td>42</td>
<td>32.8</td>
</tr>
<tr>
<td>Natural death / old age</td>
<td>20</td>
<td>18.2</td>
<td>26</td>
<td>20.3</td>
</tr>
<tr>
<td>Illness</td>
<td>14</td>
<td>12.7</td>
<td>21</td>
<td>16.4</td>
</tr>
<tr>
<td>Accident</td>
<td>9</td>
<td>8.2</td>
<td>10</td>
<td>7.8</td>
</tr>
<tr>
<td>Alcohol / Substance abuse</td>
<td>7</td>
<td>6.4</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>AIDS / HIV</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Homicide</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>3.2</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100</td>
<td>128</td>
<td>100</td>
</tr>
</tbody>
</table>

¹ n = 159 lost a family member, n = 110 knew how; ² n = 171 lost a family member, n = 128 knew how
German\(^1\) | South African\(^2\)
--- | ---
LTHE | n | % | n | %
Mugging | 11 | 24.5 | 0 | 0
Witness of mugging | 0 | 0 | 3 | 12.4
Rape | 1 | 2.2 | 1 | 4.2
Attempted rape | 1 | 2.2 | 1 | 4.2
Car accident | 21 | 46.7 | 1 | 4.2
Previous suicide attempt | 1 | 2.2 | 1 | 4.2
Friend beaten | 1 | 2.2 | 1 | 4.2
Family violence | 2 | 4.4 | 0 | 0
Asthma attack | 3 | 6.7 | 0 | 0
Illness | 3 | 6.7 | 0 | 0
Pregnancy | 1 | 2.2 | 0 | 0
Firearm / knife | 0 | 0 | 15 | 62.4
Drug use by family member | 0 | 0 | 1 | 4.2
Total | 45 | 100 | 24 | 100

\(^1\) n = 50 experienced a LTIE, n = 45 responded to how; \(^2\) n = 25 experienced a LTIE, n = 24 responded to how

Table 6.10 shows that more German than South African students experienced a life-threatening event. For the German sample, a car accident and mugging was predominant, whereas in the South African sample, being threatened by a knife or firearm and being a witness of a mugging was predominant.

6.2. VARIABLES ASSOCIATED WITH PREVIOUS SUICIDE ATTEMPTS

Spearmen correlation coefficients between suicide attempt status (true or false), Suicide Probability scale, Perceived Social Support from Friends and Family scale, Scale of Interpersonal Behaviour sub-scales, and demographic-familial variables were computed.

Table 6.11 displays the variables that have significant correlations with previous attempts in

<table>
<thead>
<tr>
<th>Group</th>
<th>Variable</th>
<th>Correlation coefficients</th>
<th>p</th>
</tr>
</thead>
</table>

Table 6.11. Variables that correlated significantly with previous suicide attempts of German and South African adolescents
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>German</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPS risk score</td>
<td>0.52</td>
<td>***</td>
</tr>
<tr>
<td>Attempted suicide by friends</td>
<td>0.29</td>
<td>**</td>
</tr>
<tr>
<td>Life threatening event</td>
<td>0.27</td>
<td>**</td>
</tr>
<tr>
<td>Previous psychiatric contact</td>
<td>0.25</td>
<td>**</td>
</tr>
<tr>
<td>Death of a friend</td>
<td>0.24</td>
<td>**</td>
</tr>
<tr>
<td>Perceived family support</td>
<td>-0.24</td>
<td>*</td>
</tr>
<tr>
<td>Female gender</td>
<td>0.23</td>
<td>*</td>
</tr>
<tr>
<td>Attempted suicide in family</td>
<td>0.23</td>
<td>*</td>
</tr>
<tr>
<td>Suicide of friend</td>
<td>0.18</td>
<td>*</td>
</tr>
<tr>
<td>Perceived friend support</td>
<td>-0.16</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>South African</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPS risk score</td>
<td>0.61</td>
<td>***</td>
</tr>
<tr>
<td>Perceived family support</td>
<td>-0.31</td>
<td>**</td>
</tr>
<tr>
<td>Death of a friend</td>
<td>0.26</td>
<td>**</td>
</tr>
<tr>
<td>Attempted suicide by friends</td>
<td>0.16</td>
<td>*</td>
</tr>
<tr>
<td>Female gender</td>
<td>0.16</td>
<td>*</td>
</tr>
<tr>
<td>Life threatening event</td>
<td>0.16</td>
<td>*</td>
</tr>
<tr>
<td>Previous psychiatric contact</td>
<td>0.11</td>
<td>*</td>
</tr>
<tr>
<td>Suicide of friend</td>
<td>0.11</td>
<td>*</td>
</tr>
<tr>
<td>Attempted suicide in family</td>
<td>0.11</td>
<td>*</td>
</tr>
</tbody>
</table>

¹Point biserial correlations.  
²Phi coefficients.  

German and South African adolescents. As is seen in the table, Suicide Probability scale, attempted suicide by friends, life threatening events, previous psychiatric contact, death of friend, perceived family support, female gender, attempted suicide in the family and suicide of friends have been found to be related to previous attempts in both groups. In addition, perceived friend support in German adolescents was found to be related to previous attempts.

To determine whether each variable was related to previous suicide attempts with the other variables controlled, logistic regression analyses procedure was used. The logistic regression method for multivariate analysis was chosen because it is appropriate for comparing two dichotomous groups (for example, attempter vs. non-attempter) on a number of variables. Like multiple regression, the logistic regression tests the independent association of several variables to a dichotomous outcome when controlling for the other variables in the model. The logistic regression procedure does not assume normally
Two logistic regression analyses were performed on German and South African samples. In the first analyses, the SPS scores were not included. Because the SPS scores clearly are associated with previous attempts, the interest here was in identifying the independent effects of other variables that were found to be related closely to attempts with univariate analyses. Significance level for entry into the model was set at the five percent level of significance. For the German sample, attempted suicide by friends, life threatening event, previous psychiatric contact, death of a friend, perceived family and friend support, sex, attempted suicide by family and suicide by friends were entered into the model as independent variables. For the South African group, the same variables were entered into the model, except for perceived friend support.

Table 6.12 and 6.13 present the results of logistic regression analyses. The overall model ($\chi^2(9) = 86.5$, $p < .0001$) for the German sample indicated that the variables entered into the model were associated significantly with previous suicide attempts. Female gender, previous psychiatric contact, death of a friend, life threatening event, perceived family support and perceived friend support variables remained significantly associated with previous attempts even though the other variables were controlled. Similarly, the overall model, ($\chi^2(8) = 55.7$, $< .0001$), in the South African sample indicated that variables entered into the model were associated significantly with previous attempts. As can be seen from the table, female gender, previous psychiatric contact, suicide attempts in the family, death of a friend and perceived family support variables in the South African sample remained significant in the model, while controlling for the effects of the other variables.
Table 6.12. Parameter estimates of logistic regression model that predicted previous suicide attempts among German adolescents

<table>
<thead>
<tr>
<th>Group / variable</th>
<th>Coefficient</th>
<th>SE</th>
<th>(\chi^2)</th>
<th>df</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>German</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-2.4</td>
<td>.99</td>
<td>5.83</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Female gender</td>
<td>2.2</td>
<td>.59</td>
<td>13.73</td>
<td>1</td>
<td>***</td>
</tr>
<tr>
<td>Previous psychiatric contact</td>
<td>2.33</td>
<td>.51</td>
<td>20.92</td>
<td>1</td>
<td>***</td>
</tr>
<tr>
<td>Suicide attempts in family</td>
<td>.43</td>
<td>.58</td>
<td>.6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Death of friend</td>
<td>.97</td>
<td>.57</td>
<td>2.92</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Life threatening event</td>
<td>1.95</td>
<td>.69</td>
<td>7.82</td>
<td>1</td>
<td>**</td>
</tr>
<tr>
<td>Suicide of friends</td>
<td>.53</td>
<td>.69</td>
<td>.59</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Suicide attempts by friends</td>
<td>.25</td>
<td>.52</td>
<td>.25</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived family support</strong></td>
<td>- .12</td>
<td>5.21</td>
<td>.95</td>
<td>1</td>
<td>*</td>
</tr>
<tr>
<td>Perceived friend support</td>
<td>- 5.49</td>
<td>5.56</td>
<td>.97</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Classification results

Sensitivity 44.44% (16 / 36)
Specificity 97.87% (276 / 282)
Combined 91.82%

Classification results with SPS

Sensitivity 50.00% (18 / 36)
Specificity 98.58% (278 / 282)
Combined 93.08%

* \(p < 0.05\)  ** \(p < 0.01\)  *** \(p < 0.001\)

Table 6.13. Parameter estimates of logistic regression model that predicted previous suicide attempts among South African adolescents

<table>
<thead>
<tr>
<th>Group / variable</th>
<th>Coefficient</th>
<th>SE</th>
<th>(\chi^2)</th>
<th>df</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>South African</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-1.17</td>
<td>.54</td>
<td>4.69</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Female gender</td>
<td>.60</td>
<td>.43</td>
<td>1.87</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Previous psychiatric contact</td>
<td>.45</td>
<td>.41</td>
<td>1.18</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Suicide attempts in family</td>
<td>.65</td>
<td>.45</td>
<td>2.03</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Death of friend</td>
<td>1.37</td>
<td>.42</td>
<td>10.80</td>
<td>1</td>
<td>**</td>
</tr>
<tr>
<td>Life threatening event</td>
<td>4.43</td>
<td>.90</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Suicide of friends</td>
<td>.74</td>
<td>.65</td>
<td>1.27</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Suicide attempts by friends</td>
<td>.60</td>
<td>.38</td>
<td>2.57</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Perceived family support</td>
<td>-.15</td>
<td>3.26</td>
<td>20.55</td>
<td>1</td>
<td>***</td>
</tr>
</tbody>
</table>

Classification results

Sensitivity 25.00% (12 / 48)
Specificity 96.41% (242 / 251)
Combined 84.95%

Classification results with SPS


Two more logistic regression analyses were carried out by using the SPS scores as well, to see whether the classification results would be improved. Classification results for the two models are displayed in Table 6.12 and 6.13. As can be seen from the table, the logistic equations were better in classifying correctly non-attempters than attempters in both samples. The first equation (model without SPS) correctly classified 91.82% of the cases in the German sample and 84.95% of the cases in the South African sample. When the SPS was included in the model, the classificatory power of the model in classifying attempters correctly increased, while the power for classifying non-attempters was almost unchanged. This time, the model correctly classified 93.08% of the cases in the German group and 91.30% of the cases in the South African group. This indicates that the SPS correctly identified suicide attempters and shows that SPS is a reliable tool to use for suicide research with adolescents.

### 6.3. PREDICTORS OF CURRENT SUICIDAL RISK

The Suicide Probability Scale assesses the degree of current suicidal risk along a continuum from low to high risk. To determine the relative contribution of variables for predicting current suicidal risk (as assessed by the SPS) in German and South African students, a stepwise multiple regression procedure was performed. Prior to the regression analysis, zero-order correlation coefficients between Suicide Probability Scale scores, Perceived Social Support from Friends and Family Scale, Scale of Interpersonal Behaviour sub-scales and demographic-familial variables were computed. Variables that had significant

| Sensitivity | 60.41% (29/48) |
| Specificity | 97.21% (244/251) |
| Combined    | 91.30% |

** ** $p < 0.01$ *** $p < 0.001$
correlations with SPS scores at 1% level or better were taken as predictor variables in the analyses.

Subsequently (see Table 6.14), previous suicide attempts, perceived family support, perceived friend support, suicide attempts in family, life threatening events, suicide attempts of friends, suicide of friends, sex (female = 1; male = 0) and previous psychiatric contacts were taken as predictor variables in the German sample. In the South African group, previous suicide attempts, perceived family support, perceived friend support, death of a friend, life threatening events, previous psychiatric contacts, suicide attempts in family, suicide of friends and suicide attempts of friends were used as predictor variables.

Table 6.14 summarizes the results of stepwise multiple regression analyses done on the German and South African students. As one can see in the table, previous suicide attempt, perceived family and friend support, suicide attempts in family, life threatening event, suicide attempt of friends, suicide of friends, female gender and previous psychiatric contact variables appeared to be the significant predictors of current suicide risk scores in the German adolescents. In the South African group, previous suicide attempt, perceived family and friend support, death of a friend, life threatening event, previous psychiatric contact, suicide attempts of family and friends and suicide of friends appeared to be the significant predictors of SPS scores.

Table 6.14. Predictors of current suicidal risk on the Suicide Probability Scale among German and South African adolescents: Stepwise multiple regression analysis

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor variable</th>
<th>Correlation cumulative</th>
<th>R²</th>
<th>p</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Previous suicide attempts</td>
<td>.49</td>
<td>.24</td>
<td>***</td>
<td>10.12</td>
</tr>
<tr>
<td>2.</td>
<td>Perceived family support</td>
<td>.56</td>
<td>.31</td>
<td>**</td>
<td>4.79</td>
</tr>
</tbody>
</table>
3. Perceived friend support  .57       .32  **  2.31
4. Suicide attempts in family   .58       .34  *  3.97
5. Life threatening event   .58       .34  **  4.75
6. Suicide attempts of friends   .58       .34  **  5.17
7. Suicide of friends   .58       .34  *  3.08
8. Female gender   .59       .35  *  4.33
9. Previous psychiatric contact   .59       .35  *  4.96

South African adolescents
1. Previous suicide attempts   .61       .37  ***  13.41
2. Previous suicide attempts   .64       .41  **  5.58
3. Perceived friend support   .66       .43  *  0.39
4. Death of a friend   .66       .43  **  4.55
5. Life threatening event   .67       .44  *  2.79
6. Previous psychiatric contact   .67       .44  *  1.91
7. Suicide attempts in family   .67       .44  *  1.84
8. Suicide of friends   .67       .44  *  1.87
9. Suicide attempts of friends   .67       .44  *  2.83

* p < 0.05  ** p < 0.01  *** p < 0.001

6.4. INDICATED AGE, REASONS AND METHODS FOR PREVIOUS SUICIDE
ATTEMPTS

The reasons given to the open-ended question for attempting suicide by the German and
South African adolescents were classified into six main categories and a miscellaneous
category. When students gave more than one reason, each reason was treated as independent.
The six main categories were as follows: (1) Psychological or personal (that is, feelings of
loneliness, emptiness, meaninglessness, unhappiness, hopelessness, depression,
dissatisfaction with personal appearance, tired of living, etc.); (2) Life stress (that is, difficult
to live, lack of money, unfair treatment, too much responsibility or expectations, beating,
nothing goes well, unspecified problems, etc.); (3) Problems with family (that is,
disagreements with family members, separation of or from parents, rejection, burden to
family, etc.); (4) Problems with school (that is, too low grades, feelings of unsuccessful,
problems with teachers, etc.); (5) Peer problems (that is, disagreements with friends,
abandonment / rejection, mobbing, etc.); and (6) Problems with opposite sex (that is,
disagreements with boy / girl friend, disappointments in romantic relations, separation, etc.).
The reasons for attempting suicide by country are presented in Table 6.15. Of the 36 suicide attempters in the German group, 77% (n = 28) responded to the open-ended question about why they have attempted suicide. In total, they gave 44 reasons. Of the 48 attempters in the South African group, 81.3% (n = 39) responded to the question. They gave 39 reasons. As seen in the table, the most frequent precipitating factors in German students were problems with family, problems with the opposite sex and psychological or personal problems. Most frequent precipitators in the South African group were problems with family, psychological or personal reasons and life stress.

<table>
<thead>
<tr>
<th>Reasons</th>
<th>German (n = 28)¹</th>
<th>South African (n = 39)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems with school</td>
<td>3 (6.8)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Problems with family</td>
<td>13 (29.5)</td>
<td>13 (33.3)</td>
</tr>
<tr>
<td>Problems with opposite sex</td>
<td>13 (29.5)</td>
<td>6 (15.4)</td>
</tr>
<tr>
<td>Peer Problems</td>
<td>2 (4.6)</td>
<td>4 (10.3)</td>
</tr>
<tr>
<td>Psychological / personal problems</td>
<td>11 (25.0)</td>
<td>8 (20.5)</td>
</tr>
<tr>
<td>Life Stress</td>
<td>1 (2.3)</td>
<td>8 (20.5)</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1 (2.3)</td>
<td>0 (0)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>44 (100)</td>
<td>39 (100)</td>
</tr>
</tbody>
</table>

¹Figures in parentheses indicate number of attempters who responded to the open-ended question about why they have attempted suicide.

The methods given for attempting suicide by the German and South African students were classified into three categories. The three categories were (1) slashing of wrist; (2) taking tablets; and (3) jumping from a dangerous height. The methods used for attempting suicide by country are presented in Table 6.16. In the German group 83.3% (n = 30) indicated the method used for attempting suicide, whereas in the South African group 75% (n = 36) responded to the question. As seen in the table, the most frequent method used in the German students was slashing of wrist. For the South African students it was slashing of wrist and...
taking tablets. Table 6.17 indicates attempted suicide by age. For both groups the age group of 15-17 appears to be the highest risk for suicide attempts.

**Table 6.16. Methods used for attempting suicide in German and South African students**

<table>
<thead>
<tr>
<th>Methods</th>
<th>German (n = 30)¹</th>
<th>South African (n = 36)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slashing of wrist</td>
<td>14 (46.6)</td>
<td>16 (44.4)</td>
</tr>
<tr>
<td>Taking tablets</td>
<td>8 (26.7)</td>
<td>17 (47.2)</td>
</tr>
<tr>
<td>Jumping from a dangerous height</td>
<td>8 (26.7)</td>
<td>3 (8.4)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30 (100)</strong></td>
<td><strong>36 (100)</strong></td>
</tr>
</tbody>
</table>

¹Figures in parentheses indicate number of attempters who responded to the open-ended question about why they have attempted suicide.

**Table 6.17. Attempted suicide by age**

<table>
<thead>
<tr>
<th>Age</th>
<th>German (n = 36)</th>
<th>South African (n = 48)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>14</td>
<td>4</td>
<td>11.2</td>
</tr>
<tr>
<td>15</td>
<td>11</td>
<td>30.6</td>
</tr>
<tr>
<td>16</td>
<td>9</td>
<td>25.0</td>
</tr>
<tr>
<td>17</td>
<td>7</td>
<td>19.4</td>
</tr>
<tr>
<td>18</td>
<td>5</td>
<td>13.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36 (100)</strong></td>
<td><strong>48 (100)</strong></td>
</tr>
</tbody>
</table>

6.4.1. Previous Suicide Attempts By Friends

Eighty-two friends (10 male; 29 female; 43 not reported) were reported of having previously made a suicide attempt by the German students, whereas the South African students reported ninety-two (18 male; 38 female; 36 not reported) attempts of friends. The
The high number of unreported cases by the German and South African students makes it impossible to indicate whether male or female attempts were more predominant.

The reasons given to the open-ended question for attempting suicide by friends by the German and South African adolescents were classified into eight main categories and a miscellaneous category. When students gave more than one reason, each reason was treated as independent. The same categories as in table 6.15 were used; except for life stress, which was dropped, and problems with alcohol or drugs, rape and pregnancy, which were added. The reasons for friends attempting suicide by country are presented in table 6.18. Of the 82 suicide attempters in the German group, 78% (n = 64) responded to the open-ended question about why a friend attempted suicide. In total, they gave 81 reasons. Of the 92 friends attempting suicide in the South African group, 79.3% (n = 73) responded to the question. They gave 84 reasons. As seen in the table, the most frequent precipitating factors for both groups were problems with opposite sex, problems with family and psychological or personal problems.

<table>
<thead>
<tr>
<th>Reasons</th>
<th>German (n = 64)¹</th>
<th>South African (n = 73)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems with school</td>
<td>6 7.4</td>
<td>5 6</td>
</tr>
<tr>
<td>Problems with family</td>
<td>23 28.4</td>
<td>41 48.8</td>
</tr>
<tr>
<td>Problems with opposite sex</td>
<td>25 30.9</td>
<td>18 21.4</td>
</tr>
<tr>
<td>Peer Problems</td>
<td>3 3.7</td>
<td>4 4.7</td>
</tr>
<tr>
<td>Psychological / personal problems</td>
<td>16 19.8</td>
<td>10 11.9</td>
</tr>
<tr>
<td>Problems with alcohol / drugs</td>
<td>3 3.7</td>
<td>4 4.7</td>
</tr>
<tr>
<td>Rape</td>
<td>1 1.2</td>
<td>0 0</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>1 1.2</td>
<td>2 2.5</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>3 3.7</td>
<td>0 0</td>
</tr>
</tbody>
</table>

¹Figures in parentheses indicate number of attempters who responded to the open-ended question about why they have attempted suicide.
The methods given for friends attempting suicide by the German and South African students were classified into seven categories. The seven categories were (1) slashing of wrist; (2) taking tablets; (3) jumping; (4) hanging; (5) use of firearm; (6) overdoses drugs; and (7) swallowing glue. The methods used for friends attempting suicide by country are presented in Table 6.19. In the German group, 85% (n = 70) indicated the method used for friends attempting suicide. In total, they gave 76 methods with a mean of 1.1 methods. In the South African group, 86.9% (n = 80) responded to the question with 84 methods and a mean of 1.05 methods. As seen in the table, the most frequent method used for both groups was slashing of wrist, taking tablets and jumping.

<table>
<thead>
<tr>
<th>Methods</th>
<th>German (n = 70)</th>
<th>South African (n = 80)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Slashing of wrist</td>
<td>37</td>
<td>48.7</td>
</tr>
<tr>
<td>Taking tablets</td>
<td>20</td>
<td>26.3</td>
</tr>
<tr>
<td>Jumping</td>
<td>10</td>
<td>13.2</td>
</tr>
<tr>
<td>Hanging</td>
<td>2</td>
<td>2.6</td>
</tr>
<tr>
<td>Firearm</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Overdoses drugs</td>
<td>5</td>
<td>6.6</td>
</tr>
<tr>
<td>Swallowing glue</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>76</td>
<td>100</td>
</tr>
</tbody>
</table>

*Figures in parentheses indicate number of attempters who responded to the open-ended question about why they have attempted suicide.

### 6.4.2. Previous Suicide Attempts By Family

Forty-five family members were reported of having previously made a suicide attempt by the German students, whereas the South African students reported forty-three attempts of
family members. For the German group 96% (n = 42) and for the South African group 90.7%
(n = 39) responded to the question. The results are presented in Table 6.20.

Table 6.20. Family members attempting suicide by country

<table>
<thead>
<tr>
<th>Family member</th>
<th>German (n = 42)¹</th>
<th>South African (n = 39)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Mother</td>
<td>8</td>
<td>19.0</td>
</tr>
<tr>
<td>Sister</td>
<td>6</td>
<td>14.3</td>
</tr>
<tr>
<td>Brother</td>
<td>4</td>
<td>9.6</td>
</tr>
<tr>
<td>Aunt</td>
<td>7</td>
<td>16.7</td>
</tr>
<tr>
<td>Uncle</td>
<td>5</td>
<td>11.9</td>
</tr>
<tr>
<td>Cousin</td>
<td>5</td>
<td>11.9</td>
</tr>
<tr>
<td>Father</td>
<td>3</td>
<td>7.1</td>
</tr>
<tr>
<td>Grandfather</td>
<td>3</td>
<td>7.1</td>
</tr>
<tr>
<td>Sister in law</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>Grandmother</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

¹Figures in parentheses indicate number of attempters who responded to the open-ended question about why they have attempted suicide.

6.5. INDICATED REASONS AND METHODS FOR COMPLETED SUICIDE

6.5.1. Completed Suicide By Friends

Twenty-seven friends (6 male; 2 female; 19 not reported) were reported of having
committed suicide by the German students, whereas the South African students reported
sixteen (11 male; 0 female; 5 not reported) suicide of friends. The number of unreported
cases by the German students makes it difficult to indicate whether male or female suicide is
more predominant. More males than females appear to commit suicide.

The reasons given to the open-ended question for suicide by friends by the German and
South African adolescents were classified into nine main categories and a didn't know
category. When students gave more than one reason, each reason was treated as independent.
The same categories as in 4.5. were used; except for life stress, which was dropped, and
problems with alcohol or drugs, debt, stealing, and AIDS, which were added. The reasons for friends committing suicide by country are presented in Table 6.21. Of the 27 suicides in the German group, 85.2% (n = 23) responded to the open-ended question about why a friend committed suicide. They gave 25 reasons with a mean of 1.1 reasons. Of the 16 friends suicides in the South African group, 50.0% (n = 8) responded to the question. They gave 8 reasons. As seen in the table, the most frequent precipitating factors in German students were problems with opposite sex and problems with family. Most frequent precipitators in the South African group were problems with family and psychological or personal problems.

Table 6.21. Reasons given for friends suicide by country

<table>
<thead>
<tr>
<th>Reasons</th>
<th>German (n = 23)¹</th>
<th>South African (n = 16)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems with school</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Problems with family</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Problems with opposite sex</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Peer Problems</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Psychological / personal problems</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Problems with alcohol / drugs</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Debt</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Stealing</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>AIDS</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Didn't know</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

¹Figures in parentheses indicate number of attempters who responded to the open-ended question about why they have attempted suicide.

The methods given for friends suicide by the German and South African students were classified into seven categories. The seven categories were (1) slashing of wrist; (2) substance abuse; (3) jumping; (4) hanging; (5) use of firearm; (6) drowning; and (7) car accident. The methods used for friends suicide by country are presented in Table 6.22. In the German group, 89% (n = 24) indicated the method used for friends suicide, whereas in the
South African group, 81.3% (n = 13) responded to the question. As seen in the table, the most frequent method used in the German students was slashing of wrist and jumping. The South African students gave hanging as the predominant method.

<table>
<thead>
<tr>
<th>Methods</th>
<th>German (n = 70)</th>
<th>South African (n = 13)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Slashing of wrist</td>
<td>5</td>
<td>20.8</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>4</td>
<td>16.6</td>
</tr>
<tr>
<td>Jumping</td>
<td>8</td>
<td>33.3</td>
</tr>
<tr>
<td>Hanging</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td>Firearm</td>
<td>1</td>
<td>4.2</td>
</tr>
<tr>
<td>Drowning</td>
<td>1</td>
<td>4.2</td>
</tr>
<tr>
<td>Car accident</td>
<td>2</td>
<td>8.4</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>100</td>
</tr>
</tbody>
</table>

¹Figures in parentheses indicate number of attempters who responded to the open-ended question about why they have attempted suicide.

6.5.2. Completed Suicide By Family

Twenty-five family members were reported of having committed suicide by the German students, whereas the South African students reported seventeen suicides of family members. For the German group 92% (n = 23) and for the South African group 88.2% (n = 15) responded to the question. The results are presented in Table 6.23. In both groups, more males than females committed suicide.

<table>
<thead>
<tr>
<th>Family member</th>
<th>German (n = 23)</th>
<th>South African (n = 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Mother</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Sister</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Brother</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Aunt</td>
<td>2</td>
<td>8.8</td>
</tr>
<tr>
<td>Uncle</td>
<td>9</td>
<td>39.1</td>
</tr>
<tr>
<td>Cousin</td>
<td>3</td>
<td>13.1</td>
</tr>
<tr>
<td>Father</td>
<td>1</td>
<td>4.3</td>
</tr>
<tr>
<td>Grandfather</td>
<td>6</td>
<td>26.1</td>
</tr>
</tbody>
</table>
Table 6.24 Descriptive and reliability statistics of the Suicide Probability Scale – Hopelessness subscale

<table>
<thead>
<tr>
<th>Suicide Probability Scale – a. Hopelessness</th>
<th>GERMAN</th>
<th>SOUTH AFRICAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Item 1</td>
<td>1.36</td>
<td>0.77</td>
</tr>
<tr>
<td>Item 2</td>
<td>1.15</td>
<td>1.69</td>
</tr>
<tr>
<td>Item 3</td>
<td>1.58</td>
<td>1.47</td>
</tr>
<tr>
<td>Item 4</td>
<td>1.75</td>
<td>0.92</td>
</tr>
<tr>
<td>Item 5</td>
<td>1.46</td>
<td>0.87</td>
</tr>
<tr>
<td>Item 6</td>
<td>1.39</td>
<td>0.81</td>
</tr>
<tr>
<td>Item 7</td>
<td>1.77</td>
<td>0.95</td>
</tr>
<tr>
<td>Item 8</td>
<td>1.19</td>
<td>1.39</td>
</tr>
<tr>
<td>Item 9</td>
<td>1.62</td>
<td>0.84</td>
</tr>
<tr>
<td>Item 10</td>
<td>1.40</td>
<td>0.66</td>
</tr>
<tr>
<td>Item 11</td>
<td>1.41</td>
<td>1.03</td>
</tr>
<tr>
<td>Item 12</td>
<td>0.88</td>
<td>1.47</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>rtt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>1.61</td>
<td>0.99</td>
<td>0.28</td>
</tr>
<tr>
<td>Item 2</td>
<td>1.14</td>
<td>1.62</td>
<td>0.54</td>
</tr>
<tr>
<td>Item 3</td>
<td>1.78</td>
<td>1.46</td>
<td>0.38</td>
</tr>
<tr>
<td>Item 4</td>
<td>1.66</td>
<td>0.80</td>
<td>0.35</td>
</tr>
<tr>
<td>Item 5</td>
<td>1.46</td>
<td>0.85</td>
<td>0.40</td>
</tr>
<tr>
<td>Item 6</td>
<td>1.70</td>
<td>1.05</td>
<td>0.30</td>
</tr>
<tr>
<td>Item 7</td>
<td>1.40</td>
<td>0.87</td>
<td>0.26</td>
</tr>
<tr>
<td>Item 8</td>
<td>1.19</td>
<td>1.18</td>
<td>0.54</td>
</tr>
<tr>
<td>Item 9</td>
<td>1.67</td>
<td>0.73</td>
<td>0.48</td>
</tr>
<tr>
<td>Item 10</td>
<td>1.39</td>
<td>0.72</td>
<td>0.24</td>
</tr>
<tr>
<td>Item 11</td>
<td>1.19</td>
<td>0.84</td>
<td>0.53</td>
</tr>
<tr>
<td>Item 12</td>
<td>0.82</td>
<td>1.43</td>
<td>0.49</td>
</tr>
</tbody>
</table>

n = 12
Alpha coefficient = 0.77

rtt = Corrected item-total correlation

The hopelessness subscale of the Suicide Probability Scale shows that mean and standard deviation are mostly similar. Alpha reliability coefficients for both groups ( = .77 and = .81) are at a good level.
Table 6.25 Descriptive and reliability statistics of the Suicide Probability Scale – Suicide ideation subscale

<table>
<thead>
<tr>
<th>Suicide Probability Scale – b. Suicide ideation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GERMAN</strong></td>
<td><strong>SOUTH AFRICAN</strong></td>
</tr>
<tr>
<td>Mean               SD                   rtt</td>
<td>Mean               SD                   rtt</td>
</tr>
<tr>
<td>Item 1             1.58 0.81 0.26</td>
<td>Item 1             1.46 0.98 0.35</td>
</tr>
<tr>
<td>Item 2             1.63 1.33 0.39</td>
<td>Item 2             1.56 1.37 0.48</td>
</tr>
<tr>
<td>Item 3             1.58 0.97 0.45</td>
<td>Item 3             1.48 0.99 0.54</td>
</tr>
<tr>
<td>Item 4             1.88 1.29 0.51</td>
<td>Item 4             1.47 1.14 0.63</td>
</tr>
<tr>
<td>Item 5             1.75 1.45 0.48</td>
<td>Item 5             1.58 1.41 0.63</td>
</tr>
<tr>
<td>Item 6             1.96 1.38 0.45</td>
<td>Item 6             1.40 1.09 0.59</td>
</tr>
<tr>
<td>Item 7             1.98 1.31 0.51</td>
<td>Item 7             1.70 1.10 0.46</td>
</tr>
<tr>
<td>Item 8             1.87 1.41 0.53</td>
<td>Item 8             1.60 1.24 0.69</td>
</tr>
<tr>
<td>n = 8</td>
<td>Alpha coefficient = 0.80</td>
</tr>
</tbody>
</table>

rtt = Corrected item-total correlation

The suicide ideation subscale also demonstrates a good internal consistency reliability of

= .80 and = .87. Mean and standard deviations are mostly similar.

Table 6.26 Descriptive and reliability statistics of the Suicide Probability Scale – Negative self-evaluation subscale

<table>
<thead>
<tr>
<th>Suicide Probability Scale – c. Negative self-evaluation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GERMAN</strong></td>
<td><strong>SOUTH AFRICAN</strong></td>
</tr>
<tr>
<td>Mean               SD                   rtt</td>
<td>Mean               SD                   rtt</td>
</tr>
<tr>
<td>Item 1             1.60 0.89 0.02*</td>
<td>Item 1             1.23 0.55 0.41</td>
</tr>
<tr>
<td>Item 2             1.74 0.97 0.20</td>
<td>Item 2             1.45 0.84 0.26</td>
</tr>
<tr>
<td>Item 3             1.42 1.09 0.25</td>
<td>Item 3             1.29 1.03 0.05*</td>
</tr>
<tr>
<td>Item 4             1.75 0.43 0.09*</td>
<td>Item 4             1.74 0.48 0.06*</td>
</tr>
<tr>
<td>Item 5             1.90 1.58 0.36</td>
<td>Item 5             1.34 1.45 0.43</td>
</tr>
<tr>
<td>Item 6             2.04 0.72 0.24</td>
<td>Item 6             1.74 0.62 0.11*</td>
</tr>
<tr>
<td>Item 7             1.48 0.75 0.29</td>
<td>Item 7             1.39 0.63 0.33</td>
</tr>
<tr>
<td>Item 8             1.51 0.78 0.23</td>
<td>Item 8             1.39 0.66 0.28</td>
</tr>
<tr>
<td>n = 8</td>
<td>Alpha coefficient = 0.50</td>
</tr>
</tbody>
</table>

rtt = Corrected item-total correlation  * poor corrected item total correlations (rtt < 0.20)

The alpha reliability coefficient of the negative self-evaluation subscale for the German sample is poor and questionable for the South African group. Scores of mean and standard deviation mostly differ. Poor items include item 1 for the German sample, items 3 and 6 for the South African sample and item 4 for both samples.

Table 6.27 Descriptive and reliability statistics of the Suicide Probability Scale – Hostility subscale
### Suicide Probability Scale – d. Hostility

<table>
<thead>
<tr>
<th></th>
<th>GERMAN</th>
<th></th>
<th>SOUTH AFRICAN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>rtt</td>
</tr>
<tr>
<td>Item 1</td>
<td>1.88</td>
<td>1.02</td>
<td>0.35</td>
</tr>
<tr>
<td>Item 2</td>
<td>1.37</td>
<td>0.61</td>
<td>0.24</td>
</tr>
<tr>
<td>Item 3</td>
<td>1.51</td>
<td>0.77</td>
<td>0.20</td>
</tr>
<tr>
<td>Item 4</td>
<td>1.56</td>
<td>1.11</td>
<td>0.23</td>
</tr>
<tr>
<td>Item 5</td>
<td>1.77</td>
<td>1.07</td>
<td>0.31</td>
</tr>
<tr>
<td>Item 6</td>
<td>2.22</td>
<td>1.43</td>
<td>0.40</td>
</tr>
<tr>
<td>Item 7</td>
<td>1.74</td>
<td>1.18</td>
<td>0.40</td>
</tr>
</tbody>
</table>

n = 7

Alpha coefficient = 0.63

*poor corrected item total correlations (rtt < 0.20)

Internal consistency reliability of the hostility subscale for both groups is questionable at

\[ \alpha = 0.63 \] and \[ \alpha = 0.62 \]. Results of mean and standard deviation mostly differ.

### Table 6.28 Descriptive and reliability statistics of the Perceived Social Support From Family Scale

<table>
<thead>
<tr>
<th>Perceived Social Support From Family Scale (Pss-Fa)</th>
<th>GERMAN</th>
<th></th>
<th>SOUTH AFRICAN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>rtt</td>
</tr>
<tr>
<td>Item 1</td>
<td>0.90</td>
<td>0.31</td>
<td>0.51</td>
</tr>
<tr>
<td>Item 2</td>
<td>0.83</td>
<td>0.38</td>
<td>0.59</td>
</tr>
<tr>
<td>Item 3</td>
<td>0.75</td>
<td>0.43</td>
<td>0.48</td>
</tr>
<tr>
<td>Item 4</td>
<td>0.77</td>
<td>0.42</td>
<td>0.41</td>
</tr>
<tr>
<td>Item 5</td>
<td>0.82</td>
<td>0.39</td>
<td>0.52</td>
</tr>
<tr>
<td>Item 6</td>
<td>0.56</td>
<td>0.50</td>
<td>0.44</td>
</tr>
<tr>
<td>Item 7</td>
<td>0.61</td>
<td>0.49</td>
<td>0.52</td>
</tr>
<tr>
<td>Item 8</td>
<td>0.81</td>
<td>0.40</td>
<td>0.53</td>
</tr>
<tr>
<td>Item 9</td>
<td>0.78</td>
<td>0.41</td>
<td>0.53</td>
</tr>
<tr>
<td>Item 10</td>
<td>0.67</td>
<td>0.47</td>
<td>0.58</td>
</tr>
<tr>
<td>Item 11</td>
<td>0.72</td>
<td>0.45</td>
<td>0.62</td>
</tr>
<tr>
<td>Item 12</td>
<td>0.57</td>
<td>0.50</td>
<td>0.56</td>
</tr>
<tr>
<td>Item 13</td>
<td>0.77</td>
<td>0.42</td>
<td>0.54</td>
</tr>
<tr>
<td>Item 14</td>
<td>0.84</td>
<td>0.37</td>
<td>0.36</td>
</tr>
<tr>
<td>Item 15</td>
<td>0.69</td>
<td>0.46</td>
<td>0.43</td>
</tr>
<tr>
<td>Item 16</td>
<td>0.67</td>
<td>0.47</td>
<td>0.34</td>
</tr>
<tr>
<td>Item 17</td>
<td>0.61</td>
<td>0.49</td>
<td>0.46</td>
</tr>
<tr>
<td>Item 18</td>
<td>0.60</td>
<td>0.49</td>
<td>0.53</td>
</tr>
<tr>
<td>Item 19</td>
<td>0.69</td>
<td>0.46</td>
<td>0.36</td>
</tr>
<tr>
<td>Item 20</td>
<td>0.75</td>
<td>0.43</td>
<td>0.52</td>
</tr>
</tbody>
</table>

n = 20

Alpha coefficient = 0.87

rtt = Corrected item-total correlation

Alpha coefficient = 0.91
For the Perceived Social Support From Family Scale, internal consistency reliability for both
groups is excellent at $= .87$ and $= .91$. The sores of mean and standard deviation are
mostly similar.

<table>
<thead>
<tr>
<th>Perceived Social Support From Friends Scale (Pss-Fr)</th>
<th>GERMAN</th>
<th>SOUTH AFRICAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>0.82</td>
<td>0.86</td>
</tr>
<tr>
<td>Item 2</td>
<td>0.68</td>
<td>0.61</td>
</tr>
<tr>
<td>Item 3</td>
<td>0.81</td>
<td>0.83</td>
</tr>
<tr>
<td>Item 4</td>
<td>0.87</td>
<td>0.88</td>
</tr>
<tr>
<td>Item 5</td>
<td>0.77</td>
<td>0.72</td>
</tr>
<tr>
<td>Item 6</td>
<td>0.69</td>
<td>0.62</td>
</tr>
<tr>
<td>Item 7</td>
<td>0.75</td>
<td>0.68</td>
</tr>
<tr>
<td>Item 8</td>
<td>0.87</td>
<td>0.87</td>
</tr>
<tr>
<td>Item 9</td>
<td>0.85</td>
<td>0.86</td>
</tr>
<tr>
<td>Item 10</td>
<td>0.69</td>
<td>0.70</td>
</tr>
<tr>
<td>Item 11</td>
<td>0.78</td>
<td>0.79</td>
</tr>
<tr>
<td>Item 12</td>
<td>0.83</td>
<td>0.83</td>
</tr>
<tr>
<td>Item 13</td>
<td>0.80</td>
<td>0.78</td>
</tr>
<tr>
<td>Item 14</td>
<td>0.81</td>
<td>0.73</td>
</tr>
<tr>
<td>Item 15</td>
<td>0.69</td>
<td>0.73</td>
</tr>
<tr>
<td>Item 16</td>
<td>0.78</td>
<td>0.78</td>
</tr>
<tr>
<td>Item 17</td>
<td>0.78</td>
<td>0.85</td>
</tr>
<tr>
<td>Item 18</td>
<td>0.74</td>
<td>0.67</td>
</tr>
<tr>
<td>Item 19</td>
<td>0.59</td>
<td>0.73</td>
</tr>
<tr>
<td>Item 20</td>
<td>0.74</td>
<td>0.84</td>
</tr>
</tbody>
</table>

$n = 20$  
Alpha coefficient = 0.88

The internal consistency reliability for the Perceived Social Support From Friends Scale is
also excellent for both groups and the scores are mostly similar.
Table 6.30 Descriptive and reliability statistics of the Scale Of Interpersonal Behaviour – Display of negative feelings subscale

<table>
<thead>
<tr>
<th>Item</th>
<th>GERMAN</th>
<th></th>
<th></th>
<th></th>
<th>SOUTH AFRICAN</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>r&lt;sub&gt;t&lt;/sub&gt;</td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>r&lt;sub&gt;t&lt;/sub&gt;</td>
</tr>
<tr>
<td>Item 1</td>
<td>1.60</td>
<td>0.87</td>
<td>0.09*</td>
<td></td>
<td>Item 1</td>
<td>1.50</td>
<td>0.81</td>
</tr>
<tr>
<td>Item 2</td>
<td>1.64</td>
<td>0.79</td>
<td>0.11*</td>
<td></td>
<td>Item 2</td>
<td>1.48</td>
<td>0.84</td>
</tr>
<tr>
<td>Item 3</td>
<td>1.16</td>
<td>0.78</td>
<td>0.02*</td>
<td></td>
<td>Item 3</td>
<td>0.83</td>
<td>0.81</td>
</tr>
<tr>
<td>Item 4</td>
<td>1.18</td>
<td>0.76</td>
<td>0.12*</td>
<td></td>
<td>Item 4</td>
<td>1.18</td>
<td>0.85</td>
</tr>
<tr>
<td>Item 5</td>
<td>1.47</td>
<td>0.81</td>
<td>0.11*</td>
<td></td>
<td>Item 5</td>
<td>1.40</td>
<td>0.89</td>
</tr>
<tr>
<td>Item 6</td>
<td>1.08</td>
<td>0.73</td>
<td>0.02*</td>
<td></td>
<td>Item 6</td>
<td>1.05</td>
<td>0.79</td>
</tr>
<tr>
<td>Item 7</td>
<td>1.62</td>
<td>0.86</td>
<td>0.02*</td>
<td></td>
<td>Item 7</td>
<td>1.56</td>
<td>0.88</td>
</tr>
<tr>
<td>Item 8</td>
<td>1.79</td>
<td>0.90</td>
<td>0.09*</td>
<td></td>
<td>Item 8</td>
<td>1.89</td>
<td>0.87</td>
</tr>
<tr>
<td>Item 9</td>
<td>1.21</td>
<td>0.93</td>
<td>0.14*</td>
<td></td>
<td>Item 9</td>
<td>1.07</td>
<td>0.97</td>
</tr>
<tr>
<td>Item 10</td>
<td>1.71</td>
<td>0.88</td>
<td>0.10*</td>
<td></td>
<td>Item 10</td>
<td>1.54</td>
<td>0.98</td>
</tr>
<tr>
<td>Item 11</td>
<td>1.74</td>
<td>0.92</td>
<td>0.08*</td>
<td></td>
<td>Item 11</td>
<td>1.37</td>
<td>1.03</td>
</tr>
<tr>
<td>Item 12</td>
<td>1.69</td>
<td>0.98</td>
<td>0.14*</td>
<td></td>
<td>Item 12</td>
<td>1.40</td>
<td>0.93</td>
</tr>
<tr>
<td>Item 13</td>
<td>1.38</td>
<td>0.89</td>
<td>0.10*</td>
<td></td>
<td>Item 13</td>
<td>1.43</td>
<td>0.85</td>
</tr>
<tr>
<td>Item 14</td>
<td>1.02</td>
<td>0.81</td>
<td>0.01*</td>
<td></td>
<td>Item 14</td>
<td>0.95</td>
<td>0.78</td>
</tr>
<tr>
<td>Item 15</td>
<td>1.69</td>
<td>0.90</td>
<td>0.03*</td>
<td></td>
<td>Item 15</td>
<td>1.76</td>
<td>0.89</td>
</tr>
</tbody>
</table>

n = 15
Alpha coefficient = 0.17

<sup>r<sub>t</sub> = Corrected item-total correlation</sup>  * poor corrected item total correlations (<sup>r<sub>t</sub> < 0.20</sup>)

Alpha coefficients for both groups are unacceptable. Scores mostly differ.

Table 6.31 Descriptive and reliability statistics of the Scale Of Interpersonal Behaviour – Expression of and dealing with personal limitations subscale

Scale Of Interpersonal Behaviour – b. Expression of and dealing with personal limitations
### Table 6.32 Descriptive and reliability statistics of the Scale Of Interpersonal Behaviour – Initiating assertiveness subscale

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>rtt</th>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>rtt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>1.71</td>
<td>0.71</td>
<td>0.05*</td>
<td>Item 1</td>
<td>1.81</td>
<td>0.85</td>
<td>0.28</td>
</tr>
<tr>
<td>Item 2</td>
<td>1.81</td>
<td>0.86</td>
<td>0.17</td>
<td>Item 2</td>
<td>1.77</td>
<td>0.89</td>
<td>0.39</td>
</tr>
<tr>
<td>Item 3</td>
<td>1.56</td>
<td>0.74</td>
<td>0.10*</td>
<td>Item 3</td>
<td>1.71</td>
<td>0.85</td>
<td>0.09*</td>
</tr>
<tr>
<td>Item 4</td>
<td>2.25</td>
<td>0.84</td>
<td>0.09*</td>
<td>Item 4</td>
<td>2.18</td>
<td>0.90</td>
<td>0.35</td>
</tr>
<tr>
<td>Item 5</td>
<td>1.45</td>
<td>0.88</td>
<td>0.04*</td>
<td>Item 5</td>
<td>1.61</td>
<td>1.04</td>
<td>0.29</td>
</tr>
<tr>
<td>Item 6</td>
<td>1.39</td>
<td>0.78</td>
<td>0.09*</td>
<td>Item 6</td>
<td>1.16</td>
<td>0.92</td>
<td>0.30</td>
</tr>
<tr>
<td>Item 7</td>
<td>1.35</td>
<td>0.69</td>
<td>0.02*</td>
<td>Item 7</td>
<td>1.26</td>
<td>0.80</td>
<td>0.31</td>
</tr>
<tr>
<td>Item 8</td>
<td>1.68</td>
<td>0.84</td>
<td>0.02*</td>
<td>Item 8</td>
<td>1.91</td>
<td>0.83</td>
<td>0.40</td>
</tr>
<tr>
<td>Item 9</td>
<td>1.65</td>
<td>0.85</td>
<td>0.03*</td>
<td>Item 9</td>
<td>1.84</td>
<td>0.89</td>
<td>0.40</td>
</tr>
<tr>
<td>Item 10</td>
<td>1.67</td>
<td>0.86</td>
<td>0.12</td>
<td>Item 10</td>
<td>2.17</td>
<td>0.87</td>
<td>0.31</td>
</tr>
<tr>
<td>Item 11</td>
<td>1.75</td>
<td>0.85</td>
<td>0.04*</td>
<td>Item 11</td>
<td>1.95</td>
<td>0.88</td>
<td>0.25</td>
</tr>
<tr>
<td>Item 12</td>
<td>1.63</td>
<td>0.88</td>
<td>0.03*</td>
<td>Item 12</td>
<td>1.52</td>
<td>0.87</td>
<td>0.49</td>
</tr>
<tr>
<td>Item 13</td>
<td>1.32</td>
<td>0.85</td>
<td>0.04*</td>
<td>Item 13</td>
<td>1.28</td>
<td>1.19</td>
<td>0.29</td>
</tr>
<tr>
<td>Item 14</td>
<td>1.51</td>
<td>0.82</td>
<td>0.11</td>
<td>Item 14</td>
<td>1.66</td>
<td>0.80</td>
<td>0.36</td>
</tr>
</tbody>
</table>

n = 14
Alpha coefficient = 0.14

rtt = Corrected item-total correlation
* poor corrected item total correlations (rtt < 0.20)

Also for the subscale of expression and dealing with personal limitations the alpha coefficients for both groups are unacceptable and scores mostly differ.

### Table 6.33 Descriptive and reliability statistics of the Scale Of Interpersonal Behaviour – Positive assertion subscale

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>rtt</th>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>rtt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>1.36</td>
<td>0.71</td>
<td>0.01*</td>
<td>Item 1</td>
<td>1.42</td>
<td>0.78</td>
<td>0.39</td>
</tr>
<tr>
<td>Item 2</td>
<td>1.80</td>
<td>0.84</td>
<td>0.03*</td>
<td>Item 2</td>
<td>1.56</td>
<td>0.87</td>
<td>0.37</td>
</tr>
<tr>
<td>Item 3</td>
<td>1.74</td>
<td>0.77</td>
<td>0.10</td>
<td>Item 3</td>
<td>1.73</td>
<td>0.84</td>
<td>0.48</td>
</tr>
<tr>
<td>Item 4</td>
<td>1.68</td>
<td>0.91</td>
<td>0.10</td>
<td>Item 4</td>
<td>1.47</td>
<td>0.92</td>
<td>0.51</td>
</tr>
<tr>
<td>Item 5</td>
<td>1.62</td>
<td>0.74</td>
<td>0.03*</td>
<td>Item 5</td>
<td>1.65</td>
<td>0.83</td>
<td>0.46</td>
</tr>
<tr>
<td>Item 6</td>
<td>1.82</td>
<td>0.90</td>
<td>0.14</td>
<td>Item 6</td>
<td>1.68</td>
<td>0.89</td>
<td>0.42</td>
</tr>
<tr>
<td>Item 7</td>
<td>1.65</td>
<td>0.93</td>
<td>0.18</td>
<td>Item 7</td>
<td>1.33</td>
<td>0.89</td>
<td>0.51</td>
</tr>
<tr>
<td>Item 8</td>
<td>1.19</td>
<td>0.94</td>
<td>0.05*</td>
<td>Item 8</td>
<td>1.53</td>
<td>0.98</td>
<td>0.50</td>
</tr>
<tr>
<td>Item 9</td>
<td>1.42</td>
<td>0.82</td>
<td>0.10</td>
<td>Item 9</td>
<td>1.29</td>
<td>0.88</td>
<td>0.48</td>
</tr>
</tbody>
</table>

n = 9
Alpha coefficient = 0.10

rtt = Corrected item-total correlation
* poor corrected item total correlations (rtt < 0.20)

The internal consistency reliability of the initiating assertiveness subscale for the German group is unacceptable, whereas the South African group has a good reliability with alpha coefficient at = .80. Scores mostly differ.
6.7. COUNTRY AND GENDER COMPARISONS ON SUICIDE PROBABILITY SCALE, PERCEIVED SOCIAL SUPPORT FROM FAMILY AND FRIENDS SCALE, SCALE OF INTERPERSONAL BEHAVIOUR AND NUMBER OF FRIENDS

In order to examine possible differences among the four groups, a 2 (country) x 2 (gender) multivariate analysis of variance (MANOVA) was performed on SPS, PSS-Fa, PSS-Fr, SIB and number of friends. The effects of variables that showed an association with country and
gender are presented in Table 6.34.

Table 6.34 Means and standard deviations of Suicide Probability Scale, Perceived Social Support from Family and Friends, Scale of Interpersonal Behaviour and number of friends by country and gender

<table>
<thead>
<tr>
<th>Groups</th>
<th>German</th>
<th></th>
<th></th>
<th></th>
<th>South African</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Total</td>
<td>Males</td>
<td>Females</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Variables</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>SPS</td>
<td>53.2</td>
<td>12.0</td>
<td>56.1</td>
<td>14.4</td>
<td>54.6</td>
<td>13.3</td>
<td>52.8</td>
</tr>
<tr>
<td>SPS-Hop</td>
<td>15.2</td>
<td>5.3</td>
<td>16.5</td>
<td>6.2</td>
<td>15.8</td>
<td>5.8</td>
<td>16.9</td>
</tr>
<tr>
<td>SPS-Si</td>
<td>12.9</td>
<td>5.0</td>
<td>14.5</td>
<td>6.1</td>
<td>13.7</td>
<td>5.6</td>
<td>12.2</td>
</tr>
<tr>
<td>SPS-Nse</td>
<td>13.1</td>
<td>3.2</td>
<td>13.2</td>
<td>3.1</td>
<td>13.2</td>
<td>3.1</td>
<td>11.1</td>
</tr>
<tr>
<td>PSS-Fa</td>
<td>11.8</td>
<td>3.6</td>
<td>11.9</td>
<td>3.3</td>
<td>11.9</td>
<td>3.5</td>
<td>12.4</td>
</tr>
<tr>
<td>PSS-Fr</td>
<td>14.3</td>
<td>4.3</td>
<td>14.7</td>
<td>4.5</td>
<td>14.0</td>
<td>4.4</td>
<td>14.4</td>
</tr>
<tr>
<td>SIB</td>
<td>78.9</td>
<td>18.3</td>
<td>79.4</td>
<td>17.6</td>
<td>79.2</td>
<td>17.9</td>
<td>74.2</td>
</tr>
<tr>
<td>SIB-Dnf</td>
<td>22.5</td>
<td>6.3</td>
<td>21.7</td>
<td>6.0</td>
<td>22.1</td>
<td>6.1</td>
<td>21.3</td>
</tr>
<tr>
<td>SIB-Pl</td>
<td>22.4</td>
<td>5.4</td>
<td>23.3</td>
<td>5.8</td>
<td>22.9</td>
<td>5.6</td>
<td>22.3</td>
</tr>
<tr>
<td>SIB-La</td>
<td>14.3</td>
<td>4.2</td>
<td>14.7</td>
<td>4.2</td>
<td>14.5</td>
<td>4.2</td>
<td>12.3</td>
</tr>
</tbody>
</table>
gender was controlled. That is age, number of siblings, suicide attempt status, previous psychiatric contact and life threatening event were taken as covariates in the MANOVA and controlled for their possible differential effects on the groups. Thus, the differences observed in the analysis can be said to be reflecting genuine differences between the groups. Table 6.34 shows the means and standard deviations of measures by country and gender.

First, the MANOVA test revealed a significant main effect for country. Follow-up univariate F-tests indicated differences between German and South African students on SPS (F = 4.99, p < 0.05), SPS-Si (F = 10.26, p < 0.05), SPS-Nse (F = 52.72, p < 0.05), SIB (F = 5.23, p < 0.05), SIB-Dnf (F = 5.86, p < 0.05) and SIB-Ia scores (F = 11.43, p < 0.05). The German students scored higher on the SPS, SPS-Si, SPS-Nse, SIB, SIB-Dnf and SIB-Ia scales than the South African students.

Second, the MANOVA test gave a significant main effect for gender. Follow-up univariate F-tests showed differences between males and females on PSS-Fr (F = 18.7, p < 0.05), SIB-Pl (F = 9.13, p < 0.05) and SIB-Ia (F = 12.34, p < 0.05). Females scored higher on the PSS-Fr scale than did males.

Finally, MANOVA indicated a significant country by gender interaction effect. Univariate F-tests indicated that the effect was significant on SPS (F = 3.51, p < 0.10), SPS-Hop (F = 4.49, p < 0.05) and PSS-Fa scores (F = 3.56, p < 0.10). The German female students
scored higher on SPS (M = 56 vs. M = 53), SPS-Hop (M = 16 vs. M = 15) and PSS-Fa (M = 15 vs. M = 13) than males, whereas South African male students scored higher than their female equivalents on SPS (M = 53 vs. M = 51), SPS-Hop (M = 17 vs. M = 16) and PSS-Fa (M = 14 vs. M = 13).

6.8 COUNTRY AND ATTEMPT STATUS COMPARISONS ON SUICIDE PROBABILITY SCALE, SUICIDE PROBABILITY SUBSCALES, PERCEIVED SOCIAL SUPPORT FROM FRIENDS AND FAMILY SCALES AND SCALE OF INTERPERSONAL BEHAVIOUR

In order to examine possible differences among suicide attempters and non-attempters, a second MANOVA, a 2 (attempt status) x 2 (country), was performed on SPS, PSS-Fa and PSS-Fr. Table 6.35. shows the means and standard deviations of measures by country and attempt status.

Table 6.35. Means and standard deviations of Suicide Probability Scale, Suicide Probability subscales, Perceived Social Support from Friends and Family Scales and Scale of Interpersonal Behaviour by country and attempt status

<table>
<thead>
<tr>
<th>Groups</th>
<th>No attempted Suicide</th>
<th>Attempted suicide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>German South African</td>
<td>German South African</td>
</tr>
<tr>
<td>Variables</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>SPS</td>
<td>52.2</td>
<td>10.9</td>
</tr>
<tr>
<td>SPS - Hop</td>
<td>14.9</td>
<td>5.0</td>
</tr>
<tr>
<td>SPS - Si</td>
<td>12.7</td>
<td>4.6</td>
</tr>
<tr>
<td>SPS - Nse</td>
<td>13.1</td>
<td>3.1</td>
</tr>
<tr>
<td>SPS - Hos</td>
<td>11.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Pss-Fa</td>
<td>14.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Pss-Fr</td>
<td>16.0</td>
<td>4.1</td>
</tr>
<tr>
<td>SIB</td>
<td>78.8</td>
<td>17.5</td>
</tr>
<tr>
<td>SIB-Dnf</td>
<td>21.9</td>
<td>6.0</td>
</tr>
<tr>
<td>SIB-Pf</td>
<td>22.8</td>
<td>5.5</td>
</tr>
<tr>
<td>SIB-Ia</td>
<td>14.4</td>
<td>4.1</td>
</tr>
<tr>
<td>SIB-Pa</td>
<td>12.4</td>
<td>3.7</td>
</tr>
</tbody>
</table>

SPS = Suicide Probability Scale
SIB = Scale of Interpersonal Behaviour
The MANOVA revealed a significant main effect for attempt status. Follow-up univariate F-tests indicated differences between suicide attempters and non-attempters on SPS (F = 272.85, p < 0.05), PSS-Fa (F = 53.45, p < 0.05) and PSS-Fr (F = 3.99, p < 0.05). Suicide attempters scored higher on SPS; and lower on PSS-Fa and PSS-Fr than did non-attempters.

CHAPTER SEVEN : DISCUSSION

The high rate of suicidal behaviour is doubly disturbing when we take into account that suicide can be viewed as a direct index of the level of unhappiness and psychological dysfunction that exists in the world today. (David Lester)

7.1. SUICIDE ATTEMPT

7.1.1. Previous Suicide Attempts By German And South African Students

Findings from the research indicate that suicide attempts are as frequent among adolescents in Germany as in South Africa. The recorded percentages of attempts in this study are in agreement with other studies (for example, Dubrow et al., 1989; Meehan et al., 1992; Shaffer et al., 1991). In a review of adolescent suicide attempts, Garland & Ziegler (1993) indicated that lifetime prevalence of attempts in adolescence ranges from 6% to 13%. Yoder (1999) found that lifetime prevalence of suicide attempts ranges from 3% to 14% in samples of adolescents in high schools. Rotheram-Borus et al. (1996) reported 22% and Fergusson, Woodward and Horwood (2000) reported 8% of past suicide attempts among adolescents.

However, higher percentages of attempts have been noted in American or Indian adolescent populations. For instance, among Zuni adolescents, Howard-Pitney, LaFromboise, Basil, September and Johnson (1992) found a 30% attempt rate. Furthermore, Prigerson &
Slimack (1999) in a community survey revealed that nearly 62% of high school students reported having some form of suicidal ideation. In line with the percentages reported by previous studies, 11.3% attempts among German and 16.1% among South African students suggest that suicidal behaviour is a significant (mental) health problem among adolescents in the two different countries. A past history of suicide attempts has been shown in a number of studies to increase the risk, both for future suicide attempts as well as for suicide itself (Corbitt, Malone, Haas, & Mann, 1996; Granboulan, Rubain, Basquin, 1995; Laederach, Fischer, Bowen, Ladame, 1999; Lewinsohn et al., 1994).

7.1.2. Male - Female Ratio

The present study is also in line with previous research suggesting that more females than males attempt suicide (Hawton, Fagg, Simkin, Bale, & Bond, 2000). Berman and Jobes (1991) and Flisher et al. (1993) reported that females attempt suicide at least three times as often as do males. Both German and South African female adolescents attempted suicide four times as often as did males. Cultural expectations for feminine and masculine behaviour may play a significant role in gender difference for suicide attempts and suicide (Canetto & Sakinofsky, 1998). Females are more likely to use less lethal suicide methods and are more likely to seek help, relative to males (Isometsa et al., 1994). The most likely theory to explain the gender difference in suicidal tendencies is a combination of biological, psychological and sociocultural factors (Kornstein, 1997).

7.1.3. Religion - Belief In God

Unfortunately, there are few empirical data on religion and suicide (McIntosh, 1996). For example, the USA Census Bureau and Department of Vital Statistics are forbidden by the constitution from surveying religious behaviours or opinions. It is widely believed that
religion tends to protect people from suicide or suicide attempts (Maris, 1981). Findings from the present study contradicts this general belief and theory. Of the 36 suicide attempters in the German sample and 48 suicide attempters in the South African, 55.6% and 95.8% respectively, indicated that they “Believe in God” and attempted suicide. These findings are supported by trends in other countries. For example, Hungary (with the 2\textsuperscript{nd} highest suicide rate) and Austria (with the 5\textsuperscript{th} highest suicide rate) have some of the highest suicide rates in the world and are predominantly Catholic (68% and 90%, respectively). Also, Sweden and Finland are mainly Protestant countries and have high suicide rates; whereas Norway, also predominantly Protestant, has a relatively low suicide rate. Clearly, religion alone does not protect against suicide, there must be other contributing factors involved.

### 7.1.4. Variables Associated With Previous Suicide Attempts

The observed relationships between the variables and previous attempts provide some important insights into the adolescent suicidal problem. With the analysis, attempted suicide by friends, life-threatening events, previous psychiatric contact, death of friends, perceived family support, female gender, attempted suicide in the family, suicide of friends and perceived friend support in the German group were found to be related to previous attempts. Perceived family support, death of friends, attempted suicide by friends, female gender, life-threatening events, previous psychiatric contact, suicide of friends and attempted suicide in the family variables in the South African group were found to be related to previous attempts.

These relationships suggest that family and friend environments, together with signs of emotional disturbance, and female gender constitute distinct vulnerability factors to suicidal attempts in adolescents. These findings are in agreement with previous research in suggesting that family disruption due to conflict, illness, separations, divorce, death, suicide attempts, suicide, and different forms of parental psychiatric disorder (for example, Davies &
Cunningham, 1999; Husain & Vandiver, 1986; Marttunen, Aro & Lönnqvist, 1993; Neiger & Hopkins, 1988; Peck, 1987; Spirito, Brown, Overholser, & Fritz, 1989; Wilson, 1991), and conflict, break-up of relationships and suicidal behaviour among friends (for example, Brent et al., 1988; Davidson, Rosenberg, Mercy, Franklin, & Simmon, 1989; Laederach et al., 1999) as well as female gender (Hawton et al., 2000) are contributing factors to the development of adolescent suicidal career.

7.2. VULNERABILITY FACTORS TO SUICIDAL BEHAVIOUR

Larzelere, Smith, Batenhorst & Kelly (1996) have suggested that consideration of other risk factors for adolescent suicide, besides the attitudes and behaviours directly associated with suicide risk such as those included in the SPS scale, would improve the ability to assess suicide risk. Previous research indicated that family cohesiveness and adaptability, separation from parents, gender, peer support, family support, exposure to peer and family suicide and suicide attempt may all contribute to the risk for adolescent suicide and suicide attempt (Borst, Noam, & Bartok, 1991; Cooley-Quille, Turner, & Beidel, 1995; de Wilde, Ineke, Kienhorst, Diekstra, & Wolters, 1992; Fendrich, Warner, & Weissman, 1990; Fergusson & Lynskey, 1995; Kaplan et al., 1999; Marcenko, Fishman, & Friedman, 1999). Results from this research supports these findings.

7.2.1. Family And Friend Environment

Peer relationships are significant and influential in the lives of young people. A conflict between friends or break-up of a relationship can often be the trigger event for the emergence of a suicidal crisis in adolescents (Brent et al., 1988; Davidson et al., 1989; Graham & Burvill, 1992; Hoberman & Garfinkel, 1988). Experiencing the loss of a friend through
death, in particular suicide, should also be considered a possible precipitant to adolescent suicide (Davidson et al., 1989).

Research suggests that certain characteristics are common to the home environment of adolescent suicide attempters. Asarnow (1992) indicated that children who attempted suicide described their families as less cohesive, less expressive, and more conflicted than did non-suicidal children. These families tend to be disorganized, unstable, rigid, inflexible, and conflict avoidant with unclear boundaries and roles (Davidson & Linnoila, 1990; Mattson, Seese, & Hawkins, 1969; Mitchell & Rosenthal, 1992; Pfeffer, 1981).

There is often an excessive secretiveness and prohibition against intimacy that isolates the potentially suicidal adolescent within the family. Precipitants to adolescent suicidal behaviour evolve out of an interpersonal context, often involving conflict with others or the loss of a valued relationship. Within the family system, such precipitants can take the form of conflict with a family member, poor family communication, having ideas different from one's parents, death or divorce of parents, lack of support from family, perceived rejection by one's family and a family history of suicide attempts (Brent et al., 1988; Dubrow, Kausch, Blum, Reed, & Bush, 1989; Dukes & Lorch, 1989; Graham & Burvill, 1992; Hoberman & Garfinkel, 1988; Sorenson & Rutter, 1991). The present study supports the precipitants of perceived rejection from family and lack of support from family. Both German and South African students who attempted suicide scored lower on the PSS-Fa and PSS-Fr scale than those who did not attempt suicide.

7.2.2. Association Between Suicide Attempts Of Adolescents And Suicidal Behaviour Among Family And Friends
The association between suicide attempts in adolescents and suicidal behaviour among family and friends is controversial and tends to be minimized by certain authors (Brent, Moritz, Bridge, Perper, & Canobbio, 1996; Pfeffer et al., 1997). Brent et al. (1993b, 1994) described the impact of adolescent suicide on friends and family and concluded that while exposure to suicide does not result in an increased risk of suicidal behaviour among friends and family, there is a relatively pervasive impact in terms of increased risk of depression, anxiety, and post-traumatic stress disorder (Brent et al., 1996). The conclusions are consistent with those of Pfeffer et al. (1997). Similarly, Davidson et al. (1989) and Gould, Wallenstein, Kleinman, O'Carroll, and Mercy (1990) argued that given the existence of other vulnerabilities and acute stressors, the suicide death of a friend may have a contributing effect in the emergence of suicidal behaviour among other adolescents.

On the other hand, Laederach et al. (1999) demonstrated an association between suicide attempts in adolescents and suicidal behaviour among family and friends. Results from this study are similar and support findings from Laederach et al. (1999). Laederach et al. (1999) found that more than one-third of the subjects in the study knew a person among family or friends who had attempted suicide. In addition, one adolescent in seven had been confronted by a completed suicide in his circle of family and friends. Both German and South African suicide attempters showed similar trends. Of the German suicide attempters, 28.9% had a family member attempt suicide and 26.8% knew a friend who had attempted suicide. The South African group showed similar trends with 25.6% and 25%, respectively. Also, 29.6% of attempters in the German group knew a friend who completed suicide, compared to 31.3% in the South African group. And, 11.1% of attempters in the German group and 6.3% of attempters in the South African group had a family member complete suicide.
This association cannot be reduced to a simple cause and effect relationship, but such a history of suicidality could reflect problems, such as social deviance, somatic or psychiatric disorder, and family break-up, which favour self-destructive behaviour. In addition, following a suicidal event in the family circle, the risk of depressive and anxiety disorders increase, as well as the risk of post-traumatic stress disorder, as shown by Brent et al. (1996). Lewinsohn et al. (1994) and Prigerson and Slimack (1999) support the view that a prior suicide or suicide attempt of a relative or friend is predictive and associated with later suicidal ideation and behaviour.

Some scholars have presented a generational explanation for families with a suicidal member (Maris, 1997). They argue that parents of a suicidal child may have faulty identifications with their own parents and are, therefore, unable to develop an appropriate capacity to care for their own child (Pfeffer, 1981). The parents may feel hostility and intense anger that may be openly and indirectly expressed in the family system (Pfeffer, 1981).

The relationship between suicide attempts in family and of friends and adolescent attempts obtained in the logistic regression analyses for both groups, independent of the perceived qualities of the family and friend environment, suggests an imitation effect congruent with the social learning theory of suicidal behaviour (Lester, 1987, 1988b). However, this association also can be interpreted as implying a genetic component (Roy, 1983, 1992).

7.2.3. Number Of Friends

There are no research findings available to compare the impact of the number of friends adolescents have with regard to suicide attempt and no attempt. Results of this study indicate
that the number of friends an adolescent has is not related to suicide attempts and that having close friends does not protect against suicide attempts. This is in contrast to a study by Maris (1981) across all age groups who found that 50% of Chicago suicides and 20% of suicide attempts had no close friends.

7.3. FAMILY SUPPORT VS FRIEND SUPPORT

The results of the multiple regression analyses (Table 4.4) clearly demonstrate that perceived family support is a more powerful protective against adolescent suicidality than friend support in both groups, which is in agreement with other studies (for example, Dubrow et al., 1989; Eskin, 1995b; Marks & Haller, 1977; Morano et al., 1993; Rubenstein et al., 1989; Rudd, 1990). However, perceived friend support also was found to be an independent predictor of current suicidal risk in both groups, which is consistent with the findings of D'Attilio, Campell, Lupold, Jacobsen, and Richard (1992). Moreover, the need for distinguishing between different sources of support (for example, friend vs. family) when one is studying social support and suicide, as pointed out by Whatley and Clopton (1992), Rudd (1993) and Eskin (1995b) was substantiated.

Most studies with non-clinical samples have found that relationships with parents may be more important than friend relationships for a variety of psychological outcomes, such as self-esteem (Armsden & Greenberg, 1987) and history of suicidal ideation or attempts (DeJong, 1992; Field, Lang, Yando, & Bendell, 1995). However, other findings suggest that parents who encourage adolescents' friend relationships, while maintaining adolescents' inclusion in a cohesive family atmosphere, provide protection against suicidal tendencies (Rubenstein et al., 1989). Both parents and friends influence adolescents' emotional
functioning and often pertain to discrete areas of adolescents lives (Youniss & Smoller, 1985). For example, adolescents attachment to parents has been found to significantly relate to global well-being and coping aspects of self-image, whereas friend attachment is strongly associated with other aspects of self-image that gain importance during this developmental stage (for example, body image, vocational goals, sexuality attitudes; O'Koon, 1992).

7.4. REASONS AND METHODS FOR ATTEMPTING SUICIDE

7.4.1. For Adolescents

With regard to the reasons for attempting suicide, family, opposite sex, and psychological problems were prevalent in the German group, and family, psychological, life stress, and problems with opposite sex were the most prevalent reasons given by the South African group. Previous studies generally documented problems with family members, friends, opposite sex relationships, alcohol and isolation (Hawton et al., 2000); bereavement or breakdown of a close relationship; interpersonal conflict with parents, partners or friends; school related difficulties; parent-adolescent arguments and difficulties in romantic relationships to be frequent precipitating factors for suicide attempts among adolescents (Beautrais, Joyce, & Mulder, 1997; Brent et al., 1988; Brent et al., 1993b; Davies & Cunningham, 1999; Hawton, O'Grady, Osborn, & Cole, 1982; Marttunen, Aro, & Lönnqvist, 1993).

South African students indicated more reasons related to life stress than did their German counterparts. This indicates that South African students may experience more life stress in their environment than German students. Suicide and suicide attempt often occurs shortly after a stressful event such as a disciplinary crisis, a recent disappointment or rejection (for example, fight with girlfriend, exam failure) (Fergusson et al., 2000). In South Africa stress
levels just before writing matric are very high and this is seen as South Africa's most worrisome time (Roberts, 1999).

With regard to methods used for attempting suicide, slashing of wrist, taking tablets and jumping were prevalent in the German group, and slashing of wrist and taking tablets were the most prevalent methods given by South African adolescents. These results are in line with previous research which documents overdose (that is, taking tablets) and skin cutting as the two most prevalent methods used by adolescents (Davies & Cunningham, 1999; Hawton et al., 2000). Other methods include drug, alcohol and use of firearms and hanging (Davies & Cunningham, 1999). Self poisoning with paracetamol (aspirin) is very common among adolescents and may be used in almost two thirds of overdoses (Hawton et al., 2000).

The great majority of non-fatal overdoses are with low intent, low lethality and impulsive. The most frequent reason for taking overdoses and wrist slashing by adolescents may be to gain relief from a stressful situation, conflict in their family or in an important relationship; and to show other people how desperate they are feeling. Another suggestion may be to get back at other people or to change their behaviour. One reason why wrist slashing is more common as a suicide attempt method than a suicide method (even when intent is high) is that wrist slashers have a tendency to turn their wrists outward, unknowingly protecting the very arteries they wished to cut. German students gave more methods related to jumping than did South African students. An explanation for this may be that more flats and high buildings are available for residential living in Germany, whereas the majority of South Africans live in houses.

7.4.2. For Family Members
Suicide attempts among family members were equally common in both groups, with 14.2% and 14.4% respectively. Mothers were the family members who attempted suicide most often in both groups, followed by Aunt and Sister in the German and Cousin and Aunt in the South African group. These findings are in line with previous research suggesting that females attempt suicide more often than males.

### 7.4.3. For Friends

Reported suicide attempts among friends were common in both groups, with 25.8% in the German group and 30.8% in the South African group. With regard to the reasons for attempting suicide, opposite sex, family and psychological problems were prevalent in the German group, and family, opposite sex and psychological problems were the most prevalent reasons given by the South African group. The results are in line with previous research, as pointed out in 7.4.1. South African students reported more problems with the family than did the German group. An explanation for this might be that South African families place higher demands and expectations and restrictions on their children than do German parents.

Again, with regard to methods used for attempting suicide, slashing of wrists, taking tablets and jumping were prevalent in the German group, and taking tablets and slashing of wrists were the most prevalent methods given by South African adolescents. These findings are also in line with previous research as pointed out in 7.4.1. Also, more females than males attempted suicide in both groups.

### 7.5. Reasons and Methods for Completed Suicide Among Family and Friends

Completed suicides in family was less prevalent in both groups, with 7.9% for German and 5.7% for the South African group. In both groups, Uncles completed suicide most often,
followed by Grandfather and Cousin in the German group, and Cousin and Grandmother in the South African group. Suicide in the immediate family was rare, with 1 in the German group and 2 in the South African group. More males than females completed suicide, which is in line with previous research.

Suicide among friends was more common in the German (8.5%) than South African (5.4%) group. Prevalent reasons given were problems with family, opposite sex, psychological and alcohol and drug use for German students, and family and psychological problems for the South African group. Methods mostly used in the German group included jumping, slashing of wrists, substance abuse and hanging; whereas hanging, use of firearm and jumping was prevalent in South African students. Previous research generally documented the use of firearms, hanging, poisoning, jumping, drowning and cutting as common methods for adolescent suicide (Shaffer & Fisher, 1981). Jumping was the most dominant choice among German students, whereas South African students chose hanging. Culture and nationality differences often exist in the specific methods employed in fatal suicidal behaviours.

7.6. DIFFERENCES AMONG GERMAN AND SOUTH AFRICAN ADOLESCENTS

German adolescents scored higher on the suicide risk scale. It seems that German students display slightly greater trends with variables associated with suicidal behaviour or that South African respondents have been more reluctant to disclose personally distressing feelings. The results from logistic regression analyses and multiple regression analyses indicate that German females are at greater risk for suicidal behaviour than males, whereas males and females in South Africa are at equal risk. (Although, content analysis indicates a strong preference for females to engage in suicidal behaviour). Having abandoned their traditional
sex-roles, German and South African females may find themselves in a more demanding, stressful, competitive and conflicting situation than before. This may explain why more females than males in Germany and South Africa attempt suicide (Flisher et al., 1993; TZS, 1999). German students were found to be more assertive than the South African students. Level of assertion reported in one cultural context may be affected by the more basic values prevalent within that culture and culturally valued behavioural patterns.

Females' feelings of having received greater social support from their friends than males should have something to do with the differences between the two sexes in their interpersonal orientation. Although both sexes have a need for interpersonal intimacy and to confide in someone, females are more interpersonally oriented and have higher expectations for meaningful interpersonal relations than males (Sarason, Shearin, Pierce & Sarason, 1987). Previous research findings indicate that females are more skilful in interpersonal relationships (for example, eye contact, smiling, self-disclosure, social sensitivity, empathy, nurturance and emotional expressiveness) than males (Barbee et al., 1993; Lips, Myers & Colwill, 1978). Having such skills may put females in a more advantageous position than males for receiving greater social support from their friends.

German female students received greater social support from their families than males, while South African male students received more social support than females. The causes of these differences may lie in more basic differences between the cultures of the two countries, however, it is beyond the scope of this research to address such a complex issue.

Suicide attempters scored higher on the suicide risk scale and lower on the two perceived social support scales. This indicates that social support from family and friends may be two
protective factors against suicide and suicide attempt. High levels of social support places adolescents at decreased risk for suicidal behaviour. It further indicates the usefulness of the instruments in detecting and identifying at risk adolescents in both countries.

7.7. SHORTCOMMINGS AND LIMITATIONS

In general, although there have been a number of studies on adolescents who attempted suicide, few studies in South Africa and Germany have addressed this issue and research findings are predominantly from the USA. For example, German law prohibits the accumulation of data on suicide attempts. The diversity of methodologies used and the complexity of the problem make comparison between studies difficult.

Questionnaires about suicidal behaviour and suicide attempts always carry concerns about the truthfulness of the responses. The results of this study must therefore be interpreted in light of the limitation of self-report measures. Giving out a questionnaire to high school students raises questions of how much information and data is given and is truthful. Suicide is a sensitive issue and some people attach a social stigma to it. Attempting suicide or thinking about it is an act that many young people might feel uncomfortable revealing on a questionnaire and this might produce results which are lower than what actually occurred. The effect of this potential bias is unknown. Therefore, assurance of confidentiality and no identification of students names was a way of addressing this problem. The study may suffer from volunteer bias in that those who did not respond may differ from those who did (Bordens & Abbott, 1991). It is impossible to know the characteristics of non-respondents (Bordens & Abbott, 1991).
The sample size for studying suicidal behaviour in this study is relatively small. A larger study group would permit a more precise examination of the differences and similarities of German and South African adolescent suicide attempters. Additional research focusing on more diverse participant populations would also be helpful in generalizing the results of this study, which predominantly examined a group consisting of middle-class white families. The degree to which these results can be generalized to minorities, different ethnic groups and less advantaged families is unknown.

Although the self-report measures used in this study are psychometrically sound, a multi-method approach may be superior. For example, the inclusion of semi-structured interviews with participants and the direct collecting of data from other persons such as family and friends, may be an option to consider. However, this study was devised in such a way as to provide complete confidentiality for participants and using interviews and collecting data from family and friends would come at the price of revealing a persons identity.
8.1. CONCLUSION AND RECOMMENDATION

Overall, certain conclusions and recommendations can be drawn from the cross-cultural research. First, the results from the study clearly demonstrate that adolescent suicidal behaviour is as frequent in Germany as in South Africa. Based on the results of this study, suicidal deaths of family and friends were more common in the German sample than in the South African sample. The results clearly indicate that suicidal behaviour constitutes a serious health problem for adolescents in the two countries.

Second, there is a clear indication that religion and belief in god does not protect against suicide attempts in both countries. There are few empirical data on religion and suicide (McIntosh, 1996). “As a result, we really do not know much about religion and suicide and tend to rely instead on theory and small ad hoc samples” (Maris, Berman, & Silverman, 2000, p. 470).

Third, there is a clear indication that previous suicide attempts and suicides of family and friends are strong risk factors for suicide attempts and increased suicide potential for adolescents; and perceived support of family over friends appears to be a strong protective
factor against attempts and increased suicidal propensity among adolescents. In this respect, the two adolescent groups were found to be similar with regard to the factors related to suicide attempts and risk, despite the cultural differences between the two countries. In line with the findings of the present study, Choquet, Kovess, & Poutignat (1993) documented similarities between Canadian and French adolescents in the factors associated with suicidal ideation.

Fourth, consistent with previous studies, this research failed to document a relationship between suicide attempts and suicide risk and assertiveness.

Fifth, the findings make a strong case for family therapy techniques and training of life-skills through educational programs, for example: education programs for teachers, availability of workshops and education for family and students, working together with schools (Hawton et al., 2000). The high response of previous suicide attempts among adolescents and attempts and suicide among family members and friends suggest the implementation of comprehensive, collaborative community programs offering adolescent and adult emergency services (for example, availability of health workers, psychologist on standby at a psychology clinic, trained counsellors at schools) and enhancement and improvement of existing services (for example, Lifeline, FAMSA, etc.). Many adolescents may not obtain the services they need because the services are not known to them or their families, are not perceived to be readily accessible or simply do not exist. Clearly, the access, knowledge and availability to appropriate health crisis services for families and adolescents in the communities of both countries has to be improved. Thus, prevention efforts for adolescent suicidal behaviour should address family relations (Choquet et al., 1993; Neiger & Hopkins, 1988; Rosenkrantz, 1978; Welleman & Welleman, 1988) and be aware of risk
Sixth, the high preferred use of 'slashing of wrist' and 'taking tablets' as methods for suicide attempts suggests that accessibility and availability of these means have to be limited and restricted. This applies to both countries. Every home has knives and other instruments for cutting or medicine for illnesses. When the range of alternatives is limited, the 'ease of access' (attainability) and the 'readiness for use' (availability) are most likely to define the choice of method. The range of possible alternative methods of suicide and suicide attempt is narrowed by socialization. Sociocultural norms help define acceptable and non-acceptable forms of behaviour, including methods of suicide. If a method is available but not normatively appropriate, it will tend not to be used. These norms of acceptability further define the likely prior experience a person will have had with particular methods. For example, adolescents who dislike knives or firearms are far less likely to have a knife or firearm available, less likely to have had experience handling a knife or firearm, and be more uncomfortable with the thought of using a knife or firearm.

If access and availability leads to suicide attempts, no or less access and availability leads to less attempts and suicide. Ways to restrict the means might be to lock the medicine cabinet at home, keeping fewer medicines at home and out of reach, a law that prohibits adolescents from buying medicine, showing of I.D. at point of sale and reducing amount of tablets per box. The case for restricting the amount of paracetamol (aspirin) available is overwhelming (Hawton et al., 2000). The increase in the use of paracetamol for self-poisoning has been recognized for some time and is a source for great concern in view of the risk of fatal
hepatotoxicity (Bray, 1993). This increase appears to be directly related to increasing
availability as measured by sales figures for paracetamol in the U.K. (Gunnell et al., 1997).

Seventh, few studies surveyed male and female adolescents across ethnic groups in a
general population. Adolescents of colour are notably under-represented in the study of
suicidal behaviour. There is a need for multi-ethnic research in order to understand the
common and differential aspects of suicidal behaviour among ethnic groups as the basis upon
which culturally appropriate programs can be developed.

Finally, the study demonstrated the usefulness of SPS, PSS-Fa and PSS-Fr scales in
studying adolescent suicidal behaviour in different cultural contexts. SPS was related
strongly to previous suicide attempts and demonstrated a moderate discriminative power in
correctly classifying suicide attempters.
References


Therapie-Zentrum für Suizidgefährdete (TZS) / Center for Therapy and Studies of Suicidal Behaviour (March, 1999). Hamburg, Germany.


Mr M.M. Sommer  
Port Elizabeth

Dear Sir

re: M.A. RESEARCH : ATTITUDES TO SUICIDE

Permission is hereby granted for the above research on the following conditions:

1. That schools participate on a voluntary basis and are not co-erced in any way.
2. That the Principal is aware of the study.
3. That schooling in not disrupted in any way.
4. That a summary of the results of the findings be submitted to this office on completion of the study.

As a District Office we wish you best of luck with your research.

Sincerely

DISTRICT MANAGER : P.E. WEST

dpa0957.doc
Mr MM Sommer
P.O. Box 20325
HUMEWOOD
6013

Dear Sir

RE: M.A. RESEARCH: “ATTITUDES TOWARDS SUICIDE”

Permission is hereby granted for the above research on the following conditions:

1. Selected high schools need to be identified and the list forwarded to the respective Circuit Managers through the Office of the District Manager.
2. Schools participate on a voluntary basis and are not coerced in any way.
3. The principal, staff, parents and SGB are aware of the study and give permission for the research.
4. Parents should indicate on the relevant consent forms their permission for their son / daughter to participate in the research.
5. Appropriate time frames be negotiated for the research on site which will not disrupt schooling in any way.
6. A summary of the results of the findings should be submitted to the Office of the District Manager on completion of the study.
7. In view of the sensitive nature of the topic, please clarify with your supervisor regarding the content / nature of the questions of the questionnaire in terms of human rights / ethical considerations.

As a District Office we wish you best of luck for your research and trust that the outcomes will benefit the community.

Yours in Service,

WM TYALI
DISTRICT MANAGER
UITENHAGE DISTRICT
Appendix B

Wissenschaftliche Untersuchungen an Schulen des Landes Schleswig-Holstein

hier: Durchführung einer Schülerbefragung

Sehr geehrter Herr Sommer,


Hiermit genehmige ich das Vorhaben unter dem Vorbehalt, daß die Bestimmungen der §§ 51 und 92 Abs. 2, Nr. 6 des Schleswig-Holsteinischen Schulgesetzes (vgl. Anlage) entsprechend eingehalten werden.
Da die Untersuchungsergebnisse des von Ihnen geplanten Projekts auch für mich interessant sein könnten, bitte ich nach Abschluß der Arbeiten um Übersendung der Ergebnisauswertung.

Mit freundlichen Grüßen

Helga Fiek
Anlage: Auszüge aus dem Schulgesetz des Landes Schleswig-Holstein

Appendix C
M.A. Research Project in Research Psychology
Reported Behaviour and Attitudes of Adolescents

Consent Form

I am a postgraduate student at the University of South Africa doing a study on the behaviour and attitudes of teenagers and suicide. Participants will benefit from this study by attaining a sense of self-perception and self-knowledge about themselves. Participating in this research will raise questions about suicide and everyday life and result in a raised sense of awareness about the opportunities life has to offer. By participating in this research new knowledge and insight can be gained to help prevent future teenage suicide.

I hereby agree to let my son / daughter complete the questionnaires on teenagers and suicide and agree that he / she can fill out the questionnaire on the following understanding:

1) Your son / daughter will have to fill out a questionnaire during a regular class session. This will take app. 35 minutes.
2) The questionnaire will ask questions about everyday life and beliefs and attitudes toward suicide.
3) The data will be used exclusively for research purposes in which individual results will remain anonymous and confidential. (No "Name" is required on the questionnaire).
4) Participation in the study is voluntary and your son / daughter can withdraw from the study at any time.
5) If your son / daughter would like feedback on the results of the research - this can be arranged.

……………………………….     ………………………………….     …………………
Full Name                                     Signature                                       Date

Thank you.

Marc Sommer        (MA Res.Psy.) Student
Tel.: 041 - 7761180
Box 20325
Humewood 6013
Port Elizabeth

Supervisor :            D.J.Kruger , Department of Psychology , Unisa.

Questionnaire
Dear Participant,

You have been selected to take part in a research study toward the "suicidal behavior of adolescents". The aim of the study is to identify certain risk factors for suicide among a normal group of teenagers and to establish cross-cultural similarities and differences in the variables associated with adolescent suicidal behaviour and risk.

The questionnaire is divided into four different sections. Part 1 requires you to fill in your age and gender and to respond to other open-ended questions about suicide. Part 2 - 4 consist of three different scales, which only require you to put an (X) next to your selected choice of response.

Please complete the following questionnaire on your own and respond to all questions. Remember, that there are no right or wrong answers to any of the following statements.

Your name is not required on the questionnaire, and in no way will your identity be disclosed. Participation is voluntary, and you may withdraw from the study at any time.

Thank you for assisting with the research.

Yours faithfully,

Marc Sommer
M.A.(Research Psychology) Student.
Part 1

Directions:

Please fill in the answers to the following questions in the spaces provided and mark with a (X) where appropriate.

Questions

1. How old are you? ________________________________

2. What is your gender?
   Male _____  Female _____

3. How many siblings (brothers and sisters) do you have?
   1 _____  2 _____  3 _____  4 _____  Other _____  None _____

4. How many friends do you have with whom you can talk about everything?
   1 _____  2 _____  3 _____  Other _____

5. Do you believe in God?
   Yes _____  No _____

6. Have you ever paid a visit to a physician, psychologist, psychiatrist or preacher for psychological reasons?
   Yes _____  No _____  If yes, who did you visit? ________________________________

7. Have you ever made an attempt to commit suicide?
   Yes _____  No _____  If yes, when ________________________________
   If yes, how? ________________________________
   If yes, why? ________________________________

8. Have you lost one or more of your parents or guardians (through death)?
   Yes _____  No _____

9. Is there somebody in your immediate family who attempted suicide (unsuccessfully)?
   Yes _____  No _____  If yes, who? ________________________________

10. Is there somebody in your immediate family who committed suicide?
    Yes _____  No _____  If yes, who? ________________________________

11. Has one of your friends attempted suicide (unsuccessfully)?
    Yes _____  No _____  If yes, when ________________________________
    If yes, how? ________________________________
    If yes, why? ________________________________

12. Has one of your friends committed suicide?
    Yes _____  No _____  If yes, when ________________________________
    If yes, how? ________________________________
    If yes, why? ________________________________
Part 1

Instructions:

Please fill in the answers to the following questions in the spaces provided and mark with a (X) where appropriate.

Questions:

13. Have you lost a friend through death?
   if yes, who?
   if yes, how?

14. Have you lost a close family member in recent years through death?
   if yes, who?
   if yes, how?

15. Have you experienced a life-threatening event in the last years?
   if yes, please describe it

16. How long do you think you will live?
   until what age?

17. If you could live anywhere on this world, where would it be?
   and why?

18. If you could be a member of a different cultural or ethical group, which one would you choose?
   and why?
### Part 3a

**Directions:**

The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with their families. For each statement there are 4 possible answers: agree strongly, agree, disagree, disagree strongly. Please circle the answer you choose for each item.

**Scale:**

<table>
<thead>
<tr>
<th>Agree strongly</th>
<th>Agree</th>
<th>Disagree</th>
<th>Disagree strongly</th>
</tr>
</thead>
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**Statements:**

1. My family gives me the moral support I need.  
   - as a d ds

2. I get good ideas about how to do things or make things from my family.  
   - as a d ds

3. Other people are closer to their family than I am to my family.  
   - as a d ds

4. When I confide in the members of the family who are closest to me, I get the idea that it makes them uncomfortable.  
   - as a d ds

5. My family enjoys hearing about what I think.  
   - as a d ds

6. Members of my family share many of my interests.  
   - as a d ds

7. Certain members of my family come to me when they have problems or need advice.  
   - as a d ds

8. I rely on my family for emotional support.  
   - ae a d ds

9. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later.  
   - as a d ds

10. My family and I are very open about what we think about things.  
    - as a d ds

11. My family is sensitive to my personal needs.  
    - as a d ds

12. Members of my family come to me for emotional support.  
    - as a d ds

13. Members of my family are good at helping me solve problems.  
    - as a d ds

14. I have a deep sharing relationship with a number of members of my family.  
    - as a d ds

15. Members of my family get good ideas about how to do things or make things from me.  
    - as a d ds

16. When I confide in members of my family, it makes me uncomfortable.  
    - as a d ds

17. Members of my family seek me out for companionship.  
    - as a d ds

18. I think that my family feels that I’m good at helping them solve problems.  
    - as a d ds

19. I don’t have a relationship with a member of my family that is as close as other people’s relationships with family members.  
    - as a d ds

20. I wish my family were much different.  
    - as a d ds
Part 3b

Directions:
The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with their friends. For each statement there are 4 possible answers: Agree strongly, agree, disagree, disagree strongly. Please circle the answer you choose for each item.

Scale: Agree strongly=as Agree=a Disagree=d Disagree strongly=ds

Statements:

1. My friends give me the moral support I need. as a d ds
2. Most other people are closer to their friends than I am. as a d ds
3. My friends enjoy hearing about what I think. as a d ds
4. Certain friends come to me when they have problems or need advice. as a d ds
5. I rely on my friends for emotional support. as a d ds
6. If I felt that one or more of my friends were upset with me, I'd just keep it to myself. as a d ds
7. I feel that I'm on the fringe in my circle of friends. as a d ds
8. There is a friend I could go to if I were just feeling down, without feeling funny about it later. as a d ds
9. My friends and I are very open about what we think about things. as a d ds
10. My friends are sensitive to my personal needs. as a d ds
11. My friends come to me for emotional support. as a d ds
12. My friends are good at helping me solve problems. as a d ds
13. I have a deep sharing relationship with a number of friends. as a d ds
14. My friends get good ideas about how to do things or make things from me. as a d ds
15. When I confide in friends, it makes me feel uncomfortable. as a d ds
16. My friends seek me out for companionship. as a d ds
17. I think that my friends feel that I'm good at helping them solve problems. as a d ds
18. I don't have a relationship with a friend that is as intimate as other people's relationships with friends. as a d ds
19. I've recently gotten a good idea about how to do something from a friend as a d ds
20. I wish my friends were much different. as a d ds
## Appendix D: Content Analysis

### Where would you like to live & why?

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¹ n = 318, n = 212 gave a reason, n = 106 did not comment; ² n = 299, n = 250 gave a reason, n = 49 did not comment
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¹ n = 318, n = 315 responded to where they would like to live
² n = 299, n = 297 responded to where they would like to live

### Different ethnic or cultural group

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¹ n = 318, n = 315 responded, n = 3 no comment
² n = 299, n = 295 responded, n = 4 no comment