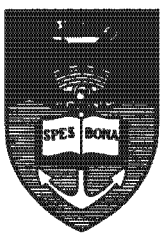
AN ARCHIVAL STUDY OF AN ADOLESCENT DAY PATIENT UNIT WITH A PARTICULAR FOCUS ON RISK-TAKING BEHAVIOUR AND SUICIDALITY



Molelekoa .J. Kometsi

B.A. (Vista); B Soc Sc (Hons-Psych.) (UCT)

(2002)

Supervisor: Prof. Andy Dawes

A minor dissertation submitted in partial fulfilment of the degree of Masters of Arts in Clinical Psychology

DECLARATION

The Author hereby declares that this thesis, unless specifically indicated to the contrary, is a production of his own work.

Signed by candidate

17 - 09 - 2002

Moleleko J. Kometsi

Date

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

I am greatly indebted to the following people:

My Mom and Dad for giving me a lifetime gift of education that has opened doors for my future. They have given and sacrificed so much for the sake of the education of my sisters and myself. To my sisters; Mamakgowa, Puseletso and Mantoa for being so patient with me while I was studying under very difficult circumstances. My brother; Kgamadi, who has supported and encouraged me in numerous ways throughout my studies. To my beautiful daughter, Mosa. I feel fortunate to have such a loving, supportive and entertaining family.

I owe thanks to my supervisor, Prof. Andy Dawes for his extremely valuable suggestions and encouragement throughout this research. I would also like to express my appreciation for his support at the time when things were emotionally taxing for me. May the Good Lord bless him and keep him.

I like to express my appreciation to my friends who belongs to "MOKHATLO" for their constant support. However, I owe a special debt to Sebolai Moeketsi, Mpharu Moeletsi and Sandra Kuter for their invaluable editorial help. Acknowledgement is also extended to Advice Lolwana and my colleague, Nolitha Mtini.

Thanks to the staff of William Slater Hospital for their co-operation and for allowing me to collect data, especially Michael for her interest and believing in me.

I cannot forget the University of Cape Town, Psychology Department and Child Guidance Clinic staff for further stimulating my interest in Psychology.

I am grateful to the staff of Moemaneng Primary and Tlokola Secondary schools for doing their excellent job of laying a solid foundation of education for me. Keep on doing the good job and the Lord will bless you.

I also like to acknowledge ALL those who have always been interested in my life and education.

Finally and above all, thanks be to GOD.

"Ruri mohau wa Modimo ke o bone ka aka mahlo"

ABSTRACT

This study was conducted with the following three objectives: 1, To construct a profile of patients admitted to William Slater Hospital day-patient program during a three-year period (1998-2000). 2, To study the prevalence of suicide and risk-taking behaviour among this sample population, and thus making a comparison with Cummins and Allwood's (1984) study. 3, To explore the extent to which risk-taking behaviour is associated with suicidal behaviour in this clinical population.

Archival research method was used to achieve these objectives. Files of 89 adolescent patients were analysed, and the results showed that more colored female adolescents within the age category of younger (12 – 15 years) adolescents were admitted. These patients are often referred to William Slater by the medical personnel and social agencies, and get diagnosed with mood disorders on Axis I and borderline personality traits on Axis II.

High prevalence of risk-taking behaviours and suicidal behaviour was noticed from this population sample. Furthermore, patients who are risk-takers were found to be more likely to have made suicide attempts.

In conclusion, this study recommends that more epidemiological studies and assessment for availability and accessibility of mental health services for adolescents be conducted, with a particular focus on blacks.

FOREWORD

As adolescents grow up, people expect them to reach adulthood and become responsible adults so that they can make a positive contribution to the society. Unfortunately, many grow up without a sense of fulfilling this hope and enjoying its accompanying benefits of adulthood. To substantiate this, DiClemente, Hansen and Ponton (1996) state that there is a growing concern that far too many of adolescents may not achieve their full potential as adult workers and parents. The reason could be that their lives are at a high risk (Dryfoos, 1990) due to risk-taking behaviours, including suicidal behaviours. As a result, adolescence has received much attention, and considerable research has been conducted in the area of adolescent mental health.

There is a general change in the cause of morbidity and mortality among adolescents during the late 20th century. Previously, infectious diseases mainly accounted for adolescents' morbidity and mortality. In Africa, diseases such as AIDS, malaria and tuberculosis still account for most deaths. However in western societies and other developed countries, behavioural problems have replaced infectious diseases as the major cause of morbidity and mortality among adolescents (Esters, Cooker & Ittenbach, 1998). In addition, DiClemente, Hansen and Ponton (1996) argue that at present, the overwhelming toll of adolescents' morbidity and mortality is the result of their lifestyle practices, which mainly involves risk-taking behaviours such as substance use and abuse, involvement in violent conflict, unsafe sexual practices, and suicidal behaviours. This has alerted researchers and clinicians about the significance of adolescent risk-taking behaviours.

Suicidal behaviour among adolescents has received much recent attention given the alarming increase in prevalence rates in western societies during the last few decades (Dubow, Kausch, Blum, Reed & Bush, 1989; Johnson, 1999). Studies show that prevalence rates for adolescent suicidal behaviour are higher than lifetime rates for the general population (Diekstra, 1989). In fact, suicide is regarded as the third leading cause of death among adolescents, both internationally and locally (Balk, 1995;

Bloom, 1992; Flisher, Ziervogel, Chalton, Leger, & Robertson, 1993a; Paluszny, Davenport & Kim, 1991).

Suicidal behaviour does not occur in isolation. It can be linked with some other risk-taking behaviours. For an example De Man and Leduc (1995) note that both alcohol and drug use frequently are cited as correlates of adolescents' suicidal behaviour. This link shall be referred to as a co-variation.

a. Objectives of the study

The researcher developed an enormous interest in adolescent suicidal behaviour during the year (2000) when he was doing an internship at William Slater Centre for Adolescents and Young Adults (referred to as William Slater Hospital throughout this study). During the course of internship at William Slater Hospital, the researcher became aware that a number of adolescents who were admitted as day-patients at that time were either suicidal or had had suicidal thoughts at some stage of their lives.
It also became evident that most of these adolescents engaged in other risk-taking behaviours, such as smoking drugs and drinking alcohol, especially on weekends. This exposure to the problem heightened the researcher's awareness of adolescent suicidal behaviour and the co-variation with other risk-taking behaviours.

The present research had the following three objectives:

1. Construction of a demographic profile of day-patients who are seen at William Slater Hospital. The objective here was to describe the characteristics of day-patients who were admitted over a three-year period (01 January 1998 to 31 December 2000). That is, who gets admitted as day-patients at William Slater Hospital in terms of demographic features such as race, sex, age, education level, diagnosis and referral path.

2. The second objective of the study was to compare William Slater Hospital's patients' profile with Cummins and Allwood's (1984) study of suicide attempts or threats by children and adolescents at the Child, Adolescent and Family Unit in Johannesburg. These authors' results indicated that suicide attempts or threats together constituted an average of 10% of selected patients. Drug overdose was the most common method employed and major predisposing factors were family stress, psychiatric illness in patients or family members, and school problems.

3. The third objective was to investigate the co-variance of risk-taking behaviour and suicidality in this clinical population.

b. Outline of the study

The foreword outlines the introduction, motivation and the objectives of the study. In the first chapter contemporary literature will be reviewed in order to provide a conceptual understanding of adolescent suicidal behaviour. It aims to provide information about the definition of adolescence, and expatiates on adolescent suicide. This will include suicide rates and risk factors. It also looks at the most commonly used methods.

The second chapter outlines methodology of the study, which starts with a background information on William Slater Hospital. This will be followed by a brief review of the research design of the archival study. Thereafter, the sampling, data collection, data analysis procedures as well as ethical considerations will be discussed.

The third chapter presents an analysis of the results. Chapter four consists of a discussion of the results, recommendations, and a conclusion of the study.

CHAPTER 1: LITERATURE REVIEW

This chapter will start with a discussion of the meaning and definition of adolescence. A brief discussion of Freud, Erickson, and Marcia's theories of personality development will follow with an emphasis on adolescence. A focus will then be placed on the risk for the development of psychopathology during adolescence. A definition of risk-taking behaviour will also be provided. A discussion on adolescent suicide will follow thereafter, placing more emphasis on risk factors, suicide rates, methods adolescents employ in attempting or committing suicide, and demographic factors. Lastly, adolescent mental health treatment resources as well as adolescents help-seeking behaviour will be reviewed.

1.1 ADOLESCENCE

Adolescence is an intense time of change (Pipher, 1995), and it is commonly accepted as a period of preparation for adulthood. The developmental tasks of this period are all tied to successful functioning in adulthood in one way or the other (Crockett & Crouter, 1995).

"The term adolescence comes from the Latin verb, *adolescere*, meaning to grow in maturity" (Rogers, 1962:4). This means adolescence is a process rather than a period. This process is characterized by physical, emotional, intellectual, academic, social and spiritual developments all happening at once (Pipher, 1995).

The difficulty starts with finding the exact meaning of what is adolescence. People define it differently placing their emphasizes on different aspects. What makes it more difficult is because it has no precisely identifiable point of beginning or ending (Berman, 1997). It emerges gradually from childhood; the adolescent is neither a child nor an adult, but somewhere in the middle. Berger and Shechter (1989) as well as Mc Coy, Metsch and Inciardi (1996) perceive adolescence as an intermediate period between two "defined" periods; that is childhood and adulthood.

For the sake of this review, adolescence refers to individuals between the ages 12 to 18 because most of the studies presented in this review focused on this age group.

1.2 THEORIES OF ADOLESCENT PERSONALITY DEVELOPMENT

There are a number of psychodynamic theories, originating with Freud, as well as other non-dynamic theories of human development helping to understand and conceptualise the life stages of adolescence. For the purpose of this review, a brief summary of Sigmund Freud, Erik Erikson and James Marcia's theories will be presented.

Freud developed a psychosexual theory of personality. According to his theory, personality develops through five psychosexual stages of development and the final stage occurs during adolescence. Appendix A shows these Freud's psychosexual stages of development compared to Erickson's psychosocial stages of development as taken from Clarke-Stewart and Friedman (1987).

According to Freud, as cited in Manaster (1977), "the primary tasks of adolescence include the subordination of pregenital part drives (the incomplete, immature childhood drives) to genital primacy, and the resolution of any Oedipal conflicts revived at this stage. The latter demands object loss (detachment from parents and their internal representations) and object finding (establishment of mature heterosexual object relations). The primary tasks of the ego in adolescence are modification of the superego, establishment of an ego ideal and more ordered character structure, establishment of sexual identity, and identity formation" (p. 103-104). This process of detaching oneself from parents (object loss) and acquiring new tender love attachments from outside the family can be anxiety provoking (Manaster, 1977).

Erickson was the first psychoanalytic theorist to appreciate the psychosocial nature of identity, stressing the important role played by the community in recognizing, supporting, and thus helping to shape the *adolescing* ego (Kroger, 1989). He developed a psychosocial stage theory of personality development. See Appendix A for Erickson's psychosocial stages of development.

Erikson (1968) postulates that adolescence is a period of searching for identity, and the resolution of identity versus role confusion is the main task of adolescence. He sums up this task by saying that adolescents "are sometimes morbidly, often curiously, preoccupied with what they appear to be in the eyes of others as compared with what they feel they are, and with the question of how to connect the roles and skills cultivated earlier with the ideal prototypes of the day" (p.128). According to Muss (1988), a positive outcome of this task depends on the individual's willingness to accept his or her past and establish continuity with previous experiences. This could be achieved by finding answers to questions such as: "who am I?" , "where am I going and who am I to become?" Muss (1988) and Berger (1980) document that adolescents who have developed personal identity must establish their own commitment to a system of values - religious beliefs, vocational goals, a philosophy of life – and accept their sexuality. Such individuals become happy with themselves and are able to accept their capacities, limitations, and opportunities. Muss (1988) went on to say that adolescents who fail in the search for an identity will experience self-doubt and role confusion. Such individuals may indulge in self-destructive activities. In more severe form, the clinical picture of identity diffusion may lead to suicide or suicide attempts.

Marcia (1980) further elaborated Erikson's stages of identity versus role confusion. He achieved this by identifying four *identity statuses* that could be seen as lying in the continuum between clear identity formation and identity diffusion (Nash, Stoch & Harper, 1990). These statuses are identity achievement, identity foreclosure, moratorium and identity diffusion and are summarised in Table 1, constructed by the author.

TABLE 1: Marcia's identity statuses.

IDENTITY ACHIEVEMENT	Flexible strength describes their manner of relating to the world, thoughtful and introspective, not immobilised by their reflections, function cognitively well under stress, and they are willing to listen and judge according to their own inner standards.
IDENTITY FORECLOSURE	Happy and self satisfied, very authoritarian, conventional in their moral reasoning and very committed to vocational and ideological values. They are particularly drawn to the values of a parent or strong leader who can show them the right way, well behaved in interpersonal relationships and placid individuals engaging in stereotypic or merger styles of interaction.
MORATORIUM	Animated and anxious in their identity struggle, able to describe what intimacy must be like and unable to be in such relationships, volatile and intense in their relationships, difficulties with detaching from parents, particularly the parent of opposite sex, they resemble achievement to their cognitive complexity and high levels of moral reasoning, and failure to conform or rely to judgement of others for making decisions.
IDENTITY DIFUSSION	Tend to be either superficial or unhappy, some might drift through life in a carefree, uninvolved way, while others may show severe psychopathology with great loneliness. They are not only involved in intimate relationships and seem to lack any real sense of contribute to a dyad or group. Distant and withdrawn from interpersonal relationships. Have low self-esteem and use less complex cognitive styles than moratoriums and achievements.

Kroger (1989) writes that:

" Achievement and foreclosure individuals have both made commitments to social roles: however, achievements have done so following a crisis or decision-making period, while foreclosures have bypassed the identity formation process and merely adopted roles and values of childhood identification figures. For the identity achieved individual, commitment has resulted from a process of ego synthesis, whereby earlier identifications are 'subordinated to a new, unique Gestalt which is more than the sum of its parts'. For the foreclosure, however, the identity formation process has not yet begun and identification remains the mode of identity resolution. Similarly, moratoriums and diffusions both are lacking commitment to a place in the social order; however, moratoriums are undergoing an evaluative process (ego synthesis) in search of suitable social roles, while diffusions are not" (p. 34-35).

1.3 RISK FOR PSYCHOPATHOLOGY

In their preparation for adulthood, adolescents are not only faced with the struggle to deal with physical and the afore-mentioned psychological changes. In addition to that, society (Crockett & Silbereisen, 2000) and parents place extra demands and expectations on them. According to Crockett and Crouter (1995), adolescents are also expected to move away from adult-directed activities of childhood toward the emotional autonomy, responsibility and self-direction that are characteristics of adulthood. Sometimes they are granted partial adult status. For example, when leaving home to attend university, starting employment, driving, voting, etc. In some contexts such as their work place, they may be treated like adults. While in others, such as at school and at home, they may still be regarded as children, and Berk (1989) says these contradictory roles may be confusing for them, and possibly anxiety provoking.

From the foregoing paragraph, one can say that it is somewhat surprising that the majority of adolescents achieve adulthood through trial and error, because there are no clearly stipulated routes indicating progression to adulthood in a desired direction. Hendry (1989) also shares this notion that it is perhaps remarkable that some adolescents arrive at their adulthood destination emotionally and physiologically unscathed.

Nevertheless, for some adolescents, the period is an overwhelming and anxiety provoking experience. Such adolescents usually spend hours in deep and unusual secret preoccupation about the expectations and the changes they are undergoing (Rogers, 1972). They are likely to feel inadequate and question their general ability to cope with life's demands. This inability to cope with these behavioural and emotional changes may result in serious psychopathology (Rutter & Hersov, 1985). Many of these adolescents turn to alcohol, drugs and narcotics to relieve their anxieties so that they can feel more adequate (Rogers, 1972). Those who suffer severe feelings of inadequacy question their self worth, wonder if life is worth living, and may attempt suicide as an escape from reality.

1.4 DEFINING RISK-TAKING BEHAVIOUR

Risk-taking behaviour is not defined consistently and different emphases are placed on different aspects. For the purpose of this review, risk-taking behaviour is defined as anything that people do that could harm their lives (Dryfoos, 1990). It is important to note that adolescents do not necessarily interpret behaviours defined by adults as risky in the same way (Gonzalez, Field, Yando, Gonzalez, Lasko & Bendell 1994). For example, these authors show that adolescent drivers often label driving behaviour labeled as risky by adults, such as driving fast, as good.

The types of risk taking behaviours that have been selected for the purpose of this review are alcohol consumption, cigarette smoking, drug use and suicidal behaviour.

1.5 CO-VARIATION OF RISK-TAKING BEHAVIOURS

DiClemente, Hansen and Ponton (1996) as well as Flisher, Hoven, Bird, Gould, Lahey and Schwab-Stone (2000) have shown that co-variation exists among adolescent risk behaviours. That is, engaging in one risky behaviour increases the likelihood of engaging in other risk behaviour patterns (Dryfoos, 1990).

Igra and Irwin (1996) proposed three reasons to explain this co-variation. Firstly, individual behaviours influence one another. For example, drivers under too much

influence of alcohol often drive at high dangerous speed and are thus likely to cause accidents. Secondly, risk-behaviours can be seen as alternative manifestations of a general tendency toward deviance. Thirdly, a finite constellation of factors is responsible for multiple risk-taking behaviours. For example, being an adolescent of parents going through divorce and constantly experiencing a feeling of rejection and therefore trying very hard to gain acceptance by identifying and complying with delinquent peers who abuse substances.

Forrest (1988) found that those adolescents who engage in various types of risk-taking behaviour are at greater risk for suicide. To substantiate this, Dubow et al. (1989) as well as Dukes and Lorch (1989) have found that risk taking behaviours which could be regarded as "acting-out" behaviours such as substance use, school problems, anger, aggression including health risk behaviours have been found to be associated with suicidal behaviour. De Man and Leduc (1995) and FeCaces, Stinson and Harford (1991) have also noted this co-variation.

1.6 ADOLESCENT SUICIDE

> "Suicide is perhaps the most disturbing expression of the maladaptation of later adolescents. We are frustrated by the premature ending of life, by unrealized potential. We are agonized by our failure to prevent the act. We are hunted by the questioning and doubt that surround suicides ... The emotions of sadness, quilt, anger, and frustration that we feel in response to another's suicide are the same emotions that are associated with the suicide attempt itself' (Newman & Newman, 1979 pp. 469).

Suicidal behaviour among adolescents has received much recent attention given the alarming increase in the prevalence rates during the last few decades (Dubow et al., 1989; Johnson, 1999). Suicide attempts are some 30 to 100 times more frequent than successful suicide (Cummins & Allwood, 1984).

Suicide may be examined from a socio-cultural historical point of view. This will allow a more comprehensive understanding of the phenomenon.

Durkheim (1952) argued that suicide varies inversely with the degree of integration of the social groups of which the individual forms part. He hypothesised that where social solidarity was strong there would be little suicide, and the reverse when solidarity was low. Farberow (1975) also shares Durkheim's view that suicide is influenced by specific factors of the society in which it appears. Beauchamp and Perlin (1978) provide the following outline of Durkheim's three-suicide types. Each is linked to a particular form of social organisation, and one would expect the frequency of each suicide type to be related to the form of social organisation:

1. *Egoistic suicide*; A lack of meaningful interaction subjects members of society to personal isolation, which in turn leads to suicide. For example, a single person who has few close personal friends is at a greater risk of suicide than a married person.
2. *Anomic suicide*; Here, a lack of participation in the societal structure deprives persons of normative restrains. This means that suicide is the result of self-isolation from society and its constrains. The individual is not part of the normative community, and is isolated from moral order of the community.
3. *Altruistic suicide*; In this type, social integration is actually excessive, and heightens the risk of suicide. This means that under certain circumstances suicide becomes honourable and socially or religiously encouraged action. For example, condemnation in some societies applies to all sorts of suicides, except to religious suicides such as drowning in sacred rivers, and also suicides by the ascetics and those suffering from intractable diseases (Venkoba Rao, 1975).

From the foregoing paragraphs, it is apparent that Durkheim's three suicide types gives a broad spectrum of how social organisation can put people at risk for suicidal behaviour. However, Durkheim's model does not give a clear account of the individual factors associated with suicide. The next section will start with a brief explanation of suicide from a psychodynamic perspective and will be followed by a discussion of individual suicidal risk factors.

1.7 SUICIDE FROM THE PSYCHODYNAMIC PERSECTIVE

There are numerous dynamic theories that are used to explain individual suicide phenomena, and not all of them will be reviewed here. Only a brief psychoanalytic perspective will be presented.

Freud, believed that suicide is a manifestation of anger turned inward, and it represents unconscious hostility directed towards the introjected (ambivalent viewed) love objects (Freud, 1925; Stillion, McDowell & May, 1989). He doubted if there would be a suicide without an earlier repressed desire to kill someone else (Kaplan & Sadock, 1998). To deepen this understanding of suicide as an unconscious act, Freud (1901) state that the "unconscious intention of committing suicide chooses it's time, means and opportunity; and it is quite in keeping with this that an unconscious intention should wait for a precipitating occasion which can take own part of the causation" (p. 181). It is probably for this reason that Freud viewed suicide as created by the breakdown of ego defences and the release of destructive forces that reflects the ambivalent relationship to those love objects with whom one identifies and makes part of oneself (Beauchamp & Perlin, 1978). Such a breakdown could be triggered by deterioration or loss of a crucial relationship, or by injury to self-esteem in the form of a failure of skills, job, or health. This breakdown may result in rage in which the object for punishment becomes oneself. Thus the hated parent with whom an individual identifies may be murdered symbolically in the act of self-killing. Suicide then would have offered both relief from unbearable pain and an avenue for expression of murderous range. (Gill, 1982).

1.8 INDIVIDUAL SUICIDAL RISK FACTORS

An impressive amount of work has gone into the effort to predict who is at risk for suicide. This work has been particularly intense in the past decade, and to a great extent has focused on adolescent suicide (Callahan, 1993). The difficulty or some would say impossibility of doing this cannot be ignored. Callahan (1993) went on to say that this work is so complex and daunting to researchers, as there are no universal motives for suicide (Kahn, 1982).

To illustrate this difficulty, it is possible that even though studies have shown that a conglomeration of risk factors that are statistically associated with the outcome variables measured (suicide completion, suicide attempts, or suicide ideation), when these factors are applied to other samples, they invariably show low sensitivity, low specification, or both. For example, depression is clearly associated with suicide, but there are many more depressed individuals who do not commit suicide than those who do.

There is no single factor that could explain all adolescents' suicidal behaviours. Like other complex human behaviours, suicide requires that we consider the contributions of numerous factors. Lyon, Benoit, O'Donell, Getson, Silber and Walsh (2000) have suggested the idea that screening for risk factors remains the best approach towards this problem. Callahan (1993) documented that a biopsychosocial model appears to be the most appropriate model to be considered in this situation. This model suggests that there is an interaction of psychological, biological and social/cultural factors which all play a role in understanding adolescent suicidal behaviour.

Table 2 shows the most commonly cited psychological, biological and social factors used in the literature to understand adolescents' suicidal behaviour

TABLE 2: The most commonly cited psychological, biological and social factors in understanding adolescent suicidal behaviour.

• Psychological factors	* Chaotic childhood factors such as abuse, neglect & multiple losses * Psychiatric disorders in adolescents like severe depression, borderline disorders & identity disorders.
• Biological factors	* Low levels of serotonin * Family history of suicide * History of mental illness in the family
• Social factors	* Media influences * Peer influences * Social isolation

1.8.1 Psychological factors

Adcock, Nagy and Simpson (1991); Lester (1991) as well as Paluszny, Davenport and Kim (1991) suggest that adolescents who commit suicide have had a chaotic childhood. According to Callahan (1993), Dukes and Lorch (1989) as well as Rosenn (1982), the following factors have been identified as being associated with adolescents' suicidal behaviour: early childhood parental absence or abusiveness, disturbed and hostile intrafamilial relationships, physical abuse, losses and separation, childhood bereavement, parental loss, and family instability or chaotic home environment, as well as inadequate love, affection and support provided by family members. The significantly higher incidence of suicide attempts among rejected, abused and neglected adolescents, as well as those who were physically and sexually abused, provides support for this position (Lyon et al. 2000). These factors are considered to be predisposing, in that they appear to set the stage for later factors and variables, which have a more proximate relationship to adolescent suicidal behaviour. For example, consider an adolescent who was neglected as a child and grew up in an abusive family with parents showing little or no affection. Such an adolescent is likely to develop low self-esteem and vulnerability to rejection. A break-up with a boy/girlfriend is likely to bring back the repressed childhood feelings of rejection, thus increasing the vulnerability to suicidal behaviour.

Although suicide "completers" and suicide "attempters" are believed to constitute two distinct groups with different risk factors and other characteristics, according to Bussuk (1982); Cohen, Spirito & Brown (1996) as well as American Academy of Pediartics (2000) one of the best predictors of successful suicide is previous attempt. Prior attempts are a risk factor because every time an adolescent makes a suicide attempt, there is more risk of serious harm and death. Wenar and Kerig (2000) also documented that unsuccessful attempts serve as "practice" for a future lethal attempt. Lyon et al. (2000) argue that those who make initial suicide attempts are at a greater risk for subsequent suicide, with repeated attempts increasing in lethality over time. Therefore, a previous suicide attempt constitutes a very serious risk factor.

Some adolescents who present with suicidal tendencies have diagnosable psychopathology, depression being the most common diagnosis (Werner & Kerig, 2000). Authors such as Dubow et al. (1989) and Cappelli, Clulow, Goodman et al. (1995), note that adolescents who exhibit suicidal behaviour are likely to be depressed and feel hopeless. Their sense of personal control is limited and they believe that the outcomes of their lives are determined by chance or luck (De Man & Leduc, 1995).

A diagnosis of alcoholism and drug dependence is another risk factor for adolescent suicidal behaviour (Callahan, 1993; Lester, 1997). The American Academy of Pediatrics (2000) associates 50% of all adolescent suicides with alcohol abuse.
Other significant behaviour patterns include aggression and hostility, substance abuse and impulsive reactions to acute crises (Cummins & Allwood, 1984).

The risk of an adolescent attempting suicide sustainably if there is a family history of suicide attempts, and the risk of completing suicide increases with having a family member who has committed suicide (Cohen, Spirito & Brown, 1996).
Adolescents are more likely to commit suicide following loss (Davis, 1993), such as the loss of a significant other, like a family member (Joan, 1986). They may do so in an attempt to join their loved ones or when they are experiencing difficulties with grieving (Curran, 1987; Bloom, 1992).

In addition, adolescent suicide is more common in communities with a high rate of divorce and family breakdown, excessively high parental expectations, breakdown in communication with parents and avoiding parental punishment.

Psychosocial problems and stress such as conflicts with parents, break-up of relationships, school difficulties or failure, legal difficulties, social isolation and physical ailments are commonly reported in young people who attempt suicide (American Academy of Pediatrics, 2000).

Nelson (1987) suggests that the triggering impact of stressful events in conjunction with inadequate coping resources (e.g. the lack of social support) could lead to suicidal behaviour. Additional psychosocial antecedent factors include the following:

quarrels with boy/girlfirend or peers, disciplinary crises with the law or the police, and economic stress (Garfinkel, Foroese & Hood, 1982).

Other important characteristics commonly associated with adolescent suicide include low self-esteem and poor self image, (Adcock, Nagy & Simpson 1991; DeSimone, Murruay & Lester 1994; Petti & Larson, 1987), as well as the desire to escape from a difficult situation, punishing loved ones through guilt and remorse (Curran, 1987; Bloom, 1992).

1.8.2 Biological factors

There is an increasing interest in finding and describing biological factors related to suicidal behaviour. However, Cohen, Spirito and Brown (1996) document that this area is quite complex and prone to methodological limitations. To illustrate this, on the one hand, lower levels of serotonin (5-HIAA) and 5 –hydroxytryptophan (5-HTP) have been found in samples of suicide attempters and have been related to further suicidal behaviour (Cohen, Spirito & Brown, 1996). Shaffer, Pfeffer and the Work Group on Quality Issues (2001) states that serotonin inhibits extreme fluctuations of mood and reactivity, and its irregularities make it more difficult for a suicidal individual to control his or her suicidal impulses. On the other hand, Callahan (1993) states that there is no empirical evidence for suicide risk due to the apparent association between low levels of serotonin and impulsive aggression.

There is also a literature suggesting that a family history of psychiatric disorder is a common feature in adolescent suicide (American Academy of Pediatrics, 2000), and many of the disorders that appear to run in families also convey significant risk of suicide (Callahan, 1993), with depression, anxiety states, alcoholism being the most common disorders (Cummins & Allwood, 1984), including schizophrenia (Callahan, 1993).

1.8.3 Social factors

Adolescents may also be exposed to suicide indirectly by media such as radios, newspaper stories or television shows. Evidence suggests a connection between published fictional stories and subsequent imitative suicides (Cohen, Spirito &

Brown, 1996). Some studies also report the cause of suicidal behaviour as the imitation of what the adolescent has seen on television (American Accademy of Pediatrics, 2000).

Both Erikson and Marcia emphasised that adolescents need to establish a sense of personal identity. Therefore, it is not surprising that adolescence is typified by an increasing interest in, and involvement with, the peer group in order to achieve identity formation. This is accompanied by an increase in conformity to the behaviour and values of the peer group. However, the question is, to what extent is the peer group responsible for adolescents' engagement in risk taking behaviour. To answer this question, Schelenberg, Maggs and Hunnelmann (1999) cite that many investigators argue that friendships are a primary source of health compromising behaviours among adolescents. For example, Wenar and Kerig (2000) state that adolescents with low self-esteem may be more attracted to drug use as a means of boosting self-image and gaining status in the peer group. These authors add that antisocial youths spend most of their time in peer groups with no adult supervision, "hanging out" on the streets, and engaging in risky behaviours.

1.9 SUICIDE RATES

There is a growing concern internationally and locally regarding extent of suicidal behaviour among adolescents (Flisher et al., 1993a; Flisher, Joubert & Yach 1984; McClure, 1986; Balk, 1995; Bloom, 1992; Gangat, Naidoo & Wessels, 1987; Paluszny, Davenport & Kim, 1991). According to King (2000) and American Accademy of Pediatrics (2000), the overall suicide rates for the United States of America remained stable since 1950, but the rates for adolescents 15 to 19 years of age increased by more than 300% from 2.7 per 100.000 in 1950 to 11.1 per 100.000 in 1990. However, this was not the case in South Africa. Flisher (1999) notes that there was no significant increase in adolescent suicide incidence from 1968 to 1990.

Locally, Flisher et al. (1993a, 1993b, 1993c) studied the prevalence of a wide range of risk-taking behaviour among high-school students in the Cape Peninsula, South Africa, using a sample of 7 340. Of the total sample, 19% reported seriously thinking about harming themselves in a way that might result in their death in the previous

year, 12% had told someone that they intend to put end to their life, and 8% had actually tried to put end to their life (Flisher et al., 1993a). Tables showing these results are affixed in the Appendix B.

In their research in South Africa, Cummins and Allwood (1984) analysed the records of children and adolescents in the 10 – 15 year age group who were referred to a Child, Adolescent and Family Unit (CAFU) in Johannesburg, over the 6 – year period 1 January 1977 – 31 December 1982. Their findings indicate that 10% of the referrals was for suicide attempts or threats. Table 3 shows these results by age and sex.

TABLE 3: Proportion of suicide threats and attempts at the CAFU between 1977 and 1982.

Age (yrs)	Females (N=54)	Males (N=27)	Total (N=81)
10	5.6	7.4	6.2
11	3.7	11.1	6.2
12	18.5	22.2	19.8
13	46.3	44.4	45.7
14	16.7	11.1	14.8
15	9.3	3.7	14.8
Mean	12.9	12.5	12.8
Results are expressed as % total CAFU referrals for each sex			

Flisher (1999) documents that in South Africa, suicide accounts for 2% or less of all deaths of adolescents aged 10 to 14 years. In the light of these findings, it is likely that adolescent suicide rates are lower in South Africa as compared to other developed countries.

It is worth noting that there is likelihood that in general, suicide statistics could possibly be much higher than reported. Cohen, Spirito and Brown (1996) maintain that statistics on suicide are generally considered to be underestimates of the true incidence because of failure to report and misclassification of unintentional injuries that might be suicides. To substantiate that, Lester (1997) states that some nations do not submit their data to the World Health Organisation. Thus making it difficult to have precise statistics. For example, in South Africa, figures have not been systematically collected, especially in rural areas in the black communities.

1.10 SUICIDE METHODS

It is important to put a focus on methods adolescents employ in attempting or committing suicide. It is well known that males have a tendency to choose more violent means of self-destruction that would ensure that they die, while females have tended to use more passive methods which are slower in action and allow time for apprehension or rescue (Cheifetz, Posener, LaHaye, Zajdman & Benierakis, 1987; Kalafat, 1996; Cohen, Spirito & Brown, 1996). The motivation of choice is not always easily explained. One possible explanation could be related to sex role stereotyping. That is, it is more acceptable for women to express affect and to act on their feelings, while men are expected to control them (Cohen, Spirito & Brown, 1996; Flisher et al., 1993a). Therefore, it is likely that men can delay expression of their feelings, and by the time they do, they might have already made some plan and found more lethal methods for the suicide attempt.

Studies in the United States of America show that adolescent males tend to shoot themselves or use other means such as hanging, strangulation, firearms, suffocation, and explosives (Cohen, Spirito & Brown, 1996). Callahan (1993) has also found that in the United States of America the most frequent method of completed suicide among adolescents is firearms. Therefore, a significant emphasis needs to be placed on firearms in the homes, regardless of whether they are kept unloaded or stored locked up, because they are mainly associated with a higher risk for adolescent suicide. However, in South Africa, hanging predominates among victims aged 5 to 39 years of age (Burrows, Bowman, Matzopoulos & van Niekerk, 2001).
Female adolescents are more likely to use methods such as wrist slashing and drug overdoses (Bloom. 1992: 389) The most commonly used drugs are analgesics, benzodiazepines and barbiturates (Garfinkel, Foroese & Hood, 1982).

In their study of the records of children and adolescents in the 10 – 15-year age group who were refereed to a Child, Adolescent and Family Unit over the 6-year period 1 January 1977 - 31 December 1982, Cummins and Allwood (984) found out that drug overdosage was used by 86 % of females and 64 % of male attempters. Drugs used were analgesics, benzodiazepines, anticonvulsants, phenothiazines, antidepressants,

antihistaminics, antihypertensives, antispasmodics, antibiotics and readily available proprietary medicines.

As some low-lethality attempts are fatal, and sometimes people survive highly lethal attempts, all means to attempt suicide must be taken seriously (Callahan, 1993).

1.11 DEMOGRAPHIC FACTORS

Suicide affects adolescents from all parts of the world, although the rates vary between different ethnic and racial groups. Studies by Shaffer, Garland, Gould, Fisher and Trautman (1988), Clayer and Czechowicz (1991) and Flisher et al. (1993a), suggest that the rate of suicide is higher among white adolescents than blacks both in the United States of America and South Africa. It has been suggested by Gibbs and Hines (1989) that there are "protective factors" in black American populations such as strong family ties, the church, fraternal and social organisations, and community schools, all of which increase social cohesion and mutual support. However, Nettles and Pleck (1996) reported that the rate of completed and attempted suicide among black adolescents has increased markedly in the last three decades, especially for males.

The epidemiological data for suicide rates and attempts varies substantially for adolescents based on gender (Shaffer et al., 1988). It is generally accepted that male suicide rate is higher than female suicide rate (Adcock, Nagy & Simpson, 1991; Dubow et al., 1989; Drummond, 1997; Flisher et al., 1993a). China, India and Southeast Asia are exceptions (Shaffer, 1988) because the majority of suicides are committed by women.

De Man and Leduc (1995), Bloom (1992) as well as Balk (1995) state that females make attempts more frequently than males do, while male completed suicide rates seem to be rising world wide, female rates do not (Lester, 1997). Interestingly, Cohen, Spirito and Brown (1996) report that there are no differences between males and females in precipitating events of the suicide attempt or suicidal ideation.

There is a growing concern that the initiation of risky behaviour is occurring at progressively younger ages. Many authors (Cheifetz et al., 1987; De Man & Leduc, 1995) believe that suicide is a very rare event among children aged 14 years and less. It has already been stated that in South Africa, suicide accounts for 2% or less of all deaths of adolescents aged 10 to 14 (Flisher, 1999). The rates increase among adolescents aged 15 – 19, and the peak incidence is reported by Cummins and Allwood (1984) to be in 15 year olds.

Problems regarding sexual identity (i.e., confusion and turmoil regarding whether one is primarily homosexual, bisexual, or heterosexual) are involved in perhaps as many as 30% of all adolescent suicides (Callahan, 1993). According Popenhugen and Qualley (1998) attempted suicide rates among gay and lesbian populations are two times greater than rates within the general population. Gay and lesbian adolescents have been reported to exhibit high rates of suicide ideation and attempts three times higher than other adolescents (American Accademy of Pediatrics, 2000). The underlying risk factors associated with lesbians and gays could include the lack of a social support system, societal homophobia, stressful process of revealing one's states, and feelings of isolation (Ruthblum, 1990).

Diverse attitudes toward suicide have emerged in different societies, where approval or disapproval of society is often influenced by ethical and religious considerations (Beauchamp & Perlin, 1978).

The proportion of younger adolescents who are from socio-economically disadvantaged communities have been found (DiClemente, Hansen & Ponton, 1996; Dubow et al., 1989) to be at a higher risk for risk behaviours. Werner and Kerig (2000) have also documented this. On the contrary, Lester (1991) documents that these rates are not been influenced by socio-economic status.

1.12 ADOLESCENT MENTAL HEALTH SERVICES

Given possibilities for the development of psychopathology and suicide rates during adolescence, a large number of adolescents would require mental health treatment. The need for an increased provision of mental health services for children and adolescents in South Africa has been expressed by Moodley and Pillay (1992) and Dawes, Robertson, Duncan, Ensink, Jackson, Reynolds, Pillay and Richter (1997).

These authors have found mental health services in South Africa for children and adolescents to be both inadequate and short in supply. Wallis (1993) states that there is a high need for mental health services in South Africa, particularly child and adolescent psychiatric services for blacks. According to Dawes et al. (1997) the historical situation of mental health resource allocation in terms of personnel and facilities remains woefully inadequate, and the problems continue to intensify due to economic problems (Wallis, 1993). Further more, Dawes et al. (1997) note that there is very limited specialist training for those who wish to work with children and adolescents. These authors state that the ratio of child psychiatrist to South African children is about 1:1 million. Currently, South Africa has only six provincially supported Child and Family Units, and several specialist adolescent units linked to academic hospital complexes (Dawes et al., 1997).

The discrepancy between the need for and receipt of mental health services during adolescence is serious, as Krispijn, Van der Ende, Wierdsma and Verhulst (1999) state that high levels of problem behaviour in adolescence form a risk of psychopathology in adulthood.

A focus will now be placed on the two types of mental health treatment resources available for adolescents. That is, inpatient and outpatient (day treatment) mental health treatments. There is no South African literature on the development of adolescents' mental health treatment resources. The literature that follows here is based on the United States of America and the United Kingdom.

Adolescents were previously treated through the general medical services. However, there has been a recent recognition of the need for and availability of a wide range of adolescent mental health treatment services (Steinberg, 1994). This has resulted in the establishment of both adolescent inpatient and outpatient mental health treatment services.

Inpatient psychiatric units were established to care for a large number of children and adolescents with behavioural and psychiatric disorders (Hersov, 1994). The aim was to contain behavioural problems through hospitalisation. However, criticisms were that, although hospitalisation offered the family and the adolescents protection from

out of control behaviour, they carried the usual negative side effects of removal from home and community, stigma, regression, dependency and separation from family, friend, school and other community support systems (Linnihan, 1977). In addition to that, this author went on saying that many disturbed youngsters would adapt to a placement outside of the community (hospital), but fail to develop sufficient skills to prepare them adequately for return to their homes and community. However, Milin, Coupland, Walker and Bloom (2000) state that inpatient treatment is preferred for those resistant to out-patient or day patient treatment and it may be used to stabilize children and adolescents to prepare them for subsequent outpatient or day treatment options.

Day-treatments (alternatively called partial treatment) were established as an effective community alternative to hospitalisation for the treatment of mentally disturbed adolescents (Linnihan, 1997). According to Hersov (1994), day-treatments were originally aimed at children and adolescents requiring more than just outpatient treatment, but less than the restrictive setting of an inpatient unit. They were designed to encourage the adolescent's involvement with the existing community structure as possible.

Burns (1991) states that the development of day treatment centres were guided by the following 3 principles about the provision of mental health services to children and adolescents:

1. Serve them in the least restrictive setting as possible
2. Serve them in the community whenever possible, and
3. Provide family focused treatment

Therefore, the primary goal of day-treatment became the provision of treatment for the adolescent in a supportive context in the community, rather than by removal to distant state hospitals (Linnihan, 1977). This author writes that the advantages of this modality include strengthening adolescent ties with family and support systems, and prevention of institutionalisation for many; for others, whose ties have been broken, it serves them as an avenue to transition back to the community. Milin et al., (2000)

added that in addition to being less disruptive for the patient, the patient's family and community, day treatments are cost effective.

Although there has been some exploration into the quality and scope of adolescent mental health treatment resources, Berard, Sennett and Ahmed (1998) state that less research has been conducted on the means to access them. Therefore, a focus needs to be turned to adolescents' help-seeking behaviour.

1.13 ADOLESCENTS HELP-SEEKING BEHAVIOUR

Given the limited availability of resources for adolescents with mental health problems, another problem is whether those in need of treatment do actually seek help and make use of it. It is rather disconcerting to note that even if these services were fully available and completely accessible, the number of adolescents actually using treatment is not expected to be 100% of those in need (Burns, 1991). There are other factors such as stigma attached to mental illness and the associated help-seeking process (Esters, Cooker & Ittenbach, 1998). According to Burns (1991), an expectation that 13% or even 5% of adolescents in need of mental health services who would actually use them, may not be a realistic percentage. Therefore, research on factors associated with mental health service use may help find ways to reach the adolescents with high levels of problems who need professional help but do not receive it (Krispijn et al., 1999). However, Steinberg (1994) states that empirical studies on factors influencing the help-seeking behaviour are scarce, especially pertaining to adolescents. Some of the factors influencing help-seeking behaviour for adolescents with mental health problems are discussed below.

According to Steinberg (1994), issues that are normally associated with adolescence such as transformation from school to work, from family to successfully or problematically negotiated independence often obscure the presence of psychological disturbance in adolescence, delaying the need to seek help. The decision to seek help may be delayed because parents or adolescents themselves find it difficult to determine when the problems are "severe enough" to seek help, since some of emotional distress is normative in this developmental period (Krispijn et al., 1999). Another problem is that there is a gap between perception of the need for help and

actual help seeking, because of adolescent's reluctance to co-operate. This is a possible reason why so many parents chose to struggle alone with their dilemma rather than to seek help (Linnihan, 1977).

The parental decision to seek help for the adolescent could also be influenced by parents' networks with other non-mental health professions. For example, teachers and local church ministers are the professionals with whom parents commonly discuss the emotional and behavioural problems of their adolescent child. These other sources provide an additional explanation for the delay in referral to specialist mental health care (Krispijn et al., 1999). Therefore, it is possible that families seek help from other professionals or non-professional sources first, and only when it turns out to be insufficient, do they turn to a mental health specialist.

Mental health service use in childhood and adolescence has also been reported by Krispijn et al. (1999) to be linked with being poor and disadvantaged socio-economic background. The reason being that those who sought help from the community resources, such as short-term hospitalisation in a local psychiatric ward or private services, often found the financial burden exorbitant and the results disappointing (Linnihan, 1977).

Psychiatric diagnoses such as schizophrenic illnesses, obsessive compulsive disorders, social phobia, agoraphobia, anorexia nervosa and other eating disorders have become noticeable more prominently in adolescence (Steinberg, 1994), and thus encourage help seeking behaviour. In addition to that, Krispijn et al. (1999) state that clinical categories of emotional disorder, conduct disorder and oppositional defiant disorder as well as mixed emotional and conduct disorders have been reported to increase the likelihood of help seeking in adolescents more than other psychiatric disorders. Nicol (1994) states that although many adolescents who suffer psychological distress are often reluctant to attend a psychiatric clinic, they may be prepared to be seen at home or to attend more familiar and less potentially stigmatising settings such as their family doctor.

Krispijn et al. (1999) note that young adolescents with low levels of participation and skill in sports, hobbies and jobs are likely to use mental health services than their

more active peers, even if they show no difference in the problem levels in early adolescence. Furthermore, these authors also stated that gender differences in treatment rates change with age; that is, boys predominate in childhood and girls in adolescence.

Although not all psychiatric illnesses during adolescence require specialised help, Krispijn et al. (1999) conclude that it would be beneficial for many young adolescents to receive professional help in early stages of the problem, given the possible beneficial effects of early intervention.

The present review indicates that there is a high need for mental health services for adolescents. However, not all of adolescents in need of specialised treatment do receive it, because there are other factors affecting their decision to seek help.

CHAPTER 2: METHODOLOGY

As noted in chapter 1, the current research has the following three aims.

1. Constructing a profile of day-patients who were seen at William Slater over a 3-year period (1998-2000).
2. Comparing William Slater's profile with a study done by Cummins and Allwood (1984) on adolescent suicide.
3. To investigate the co-variance of risk-taking behaviour and suicidality in this clinical population.

Prior to presenting the methodology of this research, a large part of this chapter is devoted to providing background information regarding William Slater and its therapeutic programme. The background provides the context of the study. Therefore, it is necessary to note the location, brief historical background, philosophy and functioning of William Slater Hospital. Background information of William Slater Hospital and the actuality of the practice/programme have been obtained from Ahmed (1997). Since this author has provided detailed historical evolution of William Slater Hospital and its therapeutic programme, brief background information will be presented for the sake of this research.

2.1 RESEARCH SITE

The William Slater Hospital is situated in an old house at Rondebosch in Cape Town, an upper middle class area. This house is fairly large and does not show any exterior or interior characteristics that could allow for its identification as a psychiatric unit (Ahmed, 1999).

William Slater is a satellite unit of Groote Schuur Hospital and also forms part of the Department of Psychiatry, University of Cape Town. It is an outpatient psychiatric therapeutic facility staffed by a multidisciplinary team of mental health professionals such as a psychiatrist (consultant), psychologist, social worker, psychiatric nurses, post graduate trainees (intern psychologist, psychiatric registrar), voluntary

facilitators. Administrative and cleaning staffs also form part of the personnel at William Slater Hospital.

Adolescents are referred to William Slater Hospital by a wide range of both mental health professionals (e.g. psychologists, psychiatrists, social workers, and tertiary hospitals) and non-metal health professional workers (e.g. school teachers and principals, school clinics, social welfare agencies). William Slater Hospital has a policy that referrals should only come through "professionals", being mental or non-mental health professionals.

The admission criteria at William Slater Hospital are that the individual must be between the ages 12 and 18 and present with one/more of the following psychological, emotional and/or behavioural problems; depression, anxiety, suicidal tendencies or attempts, difficulties with interpersonal relationships, adjustment problems, sexual and/or physical abuse, school refusal, academic or vocational underachievement, acting out behaviours and poor relationships. The individual must not have psychotic disorders, severe psychiatric disturbances, or be actively abusing substances. The individual must be of an average to above average intelligence and be motivated to attend the program. These criterion have been constant since 1997. Exclusion criteria include those who present with conduct disorders, major behavioral disturbances, recalcitrant substance abuse, or psychotic illness.

William Slater Hospital is a milieu therapy unit and offers a time-limited psychotherapeutic programme for the treatment of non-psychotic, non-organic psychological and/or adolescent psychiatric disorders. The programme's central treatment principle is that change is best effected by utilising peer group pressure in a therapeutic environment (Ahmed, 1999). Garritson (1992) defines milieu therapy as "the purposeful use of people, resources, and events in the client's immediate environment, to promote optimal functioning in the activities of daily living development or improved interpersonal skills, and the ability to manage outside the institutional setting" (p.743).

The two broad interrelated goals of the program are to achieve (1) symptoms remission from psychiatric diagnosis, and (2) optimal domains (pro-social

competence, interpersonal skills ability to cope with stress, and adversity) (Ahmed, 1999).

The programme runs for a period of eight weeks from 9h:00 to 15h:00, Mondays to Fridays. See Appendix C for day-to-day timetable of the programme. There is no uniformly applied therapeutic orientation in the unit. Therapists adopt a range of perspectives from broadly psychoanalytic through self-psychological, electic, to more behavioural approaches.

Group therapy is considered to be one of the most important aspects of the programme. Group therapies have the therapeutic function of exploration, developing insight and working through. Groups are conducted four times a week, and attendance is compulsory for all patients admitted to the programme. Group therapy has two facilitators drawn from multidisciplinary staff members (psychiatric nurses, psychologist, psychiatrist, social worker, registrar, and intern psychologist). Groups are supervised live. That is, other members of the team sit behind a one-way mirror to observe the group and then give immediate supervision following the group session.

All patients are assigned to an individual therapist on admission to the programme. Initially, the therapist is responsible for taking the history of the patient, making a diagnosis according to the American Psychiatric Association's (1994) Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), as well as therapeutic management recommendations. This is done in consultation with the team. Thereafter, the therapist conducts weekly therapy with the patient. The therapeutic modality depends on the individual therapist involved.

Most patients receive at least some form of family therapy during their programme. Family sessions are usually done on weekly basis.

Apart from the aforementioned therapeutic interventions, patients also attend other therapeutic interventions such as evocative therapy and life skills sessions. During the evocative groups, patients' emotions around a range of issues are evoked using various techniques such as guided imagery, drawings, paintings and psychodrama. Evocative groups are aimed at exploring psychodynamic issues and developing

insight etc. They are co-facilitated by one permanent staff member (social worker or a psychologist) with either an intern psychologist or psychiatric register. Evocative groups are usually followed by a relaxation technique. Life skills training is aimed at equipping adolescent patients with more socially appropriate behaviours.

Patients are prescribed medication when necessary. They also participate in a weekly "community meeting". All patients and staff at the Centre attend these meetings. The purpose of these meetings is to sort out any "issues", usually a conflict that may have arisen amongst the patients or between staff and the patients. Ward representatives and duties are also assigned to patients at these meetings.

Prior to discharge, patients evaluate their progress and the unit holds a farewell party for them.

2.2 RESEARCH DESIGN

2.2.1 Archival study

The method selected for achieving the research objectives as noted at the beginning of this chapter is archival study or a historical document study. This means that William Slater Hospital's patient folders were used in the study and ***no*** patients were interviewed or otherwise involved in the study.

Archival studies have been applied for many decades by historians and social scientists (Elder, Pavalkok & Clipp, 1993). Bailey (1978) describes archival studies as involving the analyses of documented information, the basic goal being to take a verbal non-quantitative document and transform it into quantitative data. However, the literature does not specify specific steps that should be followed when doing an archival study. Elder, Pavalkok and Clipp (1993) cite that investigators did not develop their procedures in written form as a logic or inquiry or methodology. The literature only emphasizes that when recording data from the documents or folders, this has to be done in a structured manner in order to elicit constant information.

Archival studies offer an efficient means of gathering a large amount of data. They allow for research on otherwise inaccessible subjects, which is useful for retrospective or historical reviews. They share the advantage that spontaneous actions and feelings can be recorded when they occur, rather than at a time specified by the researcher (Bailey, 1978). Katzenellenbogen, Joubert and Abdoel-Karin (1997) note that archival studies can elicit information about the kind of population served by psychiatric hospitals and this give an indication of who has access to such institutions. In addition to that, this author went on to say that research on psychiatric conditions could be problematic, as psychiatric illness is often stigmatised and therefore likely to be hidden from research. However, archival study, using psychiatric records offers a solution to this problem.

2.2.2 Sample and sampling

The study sample is the total population of adolescent patients who were admitted as day-patients at William Slater Hospital over a 3-year period (01 January 1999 to 31 December 2000). These patients were admitted for day-programs that ran for approximately eight weeks.

The total population of patient folders who had been admitted to William Slater Hospital over a 3-year period (01 January 1999 to 31 December 2000) were requested for analysis. This was made possible by checking the register of admissions for this specified period. The folders available amounted to 94.

2.2.3 Variables

Each patient's file recorded the narrative description of the patient's history according to Maudsley's format. A data-capturing sheet with a set of variables was devised to document data in a more constant and structured manner from each file. The following categories of variables were obtained from each patient's folder and entered on a data-capturing sheet:

Demographic variables

Year of admission

Age

Sex

Race

Education level

Presentation and admission variables

Referral agent

Reason for referral

Clinical diagnosis

The presence of suicidality (any indication of whether the patient had ever contemplated or attempted suicide)

if yes, method employed, precipitating factors, attempt by significant other, family psychiatric illness

The use of drugs and alcohol

Previous admissions

Previous treatments

Diagnosis, both on Axis I and II

2.3 DATA ANALYSIS

2.3.1 Re-grouping/classification of variables.

Once data had been gathered and exclusions were completed, the frequencies of all variables were *tested* in order to check any errors. This also served as the beginning of data analysis. Some of the variables were re-grouped/classified for the purposes of analysis. Please note that only those variables that required being re-grouped/classified after their initial computation will be presented below.

2.3.1.1 Ages:

The age variable was further categorised into younger and older adolescents. Younger adolescents were all adolescents between the ages 12 to 15, and the older ones were between the ages 16 to 18.

2.3.1.2 Referral agents:

With regard to this variable, all patients who were referred to William Slater Hospital by the social workers, both from governmental and non-governmental organisations, were grouped together as social agencies.

The medical personnel included all referrals from all the medical practitioners and nurses, excluding psychiatrists. Both the psychiatrists and psychologists were regarded as mental health personnel.

The school as the referral agent was made up of all school related authorities such as teachers, guidance teachers and counsellors, principals etc.

The family as the referrer included the referral by parents or any other extended members of the family.

Those who walked in and presented themselves at the Centre, either at the recommendation of a friend or ex-patient of William Slater, were grouped together as self-referrals.

2.3.1.3 Reasons for referral:

For this variable, reasons for referral were mainly grouped in terms of where the problem was picked up. The school related difficulties include school refusal, poor academic performance and conflict with the school authorities etc.
Home-related difficulties were problems such as conflict with parents, abuse (sexual or physical) at home, domestic violence, parental divorce, and problems related to

discipline. Suicide included suicidal attempts and ideation. The remaining variables were clear and self-explanatory.

2.3.1.4 Risk-taking behaviours

Risk-taking behaviours recorded were cigarette smoking, drinking alcohol and or using drugs. Some adolescents were taking more than one of the above, and they were all grouped together as drugs, alcohol and cigarettes.

2.3.1.5 DSM-IV Axis I and Axis II diagnoses:

There was a wide range of both Axis I and II disorders reported. All of these disorders were classified under their broad original categories. For example, major depressive episode and dysthymia and other mood disorders were classified as mood disorders, and post-traumatic stress disorder and panic attacks and other related disorders were classified as anxiety disorders. This kind of classification also applied to all other disorders, including Axis II disorders.

2.3.1.6 Suicide attempt by a significant other

This simply means a suicide attempt or threat by any person who could be a significant other to the adolescent patient. For example, parents or any other extended family members.

2.3.1.7 Parental family history of psychiatric illness

In clinical notes from the patients' files, it was mentioned that the family member(s) either had a confirmed diagnosis or some disturbances of psychiatric problems. However, for the purposes of this research, this will be referred to as parental family history of psychiatric illness.

2.3.2 Exclusion criterion

A total number of 5 patients' folders were excluded from the entire sample. Two of them were excluded during the data-capturing phase because they did not have sufficient relevant information to be computed. The remaining 3 were excluded on the grounds of age, because they were above the ages of 18. The decision was based on the fact that (as stated in the literature review) this research focuses only on the adolescents between the ages of 12 to 18.

2.3.3 Methods of analysing data

It is important to note that the sample size of this study allows for only a limited interpretation of the results. Therefore, the results will mainly be presented in terms of the frequencies and percentages. However, where possible, Chi-square tests will be used to test the significance differences between variables. The results will also be summarized by means of tables, pie charts and bar graphs.

2.4 ETHICAL APPRAISAL

In order to gain access to the patients' folders, the intention to conduct this research was discussed with the consultant psychiatrist at William Slater. The consultant gave the researcher a written permission subject to the Medical Ethics Research Committee's (M.E.R.C) approval. Permission was then requested from the M.E.R.C. Both copies of these letters are affixed in the Appendix D and E respectively.

As no names of patients are required for the study, the researcher maintained a high standard of confidentiality and anonymity.

A copy of this research report will be given to William Slater Hospital.

CHAPTER 3: RESULTS

This chapter presents the results of the study in two sections. Section one will provide a profile of admissions to William Slater Center over a 3-year period. This will be presented according to years of admissions, gender, age, education, race, referral agents, reasons for admissions, diagnoses, and parental family history of psychiatric illnesses. Section two will establish the prevalence of suicide and risk-taking behaviours in the same population. This will be examined with reference to the fore-mentioned demographic variables. Lastly, a relationship between risk-taking behaviours and suicide will be explored. It is important to note that the sample size of this study allows for only a limited interpretation of the results. Therefore, the results will mainly be presented in terms of frequencies data.

3.1 SECTION 1: A PROFILE OF ADMISSIONS TO WILLIAM SLATER HOSPITAL

3.1.1 Demographic characteristics

This section starts with a presentation of overall patients' demographics over a three-year period (1998-2000). Detailed breakdown showing these demographics are presented in Table 4 below.

TABLE 4: Patient demographics over three years

		1998	1999	2000	Total
Total		34 (38%)	25 (28%)	30 (34%)	N=89
Gender	Male	8	10	14	32 (36%)
	Female	26	15	16	57 (64%)
Age	(12 – 15)	17	17	16	50 (56%)
	(16 – 18)	17	8	14	39 (44%)
Race	Colored	19	24	12	55 (61.8%)
	White	11	1	5	17 (19.1%)
	Black	3	0	1	4 (4.5%)
	No information	1	0	12	13 (14.6%)

As it can be seen from Table 4, the frequencies of admissions to the program over the period 1998 to 2000 indicate that 89 adolescent patients were admitted. More patients (38%) were admitted during 1998. There was a noticeable 10% decline of admissions

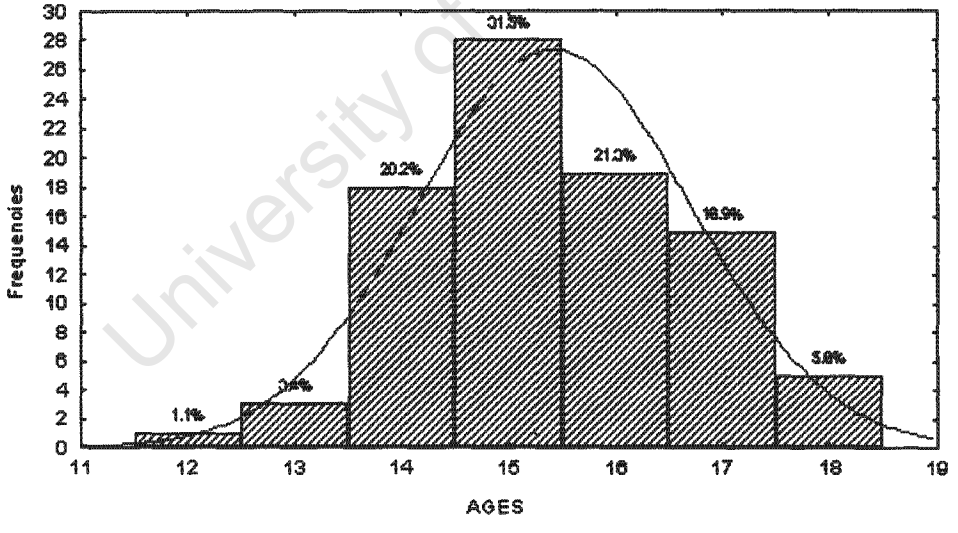
during the following year (1999). This was followed by 6% increase of admissions during the year 2000, thus making a total of 34% of admissions.

More females 57 (64%) than males 32 (36%) were admitted over the years 1998 to 2000. There has been a decline of female admissions since 1998 and an increase of male admissions over the period.

The age range of the sample was 12 to 18, with a mean of 15 years and a standard deviation of 1.29 years. Patients between the ages 14 to 17 constituted 73% of the admissions. These results are graphically presented in Figure 1 below.

The age variable was further categorized into younger (12-15years) and older (16-18years) adolescents. Fifty patients (56%) were younger and thirty nine (44%) were older adolescents. Of the total sample of younger adolescents, more females (29) than males (21) were admitted over 3-year period.

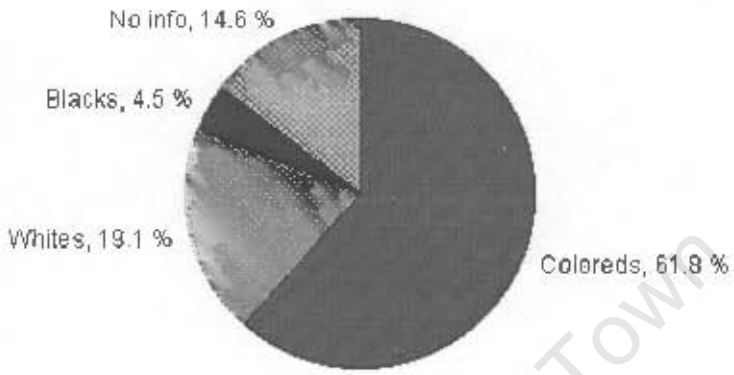
FIGURE 1: Patient age distribution



With regard to race over a three-year period, the majority of adolescent patients admitted to William Slater Hospital were classified as coloured (61.8%). Whites constituted 19.1 % of the sample, while blacks constituted only 4.5%. However, there was no indication about race from 13 (14.6%) folders. These results are also presented graphically in Figure 2.

A breakdown of race by specific years of admission indicates that the results were consistence with the afore-presented results on race in general. That is, more coloreds were admitted to the Center each year. Whites and blacks followed this respectively (see Table 4).

FIGURE 2: Race percentages over three-year period



Almost all of the patients admitted at William Slater Hospital over the 3-years were in secondary school, with an exception of 8, of which 1 had matriculated and 7 were not at school. The majority of these adolescents (55%) were in grades between 8 and 10. Detailed breakdown of percentages of school grades can be observed in Table 5.

TABLE 5: Frequencies and percentages of school grades.

School grades	Number of adolescents
7	6 (6.7%)
8	19 (21.3%)
9	17 (19.1%)
10	22 (24.7%)
11	12 (13.4%)
12	5 (5.6%)
Matriculated	1 (1.1%)
Not at school	7 (7.8%)

3.1.2 Clinical information

The frequencies of referral agents reflect the pathway through which adolescents get admitted to William Slater Hospital. Table 6 shows the referral agents classified in relation to reasons for which they referred patients.

TABLE 6: Referral agents and reasons for referral

Referral Agent	Total referrals	Reasons for referrals						
		Behavioural problems	Anxiety	School difficulties	Home difficulties	Suicide	Depression.	Unclear
Medicals	25 (28.1%)	8	2	3	2	3	6	1
Social agents	20 (22.5%)	8	0	4	1	3	3	1
Education	16 (18%)	6	1	4	0	2	3	0
Mental h/w	12 (13.5%)	3	1	1	1	1	5	0
Family	5 (5.6%)	2	0	1	0	0	2	0
Self	3 (3.4%)	0	0	0	0	0	3	0
No info	8 (9%)	0	0	1	0	1	0	6
Totals	89	27	4	14	4	10	22	8

More referrers were made by medical personnel (25), followed by the social agencies (20) and educational institutions (16). Mental health personnel only referred 12 adolescent patients, and the family referred 5. Three patients were self-referrals. There was no documentation of eight of the referrals. Percentages of these referrals are also visually presented in Table 6.

It can be seen from Table 6 that medical personnel referred most patients to William Slater Hospital due to behavioural difficulties and depression. This is followed by referrals from the social agencies and educational institutions due to behavioural difficulties.

As it can be seen in Table 6, with regard to the reasons why patients were referred to William Slater Hospital, the most common reasons for referrals were behavioural problems and depression. These two reasons combined together accounted for 49

(55%) of reasons for referrals. Education or school related difficulties accounted for 14 (15.7%) and suicide for 10 (11.2%) of the referrals. When both home and anxiety related difficulties were combined together, they accounted for 8 (9%) of the referrals. There was no information or it was unclear on 8 (9%) of admitted patients as to what could have been the reason for their referrals to William Slater Hospital.

3.1.2.1 Diagnosis

- Axis I

The frequencies of the breakdown of both DSM- IV Axis I and Axis II diagnoses over three years are presented in Table 7.

TABLE 7: Frequencies of DSM IV Axis I & Axis II diagnoses over three years

Axis I Diagnosis	1998	1999	2000	Total
Mood	22	10	19	51
Anxiety	3	4	4	11
Conduct	2	3	2	7
Eating	1	0	0	1
ADHD	0	1	0	1
Substance abuse	1	0	0	1
Parent/child Relational.	0	0	1	1
Total	29 (32.6%)	18 (20.2%)	26 (29.2%)	73 (82%)
No diagnosis	5	7	4	16
Axis II Diagnosis				
Borderline	5	1	2	8
Histrionic	0	2	0	2
Avoidant personality	2	0	0	2
Schizoids	1	0	0	1
Narcissistic	1	2	1	4
Dependent	2	1	0	3
MMR	0	1	0	1
Axis II traits	1	0	1	2
Total	12 (13.5%)	7 (7.9%)	3 (3.4%)	23 (25.8%)
No diagnosis	22	18	26	66

Of the total sample, 73 patients received a DSM-IV diagnosis either on Axis I or Axis II and 16 patients had no diagnosis on Axis I and 66 respectively on Axis II. A breakdown of these results indicates that 51 patients received Axis I diagnosis only, 1 patient received Axis II diagnosis only, and 21 patients received both Axis I and II diagnoses.

On Axis I, 51 patients were classified as mood disorders, and 11 as anxiety disorders. 7 patients were classified as conduct disorders. Very few patients, one on each, were classified under attention deficit hyperactivity disorder, eating disorder, substance abuse as well as parent-child relational problems. Refer to Table 7 for detailed breakdown of frequencies of Axis I diagnoses, as well as Axis II diagnoses.

With regard to gender, the results further indicate that more females (43) than males (19) were diagnosed with either mood or anxiety disorders over the 3-year period. However, on conduct disorders, there was not much of the difference; 4 males and 3 females were diagnosed with this disorder.

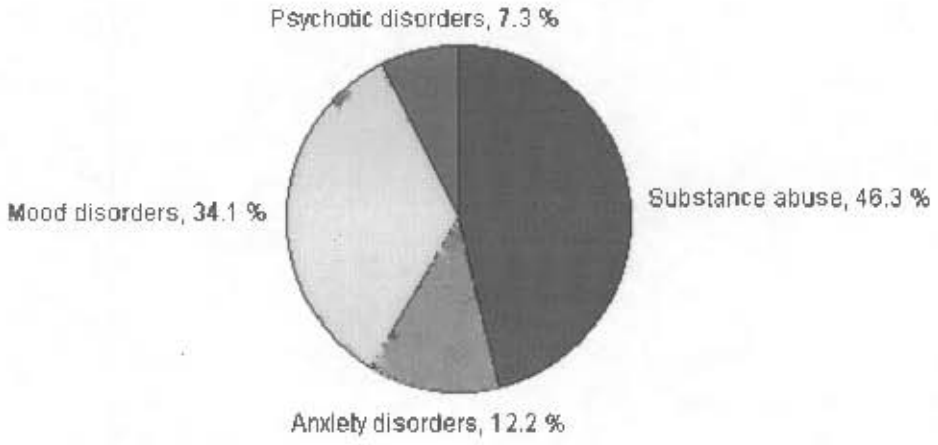
- Axis II

On Axis II, only 22 patients were diagnosed with Axis II personality traits. 8 patients were diagnosed with borderline personality traits, and 4 with narcissistic personality traits. Other Axis II diagnoses such as histrionic, avoidant, schizoid, dependent and mental retardation each accounted for less than 3 patients. Refer to Table 7 for these results.

3.1.2.2 Parental family history of psychiatric illness

The results were analysed with regard to the patient's parental family history of psychiatric illness over 3-years. This analysis indicates that less than half of the total sample, 41 came from a family with a parental history of mental illness. 19 out of 41 patients came from a family with a history of substance abuse in parents, predominantly alcohol and 14 were from families with a parental history of mood disorders. Both anxiety and psychotic disorders combined accounted for only 8 patients in this sample population. See Figure 3 below for detailed results showing percentages of these results. Please note that the statistical significance level between individuals who came from a family with a history of mental illness and those who did not, was not tested because the expected frequencies were very low.

FIGURE 3: Percentages of parental family history of psychiatric illness



Another analysis was conducted to determine whether there was any relationship between the reason for admission and the family diagnosis of mental illness. The results show that more adolescents (10) who were admitted to William Slater Hospital either due to behavioural or school difficulties came from a family with a parental history of substance abuse. In addition to that, 5 who were admitted due to depression came from a family with a parental history of depression.

More analysis was conducted to determine if there were any similarities regarding the patients' Axis I diagnosis and their parental family history of mental illness over the 3-year period. Appendix F demonstrates that there were no clear similarities between patient's Axis I diagnosis and parental family history of mental illness because frequencies were very low between these variables. However, there was an exception of parental diagnosis of mood disorder and substance abuse. The results show that 20 adolescents with a mood disorder diagnosis came from a family with a parental family history of either mood disorders (11) or substance abuse (9). This simply suggests that there is a probability that parental mood disorder and substance abuse predict a diagnosis of adolescent mood disorder.

Moreover, an analysis was conducted to determine how many patients with a parental family history of mental illness have diagnosis on Axis I as compared to Axis II. The results show that 33 patients with parental family history of mental illness had a diagnosis on Axis I, and only 15 had a diagnosis on Axis II. This simply suggests that parental family history of mental illness predicts a diagnosis on Axis I.

In general, a profile of patients seen at William Slater over three-year period indicates that 89 adolescents were admitted. There were more coloured females aged 15 and doing grades between 8 and 10 at school. The medical personnel often refer these patients to the Centre due to depression and behavioural difficulties. More of them were diagnosed with conduct disorder on Axis I and borderline personality traits on Axis II. Even though there was no relationship found between patients' Axis I diagnosis and parental family history of mental illness, there is a probability that parental mood disorder and substance abuse predicts a diagnosis of adolescent mood disorder.

3.2 SECTION 2: SUICIDALITY AND RISK-TAKING BEHAVIOURS

3.2.1 Suicidality

This section presents the prevalence of suicide attempts and threats among patients admitted to William Slater Hospital. This will be followed by results on risk-taking behaviours. Lastly, a relationship between suicide and risk-taking behaviours will be explored.

This section starts with an overall presentation of suicidal patients' demographics over the 3-year period. These demographics are presented in Table 8.

TABLE 8: Profile of suicidal patients over three years

Suicidal patients		Total	1998	1999	2000
Total		N=49	26 (53%)	14 (28.5%)	9 (18.3%)
Gender	Male	12 (24.4%)	5	6	1
	Female	37 (75.5%)	21	8	8
Age	(12-15)	24 (48.9%)	12	9	3
	(16-18)	25 (51.1%)	14	5	6
Risk-taking behaviour		35 (71.4%)	19	10	6
Parental history of mental illness		22 (55.1%)	13	9	5

The results indicate that 49 (55.1%) patients of the total sample had been suicidal at some stage of their lives. A breakdown of intake of patients with a history of suicide by years indicates that 53% were admitted in 1998, and 28.5% in 1999, and this was followed by 18.3% during the year 2000. Table 8 clearly demonstrates these results.

More females 37 (75.5%) than males 12 (24.4%) had been suicidal during the period 1998 to 2000. There was also a noticeable decline of patients' admissions on both genders over 3-year period. More suicidal patients (37) were between the ages 15 and 17, and the modal age being 15. When these results were analysed according to the age category for the 3-years, there was no difference between the young and older adolescents' suicidality.

Interestingly, the results on both the number of admissions of suicidal patients and age category showed a reduction on each year of 3-year period. These results are shown in Table 8.

With regard to school grades, the highest prevalence of suicide was found among grades 8 (n=11) and 10 (n=14). Suicidal rates from these grades combined together constitute a prevalence rate of 51%. This can be linked to the results presented on age, and thus suggests that most of the patients with a history of suicide attempts or ideation were doing grades between 8 and 10, and were between the ages 15 and 17.

More analysis was conducted to determine who were the most common referral agents of suicidal patients to William Slater Hospital over the 3-year period. The results indicate that, of the total sample of patients with a history of suicide, 16 were referred by the medical personnel, 11 by the social agencies and 10 by the mental health personnel. The remaining referral agents each accounted less than 6 of the referrals. Refer to Appendix G for detailed results.

The most common methods employed on suicide attempts were overdose (19) and slitting of wrists (10). Both of these methods were used by females only. The common drugs of usage were paracetamol, analgesics and antidepressant. Interestingly, hanging was used by 3 males only.

An analysis of suicide and diagnoses indicates that 29 patients without a history of suicide had a diagnosis on Axis I only, as compared to 22 non-suicidal patients. However, on both Axis I and II diagnoses, more suicidal patients (18) had both of these diagnoses than their non-suicidal counterparts. This simply suggests that the presence of suicide does not predict diagnosis on Axis I only, but it is likely to do so on both Axis I and II. Table 9 below shows these results.

TABLE 9: Suicide and diagnoses

	Axis I only	Axis II only	Both Axis I & II
Suicide	22	0	18
No suicide	29	1	3

In addition to that, a further analysis was undertaken to explore the most common reasons for referrals and Axis I diagnoses of patients with a history of suicide. The most commonly found reasons for referrals of patients with a history of suicide were

depression (16) and behavioural problems (11). More patients (32) with a history of suicide were diagnosed with mood disorders. Both anxiety and conduct disorders combined together accounted for 8 of diagnoses for this group of patients.

The relationship between suicide and parental family history of mental illness was explored. The results for this analysis are presented in Table 10.

TABLE 10: Suicide and parental family history of mental illness

Suicidal patients	
With family history of mental illness	Without family history of mental illness
27 (55.1%)	22 (44.9%)

As it is evident from Table 10, of the total sample with a history of suicide, 27 patients (more than half) came from a family with a parental history of mental illness, as compared to 22 suicidal patients that came from families without parental history of mental illness. The chi-square results show that patients who have a suicide history are more likely to have a family history of mental illness than those who do not [Chi^2 (df= 1) 3.581, $p< .05$]. A table indicating these results is placed in Appendix H. These results suggest that parental family history of mental illness could be a risk factor for adolescent suicidality. A suicide attempt by a significant other was not found to be a possible risk factor. 40 adolescents with a history of suicide came from families without suicide attempts by significant others, and only 9 came from families with a history of suicide attempt. It is important to note that the numbers were too small to conduct further analysis.

3.2.2 Risk-taking behaviours

Detailed breakdown of risk-taking behaviours over the 3-year period are presented in Table 11 and Table 12 below.

TABLE 11: Profile of risk-taking behaviour by sex and age

	Males		Females	
Total	19		32	
	Risk behaviour	No risk behaviour	Risk behaviour	No risk behaviour
Age (12-15)	11 (12.4%)	10 (11.2%)	18 (20.2%)	11 (12.4%)
(16-18)	8 (8.9%)	3 (3.4%)	14 (15.7%)	14 (15.7%)
Total	19 (21.4%)	13 (14.6%)	32 (36%)	25 (28%)

TABLE 12: Pattern of risk-taking behaviours, diagnosis, suicidality and family history in males and females

	Males	Females	Total
Types of risky behaviours			
Cigarette smoking	7	7	14
Alcohol	4	10	14
Dagga	1	2	3
Cigarette, alcohol & dagga.	7	13	20
Patients' Axis I diagnosis			
Mood	10	21	31
Anxiety	1	2	3
Conduct	4	3	7
Parental history of psychiatric illness	12	15	27
Suicidal	9	26	35

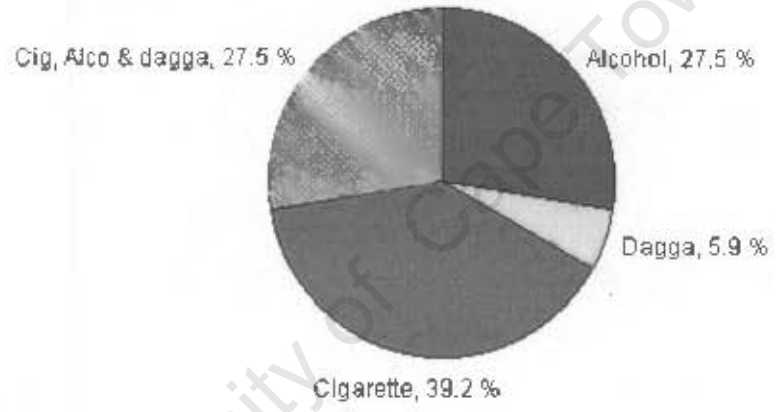
With regard to risk-taking behaviour, 51 (57.3%) of the patients admitted at William Slater Hospital over the 3-year period were either smoking cigarettes, drinking alcohol or taking drugs. 21 patients with risk-taking behaviours were admitted during the year 2000, and this was followed by stable admissions of 15 patients each during the years 1998 and 1999. More females (32) than males (19) had a high prevalence of risk-taking behaviours. Table 11 clearly demonstrates these results.

The results also indicate that the majority of the sample who uses either cigarettes, alcohol or drugs (39) were between the ages 14 and 16, with the modal age being 15 [19 (21.5%)]. When the age variable was divided according to the age category, younger adolescents (29) showed higher prevalence of risk-taking behaviour than older adolescents (22). Still in this category of younger adolescents, more females (18) than males (11) had a high prevalence of risk-taking behaviour. Detailed results

are in Table 12. When the results were analysed according to school grades, 26 patients in the category of risk-taking behaviour were doing either grades 9 or 10 at school. The remaining grades had small numbers.

A detailed breakdown of the prevalence of different types of risk taking behaviours indicates that cigarette smoking (20) was the most commonly practiced risky behaviour. Both a combination of cigarette smoking and alcohol drinking and dagga smoking (14) as well as cigarette smoking (14) separately followed this. 3 patients were smoking dagga only. Percentages of these results are also presented graphically in Figure 4.

FIGURE 4: Percentages of risk-taking behaviours



The results were explored further to ascertain the referral agents as well as the most common reasons for referrals of adolescent patients with risk-taking behaviours. The most commonly found reasons for referrals were behavioural problems (15), depression (12) and school related difficulties (11). The referral agents were the medical personnel (15), the social welfare services (15) and the mental health personnel (7). Others not mentioned accounted for less than 6 referrals each.

An analysis of risk-taking behaviours and diagnoses indicates that 26 patients with risk-taking behaviours had a diagnosis on Axis I only, as compared to 25 patients without risk-taking behaviours. However, 14 patients with risk-taking behaviours had a diagnosis on both Axis I and II as compared to 7 patients without risk-taking behaviours (see Table 13 for detailed results). These simply suggest that the presence or absence of risk-taking behaviours has almost equal chances to predict a diagnosis

of Axis I only. However, the presence of risk-taking behaviours is indicative of a better prediction of both Axis I and II together.

The most commonly found Axis I diagnoses on patients with risk-taking behaviours were mood disorders (31), conduct disorders (7) and anxiety disorders (3).

TABLE 13: Risk-taking behaviours and diagnoses

	Axis I only	Axis II only	Both Axis I & II
Risk-taking behaviours	26	1	14
No risk-taking behaviours	25	0	7

It is important to note that the prevalence of risk-taking behaviour was relatively higher (27) among patients with a family history of psychiatric illness than their counterparts (24). However, these differences were not statistically significant when tested by Chi-square. This suggests that a parental family history of psychiatric illness is not a risk factor for the development of risk-taking behaviours.

Finally, an analysis to explore if there was any relationship regarding patients' suicide and risk-taking behaviours over the 3-years was conducted. Table 14 shows the results for this analysis.

TABLE 14: Risk-taking behaviour and suicide over three-year period

Risk taking behaviour and suicide	
Suicidal patients with risk taking behaviour	Suicidal patients without risk taking behaviour
35	16

Of the total sample of patients with a history of suicidal behaviour (49) and risk-taking behaviours (51), the relationship was found between 35 patients. These differences are statistically significant [Chi2 (df= 1) 8.890 p<. 00] (see Appendix I for these results). This means that a co-variation of suicidal behaviour and risk-taking behaviours exists.

An analysis by sex indicates that out of 35 patients with a co-variation of suicidal and risk-taking behaviours, 26 (74.2%) were females and 9 (25.7%) were males, and 28 of these patients could be classified within the ages 15 to 17. Age 15 being the modal

age with 14 patients. However, there were no differences among these patients in terms of their age categories. Refer to Table 11 above for these results.

The analysis is concluded with an exploration of what types of risk-taking behaviours are associated with suicide. The analysis indicates that 35 out of 49 of patients with a history of suicide attempt or ideation were smoking cigarettes, drinking alcohol or using drugs, as compared to 14 who were not engaging in any of these risky behaviours. For this population, the most commonly found risky behaviour was smoking cigarette only, and that accounted for 12 patients. Both alcohol drinking and a combination of cigarettes smoking, drinking alcohol and dagga smoking equally followed this with 11 patients each.

To synthesize the results, analyses conducted across suicidality and risk-taking behaviour indicate that more females than males aged 15 had a high prevalence of suicide and risk-taking behaviours. These patients were often referred to William Slater by the medical personnel due to depression and behavioural problems, and are diagnosed with depression. Parental family history of psychiatric illness was found to be a risk factor for suicide in adolescents. However, this was not the case with risk-taking behaviour. Lastly, more suicidal patients who were either smoking cigarettes, drinking alcohol or using dagga compared to those who were not engaging in these risky behaviours. It is imperative to mention that tests to determine the significant relationships between certain variables, other than the ones mentioned, could not be performed as numbers were too small to allow for that.

CHAPTER 4: DISCUSSION AND CONCLUSION

This chapter re-examines and discusses the objectives of the current study, as stated in the foreword, in order to ascertain whether they have been accomplished or not. The objectives of this research are as follows:

1. Constructing a profile of day-patients who were seen at William Slater over a 3-year period (1998-2000).
2. Comparing William Slater's profile with a study done by Cummins and Allwood (1984) on adolescent suicide.
3. To investigate the co-variance of risk-taking behaviour and suicidality in this clinical population.

The discussion will be presented in two sections. Each section will start with a brief summary of the main findings. Section one will discuss the profile of adolescents admitted to William Slater Hospital over a 3-year period. Section two will follow with a discussion on suicide and risk-taking behaviours of this population. Findings will be compared with the results of previous studies. Practical implications of the results will also be included. Lastly, a summary of recommendations drawn from the discussion will be presented.

4.1 SECTION 1: WILLIAM SLATER HOSPITAL PATIENT PROFILE

A profile summary of patients admitted to William Slater Hospital over a three-year period shows that 89 adolescents were admitted. There were more colored female adolescents within the age category of younger adolescents (12 – 15 years) with a modal age of 15. The majority of referrals were for behavioural problems and depression. Medical personnel and social agencies referred these patients. More patients were diagnosed with mood disorder on Axis I and borderline personality traits on Axis II. There was no clear relationship found between patients' Axis I diagnosis and parental family history of mental illness. However, results suggest that parental mood disorder and substance abuse is predictive of a diagnosis of adolescent mood disorder.

There is no set number of patients that are supposed to be admitted to each program at William Slater Hospital. The number of admissions varies depending on the caseload each therapist is prepared to take, as well as the number of referrals at that particular time. A key question is whether the William Slater Hospital intake of 89 patients over a three-year period (an average of 30 per annum) meets the need for such services that may exist in the area served by the unit. Unfortunately this is impossible to determine, as there are no statistics available on the numbers of adolescents in the Western Cape region who need the type of service provided by William Slater Hospital (Personal communication, Ms. S. Kleintjies P.A.W.C Mental Health Directorate, March 2002). It is however disconcerting to notice that since 1991 and after Robertson and Berger (1994) had stated that there were no comprehensive community prevalence studies of child psychopathology (including adolescents) conducted in South Africa, the need for such studies remains the same in 2002. Dawes et al. (1997) have also stated that South African data of prevalence rates for child and adolescent disorders is sketchy and uneven in quality. Nevertheless, epidemiological studies conducted in Africa on psychiatric population of children and adolescents estimate potential cases range from 17% to 71% of this population (Parry, 1993). For South African population, Dawes et al. (1997) estimate that there are about 18 million children under 19 years of age, and there is likely to be a prevalence rate of about 15% for child and adolescent psychological disorders (including mental handicap). This estimate was confirmed by Robertson, Ensink, Parry and Chalton (2001) who conducted a prevalence study of psychiatric disorders among children and adolescents attending a Day Hospital in Gugulethu (Western Cape) and reported a prevalence rate of 15.2%.

The 1996 census data indicates that there are approximately 733 000 adolescents between the ages of 10 and 19 living in the Western Cape (Statistics South Africa, 2000). Of the total population of these adolescents, giving a prevalence rate of 15% of psychiatric disorder among this population, it is likely that about 10 000 adolescents are in need mental health services in the Western Cape. This number might be an overestimate since it includes the ages 10 and 11. Therefore, it is possible that the real figures might range from about 7 000 to 10 000. However, mental health and psychiatric services for children and adolescents have been a largely neglected area (Vogel, 1996) and progress in the development of child and adolescent psychiatric services has been much slower in South Africa than in western countries. The first

Child and Family Unit was established during the 1960's in Cape Town followed by others over the next 20 years (Landman, 1992). In 1996, there were only 4 Child and Family Units in the Gauteng Province (Vogel, 1996). In the Western Cape Province, there are currently only 3 resources proving specialised in patient/day patient (not out patient) treatment for adolescents with psychiatric illnesses to the entire Western Cape province (Personal communication, Ms. S. Kleintjies P.A.W.C Mental Health Directorate, March 2002). These resources are; Lentegeur Child and Family Unit, which served approximately 69 inpatient adolescents during the year 2001. Tygerberg Child and Family Unit, has a one week long day therapy programme that treats approximately 20 adolescents per week. That is approximately 1000 per annum. William Slater Hospital, which is under current study, accepts an average of 30 adolescents per year. There is also Red Cross Hospital Child and Family Unit, which does not form part of the above as it caters only for children and refers adolescents to William Slater Hospital. Furthermore, Groote Schuur Hospital's G22 Unit renders psychotherapeutic programme intervention to patients from 17 to 50 years. Out of the total population admitted to G22 during the year 2001, only 2 were adolescents. Based on these figures, some 1101 adolescents received specialised services in the Western Cape during 2001. It should be borne in mind that these statistics are approximations of need, and figures of adolescents who were admitted as outpatients have not been included here. Furthermore, there is also a certain percentage of adolescents attending private mental health facilities.

Nevertheless, this study confirms that the adolescent mental health facilities in South Africa, particularly in the Western Cape are probably woefully inadequate. According to Landman (1992) the situation in respect to psychiatric services (of children and adolescents) has not improved satisfactorily over the past 18 years. Even though Dawes et al. (1997) made a recommendation five years ago to increase child and adolescent mental health facilities, not much has improved. It is also the current author's impression that clearly not much has happened in this regard and the situation is unlikely to change soon. In order to improve this situation, more and research needs to be done to ascertain the needs and availability of adolescent psychiatric services in this country.

As was evident in the results of this study, few black African patients attend William Slater Hospital. The William Slater Hospital is situated in Rondebosch, an upper middle class area some distance from black communities, and closer to colored communities. In their study of a profile of child and adolescent inpatient center in Natal, Moodley and Pillay (1993) found that the majority of referrals were from areas within the radius of about 10 km, and less referrals were from distant areas 80 – 100 km up to 400 km away. This suggests that proximity may affect the use of available resources, as patients from far away might not even know of the existence of such resources, or might experience problems with transportation. With regard to the present study, even though Lentegeur Child and Family Unit and Tygerberg Child and family Unit might be considered as alternative psychiatric treatment resources for black adolescents, they are both situated in colored communities (Mitchels' Plain & Parow) not convenient for people residing in black communities. Furthermore, there is no public transport running from black communities to these hospitals. PAWC Mental Health Directorate has confirmed that majority of black children and adolescents have no access to mental health resources (Personal communication, Ms. S. Kleintjies. P.A.W.C Mental Health Directorate, March 2002). Schoeman, Robertson, Lasisch, Bicha and Westaway (1989) as well as Robertson and Berger (1994) also share the viewpoint that there is a severe shortage of adequate psychiatric services, and yet not enough have been developed for black children and adolescents in South Africa. It is even possible that the problem could be that the existing services are not known to those who need them most (Landman, 1992).

A review of adolescent help-seeking behaviour could also throw light on this issue. It is possible that (black) adolescents from outlying areas are not being referred because of lack of identification of mental illness (Wallis, 1993). Besides, the decision to seek help may also be affected by the difficulty of determining when the problems are severe enough to warrant seeking help, since some amount of emotional distress is normative in this developmental period (Krispijn et al., 1999).

The stigma associated with mental or psychological services within the black communities cannot be ignored. Many adolescents who suffer psychological distress are often reluctant to attend psychiatric clinics (Nicol, 1994) because of a fear of

being stigmatized, and might prefer to be seen by their medical practitioners and social workers.

It is also important to mention that language might be a factor contributing towards lack of black adolescents using mental health facilities. Mental health services (including William Slater Hospital) are often staffed by professionals who speak English or Afrikaans. This may present as a problem to many black adolescents who cannot express themselves in either of the above-mentioned languages, thereby discouraging them to seek help where they might not be fully understood or be able to express themselves.

Even though William Slater is a government institution rendering its services at low costs, the socio-economic background of black adolescents could also not be ruled out as a possible contributing factor to low black admission rates. The idea that lack of mental health service use in adolescence could be linked with being poor and disadvantaged has also been documented by Krispijn et al. (1999). Parents living in poor communities are frequently preoccupied with their own and their children's basic needs and survival, and identification of child psychiatric disorders is understandably not seen as a priority (Robertson & Berger, 1994; Schoeman et al., 1989). Therefore, in order to improve this situation, the key areas of need which need immediate attention would be poor and marginalized urban informal settlements and rural communities (Dawes et al., 1997).

The fact that 14.6% of admissions to William Slater Hospital had no indication of race suggests the possibility that clinicians are trying to be sensitive to racism. However, if this is the case, the downside of this approach is that it will make it difficult for future researchers to adequately identify whether the mental health needs of disadvantaged groups are being met.

Regarding the patient age profile, adolescents between the ages 12 – 15 constituted 56% of the total population admitted to William Slater Hospital. The findings on gender distribution indicate greater numbers of female (75.5 %), which is in accord with other studies (Krispijn et al., 1999; Robertson, Ensink, Parry & Chalton, 2000).

A possible explanation of gender differences will be provided when discussing reasons for admissions.

A large proportion of adolescent patients was referred to William Slater Hospital by the medical personnel (28.1%) and social agencies (22.5%). This is similar to the findings of Moodley and Pillay (1993) as well as Linnihan (1977), which indicate that medical personnel and social agencies (Burns, 1991) most often refer children and adolescents to mental health services. These authors argue that it is a common practice for parents to take psychologically disturbed children (and adolescents) to medical practitioners, since they do not know who else they should turn to. Moreover, parents find it acceptable and non-stigmatising to bring their children to health services for psychological problems (Graham, 1982). This is also the case with the social agencies. The implication of this finding supports the recent recognition of the need to integrate mental health with general health care (Robertson, Ensink, Parry & Chalton, 2001).

The referral pattern could also throw a light into the patient profile discussed earlier. A significant proportion of medical personnel who referred adolescents to William Slater are in private practice. This means that William Slater's services can be afforded by more financially affording patients, which are in most cases whites and coloreds, thus leaving small admission chances for financially struggling adolescents (who are more likely to be black).

Schools referred only 18% of the study population. Educational authorities are non-mental health professionals with whom parents commonly discuss the emotional and behavioural problems of their adolescent child (Krispijn et al., 1999). It is encouraging to note in the case of William Slater Hospital that education authorities are identifying adolescents at risk and referring them for further management.

Very few referrals were made by the family (5.6%) or by the individual patients themselves (3.4%). William Slater Hospital has a referral policy that adolescents should be referred by the professionals only. The practical implication is that those adolescents in need of William Slater Hospital's services without any professional persons to consult or confide to about their problems will be likely to have difficulties accessing the service.

The results of the study show that adolescents are mainly referred to William Slater for behavioural problems and depression. These findings are consistent with other studies of adolescent units (Moodley & Pillay, 1993; Wallis, 1993). Nevertheless, there were differences between the original referral reason to William Slater and the final diagnosis made following assessment. The majority of patients were diagnosed with mood disorders (57%) and anxiety disorders (12%) on Axis I. The majority of patients with these disorders are females. This is not surprising as internalizing disorders of this nature are common in female adolescents. (Booth, 1997, Rendleman & Walkup, 1997; Wallis, 1993). Booth (1997) suggests that hormonal changes during adolescence correlates with increased risk for developing depression in females. In addition to that, adolescent females may find the expression of depressed affect more acceptable than males.

On Axis II, 26% patients were diagnosed with Axis II personality traits. None of them was diagnosed as having Axis II personality disorder. Wallis (1990) states that there is a diagnostic problem concerning the introduction of personality disorder while the adolescent personality is still developing, and a significant consolidation of many aspects of personality is still underway. In essence, the difficulty of making a full diagnosis of personality disorder during adolescence is differentiating between that which is transient, a reaction to the experience of adolescence in whatever context is experienced, and that which is stable (Pearson, 1997). That is possibly why clinicians opt for *traits* rather than *disorders*. Pearson (1997) states that the prevalence of Axis II disorders in adolescent general population is unknown. The present research found that 18% of the study population was diagnosed with borderline personality traits. This supports Pearson's (1997) comment that the prevalence of borderline traits in adolescence is fairly high in adolescent clinical samples.

The fact that only 82% patients had an Axis I diagnosis and 74% patients received no diagnosis on Axis II is not surprising. According to Moodley and Pillay (1993), this is consistent with the view that diagnostic terms be employed strictly were applicable.

Regarding parental family history of psychiatric disorder, less than half (46%) of the total population admitted to William Slater Hospital over three-year period came from a family with a history of psychiatric illness. 21% adolescent patients came from a family with parental substance abuse, predominantly alcohol, and 16% came from a family with mood disturbance. There was no clear relationship found between the adolescent patients' Axis I diagnoses with parental family history of psychiatric illness. However, when both parental mood disorder and substance abuse were grouped together, the results suggested that there is a probability that they predict a diagnosis of adolescent Axis I mood disorder. These results are consistent with other studies in which family history of psychopathology was identified as risk factor for developing childhood and adolescent psychopathology (Milin et al., 2000; Rendleman & Walkup, 1997).

Furthermore, an analysis was conducted to ascertain whether parental family history of psychiatric illness predicts an adolescent diagnosis on Axis I or Axis II. The results showed that the presence of parental family history of psychiatric illness predicts adolescent diagnosis on Axis I. These results imply that during a history taking on admission, the presence of parental family history of psychiatric illness, especially mood disorder and substance abuse, should alert the clinician to the presence of adolescent diagnosis on Axis I, particularly mood disorder.

4.2 SECTION 2: SUICIDE AND RISK-TAKING BEHAVIOURS

Patient records were scanned for evidence of suicidal and risk-taking behaviours. A problem with archival studies of this nature is that clinicians completing files may not record certain information relevant to an archival study conducted at a later point in time (Bailey, 1978). This problem arises in the present investigation. Clinicians may not have recorded evidence of risk or suicidal behaviours. Alternatively, patients may not have reported these behaviours even though they may have occurred. The results obtained in this study are therefore limited by such considerations, and both risk and suicidal behaviours may be under-reported. The discussion on this section proceeds with these limitations in mind.

A summary of suicide and risk-taking behaviours at William Slater Hospital over the three-year period indicates that colored females aged 15 had higher reported rates of suicide attempt than other groups. They do have higher rates of risk-taking behaviours. A diagnosis of mood disorder was evident in adolescents with both suicidal and risk-taking behaviours. Parental family history of psychiatric illness was found to be a risk factor for adolescent suicidality, but this was not the case with risk-taking behaviours alone. An additional finding in this study was that patients who are risk-takers are more likely to have made suicide attempts.

The finding that there was a greater evidence of risk-taking behaviours among suicidal patients is in line with other studies (De Man & Leduc, 1995; Windle, Tutzauer & Domenico, 1999), and supports evidence of a co-variation between suicide and risk-taking behaviours (Forrest, 1988). Moreover, this is in accord with Flisher et al., 's (2000) finding of the co-variation of suicidal behaviour among non-clinical population of adolescents who use both drugs and alcohol. While the sample in this study is small, and while archival methods present certain problems, the present study suggests that the co-variation of risk behaviours and suicidality is evident in both clinical and non-clinical populations. This means that there are no differences between clinical and non-clinical populations regarding the co-variation between suicide and risk-taking behaviours. Garfinkel, Froese and Hood (1982) recommend that individuals who attempt suicide because of combined factors of alcohol and drug abuse require more care than others.

More than half (55%) of patients admitted to William Slater over the 3-year period had been suicidal at some stage of their lives. Of these, 75% were females. 36% of the suicidal patients had an Axis I diagnosis of mood disorder, with a female (30%) predominance. 55% of suicidal patients had a family history of mental illness.

The fact that there was a predominance of female suicidal patients concurs with findings of Cummins and Allwood (1984). High percentages of suicidal ideation and attempts by female adolescents have also been documented by Flisher et al. (1993a) as well as Cohen, Spirito and Brown (1996). Other authors that have also indicated that females make suicide attempts more frequently than males do include Bloom (1992), Balk (1995) as well as Windle, Tutzauer and Domenico (1999). According to Flisher et al. (1993b), the finding that females are more at risk than males with regard to suicidal behaviour can possibly be ascribed to a propensity for females to be more reflective and less likely to direct aggression outwards than males.

Of the total population of suicidal patients, 36% were diagnosed with mood disorder. This finding is consistent with other studies, which reported tendencies of diagnosable psychopathology, depression being the most common diagnosis, in suicidal adolescents (Flisher, 1999; Schlebusch, 1986; Werner & Kerig, 2000; Garfinkel, Froese, & Hood, 1982). Both the childhood/adolescent suicide and depression literatures suggest that there are a number of children and adolescents who are experiencing disturbed affect states (e.g., helplessness, hopelessness, rejection) and engaging in self-destructive thought processes and behaviours (Windle, Tutzauer & Domenico, 1999). However, this study discovered that the presence of suicide does not predict a diagnosis on Axis I only, but suggests that suicidal adolescents are likely to have a diagnosis on both Axis I and Axis II.

An additional finding in this study was that adolescent suicide is often accompanied by family history of psychiatric illness. In this study, 55.1% of suicidal adolescents came from a family with a parental history of mental illness. These findings are similar to Callahan (1993) and Schlebush's (1986) reports that a significant number of their suicidal study population came from problem backgrounds, with a family history of psychiatric disorders. To be more precise, the results of the current research suggest

that parental family history of psychiatric illness is a risk factor for adolescent suicidality. The predominant psychiatric illnesses in parents such as alcohol and/or drug abuse, according to Schlebush (1986), interfere with an adolescent seeking help and communicating with parents. Such adolescents may develop characterological limitations that prevent them from being helped by others (Garfinkel, Froese & Hood, 1982), and they tend to experience anomic feelings (De Man & Leduc, 1995).
It is important to note that in contrast to Cohen, Spirito and Brown (1996), the current study found suicide committed by a significant other did not put the adolescent at risk for the development of suicidal behaviour.

Of the total sample, 57.3% of patients admitted to William Slater Hospital over the 3-year period were either smoking cigarettes, drinking alcohol or taking drugs. In contrast to other studies (Flisher et al., 1993b; Flisher et al., 1993c; Zucker, 1987), this study found higher prevalence of risk-taking behaviours amongst females compared to males. This could be accounted by the fact that there are more females than males in the sample.

This research shows that in general, a large segment of younger adolescents doing lower to middle secondary (grades 8-10) had more risk-taking behaviours compared to older adolescents in higher school. Although there are more younger adolescents in the sample, according to Kometsi (1998) there are also some additional explanations that could possibly account for these findings. Firstly, it can be argued that by the time older adolescents reach higher secondary grades, they might have acquired a reasonable amount of discipline, direction and purpose in life, and therefore become more careful about their actions and their consequences. Secondly, it is possible that by the time adolescents reach higher grades at school, they tend to be more career motivated. Thirdly, young adolescents are vulnerable to peer pressure in many ways. They are at the stage of development where the need for group conformity and the need to be an acceptable member of the group are very high, and thus increase the possibilities of risk-taking behaviours. To substantiate this argument, Dryfoos (1990), Halebsky (1987) and Tompson (1989) cite that consorting with peers who use alcohol while lacking resistance in their influences may increase chances of alcohol drinking.

4.3 LIMITATIONS OF THE RESEARCH.

As already noted, documents used in archival research were not originally intended for research purposes (Bailey, 1978) The various goals and purposes for which documents are written can bias them in various ways. Bailey (1978) went on to say that many documents provide an incomplete account to the researcher who has had no prior experience of the events or behaviour under study. There were instances in this study where certain valuable information was not available for analysis. For example, there were instances were reasons for referral and diagnoses were not recorded in the folders. Moreover, the information in the documents is always mediated by the perceptions and judgments of the clinicians responsible for recording it (Monton & Marais, 1990).

The small sample size restricted the study to descriptive analysis. Furthermore, a small sample size also does not allow for making broad generalizations from the results of the study.

There are also some limitations that merit consideration in interpreting the findings. Risk-taking behaviour was limited to cigarette smoking, drinking alcohol and dagga smoking. There are several risky behaviours not included. For example, sexual behaviour, road-related behaviours, violent behaviours etc. There is also a likelihood that an under-reporting might have occurred, especially regarding adolescent patients who were never asked during history taking interviews or disclose during treatment their suicide and risk-taking behaviour statuses.

Nevertheless, the findings of this study identified significant associations between adolescent suicide and risk-taking behaviours that merit increased attention from the William Slater Hospital and other mental health workers.

4.4 RECOMMENDATIONS.

In conclusion, the findings generated in this study give rise to the following recommendations:

- Large scale and well-designed epidemiological studies, both at the national and provincial level, should be conducted in order to ascertain the prevalence and the nature of child and adolescent psychiatric disorders in South Africa.

- There is an urgent need for the assessment of availability and accessibility of child and adolescent mental health services in the country. This will provide an essential data for the purpose of planning and the improvement of mental health service provision for all children and adolescents.

- Black children and adolescents living in poor communities should be considered a priority for equal mental health service provision. To achieve this objective, studies need to be conducted in order to ascertain how the most appropriate help could be offered to the largest number of children and adolescents at the least cost.

5. REFERENCES

Adcock, A. G., Nagy, S. & Simpson, J. A. (1991). Selected risk factors in adolescent suicide attempts. Adolescence, 26, 817-828.

Ahmed, N. (1997). An outcome evaluation of the psychotherapeutic milieu programe of the William Slater Centre for Adolescents and Young Adults. Unpublished Masters Thesis: University of Cape Town.

Akers, R. L. (1972). Teenage drinking and drug use. In D. Rogers (Ed.), Issues in adolescent psychology. New York: Meridith Corporation.

American Academy of Pediatrics, committee on adolescence. (2000). Suicide and suicide attempts in adolescents and young adults. Pediatrics, 1 (4). 871-874

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders: DSM-IV. Washington, DC.

Bailey, K. D. (1978). Methods of social research. New York: The Free Press.

Balk, D. E. (1995). Adolescent development: Early through late adolescence. Pacific Grove: Books/Cole Publishing Company.

Beauchamp, T. L. & Perlin, S. (1978). Ethical issues in death and dying. Engelwood Cliffs N.J: Prentice-Hall.

Berard, M. F., Sennett, J. P. B. & Ahmed, N. (1998). Pathways to mental health care among South African adolescents: analysis of referrals to an adolescent psychiatric unit. Adolescence, 33, 405-413.

Berger, R. & Shechter, Y. (1989). Adolescent girls in distress: a high-risk intersection. Adolescence, 94, 356-374.

Berk, E. L. (1989). Child development. (4th ed). Boston: Allyn & Bacon.

Berman, A. C. (1997). The adolescent: the individual cultural perspective. In A. A. Leenaars, R. W. Maris, & Y. Takahashi (Eds.), Suicide, individual, cultural and international perspectives. New York: Guilford Press

Bloom, M. C. (1992). Studies in human development and professional helping: Changing lives. Columbia: University of South Carolina Press.

Booth, C. M. (1997). The development of affect. In J. D. Noshpitz, L. T. Flaherty, & R. M. Sarles (Eds.), Handbook of child and adolescent psychiatry: adolescence, development and syndromes. New York: Wiley.

Burns, B. J. (1991). Mental health service use by adolescents in the 1970s and 1980s. Journal of American Child and Adolescent Psychiatry, 30 (1), 144-150.

Burrows, S., Bowman, B., Matzopoulos, R. & van Niekerk, A. (2001). A profile of fatal injuries in South Africa 2000: Second Annual report of the National Injury Mortality Surveillance System. Medical Research Council: Johannesburg.

Bussuk, E. L. (1982). General principles of assessment. In E. L. Bussuk, S. C. Schoonover, & A. D. Gill, (Eds.), Lifelines clinical perspectives on suicide. New York: Plenum Press.

Callahan, J. (1993). Predicting and preventing suicide: Blueprint for an adolescent suicidal crisis. Psychiatric Annals, 23, 263 – 270.

Cappelli, M., Clulow, M. K., Goodman, J. T. et. al. (1995). Identifying depressed and suicidal adolescents in a teen health clinic. Journal of Adolescent Health, 16, 64 – 70.

Cheifetz, P. N., Posener, J. A., LaHaye, A., Zajdman, M. & Benierakis, C. E. (1987). An epidemiologic study of adolescent suicide. Canadian Journal of Psychiatry, 32, 656 – 659.

Clarke-Stewart, A. & Friedman, S. (1987). Child development: infancy through adolescence. New York: Wiley.

Clayer, J. R. & Czechowicz, A. S. (1991). Suicide by Aboriginal people in South Australia: comparison with suicide deaths in the total urban and rural populations. The Medical Journal of Australia, 154, 683 – 685.

Cohen, Y., Spirito, A & Brown, L. K. (1996). Suicide and suicidal behaviour. In R. J. DiClemente, W. B. Hansen, & L. E. Ponton (Eds.), Issues in clinical psychology: Handbook of adolescent health risk behaviour. New York: Plenum Press.

Crockett, L. J. & Crouter, A. N. (1995). Pathways through adolescence: an overview. In L. J. Crockett, & A. N. Crouter (Eds.), Pathways through adolescence: Individual development in relation to social contexts. New Jersey: Lawrence Erlabaum Associates.

Crockett, L. J. & Silbereisen, R. K. (2000). Social change and adolescent development issues and challenges. In L. J. Crockett, & R. K. Silbereisen (Eds.), Negotiating adolescence in times of social change. United States of America: Cambridge University Press.

Cummins, R. R & Allwood, C. W. (1984). Suicide attempts or threats by children and adolescents in Johannesburg. South African Medical Journal, 66, 726 – 729.

Curran, D. K. (1987). Adolescent suicidal behaviour. Washington, DC: Hemisphere.

Dawes, A., Robertson, B., Duncan, N., Ensink, K., Jackson, A., Reynolds, P., Pillay, A and Richter, L. (1997). Child and adolescent mental health policy. In D. Foster, M. Freeman, & Y. Pillay (Eds.), Mental health policy issues for South Africa. South Africa: Medical Association of South Africa Multimedia Publications.

Davis, P. A. (1993). Suicidal adolescents. Speingfield: Charles C Tomas.

De Man, A. F. & Leduc, C. P. (1995). Suicidal ideation in high school students: depression and other correlates. Journal of Clinical Psychology, 51 (2), 173 – 181.

DeSimone, A., Murruay, P. & Lester, D. (1994). Alcohol use, self-esteem, depression, and suicidality in high school students. Adolescence, 29, 938-942.

DiClemente, R. J., Hansen, W. B. & Ponton, L. E. (1996). Issues in clinical psychology: Handbook of adolescent health risk behaviour. New York: Plenum Press.

Diekstra, R. F. W. (1989). Suicide and attempted suicide: an international perspective. Acta Psychiatry Scandinavia, 80 (suppl. 354), 1-24.

Dorpat, T. L., Jackson, J. K & Ripley, H. S. (1965). Broken homes and attempted and completed suicide. Archival of General Psychiatry 12, 213 – 216.

Drummond, W. (1997). Adolescents at risk: The causes of youth suicide in New Zealand. Adolescence, m32, (128), 924-934.

Dryfoos, J. G. (1990). Adolescents at risk. New York: Oxford University Press.

Dubow, E. F., Kausch, D. F., Blum, M. C., Reed, J. & Bush, E. (1989). Correlates of suicidal ideation and attempts in a community sample of junior high and high school students. Journal of Clinical Child Psychology, 18 (2), 158 – 166.

Dukes, R. L & Lorch, B. (1989). The effects of school, family, self-concept, and deviant behaviour on adolescent suicide ideation. Journal of Adolescence, 12, 239 – 251.

Durkheim, E. (1952). Suicide. Great Britain: Lowe & Brydone

Elder, G. H., Pavalkok, E. K. & Clipp, E. C. (1993). Working with archival data: Studying lives. Newbury Park: Sage.

Erikson, E. H. (1968). Identity, youth and crisis. New York: W.W. Norton & Company.

Esters, I. G., Cooker, P. G. & Ittenbach, R. F. (1998). Effects of a unit of instruction in mental health on rural adolescents' conceptions of mental illness and attitudes about seeking help. Adolescence, 33. 469-476.

Farberow, N. L. (1975). Cultural history of suicide. In L. F. Norman (Ed.), Suicide with different cultures. London: University Park Press.

FeCaces, M., Stinson, F. S. & Harford, T. C. (1991). Alcohol use and physically risky behaviour among adolescents. Alcohol Health and Research World, 15 (3). 228 – 233.

Flisher, A. J., Hoven, C. W., Bird, H. R., Gould, M. S., Lahey, B. B. & Schwab-Stone, M. (2000). Risk behaviour in a community sample of children and adolescents. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 881 – 887.

Flisher, A. J. (1999). The management of suicidal behaviour in adolescents. Specialist Medicine, 418 – 423.

Flisher, A. J., Joubert, G. & Yach, D. (1984). Mortality from external causes in South African adolescents. South African Medical Journal, 81, 77-80.

Flisher, A. J., Ziervogel, C. F., Chalton, D. O., Leger, P. H. & Robertson, B. A. (1993a). Risk-taking behaviour of Cape Peninsula high-school students: Part II. Suicidal behaviour. South African Medical Journal, 83, 474 – 476.

Flisher, A. J., Ziervogel, C. F., Chalton, D. O., Leger, P. H. & Robertson, B. A. (1993b). Risk-taking behaviour of the Cape Peninsula high-school students: Part IV. Alcohol use. South African Medical Journal, 83, 480-482.

Flisher, A. J., Ziervogel, C. F., Chalton, D. O., Leger, P. H. & Robertson, B. A. (1993c). Risk-taking behaviour of the Cape Peninsula high-school students: Part V. Drug use. South African Medical Journal, 83, 483-485.

Forrest, S. (1988). Suicide and the rural adolescent. Adolescence, 23 (90), 341 – 347.

Freud, S. (1901). The psychopathology of everyday life: Forgetting, slips of the tongue, bangled actions, superstitions and errors. London: Ernest Benn Limited.

Freud, S. (1925). Collected papers. Morning and Melancholia. Vol IV, pp 152-170. Tavistock Square, London W.C. Leonard and Virginia Woolf at the Hogarth Press.

Gangat, A. E., Naidoo, L. R & Wessels, W. H. (1987). Suicide in South African Indians. South African Medical Journal, 71, 169 – 171.

Garfinkel, B. D., Foroese, A. & Hood, J. (1982). Suicide in childhood and early adolescence. American Journal of Psychiatry, 139, 1257 – 1261.

Garritson, S.H. (1992). Milieu therapy. In H. S. Wilson, & C. R. Kneis (Eds.), Psychiatric nursing, Cummings Publishing Co.

Gibbs, J. T & Hines, A. M. (1989). Factors related to sex differences in suicidal behaviour among black youth: implication for intervention and research. Journal of Adolescent Research, 4, 152 – 172.

Gill, A. D. (1982). Vulnerability to suicide. In E. L. Bussuk,. S. C. Schoonover, & A. D. Gill (Eds.), Lifelines clinical perspectives on suicide. New York: Plenum Press.

Goldston, D. B., Daniel, S., Reboussin, D. M., Kelley, A., Ievers, C & Brunstetter, R. (1996). First-time suicide attempters, repeat attempters, and previous attempters on an adolescent inpatient psychiatric unit. Journal of the American Academy of Child and Adolescent Psychiatry, 35, (5), 631-638.

Gonzalez, J., Field, T., Yando, R., Gonzalez, K., Lasko, D. & Bendell, D. (1994). Adolescents' perceptions of their risk-taking behaviour. Adolescence, 29, 701-709.

Graham, P. (1982). Child psychiatry in relation to primary health care. Social Psychiatry, 17, 109 – 116.

Halebsky, M. A. (1987). Adolescent alcohol and substance abuse: parent and peer effect. Adolescence, 29, 961-967.

Hendry, L. B. (1989) The influence of adults on adolescent's lifestyles and leisure styles. In K. Hurrelmann, & U. Engel (Eds.), The social world of adolescents, international perspectives. New York: Walter de Gryter.

Hersov, L. (1994). Inpatient and day-patient hospital units. In M. Rutter, E. Taylor, & L. Hersov (Eds.), Child and adolescent psychiatry, modern approaches. (3rd ed.). London: Blackwell Scientific Publications.

Hawton, K. & Goldacre, M. (1982). Hospital admissions for adverse effects of medical agents (mainly self-poisoning) among adolescents in the Oxford region. British Journal of Psychiatry, 140, 118-123.

Igra, V. & Irwin, C. (1996). Theories of adolescent risk-taking behaviour. In R. J. DiClemente, W. B. Hansen, & L. E. Ponton (Eds.), Issues in clinical psychology. Handbook of adolescent health risk behaviour. New York: Plenum Press.

Joan, P. (1986). Preventing teenage suicide. The living alternative handbook. New York: Human Science Press.

Johnson, W. Y. (1999). Youth suicide: The school's role in prevention and response. United States of America: Phil Delta Kappa Educational Foundation.

Kahn, A. (1982). The moment of truth: psychotherapy with suicidal patient. In E. L. Bussuk, S. C. Schoonover, & A. D. Gill (Eds.), Lifelines clinical perspectives on suicide. New York: Plenum Press.

Kalafat, J. (1996). Adolescent suicide and implications for school responses programs. The School Counsellor, 37, 359-369.

Kaplan, H. I. & Sadock, B. J. (1998). Kaplan and Sadock's synopsis of psychiatry: behavioural sciences, clinical psychiatry. Baltimaore: Williams & Wilkins.

Katzenellenbogen, J. M.., Joubert, G., Abdoel-Karin, B. (1997). Epidemiology: manual for South Africa. Cape Town: Oxford University Press.

Keil, S. S., Karim, Q., Whyte, E. P. & Sankar, N. (1992). Reasons for lack of condom use among high school students. South African Medical Journal, 82, 107 - 110.

King, K. A. (2000). Preventing adolescent suicide: Do high school counsellors know the risk factors? Professional School Counselling, 3 (4), 255-259.

Krispijn, S L., Van der Ende, J., Wierdsma, A. I. & Verhulst, F. (1999). Predicting adolescent mental health service use in a prospective record-linkage study. Journal of the American Academy of Child and Adolescent Psychiatry, 38 (9), 1073-1080.

Kometsi, M. J. (1998). Risk-taking behaviours of school going adolescents of Tlokola Secondary School at Moemaneng: Marquard (Free-State). Unpublished Honours Thesis: University of Cape Town.

Kroger, J. (1989). Identity in adolescence. London: Routledge.

Landman, M. (1992). Towards improved child mental health care services in South Africa. Southern African Journal of Child and Adolescent Psychiatry, 4 (1), 25 – 28.

Lester, D. (1991). Social correlates of youth suicide rates in the United States. Adolescence, 26, 54-58.

Lester, D. (1997). Suicide in an international perspective. In A. A.Leenaars, R. W. Maris, & Y. Takahashi (Eds.), Suicide, individual, cultural, international perspectives. New York: Guilford Press

Liang, H., Flisher, A. J. & Chalton, D. E. (in press). Violence and substance use in adolescents with increasing severity of suicidal behaviour. Archives of Suicide Research.

Linnihan, P. C. (1977). Adolescent day treatment: A community alternative to institutionalization of the emotionally disturbed adolescent. American Journal of Orthopsychiatry, 47 (4), 697-688.

Lyon, M. E., Benoit, M., O'Donell, R. M., Getson, P. R., Silber, T. & Walsh, T. (2000). Assessing African American adolescents' risk for suicide attempts: attachment theory. Adolescence, 35 (137), 121 – 124.

Manaster, G. J. (1977). Adolescent development and the life tasks. London: Allyn and Bacon, Inc.

Marcia, J. E. (1980). Identity in adolescence. In J. Anderson (Ed.), Handbook of adolescent psychology. New York: John Wiley.

McClure, G. M. G. (1986). Recent changes in suicide among adolescents in England and Wales. Adolescence, 9, 135-143.

Mc Coy, C. B., Metsch, L. R. Inciardi, J. A. (1996). Intervening with drug-involved youth. Thousand Oaks: Sage Publications.

Milin, R. M., Coupland, K., Walker, S. & Bloom, E. F. (2000). Outcome and follow-up study of an adolescent psychiatric day treatment school program. Journal of American Academy of Child Adolescent Psychiatry, 39 (3), 320-328.

Moodley, S. V. & Pillay, A. L. (1993). Two years of admissions to Natal's first inpatient child mental health care. South African Medical Journal, 83, 209 - 211.

Mouton, J. & Marais, H. C. (1990). Basic concepts in the methodology of social science. Pretoria: Human Science Research Council.

Muus, R. E. (1988). Theories of adolescence. (4th ed.). New York: McGraw-Hill.

Nash, E., Stoch, B. & Harper, G. (1990). Human behaviour. Cape Town: Juta & Co, Ltd.

Nelson, F. L. (1987). Evaluation of a youth suicide prevention program. Adolescence, 22, 813 – 825.

Nettles, S. M & Pleck, J. H. (1996). Risk, resilience, and development: the multiple ecologies of black adolescents in the United States. In R. J.Haggerty, L. R. Sherrod, N. Garnezy, & M. Rutter, (Eds.), Stress, risk, and resilience in children and adolescents processess, mechanisms, and interventions. United States of America: Library of Congress Cataloging.

Newman, B. M. & Newman, P. R. (1979). An introduction to the psychology of adolescence. Homewood, I11: Dorsey Press.

Nicol, A. R. (1994). Practice in non-medical settings. In M. Rutter, E. Taylor, & L. Hersov (Eds.), Child and adolescent psychiatry, modern approaches. (3rd ed.). London: Blackwell Scientific Publications.

Paluszny, M., Davenport, C. & Kim, J. (1991). Suicide attempts and ideation: adolescents evaluated on the paediatric ward. Adolescence, 26, 209-215.

Pearson G. T (1997). Personality disorder in adolescence. In J. D. Noshpitz, L. T. Flaherty, & R. M. Sarles (Eds), Handbook of child and adolescent psychiatry: adolescence, development and syndromes. New York: Wiley.

Personal communication, Ms. S. Kleintjies P.A.W.C Mental Health Directorate, March 2002.

Petti, T. A. & Larson, C. N. (1987). Depression and Suicide. In V. B. Von Hasselt, & M. Hersen (Eds.), Handbook of adolescents psychology. New-York: Pergamon Press.

Pipher, M. (1995). Reviving Ophelia: Surving the lives of adolescent girls. New York: Ballantine.

Rendleman, R & Walkup, J. (1997). Mood disorders in Adolescents. In J. D. Noshpitz, L. T. Flaherty, & R. M. Sarles (Eds), Handbook of child and adolescent psychiatry: adolescence, development and syndromes. New York: Wiley.

Rickgarn, R. L. V. (1983). The issue is suicide. Minneapolis, MN: University of Minnesota.

Robertson, B., Ensink, K., Parry, C. H. D., & Chalton, D. (2001). Prevalence and detection of psychiatric disorders among children and adolescents attending a primary health care clinic. Southren African Journal of Child and Adolescent Mental Health, 13 (1) 30 – 40.

Robertson, B., Zwi, R., Ensink, K., et al. (1997). Psychiatric service provision. In D. Foster, M. Freeman, & Y. Pillay (Eds.), Mental health policy issues for South Africa. South Africa: Medical Association of South Africa Multimedia Publications.

Robertson, B. & Berger, S. (1994). Child psychopathology in South Africa. In A. Dawes, & D. Donald (Eds.), Childhood and adversity: Psychological perspectives from South African research. Cape Town: David Phillips.

Rogers, D. (1972). Issues in adolescent psychology. New York: Meredith Corporation.

Rogers, D. (1962). The psychology of adolescence. New York: Appleton-Century-Crofts.

Rosenn, D. W. (1982). Suicidal behaviour in children and adolescents. In E. L. Bussuk, S. C. Schoonover, & A. D. Gill (Eds.), Lifelines clinical perspectives on suicide. New York: Plenum Press.

Ruthblum, E. D. (1990). Depression among lesbians. An invisible and unresearched phenomenon. Journal of Gay and Lesbian Psychotherapy, 1(3), 67-87.

Rutter, M. & Hersov, L. (1985). Child and adolescent psychiatry. Modern approaches. (2nd ed.). London: Blackwell Scientific Publications.

Schlebush, L. (1986). Short-term precipitants of parasuicide in adolescents. South African Medical Journal. 70, 481-489

Schoeman, J. B., Robertson, B., Lasisch, A. J., Bicha, E. & Westaway, J. (1989). Children and adolescents consulted at four psychiatric units in the Transvaal, Natal and Cape Province. Paper read at the 7th National Congress of S.A. Association for Child and Adolescent Psychiatry and Allied Disciplines, Cape Town, 30 March 1989.

Schulenburg, J., Maggs, J. L. & Hunnelmann, K. (1999). Health risks and developmental transitions during adolescence. United States of America: Cambridge University Press.

Shaffer, D. (1988). The epidemiology of teen suicide: An examination of risk factors. Journal of Clinical Psychiatry, 49, 36 – 41.

Shaffer, D., Garland, A., Gould, M., Fisher, P. & Trautman, P. (1988). Preventing teenage suicide: A critical review. Journal of the American Academy of Child and Adolescent Psychiatry, 142. 1061 – 1064.

Shaffer, D., Pfeffer, C. R. & the Work Group on Quality Issues (2001). Practice parameter for the assessment and treatment of children and adolescents with suicidal behaviour. Journal of the American Academy of Child and Adolescent Psychiatry, 40 (7). 24s – 51s.

Statistics South Africa. (2000). Census in brief. Pretoria: Statistics South Africa.

Steinberg, D. (1994). Adolescent services. In M. Rutter, E. Taylor, & L. Hersov, (Eds.), Child and adolescent psychiatry, modern approaches. (3rd ed.). London: Blackwell Scientific Publications.

Stillion, J. M., McDowell, E. E, & May, J. H. (1989). Suicide across the life span: premature exists. New York: Hemisphere Publishing Corporation.

Tompson, K. M. (1989). Effects of early alcohol use on adolescents' relations with peers and self-esteem: Patterns over time. Adolescence, 24, 837-847.

Venkoba Rao, A. (1975). Suicide in India. In L. F. Norman, (Ed.), Suicide with different cultures. London: University Park Press.

Vogel, W. (1996). The development of child mental health services in Gauteng: the importance of training. Southern African Journal of Child and Adolescent Mental Health, 8 (2), 57 – 67.

Wallis, J. M. (1993). A demographic study of adolescent in-patients at Lentegeur psychiatric hospital 1986-1990. Unpublished Masters Thesis: University of Cape Town.

Wenar, C. & Kerig, P. (2000). Developmental psychopathology: From infancy through adolescence (4th ed.). London: McGraw-Hill.

Wertheimer, A. (1997). Surviving suicide. Psychiatry in Practice, 4, 28 – 32.

Windle, M., Tutzauer, C. M. & Domenico, D. (1999). Alcohol use, suicide behaviour, and risky activities among adolescents. Journal of Research on Adolescence, 2 (4), 317–330.

Zucker, R. A. (1987). The four alcoholisms: a developmental account of the etiological process. In E. Nathan, R. A. Zucker, R. W. Wilsnack, T. Jacob, S. Y. Hill. & T. B. Baker (Eds.), Alcohol and addictive behaviour. p27-83.

6. APPENDICIES

APPENDIX A: Freud psychosexual stages of development (Clarke-Stewart & Friedman, 1987)

Developmental progression

Age	Freud's stages	Erikson's crises
1st year	*Oral Stage* Infants obtain pleasure through stimulation of the mouth, as they suck and bite.	*Trust versus Mistrust* Infants learn to trust, or mistrust, that their needs will be met by the world, especially by the mother.
2nd year	*Anal Stage* Children obtain pleasure through exercise of the anal musculature during elimination or retention.	*Autonomy versus Shame, Doubt* Children learn to exercise will, to make choices, to control themselves; or they become uncertain and doubt that they can do things by themselves.
3rd to 5th year	*Phallic (Oedipal) Stage* Children develop sexual curiosity and obtain pleasure through masturbation. They have sexual fantasies about the parent of the opposite sex and guilt about their fantasies.	*Initiative versus Guilt* Children learn to initiate activities and enjoy their accomplishments, acquiring direction and purpose. If they are not allowed initiative, they feel guilty for their attempts at independence.
6th year through puberty	*Latency Period* Children's sexual urges are submerged; they put their energies into acquiring cultural skills.	*Industry versus Inferiority* Children develop a sense of industry and curiosity and are eager to learn; or they feel inferior and lose interest in the tasks before them.
Adolescence	*Genital Stage* Adolescents have adult heterosexual desires and seek to satisfy them.	*Identity versus Role Confusion* Adolescents come to see themselves as unique and integrated people with an ideology; or they become confused about what they want out of life.
Early adulthood		*Intimacy versus Isolation* Young people become able to commit themselves to another person; or they develop a sense of isolation and feel they have no one in the world but themselves.
Middle age		*Generativity versus Stagnation* Adults are willing to have and care for children, to devote themselves to their work and the common good; or they become self-centered and inactive.
Old age		*Integrity versus Despair* Older people enter a period of reflection, becoming assured that their lives have been meaningful, and they grow ready to face death with acceptance and dignity; or they despair for their unaccomplished goals, failures, and ill-spent lives.

APPENDIX B: Results of suicidal rates in South Africa (Flisher et.al, 1993a)

TABLE II.
Percentages (with 95% CIs) of students who during the previous 12 months had told someone that they intended putting an end to their life, by standard and language(s) spoken at home, and gender (*N* = 7 340)*

	Males	Females
Standard		
6	7,0 (4,6 - 9,3)	12,2 (9,0 - 15,4)
7	7,9 (6,1 - 9,7)	16,7 (14,2 - 19,3)
8	9,8 (7,5 - 12,1)	16,3 (13,1 - 19,5)
9	11,2 (8,1 - 14,3)	15,6 (12,7 - 18,6)
10	10,7 (7,2 - 14,2)	17,2 (13,6 - 20,9)
Language(s)		
Afrikaans	7,7 (6,5 - 9,0)	15,1 (13,3 - 17,0)
Afrikaans and English	13,3 (10,3 - 16,3)	22,6 (19,3 - 25,8)
English	9,1 (6,7 - 11,6)	16,2 (12,6 - 19,7)
Xhosa	4,6 (3,5 - 5,7)	5,1 (4,3 - 5,9)

* No. of missing responses = 59.

TABLE I.
Percentages (with 95% CIs) of students who during the previous 12 months had seriously thought about harming themselves in a way which might result in their death, by standard and language(s) spoken at home, and gender (*N* = 7 340)*

	Males	Females
Standard		
6	11,6 (9,3 - 13,8)	19,9 (15,2 - 24,6)
7	12,8 (10,4 - 15,2)	22,0 (19,6 - 24,4)
8	16,1 (12,2 - 20,0)	25,6 (23,1 - 28,0)
9	16,8 (12,9 - 20,7)	24,5 (20,8 - 28,1)
10	15,5 (10,7 - 20,2)	24,9 (21,0 - 28,8)
Language(s)		
Afrikaans	11,6 (10,2 - 13,0)	20,5 (17,4 - 23,7)
Afrikaans and English	18,6 (15,1 - 22,1)	30,7 (27,0 - 34,3)
English	16,7 (13,2 - 20,1)	26,8 (22,0 - 31,6)
Xhosa	8,4 (5,6 - 11,3)	12,9 (11,2 - 14,6)

* No. of missing responses = 50.

TABLE III.
Percentages (with 95% CIs) of students who had in the previous 12 months actually tried to put an end to their life, by standard and language(s) spoken at home, and gender (*N* = 7 340)*

	Males	Females
Standard		
6	6,1 (4,3 - 7,8)	9,9 (6,4 - 13,4)
7	5,7 (3,3 - 8,1)	12,1 (8,8 - 15,4)
8	5,1 (3,8 - 6,3)	11,0 (8,7 - 13,3)
9	4,4 (2,1 - 6,6)	9,2 (6,6 - 11,8)
10	2,9 (1,2 - 4,7)	8,4 (5,8 - 10,9)
Language(s)		
Afrikaans	5,5 (4,3 - 6,7)	10,1 (7,9 - 12,3)
Afrikaans and English	6,1 (3,9 - 8,3)	10,1 (7,9 - 12,3)
English	3,0 (1,0 - 5,0)	9,4 (5,9 - 13,0)
Xhosa	5,7 (4,8 - 6,6)	7,8 (6,5 - 9,0)

* No. of missing responses = 54.

APPENDIX C: Day to day timetable of the programme at William Slater

MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY	
'OMMUNITY	STAFF	COMMUNITY	STAFF	COMMUNITY	STAFF	COMMUNITY	STAFF	COMMUNITY	STAFF
	8:15 - 9:00 PRESENTATION PATIENT FEEDBACK		8:15 - 9:00 EVOCS PLANNING		8:15 - 9:00 PRESENTATION EVOCS FEEDBACK		8:15 - 9:00 STAFF GROUP		
9:00 - 9:30 NTRO/BUSINESS /-END FEEDBACK/ WEEK PLANNING	9:00 - 9:30 INTRO/BUSINESS W-END FEEDBACK/ WEEK PLANNING	9:00 - 10:00 GROWTH GAMES	9:00 - 10:00 GROWTH GAMES	9:00 - 11:00 DRAMA THERAPY. NEW PATIENTS FUN DRAMA	9:00 - 9:30 SUPERVISION WITH RAY (next presentation)	9:00 - 10:15 RELATIONSHIPS	9:00 - 10:15 RELATIONSHIPS	9:00 - 10:00 CAREERS	
9:30 - 11:30 DRAMA	9:30 - 11:30 WARD ROUND				9:30 - 11:00 STAFF S.VISION WITH JENNY & GARY (excl. nursing staff)	10:30 - 11:00 COMMUNITY MEETING	10:30 - 11:00 COMMUNITY MEETING		
					11:00 - 11:10 DRAMA FEEDBACK				
11:00 - 11:30 TEA	11:00 - 11:30 TEA	10:00 - 10:45 TEA	10:00 - 10:45 TEA	11:00 - 11:30 TEA	11:00 - 11:30 TEA	11:00 - 11:30 TEA	11:00 - 11:30 TEA	10:30 - 11:00 TEA	10:30 - 11:00 TEA
11:30 - 12:30 GROUP & F. BACK. NEW PATIENTS ADMITTED	11:30 - 12:30 GROUP & F. BACK	10:45 - 12:30 EVOCS. NEW PATIENTS COLLAGES	10:45 - 12:15 EVOCS	11:30 - 12:30 GROUP & F. BACK	11:30 - 12:30 GROUP & F. BACK	11:30 - 12:30 GROUP & F. BACK	11:30 - 12:30 GROUP & F. BACK	11:00 - 12:00 GROUP & F. BACK	11:00 - 12:00 GROUP & F. BACK
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	12:30 - 13:00 W/.END PLANNING	13:00 - IND./FAMILY THERAPY
13:30 - 14:00 'ATIENT MEETING				13:30 - 14:00 PATIENT MEETING					
14:00 - 15:00 SEX EDUC/ CRAFTS	14:00 - 15:00 SUPERVISION WITH RAY (next presentation)	14:00 - 15:00 LIFE SKILLS	14:00 - IND./FAMILY THERAPY	14:00 - 15:30 SPORTS	14:00 - 15:30 SPORTS	14:00 - 15:30 FUN DRAMA	14:00 - 15:30 STAFF ADMIN. MEETING. IND./FAMILY THERAPY		
	15:00 - IND./FAMILY THERAPY				15:30 - IND./FAMILY THERAPY	15:30 - 16:00 FAREWELL TEA	15:30 - 16:00 FAREWELL TEA		

APPENDIX D: Letter of permission from psychiatric consultant at William Slater

WILLIAM SLATER CENTRE
for Adolescents

Tel: (021) 685 5116/7/8
Fax: (021) 689 1343

Address:
Cnr Park and Milner Road
Private Bag X9
Rondebosch
7700
Cape Town

03/10/01

Dear Prof Swanepoel,

Re: Day patient profile and suicidal behaviour and the co-variation with risk taking behaviours at William Slater Hospital

I have read the above proposal and write as requested that I will give permission for Mr M Kometsi, once he has been granted ethical approval to view the folders of patients as detailed in his protocol.

Regards

Dr N J Shortall
(Consultant Psychiatrist William Slater Hospital)

APPENDIX E: Letter of permission from the Medical Research Ethics Committee

UNIVERSITY OF CAPE TOWN

Research Ethics Committee
Faculty of Health Sciences
E46-26 Old Main Building, Groote Schuur Hospital, Observatory, 7925
Queries : Xolile Fula
Tel : (021) 406-6492 Fax: 406-6390
E-mail : Xfula@curie.uct.ac.za

29 October 2001

REC REF: 261/2001

Mr. M. Kometsi
Psychology

Dear Mr. Kometsi

DAY PATIENT PROFILE AND SUICIDAL BEHAVIOUR AND THE CO-VARIATION WITH RISK TAKING BEHAVIOUR AT WILLIAM SLATER HOSPITAL

Thank you for your letter received by the Research Ethics Committee on the 19 October 2001.

It is a pleasure to inform you that the Committee has formally approved your study on the 26th October 2001.

Please quote the Reference number in all correspondence.

Yours sincerely

PROF. CR SWANEPOEL
CHAIRPERSON

APPENDIX F: Patient Axis I diagnosis and parental family history of psychiatric illness

	Parental family history of mental illness				
Adolescents Axis I diagnosis	Substance abuse	Anxiety disorders	Mood disorders	Psychotic disorders	Totals
Mood	9	2	11	3	25
Anxiety	2	1	0	0	3
Conduct	3	0	1	0	4
Eating	0	0	0	0	0
ADHD	0	0	0	0	0
Substance abuse	0	0	0	0	0
Parent/child relational	0	0	1	0	1
No diagnosis	5	2	1	0	8
Total	19	5	14	3	41

APPENDIX G: Frequencies of referral agents

Referral agents	Frequencies
Medical personnel	16
Self referral	2
Social agencies	11
No information	1
Family	3
Education	6
Mental health personnel	10
Total	49

APPENDIX H: Chi-square indicating adolescent suicide and parental family history of mental illness

	Chi-square	df	p
Pearson Chi-square	3.582	df=1	p=.05842
M-L Chi-square	3.616	df=1	p=.05723

APPENDIX I: Chi-square indicating adolescent risk-taking behaviour and parental family history of psychiatric illness

	Chi-square	df	p
Pearson Chi-square	2.272	df=1	p=.13177
M-L Chi-square	2.288	df=1	p=.13036