

***KAREN BURNS.***

***PREVENTING SUICIDAL BEHAVIOUR AMONGST ADOLESCENTS:  
HOSPITAL ADMISSIONS AS A BEHAVIOURAL MEASURE  
IN ANALYSING THE EFFECTIVENESS OF A  
SCHOOL-BASED PROGRAMME.***

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## **ABSTRACT**

**This study aimed to develop, implement and analyse the effectiveness of a school-based prevention programme aimed at reducing the high rate of parasuicide amongst Indian adolescents in Pietermaritzburg, Natal. This thesis is concerned with long-term effects of the programme, specifically whether the intervention would lead to a decrease in parasuicide amongst Indian adolescents in this region. Schools were randomly divided into an intervention and control group, and parasuicide hospital admissions from a local hospital were examined to determine pre-intervention and post-intervention parasuicide admission rates. Data analysis attempted to take seasonal fluctuations into account, and both the T-tests for mean differences and Regression Analyses revealed that in the post-intervention period there was a significant decline in parasuicide admissions for all adolescents. Furthermore an examination of the data indicates that in the post-intervention period adolescents from the experimental group had significantly lower hospital admission rates than adolescents from the comparison group. Gender differences revealed that female adolescents benefitted more from the programme than male adolescents. These results are discussed with possible explanations and recommendations for future research.**

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## CHAPTER ONE : INTRODUCTION.

### 1.1

#### STATEMENT OF PROBLEM.

Suicidal behavior among adolescents is an increasing cause for concern locally and overseas. The literature states that there has been a significant increase in suicidal behaviour among this age group. (Curran, 1987; Garland and Zigler, 1993; Hawton, 1986; Pfeffer, 1989). Frederick (1985) points out that in the United States of America suicide has remained among the top three causes of death for persons under twenty-four years of age for a number of years. This is remarkable because, while suicide is the eighth leading cause of death for persons in all age groups, it has maintained a steady ranking of second or third among adolescents, age 15 to 24 (Berman and Jobes, 1991).

Research indicates that a similar situation exists in South Africa. Pillay and Wassenaar (1993) state that suicidal behavior amongst adolescents is as prevalent in South Africa as it is in most western countries. High rates of suicidal behavior have been documented amongst the Indian population in South Africa, who are experiencing the effects of cultural transition (Bhamjee, 1984 ; Meer, 1964). Data collected for the Pietermaritzburg region of Natal from 1990 - 1992 suggests a mean suicide rate as high as 21.4 per 100, 000 population for Indians as compared with 12.5 per 100, 000 for whites (Naidoo, 1993). Similarly, Bhamjee (1984) found that 10.3% of all admissions at a large "Indian" general hospital were due to suicidal behaviour. In this regard, Pillay and Wassenaar (1993) point out that adolescents from the Indian community in Natal, are particularly affected, and those between 16 and 25 years of age have been identified as 'high risk' (Pillay and Pillay, 1987).

Within the Indian community, socio-cultural transition, and the resulting acculturation and deculturation, has been implicated in suicidal behavior among adolescents. In striving to attain Westernised goals of individualism, teenagers come into conflict with parents holding more traditional values, and this interpersonal conflict is a significant factor in adolescent suicidal behaviour amongst this population group (Wassenaar, 1987; Wood and Wassenaar, 1989).

## 1.2

## BACKGROUND

Over the last ten years suicidal behaviour has become an important aspect of "medically applied psychology" in South Africa, and research into suicidal behaviour has burgeoned in Natal (particularly Pietermaritzburg and Durban). In South Africa, due to immoral South African apartheid legislation, which was current at the time this study was conducted, hospitals tended to serve specific race groups. In response to a request from the general hospital serving the Indian population in Pietermaritzburg, (Natal), a psychological clinic was set up to provide, amongst other things, therapeutic intervention for the vast number of parasuicide cases seen at the hospital. The vast majority of cases (approx. 80%) tended to be Indian adolescents, with family factors and interpersonal conflicts appearing as precipitants in many cases (Pillay and Wassenaar, 1991; Wassenaar 1987). This prompted research in an attempt to fully understand and attempt to prevent the problem of suicidal behavior amongst the Indian population in this area (Pillay and Pillay, 1987; Wassenaar, 1987; Wood and Wassenaar, 1989). Research has examined family functioning (Cheetham, Edwards, Naidoo et al., 1983; Pillay, 1989; Wassenaar, 1987; Wood and Wassenaar, 1989), personality factors (Bhana, 1982), coping strategies (Boya, 1990), attributional and coping styles (Hare, 1995) and rescue expectations (Pillay and Wassenaar, 1991).

## 1.3

## RATIONALE

The high rate of suicidal behaviour amongst Indian adolescents prompted a gradual shift in research focus; from the treatment of suicidal behaviour to an attempt at preventing this behaviour from occurring in the first place (Wassenaar, Pillay, Burns and Davies, 1993). This approach may be described as a primary health care (PHC) perspective, emphasising the role of prevention as opposed to mere treatment. A Primary Health Care approach attempts to empower members of the community to participate in the community's primary health care. Thus the training of community members and para-professionals to take on



the role of providing health care services is highlighted, and the role of mental health professionals becomes more that of facilitator than clinical health expert.

The majority of the South African population, and especially those from a disadvantaged background are in great need of medical and psychological services. Psychological services, however, are insufficient, inaccessible and unable to meet the mental health needs of the majority of the population (Vogelman, 1990). In South Africa it appears that a primary health care approach would best serve the needs of the majority of the population (Freeman, 1992; Olivier, 1992).

The education system forms an ideal base for the implementation of a primary health care approach. School personnel, due to their close proximity to and knowledge of the students, are usually in an excellent position to note early warning signs of suicidal behaviour. In addition since adolescents spend a large majority of their time in school, changes in attitude, behaviour or grades can easily be detected by school personnel trained to look for specific warning signs and symptoms. An examination of suicide prevention trends in the U.S.A., indicates that the educational system is, indeed, a particularly useful medium for attempting to reach adolescents at risk for suicidal behavior (Kalafat and Elias, 1991; Leenaars and Wenckstern, 1991).

The rationale for the use of a primary health care approach was seen as important in the present study, an over-reliance on specialist expertise was not seen as in the community's long term interests. The programme sought to facilitate an ongoing, cost-effective primary health care source within the community at risk, by training school personnel in the area of suicide and parasuicide prevention. It represents a proactive approach towards the study of suicidal behavior amongst adolescents - an attempt to prevent the problem of suicidal behavior from occurring.

## **CHAPTER TWO : LITERATURE REVIEW**

### **2.1 SUICIDAL BEHAVIOR - ISSUES IN DEFINITION.**

In any field of study comprehensive definitions are essential for compiling accurate statistics, facilitating communication between researchers and ensuring comparability across studies. Despite the extensive study of suicidal behaviour over the last few decades, however, professionals have still not come to a conclusive definition of the various terms.

According to McIntosh (cited in Evans and Fareberow, 1988) no single term, definition or taxonomy yet serves sufficiently to represent what he deems "the complex set of behaviors that have been suggested as suicidal" (p. 84). He emphasises the importance of an adequate definition and asserts that the definition of suicide is more than simply a philosophical question. "For how the word itself is defined has implications for, and large effects on statistics that are compiled on the official number of suicides, and for researchers, so that there is a clear communication regarding who and what is being studied" (p. 84). Similarly, Garrison (1989) stresses that clearer, standardized definitions of the various categories of suicidal behavior would increase comparability across investigations.

While the literature stresses the necessity of precise, mutually agreed upon definitions, the field of suicidology is a complex one; suicidal behaviour occurs in a variety of forms.

According to Motto (1965), suicidal behaviour includes any suicidal act which can be placed along a continuum from least to most severe according to intention to die and lethality of the method chosen. Suicidal thoughts and ideation are the least severe and involve thinking about suicide. Communication of one's intention to act on these thoughts are 'suicide threats'. Actions taken to implement such threats are 'suicidal gestures'. Attempted suicide is a failed attempt to die, and suicide occurs when the action results in death. In this conception intent and lethality are measured according to the severity of the behavioural consequences.

Jacobs (1983) proposes that the major dimensions of suicidal behaviour are intent, lethality and mitigating circumstances. He defines intent as the patient's subjective expectation that a suicidal act will lead to death. Lethality refers to the danger to life, and he considers it as separate from the patient's conception of danger to life. Mitigating circumstances refer to factors that might aggravate a persons wish to commit suicide or alter awareness of the consequences of suicidal behavior.

Defining suicidal behaviour is complicated by issues such as determining intention to die, the lethality of method utilised, and the consequences of the action. Establishing intention to die leads to a number of difficulties. Intention is an internal process and as such it is not easy to measure. One may have serious intention to die but fail due to insufficient knowledge on lethality of the method chosen. On the other hand those who do not want to die may make a lethal attempt. The definition of suicide requires that the injuries causing death be self-inflicted, but O'Carroll (1989) points out that determining self-infliction is not always straightforward and may be impossible in some cases.

**(i) Suicidal Behavior**

Suicidal behavior is the "umbrella" term used to encompass the various dimensions of suicidal behavior. Jones, Schlebusch, M'Bokazi, Bangani and Bruwer, (1992) offer the following definition of suicidal behavior;-

"Suicidal behavior is the term applied to describe a wide range of thoughts, feelings and actions all related to suicidal activity, and can thus be considered from various angles including overt obvious suicidality and less obvious suicidal behavior such as suicidal tendencies expressed in indirect self destructive behavior" (p. 47).

The W.H.O has proposed the following definition;-

"A suicidal act may be defined as self injury with varying degrees of lethal intent, and suicide may be defined as a suicidal act with a fatal outcome". (cited in O'Carroll, 1989, p. 2).

## **(ii) Suicide**

Shneidman (1985) states that "the surprising fact for many people about suicide is that it is a fairly recent word" (p. 10). Translated from its Latin origin the word "suicide" means sui -"of oneself", plus cide "a killing" (Evans and Farberow, 1988, p. vii).

Shneidman (1981) asserts that the term "suicide should be limited to acts of committed suicide (or efforts or attempts to be dead by suicide)" (p. 10). He suggests the following definition of suicide;-

"Currently in the Western world, suicide is a conscious act of self-induced annihilation, best understood as a multidimensional malaise in a needful individual who defines an issue for which the suicide is perceived as the best solution" (p. 203).

Beck et al. (1976) define suicide as a wilful self-inflicted life-threatening act which results in death.

## **(iii) Attempted Suicide:**

It is argued that attempted suicide, should be used only for those events in which there has been a failure of a conscious effort to end one's life (Shneidman, 1985). Attempted suicide should refer to those who consciously attempted suicide but survived. It may be defined as;-

"The fortuitous survival of an intended suicide" (Shneidman, 1985, p. 19).

Literature on the definition of attempted suicide, however, reveals that this term is often used to describe behaviour which may lack serious suicidal intention (Berman and Jobes, 1991).

#### **(iv) Parasuicide:**

Parasuicide is the term proposed for non-lethal, self-inflicted, injurious, suicide-like acts. Kreitman (1977) states that "a terminological rather than a major conceptual innovation was introduced by the term 'parasuicide' in an attempt to supply a word which would indicate a behavioral analogue of suicide, but without considering a psychological orientation towards death being in any way essential to the definition" (p. 3).

Parasuicide may be defined as

"A non-fatal act in which an individual deliberately causes self-injury or ingests a substance in excess of any prescribed or generally recognised therapeutic dosage" (Kreitman, 1977, p. 3).

#### **(iv) Indirect self destructive behavior**

Shneidman (1985) defines indirect self destructive behavior as

"Suicide which is not consciously intended, but is linked to an unconscious self-destructive drive" (p. 85).

This would include covertly life threatening behavior such as reckless driving and other forms of risk taking. The effect of these behaviours is long-range, and the person is usually unaware of or at least does not care about the effects of his behavior.

Shneidman (1985) outlines various psychological differences between suicide attempters and suicide completers. He proposes that the psychological pain experienced is quantitatively different, and that the purpose of the behaviours differs. Whereas suicide is conclusive, parasuicide is evocative and seeks to evoke a response. The goal of parasuicide is to decrease discomfort while the goal of suicide is cessation of life. Feelings of overwhelming disconnectedness and confusion are common in parasuicide whilst in suicide hopelessness and helplessness predominate. In suicide there is an overwhelming sense of ambivalence (the will to live opposes the will to die), while in parasuicide three aspects predominate, life,

suffering and death. Interpersonally suicide is the communication of a conclusion, while in parasuicide it is in a sense communication of a plea for help.

For the purpose of this study, suicide shall refer to a completed suicidal act, i.e, a suicidal act which has resulted in death. Attempted suicide will refer to cases where there is a genuine attempt to end ones life, but this attempt has failed (although the difficulties of determining intention have been discussed). Parasuicide will refer to non-fatal injurious like acts, which are often a plea for help or an attempt to mobilise resources in helpless situations.

This section has highlighted the necessity of adequate definitions of the various forms of suicidal behaviour. Reliable research depends to a large extent on adequate definitions, thereby facilitating efficient data gathering and valid results. In order to ensure accuracy and comparability across studies, it is further, necessary to specify the age group being studied. The next section will examine conceptualisations of adolescence and focus on suicidal behavior amongst adolescents.

## 2.2

### ADOLESCENCE.

In order to specify the age range commonly referred to as 'adolescence' it is necessary to examine various conceptualisations of this age group and how this relates to the field of suicidology. While adolescence is commonly viewed as a specific stage in the developmental transition from childhood to adulthood, there is no universal agreement on the definition of this phase of life. The ambiguity of the precise age range conceptualised as adolescent is reflected in the following definition;

Adolescence is the "period of physical and psychological development between puberty and maturity" (Webster's New Riverside Dictionary, 1984, p. 12).

Jacobs (1983) proposes that the major dimensions of suicidal behaviour are intent, lethality and mitigating circumstances. He defines intent as the patient's subjective expectation that a suicidal act will lead to death. Lethality refers to the danger to life, and he considers it as separate from the patient's conception of danger to life. Mitigating circumstances refer to factors that might aggravate a persons wish to commit suicide or alter awareness of the consequences of suicidal behavior.

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Parasuicide may be defined as

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#### **(iv) Indirect self destructive behavior**

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Adolescence is the "period of physical and psychological development between puberty and maturity" (Webster's New Riverside Dictionary, 1984, p. 12).

**An examination of suicidology literature indicates that various authors tend to conceptualise adolescence in terms of an age range. Evans and Fareberow (1988) indicate that data on suicide in adolescents most often refers to the 15 to 24 age group. Diekstra and Moritz (1987), state that "the age of 12 marks the lower limit of adolescence and the upper limit is usually put somewhere between 21 and 24" (p. 8). They caution, however, that in individual cases adolescence may begin or end earlier or later. Stillon, McDowell and May (1989) assert that "the period of adolescence begins formally at puberty, and is considered to be formally over when the individual has become an independent adult and begins to function on his or her own without the help of parents" (p. 88). They define adolescence as a period beginning at the age of 15, and due to the fact that the period of dependency has lengthened in the U.S.A, they put the upper end at 24 years of age.**

**Research on adolescence may be confounded by the fact that there are intercultural differences with regard to what is considered to be adolescence. In addition, inconsistent definitions of adolescence are used without the actual age range under examination being specified, and statistics might include data from adult and children populations.**

**Adolescence is a developmental phase in which profound physiological, anatomical and cognitive change takes place. Mulder, Methorst and Diekstra, (1989) point out that adolescence is characterised by attempts to adjust to these developmental changes. They outline many behaviours adolescents use to deal with the stress that these biological and psychological changes inevitably induce. While healthy behaviors are common (daydreaming, listening to music, reading etc.) adolescents may also engage in risk taking behavior such as drinking, smoking etc. Although it is common for adolescents to experiment with these behaviors, should they become conditioned responses to stress, they may impede healthy transitions to adulthood.**

**Berman and Jobes (1991) point out that "the topic of adolescence was given practically no scrutiny at all prior to this century and has only received proper empirical attention in the past decade" (p. 52). While earlier psychoanalytic theories emphasised the "storm and**

stress" of adolescence (Freud, 1958), recent research (Abramowitz, Petersen, and Schulenberg, 1984; Offer, 1987) indicates that most adolescents manage to negotiate adolescence successfully. Berman and Jobes (1991) conclude that adolescence is characterised by both increasing capacities and competencies as well as problems. "The majority of adolescents successfully navigate through adolescence, learning to use developing skills to solve problems. It is a minority of adolescents who experience difficulty, and it is within this subgroup that suicidal behaviors are likely" (p. 55).

The developmental tasks of adolescence are further discussed in the section 2.5(iii) (Developmental perspective), but first the thesis will examine causes and precipitants of suicidal behaviour amongst adolescents.

### **2.3 SUICIDAL BEHAVIOUR AMONGST ADOLESCENTS.**

The rise in suicide and attempted suicide among adolescents appears to be an internationally reported phenomenon. It appears that suicide amongst adolescence is now of greater significance than amongst adults. "The fact that adolescence, by itself, seems to be a good predictor of whether or not a person will attempt suicide strongly suggests that there is something about the condition of adolescence which underlies this type of behavior" (Johnson, 1985, p. 114). According to Berman and Jobes (1991) it is during adolescence that an individual begins to develop a consciousness about life and all it entails, including death. They state therefore, it is also to be expected that adolescence should be the phase when death wishes, suicidal thoughts and actions first manifest themselves. They point out that one of the least mentioned characteristics of adolescence is the preoccupation with thoughts of death and suicide.

Curran (1987) states that " the adolescent has a sense of personal immortality no matter what his state of concepts are, because his own death is so remote in time and he enjoys the invincibility of youth" (p. 60).

**(i) Gender Differences**

Research has shown that female adolescents attempt suicide approximately 3 times more often than male adolescents (Berman and Jobes, 1991; Hawton, 1986). Males, however complete suicide more often than females. The ratio of Male to Female completed suicide has been put at 18:4.4 (Berman and Jobes, 1991) and 5:1 (Shaffer and Fischer, 1981).

Bettes and Walker (1986) found that female adolescents who attempt suicide are more likely to report suicidal ideation or behaviour and are more likely to express self-destructive intent than are adolescent males who attempted suicide. They concluded that adolescent males tend to hide their true feelings of depression and hopelessness and that acting out behaviours may be more indicative of suicidal tendencies in adolescent males than are more conventional warning signs such as depression and hopelessness. Females tend to use emotional regulation and social support rather than wishful thinking. These differences may be due to different socialisation patterns, males are socialised into suppressing feelings and emotions whereas females are traditionally socialised to be more expressive (Richmond-Abbott, 1983).

The gender difference in the ratio of completed to attempted suicide amongst adolescents is due in some measure to differences in methods of attempt. This is discussed in the next section.

**(ii) Method of Attempt.**

Research (Hawton 1986; McKenry, Tishler and Kelly, 1982) has shown various differences between nonfatal suicidal behavior and completed suicide. Hawton (1986) contends that these behaviours differ in terms of risk by age and sex, in the usual predisposing factors, and in the methods used. They do, however, also show considerable overlap, and (for example) some suicides did not have death as their intention while some nonfatal acts are failed attempts at committing suicide. The most common method of suicide attempt

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amongst adolescents is ingestion or overdose. A study by Spirito et al., (1992) found that 83% of adolescents who attempted suicide used this method. Berman and Jobes (1991) indicate that the most common method of completed suicide is the use of firearms. They found that males are more likely to use firearms, while females are more likely to take an overdose in cases of completed suicide. The gender difference in rate of completed suicide is probably due to the method used. Males use more violent, fatal methods (Otto, 1972), while chances for discovery and recovery are greater from less violent methods used by females (Overholser, Evans and Spirito, 1991).

**(iii) Repeat Attempts.**

Once an individual has carried out a nonfatal suicidal act, the risk that he or she will eventually commit suicide increases (Hawton, 1986). In this respect a study by Hawton and Fagg (1988) showed that the number of deaths in a large series of suicide attempters was 3.3 times greater than expected. Suicide or probably suicide occurred in 2.8% by the end of the eighth year of follow-up, the rate of suicidal deaths being 26.9% the expected rate. The highest risk was during the first 3 years, and this was especially high in the first 6 months following an attempt. Follow up studies (Stillon et al., 1989) of suicide attempters in Great Britain and Denmark indicated that on average nearly 1.5% of suicide attempters die within twelve months after their attempt, as a result of a repeated suicidal act. In addition between 40% and 60% of suicides are known to have made at least one attempt earlier in their lives.

Attempted suicide appears to be far more common than completed suicide amongst adolescents. Smith and Crawford (1986) point out that the exact magnitude of nonfatal adolescent suicidal behaviour is difficult to estimate since relatively few receive medical treatment following their attempt. Although the actual rate is difficult to determine various authors estimate that attempted suicide occurs between 50 to 200 times more frequently than suicide (Hawton, 1986; Pfeffer, 1986; Weissman, 1974).

Levine (1992) contends that at least half of adolescents repeat a suicide attempt if they survive the first attempt and they often continue to make suicide attempts until they kill themselves. Hawton (1986) indicates that follow-up studies of adolescent suicide attempters show that their suicide rate is considerably higher than that of the general population.

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Adults are often of the opinion that adolescent suicidal behavior is a manipulative attempt to control others in the environment. Adolescents, however, tend to perceive their acts differently, and concur that suicidal behavior occurs in an interpersonal context and is a means of communicating inner needs and as a means of escape (Curran 1987). Adolescents tend to communicate their intentions to others and suicidal behavior is often a cry for help and an attempt to mobilise other resources.

Jacobs (1971, p. 28) postulates that the following process may account for suicidal behavior:-

- (1) A long standing history of problems from childhood to the onset of adolescence.
- (2) A period of escalation of problems since the onset of adolescence and in excess of those normally associated with adolescence.
- (3) Progressive failure of available adaptive techniques for coping with old and increasingly new problems. This leads to a progressive social isolation from meaningful social relationships.
- (4) A chain reaction dissolution of the remaining meaningful social relationships immediately prior to the suicide attempt.

#### **2.4 CAUSES OF SUICIDAL BEHAVIOR IN ADOLESCENTS.**

An examination of the literature on suicidal behaviour among adolescents reveals that there are numerous factors which may contribute to this sort of behaviour. Stillon et al. (1989) describe various factors which contribute to suicidal behaviour amongst this age group. They state that competition among this age group has increased leading to more pressure,

failure and loss of self-esteem.

It is important to distinguish between problems faced by adolescents who may attempt suicide during the period leading up to their suicidal acts and the events that appear to precipitate the act itself. Precipitating factors are not causes, causes are more complex in nature (Curran, 1987; Hawton, 1986; Schlebusch, 1985). Thus, while the precipitating factor may appear trivial in the case of a suicide attempt an examination of the longer term causes may indicate that the precipitating factor was the "final straw" (Wassenaar, 1987).

***(i) Background Characteristics***

Background characteristics include early experiences which may have increased an adolescent's vulnerability to resort to such behaviour under stress.

Family factors implicated in youth suicide include a family history of psychiatric disorder, previous suicide in the family, alcohol abuse, loss of a parent thought death, separation or divorce, physical or sexual abuse, family violence, ineffective family patterns of managing stress (Eyeman, 1987; Hawton, 1986; Stillon et al., 1989).

Suicidal individuals are more likely to come from families that are highly conflicted and unresponsive to children's needs. In this regard, Richman (1986) proposes that disturbances in the family structure, including role conflicts and confusion, dysfunctional family structures with confused, symbiotic or double-binding family relationships, difficulties with communication and rigidity with inability to accept change or tolerate crisis, have been thought to promote suicidal behavior amongst adolescents. There is reported to be a higher incidence of psychiatric disturbances, alcoholism and drug abuse in the families of adolescents who exhibit suicidal behavior (Blumethal and Klupfer, 1988; Hawton, 1986). Hawton (1986) states that one possible explanation for this finding is that parasuicidal adolescents whose families manifest such disturbances may have a greater genetic vulnerability to psychiatric conditions and life stress. In addition families with



psychiatrically ill parents are likely to experience more conflict which might increase adolescents' distress and unhappiness in the family situation.

There is also a higher incidence of suicidal behaviour in the families of adolescents who manifest suicidal behavior. Hawton (1986) points out that these adolescents are more likely to have parents who exhibit suicidal behavior. Diekstra (1987) outlines the role of modelling or learning in acquiring suicidal behavior as a method of coping with difficult situations.

A number of South African studies have also implicated family factors in the development of suicidal behaviour among their young. Kader (1986) concluded that impaired communication was the most critical variable of family dysfunction in his study of suicidal behaviour amongst Indian South Africans. Wood and Wassenaar (1989) found that families of parasuicide patients generally differed from matched controls along a number of dimensions. In particular, they displayed lower family adaptability in dealing with problems and lower family cohesion which led to lower family satisfaction. Another study by Pillay (1991) found that amongst Indian adolescents parasuicide subjects reported significantly lower family adaptability, cohesion and family satisfaction when compared with nonparasuicidal adolescents.

***(ii) Precipitating Factors.***

An important issue to examine in the context of adolescent suicidal behavior is the immediate precipitants / nature of the stresses associated with an attempt. Hawton (1986), states that when comparing suicidal and non-suicidal adolescents, suicide attempters generally face more problems in life. He describes precipitants as problems faced by adolescents during the immediate period preceding suicidal behavior.

Many authors (Curran, 1987; Hawton, 1986; Wassenaar 1987) have been struck by the highly impulsive nature of much suicidal behavior in adolescents. According to Curren

(1987), adolescents are far more likely to make nonfatal self-destructive attempts, which may be due to the fact that adolescents have a less developed sense of impulse control and are also more prone to dramatic mood swings. Without emotional experience and sufficient maturation to deal with crises, the more at-risk individuals may impulsively make a suicide attempt in a sudden shift of mood. In this light however, Wassenaar (1987) states:

"While the suicidal gesture would superficially appear to be a mere impulsive reaction to transient stress or situational disturbance, there is, however, the possibility that this 'impulsive' behavior may in fact represent a 'last straw reaction' in the face of a chronic situational disturbance which has been exacerbated" (p. 173).

According to Farberow (1985) precipitating factors fall into three main areas, all of which lead to a loss of self-value. These are loss of object, through rejection, separation, divorce or death; loss of body and/or self-concept following illness or trauma with injury to the body requiring a change in physical performance; and finally loss of status as occurs in failure of performance in school, or inability to perform in highly valued areas (p. 196). Research (Hawton, 1986; Pillay, 1991; Wassenaar, 1987) has implicated interpersonal conflicts, including conflicts with family members, disruption in a relationship with a lover, conflicts with peer groups and school difficulties as common precipitants of suicidal behaviour. The most common interpersonal conflicts appear to be with parents (Cheetham et al., 1983; Hawton; 1986; Wassenaar, 1987), or relationship partners (Hawton, 1986). A follow-up study of 180 adolescent suicide attempters found that the precipitants of suicidal behaviour were parental problems (50%), girlfriend/boyfriend problems (30%), school problems, (30%), sibling problems (16%) and peer problems (15%) (Tishler, McKenry and Morgan, 1981).

Other risk factors are depression, social isolation, alcohol or drug abuse, legal problems, sexual difficulties, and pregnancy. Although many of these problems are not given as immediate precipitants they are often present in conjunction with factors mentioned above. (Curran, 1987; Hawton, 1986).

### **(iii) Motivational Factors**

It is often difficult to determine the exact motivational factors underlying suicidal behavior as they tend to be complex and difficult to study. Hawton (1986) points out that adolescents often indicate more than one reason for their behavior. Hawton, Cole and Grady, (1982) outline various possible motives in adolescent suicidal behavior. These include;-

- an attempt to obtain relief from a terrible state of mind.
- to escape from an impossible situation.
- communication of distress.
- to make others regret treating an adolescent in some manner.
- an attempt to influence someone.
- an attempt to seek help.

The meaning and intent of adolescents' acts are often suffused with ambivalence. Diekstra (1987) explains that the will to live is opposed to the will to die. If the will to die dominates long enough, the person will act on it. The circumstances surrounding a suicidal act often facilitate certain inferences about the intention involved. Factors such as precautions taken to ensure discovery, timing, and knowledge of whether other people are in the vicinity are important. Pfeffer (1986) states that the wish to be rescued is very common, and that this may be the reason why suicidal behaviour in children often occurs within the vicinity of others who could intervene. In addition, Pillay and Wassenaar (1991), found that 45% of their sample of Indian adolescents who exhibited parasuicidal behaviour reported a wish to be rescued.

### **(iv) Psychological Factors.**

Three primary emotional states have been associated with adolescent suicide attempts, these are depression, hopelessness and anger (Spirito, Overholser and Fritz, 1992). They concluded that depression is characteristic of a substantial proportion of, but not all

adolescent suicide attempters, and indicate that rates of depression may vary depending upon the population studied, with highest rates found in psychiatric hospitals.

The literature suggests that hopelessness is closely related to suicidal behaviour (Berman and Jobes, 1992; Bongar, 1991; Pfeffer, 1986). Pillay and Wassenaar (1995) found that Indian adolescent parasuicides showed significantly higher levels of hopelessness and psychiatric disturbance than non-suicidal controls. Although depression and hopelessness are related concepts, data suggests that hopelessness is more strongly related to suicidal behaviour than depression alone. (Beck, Steer and Brown, 1993; Pfeffer, 1986; Spirito et al, 1992). In addition, hopelessness has been found to be the best predictor of eventual completed suicide at 10 year follow-up (Beck, Steer, Kovacs, and Garrison, 1985).

It appears that anger and aggressive behavior have been found in a large proportion of adolescent suicide attempters (Curran, 1987; Garfinkel, Froese and Hood, 1982). Increased anger has been associated with increased seriousness of an attempt (Gispert, Wheeler, Marsh and Davis, 1985).

**(v) Modelling Effects.**

Numerous authors (Curran, 1987; Gould, 1990) point to the phenomenon of "cluster suicides". Diekstra (1987) states that "Adolescents who manifest suicidal behaviour, far more often than adolescents who react to stress in other ways, have had others in their environment who have demonstrated similar behaviour" (p. 55). Curran (1987) refers to "epidemics" of suicidal behaviour, and states that exposure to and imitation of such behaviour and factors such as peer influence may result in an internalization of suicide as a viable mode of expressing one's inner needs and concerns.

The terms cluster, contagion and imitation are often used interchangeably and may lead to confusion. Gould (1990, p. 517) defines these terms as follows :-

"A suicide cluster refers to an excessive number of suicides occurring in close temporal and/or geographical proximity. Contagion is the process by which one suicide facilitates the occurrence of a subsequent suicide, and therefore assumes either direct or indirect awareness of a prior suicide". Imitation, the process by which one suicide becomes a compelling model for successive suicides, is one underlying theory to explain the occurrence of contagion. She points out that imitation and identification are factors hypothesized to increase the likelihood of cluster suicides.

It has been hypothesised that media attention given to suicide may contribute to suicidal behaviour. In this respect Gould and Shaffer (1986) found that the adolescent suicidal behaviour in hospitals they were monitoring was significantly higher during a two week period following a television broadcast on suicide than two weeks preceding it. Berman (1988), however, found no evidence for increased numbers of suicides after TV broadcasts of 3 films likely to promote such behaviour. He concluded "to the extent that fictional presentations of suicide may serve as a stimulus for imitative behavior, the effect appears to depend on a complex interaction among characteristics of the stimulus, the observer of that stimulus, and conditions of time and geography" (p. 982).

Although the issue of imitation and contagion is a controversial one, it highlights the necessity for information on suicide to be presented in a serious light. Suicidal behavior should not be romanticised or portrayed in a glamorous light.

## 2.5

### *THEORETICAL ORIENTATION*

This section will consist of a brief summary of the various theories of suicidal behavior, particularly as these relate to adolescents.

Berman and Jobes (1991) point out that although a number of attempts have been made to develop viable and heuristic theories of suicidal behavior, conceptually adequate and applicable theories remain elusive. Most of the major theories of suicidal behavior follow a particular theoretical orientation.

***(i) Sociological Theory.***

The sociological perspective emphasises that human behavior cannot be viewed outside of the context in which it is situated.

Emile Durkheim espoused a sociological theory of suicide in 1897 (Taylor, 1982). His theory proposes that suicide occurs as a result of the kind of "fit" that an individual experiences in society, and that suicide results from society's strength or weakness of control over the individual. He identified four basic types of suicide that reflect the individual's relationship to society; egoistic, altruistic, anomic and fatalistic suicide.

In egoistic suicide the individual is isolated from social life and suffers from an excess of individualism. Durkheim compared suicide rates in Catholic and Protestant countries and believed that the higher suicide rate among Protestants was due to greater individualism in that community (Taylor, 1982).

Altruistic suicide, in contrast with egoistic suicide, occurs when there is an over-integration of the individual into society. The person then commits suicide in an effort to conform to social rules (Taylor, 1982). Examples of this type of suicide are the Japanese kamikaze pilots (Shneidman, 1985).

Where an individual actively lacks regulation, anomic suicide may result. Increasing suicide rates in times of depression and prosperity are cited as examples of anomic suicide and occur where the individual feels cut off from what is going on in the larger society and has a great deal of freedom of expression.

Durkheim's theory views fatalistic suicide as the result of over-regulation and oppressive discipline by a society directed at some segment of that society (Durkheim, 1952). Examples of fatalistic suicides are to found amongst slaves or prisoners in barbaric conditions.

***(ii) Psychoanalytic perspective.***

The psychoanalytic theory of suicide consists mainly of the theories of Freud (1917; 1920), who developed two theories to explain the occurrence of suicide. This perspective tends to focus mainly on intrapsychic, unconscious motivations. In "Mourning and Melancholia" Freud (1917) theorised that suicide may result from loss of a love object leading to a depression. He proposed that when a person loses a significant other who was introjected and towards whom there were ambivalent feelings, anger and aggression result. These feelings are directed inward on the self aimed symbolically at the internalised lost object. This may result in suicide where the feelings are strong enough. Thus suicide is seen as aggression turned inwards due to the inability to externalise these feelings, it is "murder in the 180th degree" (Shneidman, 1981, p. 12).

The second theory relates to the balance of Eros (life force) and Thanatos, (death force) within the Id (Freud, 1920). According to psychoanalytic theory, poorly adjusted adolescents bring many unresolved problems from earlier stages of development to the genital phase. Early conflicts related to trust (oral stage), difficulty with autonomy (anal stage), or sexual identification problems (phallic stage) all have implications for adolescent personality. "When an adolescent expends too much energy in repressing or defending against fixation at earlier stages the balance between eros and thanatos is disturbed and this creates the possibility of strong death wishes which may manifest in suicidal behavior" (Stillon et al., 1989, p. 89).

### **(iii) Developmental Perspective**

**Developmental theories focus on adolescent developmental issues. As Berman (1991) notes, the adolescent is developmentally caught between two worlds; needs for autonomy and independence paradoxically conflict with dependency needs and a desire to be part of the family.**

**According to Erikson's developmental perspective the two stages of personality development occurring during adolescence are "identity versus role diffusion" and "intimacy versus isolation" (1959).**

**Erikson emphasises the "identity crisis" of adolescence. The central task is to establish a firm identity. Incomplete resolution of this stage results in a state of identity confusion and progression to the next stage is incomplete. Identity may be described as a secure sense of self, and identity diffusion is failure to develop a cohesive self or self-awareness (Kaplan, Saddock and Grebb, 1994). The events of late adolescence - i.e leaving school, forming new relationships, moving away from home - challenge the adolescent's self-concept which precipitates an identity crisis. The adolescent must resolve this crisis by developing an integrated image of him or herself as a unique individual.**

**Adolescents tend to cope with this struggle toward identity by turning to peers, popular heroes and causes. Teenagers gradually obtain a growing sense of identity through trying various roles. Adolescents unsuccessful at this stage remain confused concerning their identity and role in life. They are likely to fail in adult responsibilities of intimacy and are likely to suffer low self-esteem and depression which have repeatedly been associated with suicidal behavior. (Berman and Jobes, 1991).**



**(iv) Behavioural Approach.**

Behavioural approaches emphasise the role of learning, and the influence of conditioning on behaviour. Imitation and modelling are prevalent behaviours among adolescents. From the perspective of suicidal behaviour "anniversary" and cluster suicides are seen as examples of suicides that result from imitation and modelling (Gould, 1990). Frederick and Resnick (1971) indicate that a variety of stimulus-response conditions account for the production of suicidal behaviour.

**(v) Cognitive Perspective.**

According to Piaget early adolescence heralds the stage of operational thinking. According to his theory adolescents are in the stage of formal operations, which is marked by the development of hypothetical and abstract thinking properties, and the use of scientific problem solving (Ginsburg and Opper, 1979). Stillon et al. (1989) point out that for the first time in their lives adolescents are capable of imagining a world that does not exist. However, their development has not yet progressed to a level where they can impose reality constraints upon their hypothetical "ideal" worlds, and they are often disappointed with life. This may result in unhappiness, disillusionment, and also the consideration of other hypothetical possibilities such as suicide.

Adolescence is the stage during which self concept develops. If a negative self-concept, a negative expectancy of relationships with others or negative expectancies of the future have developed, the period of adolescence has not been successfully completed. Adolescents often have not sufficiently developed cognitive control of psychological and emotional factors. Thus these negative developments can be ascribed, usually to situational and social factors such as problems in the family and peer group and problematic developments in the society as a whole.

Cognitive errors and distorted thinking have been implicated in suicidal behavior (Rush and Beck, 1978). Hopelessness is an extremely relevant clinical variable implicated in suicidal behaviour. In addition features like cognitive constriction, ambivalence, rigidity and dichotomous thinking are further elaborations of cognitive aspects of suicide (Shneidman, 1985). Cognitive rigidity has also been linked with suicidal behavior (Boya, 1990). The suicidal person finds it difficult to develop new and alternate solutions to problems due to his/her rigid mode of thinking. These factors may render them helpless and, as anxiety increases, so does the likelihood of suicidal behaviour.

**(vi) Integrative Psychological Theory.**

Integrative theories attempt to integrate both internal (intrapyschic) factors and external (environmental) factors in an attempt to explain the occurrence of suicidal behavior. This is in contrast to the sociological theory which tends to focus exclusively on the external situation and the psychoanalytic theory which focuses on internal processes.

Shneidman (1988) theorised that suicide can be understood in terms of a suicidal cube. The three surfaces of which are labelled "pain", "pcturbation", and "press". "Pain" is described as the subjective psychological pain felt by the individual", which can range from little to unendurable pain. "Perturbation" refers to the individual's general state of emotional upset and is reflected in poor impulse control, agitation and propensity for precipitous action. Once again, this can range from mild upset to extreme agitation and emotional upset. "Press" is everything that is done to an individual that affects an individual's response to anything. "Press" would include pressures and influences that affect an individual's feelings, thoughts and behavior, such as societal and interpersonal influences.

In terms of Shneidman's suicidal cube model, presses range from positive to negative. Thus when these three factors are highest and especially if they occur in combination the most acute suicidal risk should occur. This model defines suicide as a death fundamentally caused by a synthesis of emotional energy, acute subjective intrapyschic pain, and

overwhelming external pressures (ibid).

Shneidman concluded (1993) that overall, "Suicide is caused by psychache" (p. 147). He states that suicidal behaviour consists of concomitant biological, sociological, psychological, epidemiological and philosophical elements. The key factor from a psychological point of view is psychache which refers to psychological pain, which, when unbearable leads to suicidal behavior.

This study views suicide and suicidal behaviour as the outcome of a complex set of forces operating on the adolescent. Both external forces and intrapsychic factors lead to cognitive and behavioural responses resulting in the suicidal behaviour of adolescents.

## **2.6                      SUICIDAL BEHAVIOUR IN SOUTH AFRICA.**

Most South African research into suicide and parasuicide has been conducted since the 1980's. Early studies comparing suicidal trends across cultural groups indicated that Indians had the highest suicide rate in the country. (Meer, 1964) Levine (1992) points out that suicide as a percentage of deaths in South Africa has changed little over the past 20 years. She points out that when examining prevalence per population group, however, a divergent picture emerges. Suicide is more common in White and Indian South Africans.

Flisher and Parry (1995) analysed nationally registered suicide mortality data for South Africa from 1984 - 1986 and found that the mean annual suicide mortality rates and proportional mortality (proportion of deaths due to suicide) were highest for whites, followed by Asians and then coloureds and blacks. (The actual mean annual suicide rate for blacks is not presented as this was not calculated due to the poor quality of both numerator and denominator data (Flisher and Parry, 1995, p. 4).

**Mean annual suicide rate (1984 - 1986)**

<b>Whites</b>	<b>Indians</b>	<b>Coloreds</b>
<b>25.01 per 100 000</b>	<b>13.88 per 100 000</b>	<b>8.23 per 100 000</b>

**(Flisher and Parry, 1995, p.4)**

Amongst Asian females aged 15 - 24 years, however, they found that suicide was a relatively prominent as a cause of death, and this group exhibited a higher suicide rate than their white and coloured counterparts. In addition, data collected specifically for the Pietermaritzburg region (from 1990 - 1992) indicates a mean suicide rate as high as 21.4 per 100 000 population for Indians, as compared with 12.5 per 100 000 for whites (Naidoo, 1993). These statistics imply that the Indian population, and particularly Indian female adolescents are at high risk for suicide. This has important implications for research and highlights the necessity of examining suicide data for all age and gender categories as well as analysing local and national statistics. In this regard, Pillay and Wassenaar (1995) point out that intervention programmes should be based on local rather than national rates as these may vary widely.

Flisher and Parry (1995) found that the most common method of suicide by whites was the use of firearms, while hanging was the most common method used by other population groups. Schlebusch, (1985) found that the most common method of suicide amongst the Indian population is self-poison by ingestion, with a prevalence rate of 95%. The more violent methods such as hanging, shooting or jumping occurred less frequently and were more likely to be implemented by males than females.

Parasuicide accounts for a large proportion of admissions at numerous general hospitals in KwaZulu Natal. Bhamjee (1984) revealed that 10,3% of all medical admissions to a large general hospital serving the Indian community at that time in the greater Durban area, were due to suicidal behaviour, and Schlebusch (1985) reported that parasuicide accounted

for one-fifth of patients seen at a general hospital in this area. In Pietermaritzburg, due to the high rate of parasuicide at a local hospital set up to serve the Indian population, a psychological clinic was set up to include the provision of therapeutic intervention for the vast majority of parasuicide patients seen at the hospital (Pillay and Wassenaar, 1991).

## **2.7                    THE INDIAN POPULATION IN SOUTH AFRICA.**

Cultural influences have been given increasing attention in the context of suicidal behavior amongst Indians in the South African context. In order to examine the influence of these factors it is necessary to briefly examine the history of the Indian population in South Africa, and the pressures relating to cultural transition.

Indians are an immigrant group who constitute approximately 3% (900 000 people) of the population in South Africa (Central Statistical Services, 1985). The Indian community reside mainly in the province of Natal, and considering the small percentage of Indians in the population, the parasuicide rate among Indian adolescents is extremely high, 21.4 per 100 000 population as compared with 13.88 per 100 000 for whites (Naidoo, 1993). The Indian community in South Africa is a group forced to adapt to a Westernised socio-economic environment. The Indian culture is experiencing the effects of acculturation and deculturation, the processes of which lead to a transitional state of values and norms and psychological stress within the community (Jithoo, 1975).

Acculturation may be defined as the adoption of a culture other than the traditional one by virtue of the proximity of a minority group living within the bounds of a majority group, the cultural norms of which are at variance with the minority group. Cheetham et al., (1983) point out that Indians already have a sophisticated traditional culture and the influence of urbanization represents a deviation from or loss of identification with their basic culture. Cultural deviance is thus seen as a consequence of deculturation, which reflects a loss of identification with one's basic culture. Traditionally, Indians tended to

value kinship links more strongly than western ideals of individualisation. The joint family system or "kutum" prevailed (Jithoo, 1975), whereby a male was the head of the household and all major decisions were made by consulting him. This extended family has been described as a "collective conscience" promoting conformity amongst its members and fostering a sense of obligation to the unit as a whole (Cheetham et al., 1983.; Jithoo, 1975).

This model of the tight knit extended family has, however, undergone much transition over the years. Jithoo (1975) outlined some possible causes for this change. Included are accommodation problems, apartheid legislation, and family conflict. Westernized value systems have also seeped into the Indian culture, and this has led to increasing emancipation of young people and women, and led to their challenging traditional values.

Amongst the Indian population in South Africa various sub-groups exist. These sub-groups differ in terms of religion (Hindu, Muslim and Christian), language (Tamil, Telugu and Hindi) and traditional historical backgrounds. Various restrictions operate among these sub-groups, "the firmest of which are those related to marriages between people from different religions, language groups and castes" (Cheetham et al., 1983, p. 943). Traditionally, marriages were arranged by parents within the constraints of the various religious and linguistic sub-groups. The flouting of these norms and values by adolescents is as a key factor in promoting parent-adolescent conflict and subsequent suicidal behavior amongst this population (Pillay, 1991; Wood and Wassenaar, 1989).

## 2.8 SUICIDAL BEHAVIOUR IN INDIAN ADOLESCENTS.

Since the 1980's numerous authors have investigated parasuicide among Indian adolescents in South Africa (Bhamjee, 1984; Bhana, 1981, Cheetham et al., 1983; Kader, 1986; Pillay and Pillay, 1987; Wassenaar, 1987; Wassenaar and Pillay, 1991).

Pillay and Pillay (1987) reported in their study of Indian parasuicides in South Africa that 48.9% (N = 147) were between the ages of 11 and 20. The male : female ratio has been

put between 1,5 : 1 (Bhamjee, 1984, Wassenaar, 1987) and 2,5 :1 (Pillay 1984, Pillay and Pillay, 1987). Pillay and Schlebusch (1987) point out that a noteworthy feature of suicidal behaviour among Indian adolescents is that non-violent methods are used in the vast majority of parasuicides. Self-poison by ingestion appears to be the most common method.

Pillay and Wassenaar, (1987; 1991) outline the double restriction faced by Indian adolescents in South Africa. Not only are they denied the freedom and privileges enjoyed by white adolescents, but the traditional Indian culture in South Africa is also undergoing a great deal of socio-cultural transition. Indian adolescents, in striving for Westernized ideals of individualism and independence, come into conflict with parents holding more traditional values. Studies have reported that such cross-generational conflict may account for up to 50% of para-suicidal behavior in Indian adolescents (Pillay, 1987; Schlebusch, 1986; Wassenaar, 1987).

Romantic relationship difficulties have been cited as precipitants of suicidal behaviour among Indian adolescents and this has been related to parent - adolescent conflict and unsupportive family environments (Pillay and Schlebusch, 1987; Wassenaar, 1987; Wood and Wassenaar, 1989). Cheetam et al. (1983) found that deviation from accepted cultural norms by younger persons and concomitant disapproval by relatives or the community resulting in interpersonal disputes were major precipitating factors in the parasuicidal acts in 54% of their sample of 100 patients. Furthermore, they found that parasuicide acts precipitated by the flouting of culturally accepted norms are more common in females, in the younger age group, in patients of the Christian religion, and in upper and middle class patients. They speculate that the traditional arranged marriage is being challenged and diluted by Western notions of love relationships. In addition, adolescents may be choosing partners from different cultures. In light of the stresses faced by Indian adolescents, parasuicidal behaviour may be seen as an attempt to communicate the helplessness felt in striving to attain Westernized goals, yet being denied these by rigid, authoritarian parents.

Holinger, (1989) describes epidemiology as the study of the distribution and determinants of disease frequency in humans. (p. 41). In the case of suicide, epidemiologists use information on rates per 100 000 to study variation and trends in rates of suicidal behavior.

Epidemiological data provides information on a variety of useful demographic statistics such as race, gender, age, demography and socioeconomic status. Such data is important in ascertaining risk factors associated with suicidal behaviour, and therefore informing prevention and prediction strategies.

Data on suicide mortality has been used to determine the magnitude of the problem of suicide, to identify high-risk individuals or groups and to generate and test hypotheses about the etiology of suicide (O'Carroll, 1989). Trends in the incidence of suicide have been used to evaluate the effectiveness of suicide prevention measures, and Berman and Jobes (1991) state that "the quality of the empirical base in suicidology determines in great measure the quality of our clinical work with suicidal patients" (p. 78).

Holinger (1989) points out that epidemiologic studies take various forms. Longitudinal epidemiologic data examines factors such as age or period effects. Age effects involve changes in specific rates of mortality or illness over the life span of the individual. Period effects refer to changes in rates of mortality or illness during a particular historical period. Demographic methods such as Cohort analyses have been used to provide data on the increase in suicide rates among the young. Cohort effects involve differences in rates of mortality among individuals defined by some shared temporal experience such as year or decade of birth Whereas Cohort methods follow a certain group of people (cohort) over time, population models study specific age groups over time. Cross-cultural studies examine comparisons across cultures within the same country and across different countries.



***(i) Difficulties inherent in suicidal research.***

Berman (1986) points out that the systematic and scientific study of suicide is itself only in its adolescence. Suicidal behavior is difficult to study experimentally for a number of reasons and the validity and reliability of officially reported suicide statistics have been widely questioned and debated in the literature (Berman and Jobes, 1991).

Research has been plagued by methodological problems which arise from the diversity of research designs, sampling procedures and methods of analysis. Numerous authors (Berman and Carroll, 1984; Berman and Cohen-Sandler, 1982; Pfeffer, 1989) have highlighted the fact that adequate research has been hindered by neglect of basic methodological considerations such as the use of adequate definitions and the use of appropriate comparison or control groups.

There is often a lack of clear operational definitions of terms such as suicidal behaviour, attempts and ideation (Resnik and Hawthorne, 1973). Thus, studies may combine data on completed suicides with those of suicide attempts and suicidal thoughts and threats. Berman and Jones (1991) point out that completers are fundamentally different from attempters. They point out that when studying adolescent suicide, much of what is diagnosed as attempted suicide is in fact not really an attempt to die, but rather an attempt to mobilise help. In addition, studies have shown differences in the personalities of high and low-intent suicide-attempters (Cross and Hirschfield, 1985; Linehan, 1985). The lack of clear operational definitions is also reflected in the fact that some studies fail to distinguish adolescents from adults, and inconsistent definitions of "adolescence" are used.

Comparison between studies is hindered by differences in selection of patients, method of evaluation and diagnostic criteria. Data on suicidal behavior is often based on samples drawn from hospital records, and data on cases receiving treatment from private and other health services is often missing. Thus data on suicide and parasuicide may be under

reported and lack generalisability. Many of the studies on suicidal behavior use patients from hospitals but patients admitted to psychiatric treatment facilities are only a minority of those who seek medical attention following a suicide attempt. In addition, many suicidologists choose to study living suicide ideators or surviving attempters. However, data obtained from attempters and ideators is often not readily generalizable to completers, who represent a markedly different population (Jobes, Casey, Berman and Wright, 1991). A number of studies have, however, reported on referrals to general hospitals. Most of these hospitals may be a receiving point for all parasuicide patients in a defined area. Patients admitted to any hospital within that area following a suicide attempt are referred to this point (Hawton et al., 1982; Kreitman, 1977). However, actual figures of patients attempting suicide who are treated by private and other health services are very difficult to obtain. Kreitman (1977) attempted such a study and found that 30% of parasuicidal episodes treated by general practitioners of their sample were never referred for adequate professional follow-up.

Reporting bias by coroners has also been identified as a major influence on the accuracy of suicide statistics. Jobes, Berman and Josselson (1986) concluded that most medical examiners agree that the actual suicide rate is probably two times the reported rate. O'Carroll (1989) states that there is general agreement that suicides are likely to be undercounted, both for structural reasons (burden of proof issues, the requirement that suicide is suspected by the coroner) and for socio-cultural reasons. Overall, it does not seem that very many true non-suicides are incorrectly certified as suicides.

Inconsistencies in the recording of information in hospital records also pose problems for data collection. Changes in personnel who tend to have individual styles in interviewing and recording data may lead to alternate forms of conceptualising and thus measuring suicidal behavior. Identifying people who display suicidal behaviour is not always easy. Many patients may deny suicidal intent and suicidal behaviour, and may present at casualty stating "accidental overdose". In addition suicidal behavior involving motor vehicles is frequently recorded as 'motor vehicle accident' (du Preez and Schlebusch, 1992). Thus,

if it is difficult to obtain accurate statistics for suicide completers it is often virtually impossible to do so for attempted suicides " (p. 339).

Berman and Jobes (1991) point out that "social constructionist" arguments assert that the underlying inaccuracies of officially reported suicide statistics invalidate research results that rely on this data base. However, considering the constraints inherent in suicidal research, Berman and Jobes (1991) argue that the overwhelming strength and value of epidemiological studies of suicide clearly outweigh the various constraints and limitations inherent in this approach. In addition, various researchers argue that officially reported rates are appropriate for research, "because the error variation in the reporting of statistics on suicidal behavior is randomized in such a way as to not invalidate comparisons made between different suicide rates or conclusions made about social correlates of suicide" (Pescosolido and Mendelsohn, 1986, Sainsbury and Jenkins, 1982).

## **2.10                      PREVENTION OF SUICIDAL BEHAVIOR.**

Berman (1991) states that "suicide and suicidal behaviors are the outcomes of a complex of interacting forces from intrapsychic to interpersonal, from genetic and biochemical to familial and sociocultural. No simple strategy of preventive education can be expected to impact significantly on these behaviours" (p. 248).

Traditionally the primary emphasis in cases of suicidal behaviour was on the treatment of an individual after a suicidal event had already occurred. In the 1960's, however, it became apparent that many suicidal behaviours were help-seeking, communicative actions and this highlighted the need to respond to the distress reflected in these communications (Tierney, Ramsy, Tanney and Lang, 1991). The focus of intervention was thus expanded from treatment after a suicidal event to the preventing the occurrence of such behavior from happening in the first instance.

Research into parasuicide among Indian adolescents in South African has burgeoned since the 1980's, yet there appears to have been a paucity of research into prevention of suicidal behaviour in the South African context. Pillay (1991) points out that most studies on Indian parasuicides have been clinical studies with the exception of three empirical investigations (Bhana, 1981; Kader, 1986; Wood and Wassenaar, 1989). In the realm of prevention, family factors have been investigated and family therapy has been advocated as the treatment of choice for this behavior. Wassenaar (1987) utilizing brief strategic family therapy found this a useful technique for preventing repeated attempts over a three year follow up period.

An examination of the situation in South Africa reveals that a Primary Health Care Approach is a beneficial approach towards promoting mental health amongst South Africans. Primary health care emphasises the use of community resources in the delivery of health care services, and as such school based programmes form a useful medium for attempting to reach adolescents at risk for suicide. School-based suicide prevention efforts have become increasingly popular the U.S.A. (Kalafat and Elias, 1994), and similarly, would appear to be an ideal base for prevention efforts in the South African context.

The next section will discuss how Primary Health Care perspectives could effectively utilise the educational system as a medium for the prevention of suicidal behaviour amongst adolescents.

### **2.11                    A PRIMARY HEALTH CARE PERSPECTIVE.**

Primary health care approaches emphasize a holistic approach to the treatment of mental health problems. "In the new era of health service management there is a major drive towards primary health and preventative strategies, this new call is for the development of relevant and contextualised services, focusing on a biopsychosocial approach" (du Preez and Schlebusch, 1992).

**Primary health care stresses that the mere absence of disease does not necessarily imply a sense of physical, psychological and social well being. This approach embraces a holistic approach taking into account the community at large.**

**The literature on community health in South Africa emphasises that the present health care system is inadequate and incorrectly structured to cater for the needs of the population. Health care in South Africa has a long history of racial inequality. Freeman (1992) points out that within the health sector, mental health care is provided through private transactions and by the state. By comparison, services in the public sector are extremely poor (Vogelman, 1991), and this is especially pertinent for those groups disadvantaged by the recently abolished apartheid system. In addition, the health care system is firmly entrenched in the medical model view of illness, focusing on individualistic, one-on-one models of treatment, which neglects the needs of the majority of the population. This approach tends to place responsibility for illness within the individual rather than examining the role of environmental factors.**

**In order to meet the needs of mental health care in South Africa a restructuring of services is necessary. A Primary Health Care (PHC) approach has been advocated as the best method through which some of the above needs can be addressed (Freeman, 1992). A PHC approach stresses the use of community based intervention to alleviate mental health problems and facilitate well being. The focus of such interventions could be the population as a whole, members of the population at a certain point in time or members identified as belonging to a high risk.**

**Primary Health Care emphasises that mental health care should be community based, close to where people live and work and administered by appropriately skilled personnel (Shinn, 1987).**

**Traditionally, mental health professionals saw suicide prevention as their domain. However, in a primary health care approach, the role of mental health professionals**

becomes that of facilitators or consultants rather than that of mental health experts. Consultation refers to "a specific mental health method in which a consultant meets with a consultee or group of consultees for the purpose of resolving problems that the consultee has in performing some care-giving function for a group of clients" (Mann, 1978, p. 218). This "deprofessionalisation" fosters a sense of control and empowerment in the community and ensures redistribution of resources and skills from private or localised health settings to the community. This decentralisation of health services and the training of para-professionals in the delivery of health care services overcomes many problems associated with the present health care system in South Africa. Previously untapped resources are fully utilised and this facilitates wider distribution of health services, ensuring greater availability to the majority of the population. Kalafat and Boroto (1977) emphasise the usefulness of the paraprofessional movement and states that "although nonprofessionals were initially utilised in response to professional shortages and/or inadequacies, they have demonstrated qualities that render them the mode of choice in the delivery of services" (p.3). In particular their social position, knowledge of the community and lifestyle are an aide in their gaining entry and establishing rapport with those in need of help. School staff are in an excellent position to fulfil this role, and as such schools form a source of resources for training in suicide prevention programmes.

## **2.12 SCHOOL-BASED PREVENTION PROGRAMMES.**

The concern about the high rate of youth suicide has led to the introduction of many school-based suicide prevention programmes in the United States of America. Shafer, Garland, Vieland, Underwood and Brusner (1988), point out that in 1986 over 100 such programmes existed, reaching approximately 180 000 students. The number of school based programs increased by 200% between 1984 and 1989 (Garland et al., 1988) and continues to grow (Garland and Zigler, 1993). Certain states (California, Louisiana and Wisconsin) have gone as far as to mandate the implementation of curriculum-based suicide prevention programmes (Garland and Zigler, 1993; Sandoval, London and Rey, 1994).

Numerous authors support the implementation of comprehensive school-based suicide prevention programmes. (Berman and Jobes 1991; Blumentahl and Kupfer, 1990, Johnson and Maile, 1985; Leenaars and Wenckstern, 1991, Wassenaar et al., 1993). Berman (1991) states that the prevention of youth suicide is the business of the entire community. That the school should be in the business of preventative mental health should not be in question. For him the important question is how best to accomplish this end.

Schools provide a logical site for the implementation of programmes aimed at preventing suicidal behaviour. Since students spend a large proportion of their time at school, school personnel who interact with students on a daily basis are usually in an excellent position to observe and note changes in behaviour. "Schools are in a unique position to provide accurate information and effective intervention, and in addition, educators have a substantial influence on the behaviour of adolescents" (Johnson and Maile, 1985, p. 114).

Smith (1991, p. 4) states that three primary considerations justify the involvement of schools in suicide prevention efforts. These are :

- (a) Schools have the responsibility of helping students develop into productive citizens who can contribute positively to society.
- (b) Schools have the responsibility to identify and attempt to resolve problems that interfere with the educational process.
- (c) Schools have the opportunity and resources to identify and offer assistance to at-risk students.

Primary health care involves a multi-level focus of prevention namely primary, secondary or tertiary prevention. Primary prevention seeks to reduce the incidence of a particular disease. It operates on two levels, by preventing the occurrence of the problem, or by promoting optimal development and functioning of the individual (Freeman, 1992). When applied to suicide, primary prevention refers to the removal of hazardous events (stressful situations or failed developmental tasks) or modification of dangerous situations and promoting factors that allow people to cope with problems without resorting to the option of suicide (Tierney et al., 1991).

**When applied to suicide prevention in schools, primary prevention refers to:-**

- (a) Fostering a school climate or psychological atmosphere which should enhance positive growth.**
- (b) Implementing programmes that address the emotional development and well-being of students, emphasising coping skills for dealing with stress, depression and problems students may encounter.**
- (c) The identification of helping resources to assist those in difficulty.**
- (d) Introducing programmes that specifically address suicide awareness.**

**(Tierney et al., 1991 p. 87)**

**Secondary prevention or intervention involves providing immediate assistance to those in crisis, with the purpose of minimising the effects of the crisis. This occurs when the problem is identified early enough to allow for immediate intervention (Freeman,1992). Intervention aims at reducing the level and duration of the problem at an early phase so that it does not develop more serious manifestations. As applied to suicide it involves recognition of suicidal cues, provision of support to the suicidal person, assessment of suicidal risk and immediate crisis intervention (Tierney et al.; 1991, Poland, 1989).**

**In the school context, intervention involves:**

- (a) The provision of immediate support to students at risk for suicide.**
  - (b) Establishment of a policy and procedures to guide intervention. It is essential that staff have necessary skills and back-up when handling suicidal adolescents.**
  - (c) Referral resources are essential. Dealing with suicidal and troubled adolescents often requires more assistance than schools can reasonably provide. Because of the emergency nature of crisis, rapid access to resources is required.**
  - (d) Ensuring follow-up with the student, parents, and outside helping resources.**
- (Tierney et al., 1991, p. 92)**



**Tertiary prevention or postvention refers to treatment after a crisis has occurred. It involves providing support and assistance to those affected by the crisis. The goal is to assist an individual or group to return to at least a pre-crisis level of functioning, without any lasting deleterious effects. In cases of suicide it involves efforts to help those affected by suicide. Postvention strategies include management of the crisis, disseminating information, providing follow-up and counselling of those affected by the suicide, dealing with issues surrounding memorials and funerals, dealing with bereaved family and friends, linking with the community and responding to the media (Poland, 1989; Tierney et al., 1991).**

**Although primary health care approaches work from all three of the above perspectives the most highly emphasised and utilized are the primary and the secondary intervention methods, reaching the problem just before or shortly after it has occurred. According to Felner and Felner (1989), prevention efforts in educational settings in the U.S.A. are now well into their third generation. They point out that initially work in these settings focused on what generally could be characterised as secondary prevention. They state, however, that these resembled more traditional clinical models as they often focused on individual children, the use of early symptoms to identify children at risk for the development of more serious disorder, and the treatment of such problems. From this, programmes emerged which strove to be truly primary preventative. These targeted entire populations of youth and developed strategies that attempted to reduce the incidence of the initial onset of the disorder. The focus shifted to the development of resilience and modification of specific environmental conditions that predispose children and adolescents to increased risk and vulnerability to dysfunction.**

### **2.13 PREVENTION PROGRAMMES : ISSUES IN DESIGN.**

**School-based suicide prevention programmes require that numerous factors are taken into account in the planning, implementation and follow-up of these programmes. Suicide**

prevention programmes may consist of various components including; training staff before a suicide takes place; postvention efforts after a suicide attempt or completion has occurred (Klingman, 1989); programs including parents (Ryerson, 1991); programs specifically for at-risk students (Shaffer, Garland, Gould, Fisher and Trautman, 1988); programs aimed at all students (Kalafat, 1990) and programs for peer counselors (Davis and Sandoval, 1991).

Kalafat et al., (1988) state that "Everyone who comes into contact with young people should be involved but at different levels and in different ways" (p. 45). School personnel need to become sensitive to warning signs and procedures to follow in the event of a suicidal event. Students need to know warning signs, how to respond to a suicidal friend and who to contact for help. Ryerson (1989; 1990) emphasises that parents should be involved in suicide prevention efforts as parents need to communicate with their children and learn skills to avert a potential suicide attempt.

Berman (1986) states that the most fundamental assumption about suicide prevention is that prevention requires attention to behavioural change, not simply information processing. He outlines how this can be achieved;

- (a) **Environmental control.** This involves restricting access to immediately lethal means for self destruction.
- (b) **Early detection.** In this respect students and staff can be taught to look for specific factors or behaviours associated with suicide risk.
- (c) **Making referrals.** Students and staff should be taught to intervene and then refer a student at risk to a professional or reputable agency for evaluation and treatment. High risk students need support and crisis intervention which can be part of a school system but continuing therapy should be referred outside the school system.
- (d) **Resource identification.** School communities should have a list of competent professional resources for referrals. The development of close, effective communication and referral procedures between the schools, mental health systems is essential. (Ryerson, 1990).

(e) **Professional education.** Specific training is required for local professionals who deal with suicidal youth.

***(i) Goals.***

Various goals are viewed as important in implementing effective suicide prevention programmes in the schools. Kalafat et al. (1988) emphasize that programmes should have clearly stated programme objectives. They suggest that programme objectives be both intervention and postvention. Programmes need to address the problems of depression, assessment, referral and follow-up care. The overall goal of an effective intervention programme is to change attitudes, knowledge and behaviour. This should be accomplished with a proactive approach that aims at early intervention reaching potentially suicidal adolescents before a crisis develops.

***(ii) Content.***

In order to be effective programmes need to address various issues. Important areas of information recommended for inclusion are; facts, myths and causes of suicidal behavior, the role of substance abuse, family dynamics, warning signs, presentation of depression in adolescents and referral sources. Teachers or students should be given skills necessary to help adolescents who may be suicidal, policy and procedure should be well established and issues such as confidentiality, ethics and responsibility must be clarified. (Lennox 1987; Ryerson, 1991).

Sandoval et al. (1994) point out typical curricula content of programmes implemented in schools in the U.S.A include components on;

- (a) **Facts and myths about suicide.**
- (b) **The nature and symptoms of depression and warning signs of suicide.**
- (c) **The roles of substance abuse and stress in the development of suicidal feelings.**

- (d) Teaching skills for coping with stress and depression.
- (e) Referral resources.

**(iii) Factors Affecting Entry Into the School System.**

A number of factors may make entry into the school system difficult, and as such have to be dealt with in a systematic, professional manner. A study by Sandoval et al. (1994) on the implementation of the SDE (State Department of Education) curriculum programme in California revealed that the greatest obstacle to implementing suicide prevention programmes in this area was teacher reluctance and resistance (33%). Following this were time constraints on the curriculum (28%) and then financial considerations (15%).

Denial of youth suicide may pose a problem for implementation of programmes aimed at preventing this behavior (Dyck, 1991; Poland 1989). Hendrickson and Cameron (1975) found that deans in 90 schools they studied under-rated the magnitude of the problem of youth suicide, and Ross (1980) found that many school staff found it difficult to comprehend that adolescents could see suicide as the only possible escape from a distressing situation.

School authorities may resist implementation of mental health programmes arising from the lack of involvement with the mental health professionals in the planning process; the belief that the unique needs of a school are not being addressed and the fear of not being adequately trained to deliver mental health programmes. (Ryerson, 1989). In addition, teachers and counsellors might feel that they do not have time to become experts in the area of suicide prevention and may therefore experience helplessness and fear. Referral resources must be readily available and discussed with school personnel as an inability to obtain help for at-risk students will lead to feelings of helplessness, frustration, anger and guilt. In addition, school personnel tend to have a full schedule with numerous curriculum demands. There is often limited time to partake in extra activities. Suicide prevention programmes should therefore not be seen as an added burden.

Poland (1989) points out that among school personnel who expressed resistance or fear, one of the major concerns was that efforts at preventing suicidal behavior would in fact make it worse. This fear has been voiced by various authors (Klingman, 1989; Lester, 1990). There is a fear that open discussion of suicide may promote the use of suicidal threats or gestures as a means of gaining attention or achieving a desired goal. This is based on evidence that persons can become desensitized to negative events through exposure to them (Marks, 1978). Dyck (1991), however, points out that many adolescents have come into contact with suicidal behaviour in some manner anyway, and many adolescents may also have thought about suicide previously. This fact makes talking about suicide and suicidal behavior more necessary. Ross (1981) and Valente et al., (1986) stress that the manner in which information on suicide is presented is of utmost importance. Information on suicide must be presented in a serious manner. It is important not to sensationalise suicide or portray it as glamorous and romantic.

Potential concern from parents regarding suicide prevention also causes some concern. Valente et al. (1986) point out that ethical and legal issues should be considered, including confidentiality of students and need for parental consent for referrals.

## **2.14 EVALUATION OF SCHOOL BASED PROGRAMMES.**

Evaluation of school based suicide prevention programmes is a multi-faceted phenomenon, and there is not likely to be one simple measure of effectiveness. Evaluation should include the study of both short and long-term effects, attitude and knowledge changes, changes in help-seeking behaviour and statistics on suicide attempts and completions.

School-based suicide prevention programmes have been criticised for lack of adequate evaluation of outcome measures. (Berman, 1991; Sandoval, London and Rey, 1994; Shaffer et al., 1988; Stillon et al., 1989). Research into the effects of these programmes is still in it's early stages, despite the fact that such programmes have been in operation for at least

a decade in the U.S.A (Felner and Felner, 1989; Valente, 1986). Research on the effectiveness of school based suicide prevention programmes has also been criticised for the lack of control groups (Nelson, 1987). Garland and Zigler (1993) express concern that "the increasingly popular curriculum-based suicide prevention programs have not demonstrated effectiveness and may contain potentially deleterious components" (p. 169). They concluded that programme evaluation research is underdeveloped, that most programmes they evaluated were of short duration and evaluation included only self-report measures of knowledge, attitudes and behavior. They recommend that "further evaluation is clearly needed, with an emphasis on the assessment of behavioral variables including suicidal behavior and help-seeking behavior" (p. 176).

Emphasising the poor record of programme evaluation, Kalafat and Elias (1991, p.43), in their review of forty programmes implemented in the U.S.A and Canada, revealed that;

- (a) Approximately 50% of the programmes regularly obtained written feedback from students, faculty, administrators and parents.
- (b) Most programmes conducted the classes themselves rather than trained teachers to do so.
- (c) Approximately 50% assessed changes in knowledge and attitudes of students.
- (d) Over 50% tracked changes in referrals to school personnel, and approximately 50% tracked referrals to community agencies.
- (e) The majority have not assessed changes in rates of suicide attempts or completions

Research has tended to focus on attitude and knowledge change, and in general has yielded contradictory results. Spirito, Overholser, Ashworth, Morgan and Benedict-Drew (1988) found that the prevention programme they studied was slightly effective in imparting knowledge about suicide, but was ineffective in changing attitudes. Shaffer, Garland and Vieland et al. (1991), in a review of three suicide prevention curriculum programmes found that most of the students who attended the programs were fairly knowledgeable about suicide before the programme and tended to hold favorable attitudes towards help-seeking behaviour. Post programme results showed that no significant attitude or knowledge

changes occurred, either amongst students holding favorable attitudes prior to implementation of the programme or amongst students holding unfavorable attitudes prior to the programme. In addition, a negative result of their study, was a small but significant increase in the number of students who responded that suicide could be a possible solution to problems.

A study by Kalafat and Elias (1994), however, found that participation in a suicide prevention curriculum did lead to a "significant increase in knowledge about suicide, a more positive approach to seeking help for troubled peers, and a more realistic appraisal of peer suicide" (p. 230). In addition, Boggs (1987) found high school students were better able to detect suicidal behavior in peers after presentation of a curriculum programme.

The literature emphasises the need to pay more attention to behavioural measures. In this regard, Tierney et al., (1991) recommend that research is necessary to determine if attitude and knowledge change translates to behaviour and more effective abilities to recognise those at risk for suicidal behaviour. They recommend that suicide attempt rates and the severity of individual attempts be examined, that attempters who have participated in school-based intervention programmes be interviewed, that screening devices should be developed for identification of those at risk, and that control groups be used (p. 93). Garland and Zigler (1993) agree that behavioural measures are necessary. They concluded that evaluation findings need to be interpreted cautiously as most studies record attitudes rather than behaviour, and there is no certainty that a given attitude will predict a related behavior in times of crisis.

School based suicide prevention programmes should be comprehensive and contain a number of evaluation components. Ryerson (1987) outlines various components she believes should be included in comprehensive programme evaluation. These include clearly defined goals, operationalising of outcome variables, the use of a homogenous comparison or control group, which does not partake in the programme and measurement of outcome variables.

**Kalafat and Elias (1991) state that outcome evaluation should include;**

- (a) Process evaluation, which assesses the extent to which the program was delivered as it was conceived.**
- (b) Proximal outcome to assess the immediate impact of the program on its participants.**
- (c) Distal outcome to assess the effects associated with processes and proximal outcomes (for school-based programmes, these might include referral rates and suicidal behavior).**

**The literature indicates that in recent years the educational system has become the focus of suicide prevention efforts in the U.S.A. To date no study in South Africa has attempted to design, implement and analyse the effectiveness of school based suicide prevention programmes. Such programmes do not form part of the curricula content in South African schools. The programme used in this study was designed specifically for the population in this study. This thesis forms part of a two-pronged approach to analyse the effectiveness of this prevention programme. An adjacent study (Davies, M), will examine pre and post-intervention attitude and knowledge changes in school counsellors and pupils who participated in the present study.**

**The present thesis takes note of recommendations (Berman, 1986; Kalafat, 1988; Leenaars et al., 1991) that behavioural measures are required in examining outcome of suicide prevention programmes. The primary measure of effectiveness in this study will be an examination of data categorised as 'suicide and self-inflicted injury' admissions at a local Indian hospital. This hospital, which was established under the now-abolished Apartheid system was situated to serve a predominantly Indian community. The hospital serves a relatively homogenous population within a geographically defined area, and is the most centrally located hospital for the population under study. From a research perspective, this means data from the hospital is likely to accurately reflect parasuicide admissions from the Indian population in the area.**

**The next section will discuss the process and procedure which was followed in designing and analysing the effectiveness of this school based programme.**



## **CHAPTER THREE : METHODOLOGY**

### **3.1. AIM**

Indian adolescents in South Africa have been identified as a group at high risk for parasuicide. This thesis aims to utilise behavioural data in an attempt to evaluate the effectiveness of a school-based primary health care approach to preventing suicidal behaviour (particularly parasuicide) amongst this population. Data on parasuicide admissions collected from a local hospital, will be analysed pre and post-intervention in order to evaluate the effectiveness of the intervention. Cognitive and attitudinal variables are analysed in a parallel study (Davies, 1995) and were not the focus of the present work.

### **3.2 HYPOTHESES**

The following hypotheses are proposed:-

- (a) Following implementation of the programme, parasuicide admissions to the local hospital will decline when compared with a similar time period in preceding years.
- (b) Adolescent admissions will be divided into two groups, those under 18 years of age (school-attending age), and those over 18 years of age (not attending school). Although these groups are not totally discrete, it is hypothesised that post-intervention admissions for adolescents under 18 years of age will decline when compared with post-intervention admissions for the 18+ age group. The rationale underlying this hypothesis is, since at least half the population in the under 18 age group will participate in the prevention effort, this group should show a greater decline in admissions than the 18 + age group, none of whom would benefit directly from the school-based intervention.
- (c) Most parasuicide admissions in adolescents under 18 years of age will be from the comparison group (non-participating schools) rather than the experimental group (i.e schools that participated in the programme).

To determine whether declining admissions are significant the following factors must be considered; General hospital admissions should remain constant in the post-intervention period, in order to prove that any decline in parasuicide admissions is not merely indicative of a general trend of declining admissions to this hospital.

### **3.3 PROCEDURE - A PRIMARY HEALTH CARE DESIGN**

A primary health care approach emphasises certain elements and a specific manner in which community based interventions are implemented (Mann, 1978; Rappaport, 1987; Shinn, 1985). The process followed in this particular study is outlined below;

#### **(i) Needs Assessment**

Various sources confirmed the need for an intervention focusing on the prevention of suicidal behavior amongst Indian adolescents.

- (a) A review of current research (Pillay, 1989; Wassenaar 1987; 1991) emphasised the high rate of parasuicide among Indian adolescents and the importance of research focusing on prevention of this behavior.
- (b) A needs assessment workshop was conducted in 1991 by Mr D. R. Wassenaar, (Clinical Psychologist and Senior Lecturer at the University of Natal), and Dr A. L. Pillay, (Principal Clinical Psychologist at Midlands Hospital and Senior Lecturer at the University of Natal), both of whom have extensive clinical and research experience in the field of parasuicide. School personnel from numerous high schools in the region attended this workshop, and confirmed that, firstly there was a need for an intervention focusing on prevention of suicidal behaviour, and secondly, that school personnel would be willing to partake in the programme. In particular, the workshop revealed that school personnel were interested in learning skills which could assist them in early identification of suicidal behaviour, preventative education concerning suicidal behaviour, and counselling and referral skills for working with

children and adolescents identified as suicidal (Wassenaar et al., 1993).

- (c) Close collaboration between the consultants (K. Burns and M. Davies) and the Educational Psychologist from the House of Delegates (Mr Logan Govender) ensured that specific needs of the community were taken into account during each step of design, implementation and analysis of the intervention.

**(ii) Selection of Subjects**

Subjects were drawn from a sample of the Indian schools in the Pietermaritzburg area. Schools were divided into upper and lower socio-economic status groups, and from each group every second school on the list was targeted to partake in the programme. This formed a representative selection of half of the high schools in the area. The subjects of the workshop were 24 Indian school counsellors, (from four high schools and eleven junior schools). These counsellors were trained to run programmes with pupils in their schools, and as such pupils from these schools also formed subjects of the study.

**(iii) Planning / Pre-entry**

Allen (1976) contends that the following activities are important educational aspects of program planning:

- (a) Appraising educational resources available and planning for additional resources to meet program needs.
- (b) Utilising base line data about suicide prevention attitudes, knowledge and practices.
- (c) Defining and setting short-range, intermediate and long-range educational objectives within a specific suicide prevention programme.
- (d) Planning and executing educational activities to implement suicide prevention programme goals.
- (e) Recognizing and dealing with social, psychological and cultural factors relating to the understanding and acceptance of suicide and suicide prevention practices.

Following the needs assessment an evaluation of health services and resource networks in the community revealed that sufficient resources were available to support implementation and follow-up of the intervention. In particular the number of counsellors, their willingness to participate in the programme, the location of suitable venues for conducting the workshop, back-up support, referral resources and time allocation were all deemed sufficient to implement an effective programme.

The Educational Psychologist representing the House of Delegates was consulted to discuss parameters of the programme. Issues related to timing, content and procedure of the workshop were discussed in depth. In particular it was emphasized that the programme would be portrayed in a serious light and the notion of suicide would not be romanticised in any way.

Community based interventions emphasise collaboration between consultants and consultees, and emphasise empowerment of community members in programmes implemented in their community (Mann, 1978; Rappaport, 1987). Attention must be paid to securing participation in and support for suicide prevention programmes amongst the community. This includes;

- (a) Organising and developing community resources to meet suicide prevention needs.
- (b) Helping key individuals within the community study and define their own crisis intervention needs, set priorities for action, and plan, carry out and evaluate their own projects.
- (c) Working with a variety of interagency groups such as schools, mental health services, health departments and district surgeons, and focusing on specific suicide prevention programmes.

In order to ensure the community's involvement close liaison between the consultants and school personnel was stressed during the design, planning and implementation of the programme.

**(iv) IMPLEMENTATION ISSUES**

**(a) Permission From the Educational Body**

Enlisting the aid of community leaders in carrying out the programme was seen as vitally important. Once the programme had been designed it was forwarded to the House of Delegates for approval, and permission was granted for the programme to be implemented (See Appendix A). After receiving permission from the House of Delegates each headmaster was approached individually in order to obtain permission to implement the programme in that particular school.

**(b) Timing**

The consultants were granted permission to run the programme on the condition that it took place outside of normal school hours. The programme was run on a Saturday morning due to the limited free time available to school personnel. This factor was largely influential in dictating the length of the programme.

**(v) Programme Design**

A number of features were seen as essential in implementing an effective programme and numerous literature sources were consulted (see Appendix C - References for Material used in workshop). In particular, the goals of the workshop were to facilitate a sound knowledge base about suicide and suicidal behaviour, to promote favourable attitudes towards helping those at risk for suicidal behaviour and to impart skills necessary for dealing with those at risk for suicide.

### 3.4 Apparatus

- (1) An educational lecture and handout (Appendix B) discussing the following aspects of suicidal behaviour;
  - Definitions of suicidal behaviour.
  - Suicide and para-suicide amongst adolescents.
  - Reasons, motives and predisposing factors for suicidal behaviour.
  - Warning signs.
  - Coping strategies.
  - The prevention of suicidal behaviour among adolescents.
  - The school as a medium of prevention.
- (2) A video entitled "Suicide - The Wrong Choice". ✓
- (3) A crisis Intervention Handout (Appendix C). ✓
- (4) A prevention programme for high school pupils (Appendix D).
- (5) A coping skills and prevention programme for junior school pupils (Appendix D)
- (6) A suicide opinion questionnaire (Appendix E).
- (7) A workshop evaluation questionnaire (Appendix F).

### 3.5 Format of the workshop.

The workshop took place at a local school hall, on a Saturday morning and lasted approximately 6 hours. The workshop structure is outlined below.

- (a) Filling out of Attitude and Knowledge Questionnaire (30 minutes prior to beginning workshop) 15 10 15
- (b) Warm up and introductions (20 minutes). } 1 hr
- (c) Lecture on Suicidal Behaviour (One hour). }

This lecture focused on issues such as the general concept and definition of suicidal behavior; suicidal behavior among Indian adolescents in South Africa; myths and misconceptions about suicide and a section on questions commonly asked about suicide. The goal of the lecture was to transmit clear, accurate information

regarding suicide, in an attempt to promote attitudes conducive to helping children or adolescents at risk for suicidal behavior.

(d) Video and discussion (30 minutes). <sup>15</sup>

A video entitled "Suicide - The Wrong Choice", was designed to promote clearer insight into suicidal behavior amongst adolescents and also to facilitate discussion of ways to promote health seeking as opposed to suicidal behavior. The video was scripted and produced by the consultants and members of the drama department at the University of Natal, Pietermaritzburg. The video was culture specific to the targeted community and dealt with a typical situation hypothesised to underlie parasuicide among Indian adolescents. Close liaison between the consultants and the drama department ensured that the video was presented in a serious light and parasuicide was not romanticised or glamorised in any way. The video was then subject to independent evaluation and was found to increase participants realisation that suicide is an unacceptable option to solving problems (Cockle, 1992).

(e) Tea break (30 minutes)

(f) Crisis Intervention and Role Playing (One and a half hours). <sup>45</sup>

This part of the programme was designed to enable counsellors to recognise warning signs and help adolescents who might be at risk for suicidal behavior. This was viewed as an essential component of the programme in order that counsellors would feel confident in dealing with suicidal adolescents before referring on to various referral resources. After a lecture and discussion on crisis intervention, the group was divided into smaller segments to role play typical suicidal situations. This was seen as a form of experiential learning, enabling counsellors to experience suicidal behaviour from the viewpoint of both counsellor and suicidal adolescent.

(g) Programmes to be run in the Classroom (One and a half hours). <sup>1 hr</sup>

The final component of the programme consisted of educational programmes for school pupils. Two programmes, one for high school and one for junior school were developed. These are 6-week programmes aimed at increasing knowledge about suicide and parasuicide, enabling pupils to recognise signs that peers were at risk for suicide and the promotion of help-seeking as opposed to suicidal behavior.

The programme for high school was less structured than that for the junior school. School staff from the junior schools had expressed anxiety about dealing with the issue of suicide in their schools. The programme for junior schools focused less on the topic of suicidal behaviour and more on teaching children adaptive living skills including communicating feelings of distress, listening to signs that others might be in distress and encouraging friends to seek help for problems.

(h) Final discussion, Question and Answers (30 minutes). ✓ 1.5

This section included information on local facilities and referral resources.

(i) Post - intervention Attitude and Knowledge Questionnaire.

(j) Programme Evaluation Questionnaire.

Shaffer et al. (1988) point out that although consumer satisfaction is one aspect of evaluation, this is no guide to behavior change. For the purposes of ensuring constant communication with members of the community, feedback from the counsellors was seen as an essential aspect of evaluation in this study in order that their recommendations be taken into account in any subsequent modifications of the programmes content or structure.

### **3.6 WITHDRAWAL**

Withdrawal was a gradual process, counsellors were equipped with emergency contact numbers and a follow-up session was devoted specifically to revising and reinforcing the programmes. Counsellors implementation of the prevention programmes in their schools was also followed up.

### **3.7 PROCESS OF DATA COLLECTION**

Once permission was obtained (Appendix G) 'Suicide and Self-inflicted injury' admissions at the hospital targeted for intervention were analysed to form base rates for the period preceding the intervention. As the hospital was in the initial stages of implementing a computer system, data was obtained manually from the Medical Records department as



well as Ward registers. Data was only available from the beginning of January 1991, as records prior to that date had been set aside for destruction. This meant that January 1991 formed the starting period for the collection of base rates. Data collection was a time consuming process, as once file numbers had been obtained, the individual files were then examined for information on the patient.

General admission data and information on occupancy of hospital beds was also collected in order to determine that hospital admission rates remained constant over the period of study, and also that there were sufficient facilities for admitting suicidal adolescents.

Once names had been gathered school registers were examined to determine number of students from this group who had been admitted to the hospital post-intervention.

## **CHAPTER FOUR - RESULTS.**

The data was analysed using the SAS system, after being placed into a number of monthly time-series of parasuicide admissions for the period January 1991 to June 1993 (Table 1). The first time series is the number of parasuicide admissions for all adolescents over the entire period of the study. The second time series shows adolescents under 18 years of age (-18 age group) and the third time series consists of hospital admissions from adolescents over 18 years of age (18 + age group). Graphs 1.1, 1.2 and 1.3 show the hospital admissions from each of these groups over the entire period of the study (Section 4.1 pgs 58 - 61).

Each group of adolescents is further divided into Males and Females (Section 4.1 : Tables 2 and 3, pgs 62-64), and the time series for the 18 - age group is further divided into an experimental and control group for the post-intervention period, October 1992 to June 1993. (Section 4.3, Table 9, pg 72).

The data was divided into these groups for a number of reasons. This study is concerned with suicidal behaviour amongst adolescents of all ages. Due to the nature of the intervention programme, however, the main focus of the present research is adolescents directly affected by the school-based intervention programme (under 18 years of age). Adolescents in the over 18 age group are utilised as a form of comparison group against which parasuicide admissions from adolescents in the under 18 age group can be compared. Thus, it is hypothesised that in the post-intervention period there should be a greater decline in parasuicide hospital admissions from adolescents under 18 since at least half of this group are likely to participate in prevention programmes held in their schools. Such information is useful for informing future research and preventative efforts.

The data was divided into male and female adolescent groups in order to determine which groups are at greatest risk for suicidal behaviour, and also which groups are most likely to benefit from prevention efforts.

The under 18 age group is further divided into an experimental and control group for the post-intervention period. This is to examine programme effectiveness in reducing parasuicide admissions amongst adolescents participating in the programme, and also to ensure that the programme did not have a contagion effect leading to cluster suicidal behaviour amongst participating students.

From an examination of Table 1 and Graphs 1.1, 1.2 and 1.3, it appears that hospital admissions for the post-intervention period (October 1992 - June 1993) are lower than corresponding months in previous years (pre-intervention). This pattern is evident for both male and female adolescents. (Tables 2 and 3 and Graphs 2.1 and 3.1).

An interesting finding is the seasonal pattern that becomes evident from an examination of the graphs. Thus, the period October to May appear to be high-risk months for suicidal behavior, while June to August appear relatively low. This has important implications for data analysis, as these seasonal fluctuations need to be taken into account.

Total hospital admissions have also been sorted into a monthly time-series (Section 4.4, Table 10, pg. 79), in order to examine the pattern of total hospital admissions over the period of the study. It is hypothesised that total hospital admissions should remain constant, in order to prove that any decrease in parasuicide / attempted suicide admissions is not merely indicative of a general trend of declining admissions to the hospital.

TABLE 1.

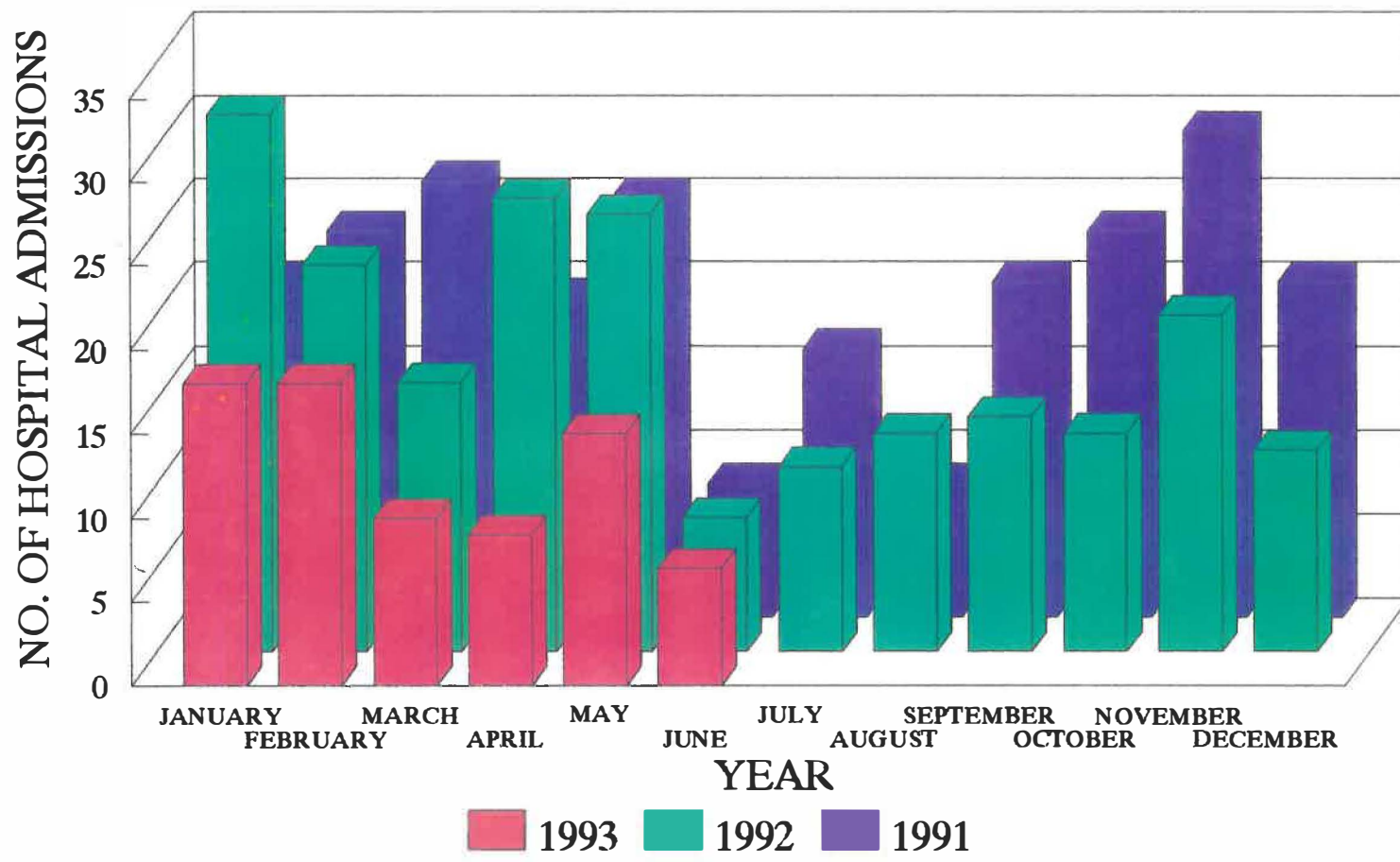
SUICIDE AND SELF--INFLECTED INJURY ADMISSIONS.

AGE	1991			1992			1993		
	- 18	18 +	TOTAL	- 18	18 +	TOTAL	- 18	18 +	TOTAL
JANUARY	10	10	20	11	21	32	7	11	18
FEBRUARY	6	17	23	11	12	23	7	11	18
MARCH	12	14	26	4	12	16	5	5	10
APRIL	8	11	19	7	20	27	3	6	9
MAY	9	16	25	14	12	26	7	8	15
JUNE	6	2	8	3	5	8	4	3	7
JULY	6	10	16	6	5	11			
AUGUST	3	5	8	4	9	13			
SEPTEMBER	10	10	20	6	8	14			
OCTOBER	17	6	23	7	6	13			
NOVEMBER	13	16	29	10	10	20			
DECEMBER	9	11	20	7	5	12			

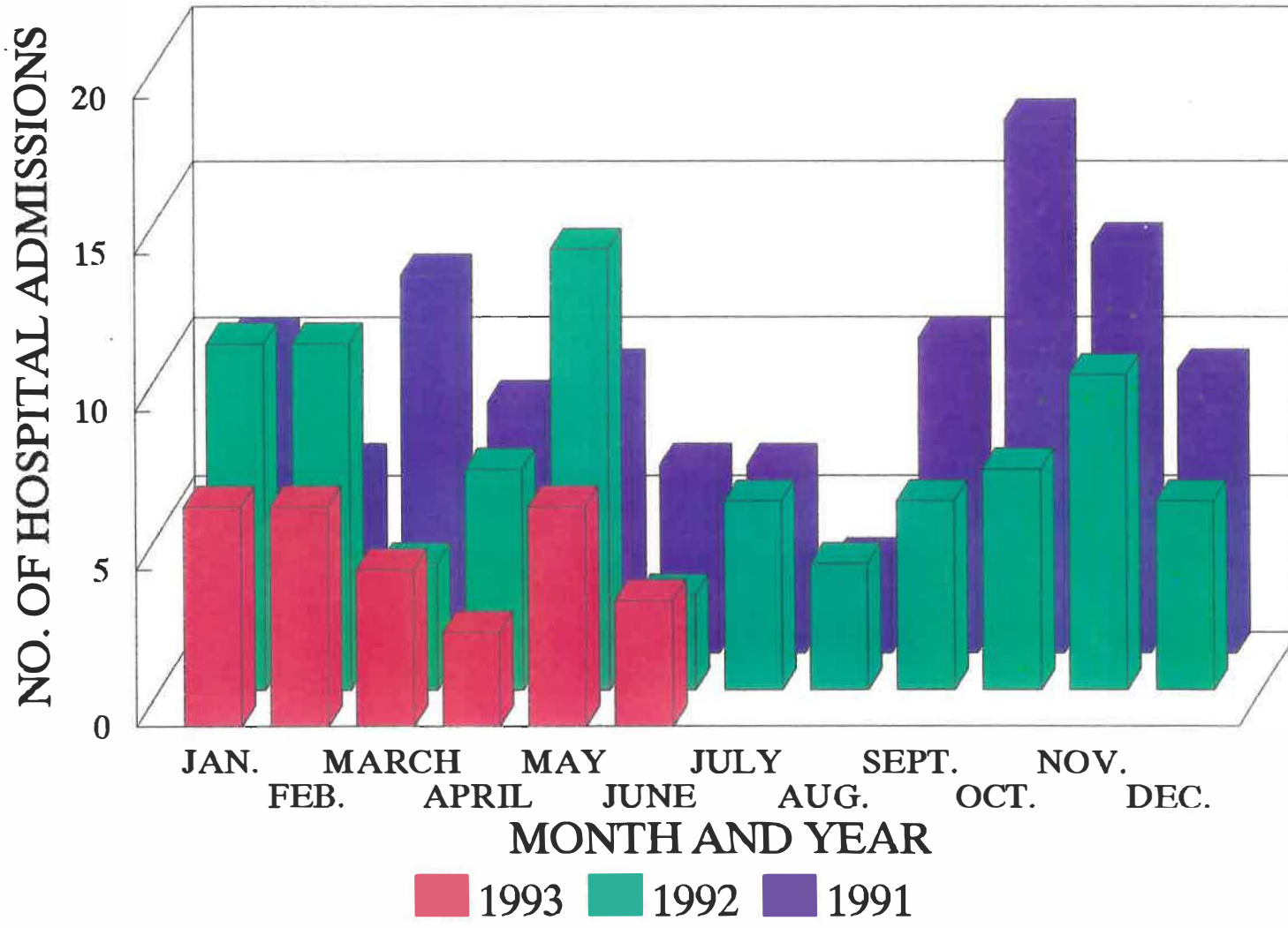
TOTALS	18 -	18 +	TOTAL	18 -	18 +	TOTAL	18 -	18 +	TOTAL
JAN - DEC	109	128	237	90	125	215			
JAN - JUNE	51	70	121	50	82	132	33	44	77

PRE - INTERVENTION  
POST - INTERVENTION.

### PARASUICIDE / ATTEMPTED SUICIDE HOSPITAL ADMISSIONS ALL ADOLESCENTS



PARASUICIDE / ATTEMPTED SUICIDE HOSPITAL ADMISSIONS.  
ADOLESCENTS UNDER 18.



PARASUICIDE / ATTEMPTED SUICIDE HOSPITAL ADMISSIONS.  
ADOLESCENTS OVER 18.

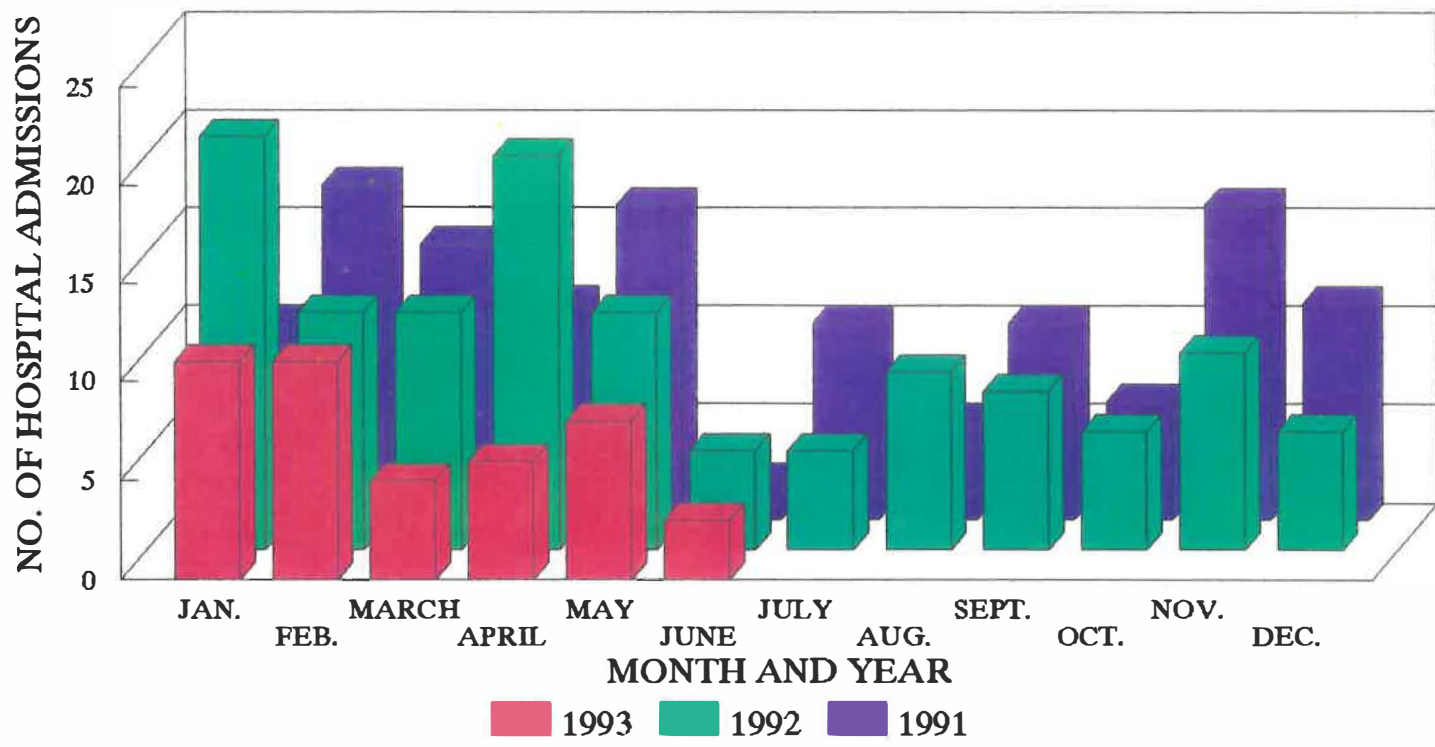


TABLE 2. PARASUICIDE / ATTEMPTED SUICIDE HOSPITAL ADMISSIONS  
MALE ADOLESCENTS.

MONTH	1991		1992		1993	
	18-	18+	18-	18+	18-	18+
JAN	3	3	3	6	3	3
FEB	1	5	1	4	2	3
MARCH	5	6	1	4	1	2
APRIL	2	5	1	7	1	4
MAY	4	7	6	7	2	3
JUNE	0	1	2	1	0	3
JULY	1	3	3	2		
AUG	2	1	0	2		
SEPT	1	6	0	1		
OCT	5	4	2	2		
NOV	5	6	1	5		
DEC	1	2	4	3		

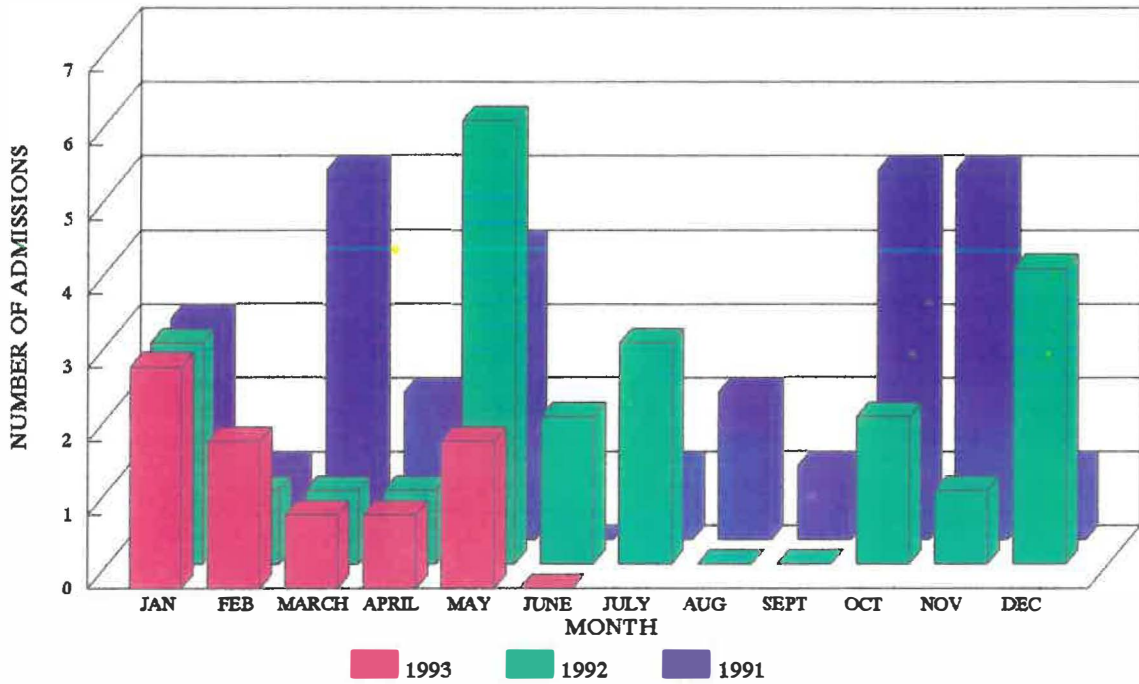
TABLE 3 : PARASUICIDE / ATTEMPTED SUICIDE HOSPITAL ADMISSIONS.  
FEMALE ADOLESCENTS.

	1991		1992		1993	
	18-	18+	18-	18+	18-	18+
JAN	7	7	8	15	4	8
FEB	5	12	10	8	5	8
MARCH	7	8	3	8	4	3
APRIL	6	6	6	13	2	2
MAY	5	9	8	5	5	5
JUNE	6	1	1	4	4	0
JULY	5	7	3	3		
AUG	1	4	4	7		
SEPT	9	4	6	7		
OCT	12	2	5	4		
NOV	8	8	9	5		
DEC	8	9	3	2		



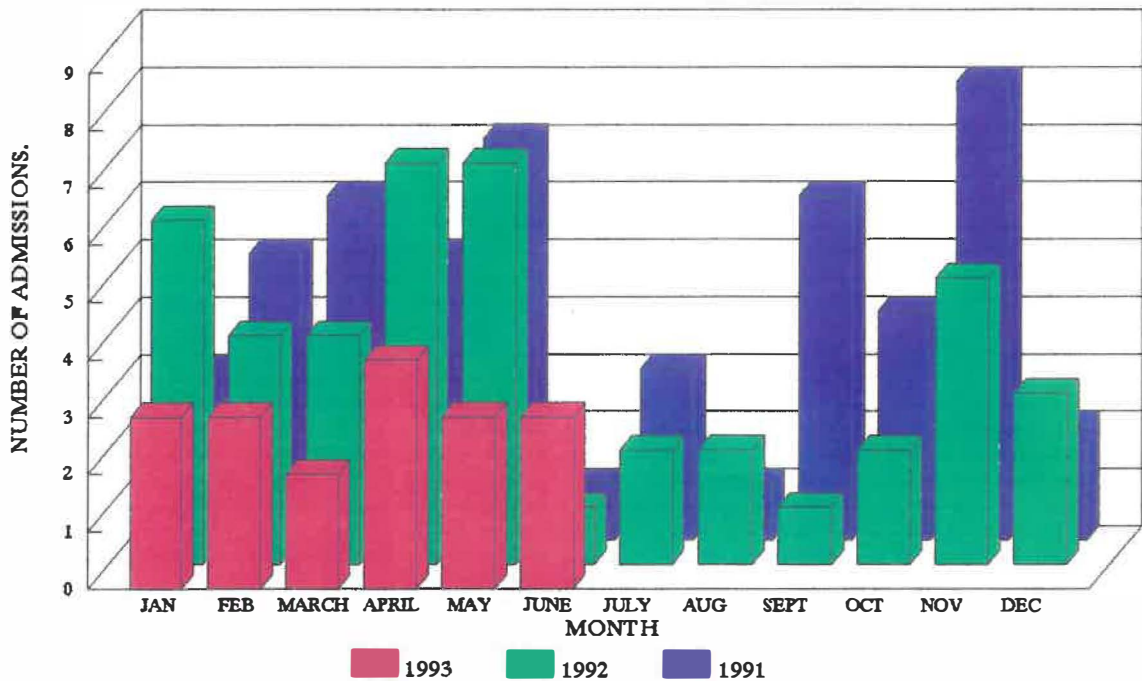
GRAPH 2.1

PARASUICIDE/ATTEMPTED SUICIDE HOSPITAL ADMISSIONS  
MALES UNDER 18.

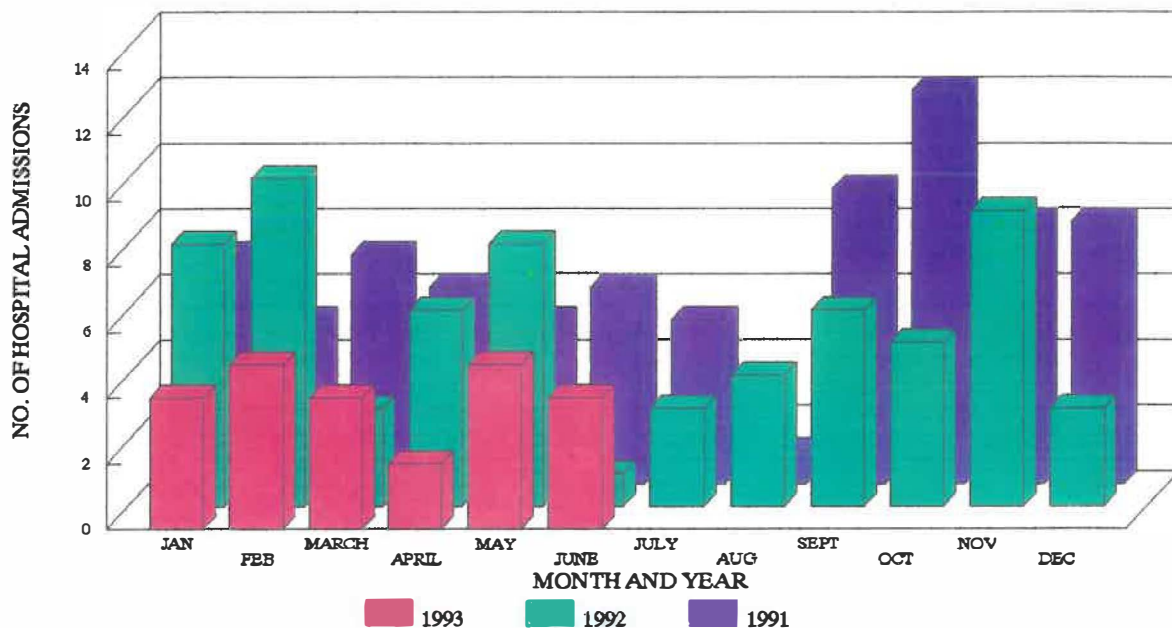


GRAPH 2.2

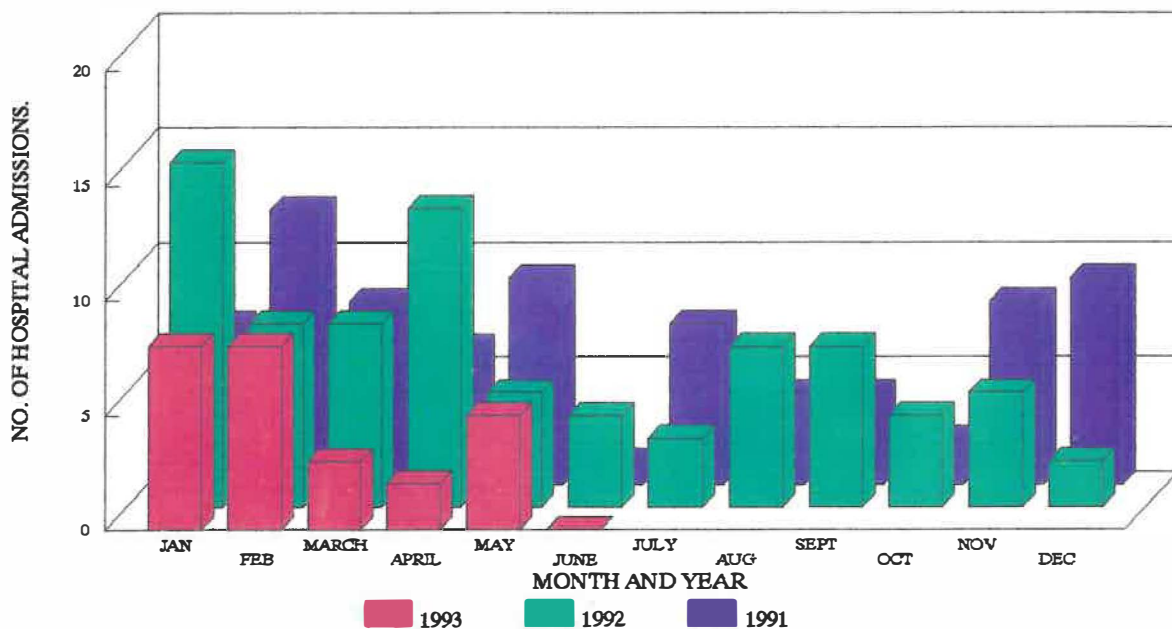
PARASUICIDE/ATTEMPTED SUICIDE HOSPITAL ADMISSIONS  
MALES OVER 18



GRAPH 3.1 PARASUICIDE / ATTEMPTED SUICIDE HOSPITAL ADMISSIONS :  
FEMALES UNDER 18.



GRAPH 3.2 PARASUICIDE / ATTEMPTED SUICIDE HOSPITAL ADMISSIONS :  
FEMALES OVER 18



#### **4.1 DESCRIPTION OF THE DATA : MEAN DIFFERENCES.**

##### **(i) Age and Gender differences over time.**

This analysis will start by comparing the two groups of adolescents (i.e those under eighteen, (referred to as - 18), and those over eighteen, (referred to as 18+) in order to assess their differences. The rationale for dividing the data into these groups has already been explained, and this section will examine the differences between the two groups. Analysis of differences in parasuicide hospital admissions for both the pre-intervention period (Table 4a) and the entire period of the study (Table 4b) are assessed by means of a t-test of the mean differences.

**TABLE 4(a)**  
Mean comparison between -18 and 18+ adolescents.  
Sample size : 21 months (January 1991 - September 1992).

<i>Age and gender</i>	<i>Mean</i>	<i>Std. Error</i>	<i>t-statistic</i>	<i>Prob &gt; t</i>
Overall: -18 vs 18+	-2.714	1.165	-2.329	0.0304
Males: -18 vs 18+	-1.809	0.434	-4.166	0.0005
Females: -18 vs 18+	-0.905	0.936	-0.967	0.3452

**TABLE 4(b)**  
Mean comparisons between -18 and 18 +  
Sample size : 30 Months (January 1991 - June 1993)

<i>Age and gender</i>	<i>Mean</i>	<i>Std. Error</i>	<i>t-statistic</i>	<i>Prob &gt; t</i>
Overall : 18 - vs 18 +	-2.167	0.852	-2.541	0.0166
Males : 18 - vs 18 +	-1.667	0.343	-4.851	0.0001
Females : 18 - vs 18 +	0.500	0.709	0.705	0.4864

The analysis reveals that there are differences in parasuicide hospital admissions for the two groups. There are fewer admissions from adolescents under 18 years of age ( $p < 0.05$ ).

When examining gender differences, however, the data reveals that this result is mainly due to the significant difference between male adolescents in the two age groups. Thus, for male adolescents there were significantly fewer parasuicide hospital admissions from the under 18 age group ( $p < 0.01$ ). When examining the female adolescent group there is no significant difference in parasuicide hospital admissions for female adolescents under 18 years of age and those over 18 years of age.

**(ii) Gender Differences**

An examination of gender differences reveals that the ratio of Female : Male admissions over the period of the study is approx 3:1. The t-test was utilised in order to determine whether there is a significant difference in parasuicide hospital admissions between the two groups. The results are outlined below.

**TABLE 5(a) : Pre-Intervention period.  
Mean Comparisons between males and females within each group.  
Sample size : 21 months (January 1991 - September 1992).**

<i>Age and gender</i>	<i>Mean</i>	<i>Std Error</i>	<i>t-statistic</i>	<i>Prob &gt; t</i>
Overall : M/F (-18)	-3.857	0.610	-6.317	0.0001
Overall : M/F (18+)	-2.952	0.685	-4.311	0.0003

**TABLE 5(b) : Entire period of study.  
Mean Comparisons between males and females within each group.  
Sample size : 30 months (January 1991 - June 1993)**

<i>Age and gender</i>	<i>Mean</i>	<i>Std Error</i>	<i>t-statistic</i>	<i>Prob &gt; t</i>
Overall : M/F (-18)	-3.533	0.495	-7.1333	0.0001
Overall : M/F (18+)	2.367	0.572	-4.135	0.0003

The results of Tables 5(a) and 5(b) indicate the there were significantly more female than male hospital admissions. This was reported for both age groups for the pre-intervention period ( $p < 0.01$ ) and for the entire period of the study ( $p < 0.01$ ).

**TABLE 6 (a) 9 MONTH PRE VS POST-INTERVENTION ANALYSIS.**

(TABLE 6 (a) AVERAGES DATA FROM BOTH 1991 AND 1992 WHERE THIS IS AVAILABLE, I.E JAN - JUNE 1991 AND 1992).

**(i) Pre - Intervention.**

MONTH	- 18	18 +	TOTAL
OCT. '91	17	6	23
NOV. '91	13	16	29
DEC. '91	9	11	20
JAN. '91/92	10.5	15.5	26
FEB. '91/92	8.5	14.5	23
MARCH '91/92	8	13	21
APRIL '91/92	7.5	15.5	23
MAY '91/92	11.5	14	25.5
JUNE '91/92	4.5	3.5	8

**(ii) Post - Intervention**

MONTH	- 18	18 +	TOTAL
OCT. '92	7	6	13
NOV. '92	10	10	20
DEC. '92	7	5	12
JAN. '93	7	11	18
FEB. '93	7	11	18
MARCH '93	5	5	10
APRIL '93	3	6	9
MAY '93	7	8	15
JUNE '93	4	3	7

**(iii) Differences (ii) - (i)**

- 18	18 +	TOTAL
-10	0	-10
-3	-6	-9
-2	-6	-8
-3.5	-4.5	-8
-1.5	-3.5	-5
-3	-8	-11
-4.5	-9.5	-14
-4.5	-6	-10.5
-0.5	-0.5	-1

**TABLE 6 (b)**

TABLE 6 (b) UTILISES DATA FROM ONLY ONE YEAR PREVIOUSLY IN ORDER TO DO PRE - POST COMPARISONS.

**(i) Pre - Intervention.**

MONTH	- 18	18 +	TOTAL
OCT. '91	17	6	23
NOV. '91	13	16	29
DEC. '91	9	11	20
JAN. '92	11	21	32
FEB. '92	11	12	23
MARCH '92	4	12	16
APRIL '92	7	20	27
MAY '92	14	12	26
JUNE '92	3	5	8

**(ii) Post - Intervention**

MONTH	- 18	18 +	TOTAL
OCT. '92	7	6	13
NOV. '92	10	10	20
DEC. '92	7	5	12
JAN. '93	7	11	18
FEB. '93	7	11	18
MARCH '93	5	5	10
APRIL '93	3	6	9
MAY '93	7	8	15
JUNE '93	4	3	7

**(iii) Differences (ii) - (i)**

- 18	18 +	TOTAL
-10	0	-10
-3	-6	-9
-2	-6	-8
-4	-10	-14
-4	-1	-5
1	-7	-6
-4	-14	-18
-7	-4	-11
1	-2	-1

## 4.2 PRE - POST - INTERVENTION DIFFERENCES.

In order to determine whether there was a decline in parasuicide hospital admissions a number of analyses were performed using the SAS system (SAS Institute Inc, 1989). Initial analysis consisted of comparing the 9 month post-intervention period with a corresponding 9 month period in previous years. Table 6(a) and (b) (pg 67) outline parasuicide hospital admissions for these time periods. T-tests of the pre and post-intervention period were computed taking age and gender into account. In comparing the pre and post-intervention data, Table 7 (a) utilised data from both 1991 and 1992 for the pre-intervention period, averaging data where this was available for the same month in both years (i.e Jan to June 1991 and 1992).

TABLE 7(a)  
Pre-Post comparisons (sample size : 9 months)

Age / gender	Mean	Std. Error	t-statistic	Prob > t
- 18 & 18 +	8.500	1.247	6.815	0.0001
- 18 Overall	3.611	0.912	3.959	0.0042
18 + Overall	4.889	1.053	4.641	0.0017
- 18 Males	1.055	0.738	1.430	0.1905
18 + Males	1.555	0.642	2.421	0.0418
- 18 Females	2.555	0.868	2.945	0.0186
18 + Females	3.333	0.961	3.468	0.0085

The results of the table can be summarised as follows: There was a decrease in parasuicide hospital admissions for all adolescents in the post - intervention period. This was highly statistically significant ( $p < 0.01$ ) for both groups of adolescents, those under 18 years of age and those over 18 years of age. When examining gender, the decrease is larger in magnitude for females than males, and there is a significant decline in parasuicide hospital admissions in the post-intervention period for both groups of female adolescents. In the post-intervention period, although there is a decrease in parasuicide admissions for all male adolescents, this is significant only for male adolescents over 18 years of age.

A potential drawback with this data is that for the months January to June there are two observations in the pre-intervention period (one for 1991 and one for 1992), and these were averaged. In order to cross-check results, another analysis is performed utilising data only from one year in the pre-intervention period (October 1991 to June 1992). The results of this comparison are given in Table 7(b).

**TABLE 7(b)**  
Pre - Post comparisons (sample size : 9 months)

<i>Age and gender</i>	<i>Mean</i>	<i>Std. Error</i>	<i>t-statistic</i>	<i>Prob &gt; t</i>
18 - & 18 +	9.111	1.670	5.454	0.0006
18 -	3.555	1.1679	3.044	0.0160
18 +	5.555	1.491	3.724	0.0058
18 - Males	1.000	0.799	1.251	0.2462
18 + Males	1.666	0.667	2.500	0.369
18 - Females	2.555	1.131	2.258	0.0539
18 + Females	3.889	1.378	2.820	0.0225

The results of Table 7(b) indicate that there was a significant decrease in parasuicide hospital admissions for all adolescents in the post-intervention period. When examining gender, the results are similar to those of Table 7(a), i.e the decrease is of greater magnitude for females than for males.

Tables 7(a) and 7(b) do however, show differences in significance levels for the age and gender distributions. Whereas Table 7(a) indicates that there was a significant decrease ( $p < 0.05$ ) in parasuicide hospital admissions for both groups of male adolescents, Table 7(b) indicates that no significant decrease in parasuicide hospital admissions occurred for these groups. In addition, while both tables indicate that there was a significant decrease in parasuicide hospital admissions for all female adolescents, Table 7(a) shows a more significant decrease for females over 18 years of age ( $p < 0.01$ ) than Table 7(b) ( $p < 0.05$ ).

In conclusion, this indicates that results are more significant when longer periods of base line data are collected, (as mentioned above, Table 7(a) utilised data from both 1991 and 1992 and averaged data where this was available for more than one month).

The analysis so far has compared data from 9 month periods in order to obtain corresponding pre and post - intervention time frames (October to June). This was done in order to overcome the difficulty of seasonal variations in parasuicide admissions. The analysis has therefore excluded data for July, August and September 1991 and 1992. In an attempt to utilise all the data from the pre - intervention period a number of Simple Linear Regression models are built. These models use pre-intervention parasuicide admission data and from the resulting trend a prediction about admission rates for the post-intervention period is plotted, with confidence intervals built around the predicted values. Several models were fitted for the age and gender groups, the one with the best fit is presented.

In building the regression models, the trend variable, taking the values 1, 2, 3, ..., 20, 21 is obtained from January 1991 (month 1) to September 1992 (month 21). In order to take account of the seasonal fluctuations outlined on page 57, the seasonality variable built in to the model takes the value 0 for the months June, July and August (low risk months for suicidal behaviour) and the value 1 otherwise (higher risk months). By measuring the nature of the pre-intervention trends in parasuicide hospital admissions, predictions are made about parasuicide hospital admissions in the post-intervention period (months 22 - 30). The raw coefficients and r-squared values derived from the computation are indicated in the Statistical Appendix Two.

**Group 18 -**

$$\text{Parasuicide hospital admissions} = 5.274 + (5.002 * \text{Seasonality}) - (0.047 * \text{Trend})$$

(1.94)	(1.527)	(0.144)
--------	---------	---------

**Males 18 -**

$$\text{Parasuicide Hospital Admissions} = 1.788 + (1.168 * \text{Seasonality}) - (0.035 * \text{Trend})$$

(1.15)	(0.067)	(0.902)
--------	---------	---------



**Females 18 -**

$$\text{Parasuicide Hospital Admissions} = 3.485 + (3.833 * \text{Seasonality}) - (0.011 * \text{Trend})$$

(1.40)      (1.102)                      (0.114)

**Group 18 +**

$$\text{Parasuicide hospital admissions} = 5.985 + (7.069 * \text{Seasonality}) - (0.001 * \text{Trend})$$

(2.54)      (1.999)                      (0.149)

**Males 18 +**

$$\text{Parasuicide Hospital Admissions} = 2.125 + (3.234 * \text{Seasonality}) - (0.035 * \text{Trend})$$

(1.14)      (0.889)                      (0.066)

**Females 18 +**

$$\text{Parasuicide Hospital Admissions} = 3.860 + (3.835 * \text{Seasonality}) + (0.036 \text{ Trend})$$

(2.02)      (1.584)                      (0.188)

(standard errors of estimate in parentheses)

Based on the Regression Model, the mean predicted values (denoted by x) for the post-intervention period (variables 22 - 30 on the graphs), with their 95% confidence intervals and the actual observed values in the post-intervention period (denoted by O) are shown in Figures 8 (a-f) (Statistics Appendix One).

An examination of Graphs 8(a - f) indicate that in the post-intervention period;

- (a) For adolescents under 18 years of age, actual parasuicide hospital admission rates (denoted by o) fall below the mean predicted values (x), but within the 95% confidence band. This indicates that no significant decline in parasuicide hospital admissions occurred for this group as a whole. When examining gender, however, a different result emerges.
- (b) Parasuicide and attempted suicide hospital admissions do not decline significantly for male adolescents under 18 (Graph 8 (b)) in the post-intervention period, (the actual admission rates are all within the 95% confidence band and are scattered around the predicted values).

- (c) For females under 18 years of age (8c) there are several months where the number of admissions fall below the expected value and also the 95% confidence band, indicating that for this group there was a significant decrease in parasuicide / attempted suicide hospital admissions in the post-intervention period.**
- (d) Graph 8(d) indicates that a number of hospital admissions rates (denoted by o) for adolescents over 18 fall below the predicted values (x) and the 95% confidence band, indicating that for this group as a whole there is a significant decrease in parasuicide / attempted suicide hospital admissions.**
- (e) The decrease in hospital admissions is significant for female adolescents over 18 (a number of admissions (o) fall below the predicted values (x) and the 95% confidence level).**
- (f) For male adolescents however, most hospital admission rates fall within the 95% confidence level, indicating no significant decrease in the post-intervention period.**

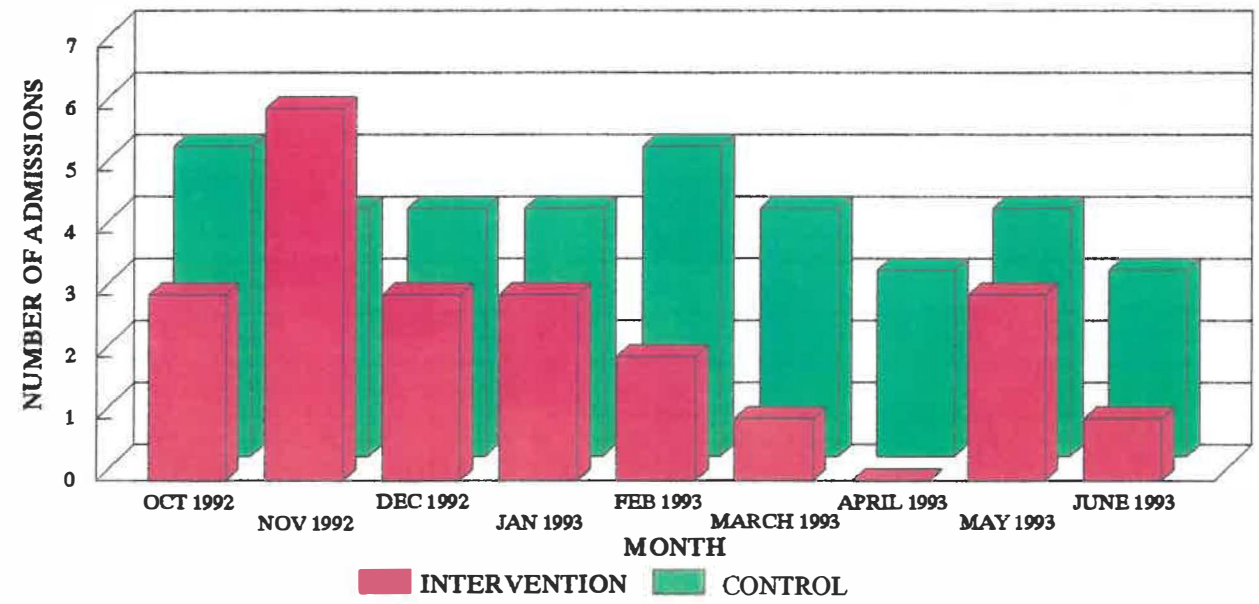
**In summary, the Regression analyses reveal that there is decline in parasuicide / attempted suicide hospital admissions in the post intervention period, particularly for female adolescents (both under and over 18 year old age groups).**

### 4.3 POST INTERVENTION DIFFERENCES : EXPERIMENTAL VS CONTROL

TABLE 9 : INTERVENTION VERSUS CONTROL GROUP.

	MALES		FEMALES	
	CONTROL	EXPERIMENTAL	CONTROL	EXPERIMENTAL
OCT 1992	2	0	3	2
NOV 1992	0	1	4	5
DEC 1992	2	2	2	1
JAN 1993	2	1	2	2
FEB 1993	1	1	4	1
MARCH 1993	1	0	3	1
APRIL 1993	1	0	2	0
MAY 1993	1	1	3	2
JUNE 1993	0	0	3	1
<b>TOTALS</b>	<b>10</b>	<b>6</b>	<b>26</b>	<b>15</b>

GRAPH 9.1 : PARASUICIDE / ATTEMPTED SUICIDE HOSPITAL ADMISSIONS. INTERVENTION VERSUS CONTROL GROUP.



**Table 9 and Graph 9.1 (pg. 72) outline data collected for both the experimental and control group for the post-intervention period. From an analysis of the Graph 9.1 it is clear that there were fewer parasuicide hospital admissions from the experimental group (adolescents who participating in the intervention).**

**A t-test is utilised to examine differences between the experimental and control group. The results are outlined below;**

**TABLE 9(a)**  
**Mean comparisons between Intervention and Control Groups**

	<i>Mean</i>	<i>Std. Error</i>	<i>t-statistic</i>	<i>Prob &gt; t</i>
<b>Exp : Control</b>	<b>-1.666</b>	<b>0.552</b>	<b>-3.015</b>	<b>0.0167</b>
<b>Males</b>	<b>0.444</b>	<b>0.294</b>	<b>-1.512</b>	<b>0.1690</b>
<b>Females</b>	<b>-1.222</b>	<b>0.400</b>	<b>-3.051</b>	<b>0.0158</b>

**The negative sign in mean differences indicates that a decrease in parasuicide and attempted suicide hospital admissions occurred for the intervention group. This result is statistically significant when comparing experimental and control groups as a whole ( $p < 0.05$ ). When examining gender, there are significantly fewer female admissions from the experimental group ( $p < 0.05$ ). Although there are fewer admissions from males in the experimental group, this is not statistically significant.**

#### **4.4 TRENDS IN TOTAL HOSPITAL ADMISSIONS**

Table 10 and Graph 10.1 (pg. 75) outline total hospital admissions over the entire period of the study. In order to examine trends in total hospital admissions several analyses were performed.

- (a) An ANOVA was performed using the SAS system (see stats appendix 2).  $F = 0,348$  indicates that is no significant difference in total hospital admissions in the pre and post-intervention periods. ( $F \text{ statistic} < F + 0.5601$ ).
- (b) In an attempt to further confirm the results above, a Simple Linear Regression model is fitted to the first 21 months (pre-intervention period) and a forecast built for the post intervention period. The fitted model is;

$$\text{Hospital Admissions} = 1452.60 - (10.768 * \text{Trend}) + (107.08 * \text{Seasonality})$$

$(77.37) \quad (5.27) \quad (64.54)$

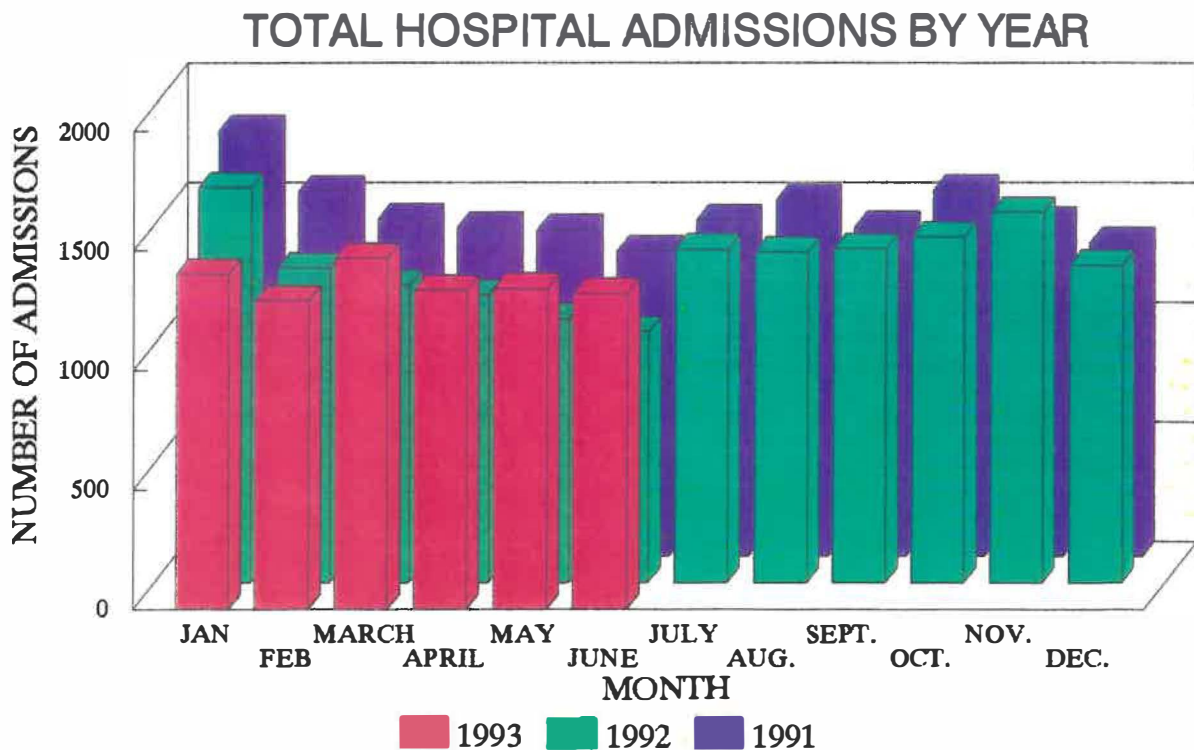
(Standard errors of the estimates in parentheses).

Graph 10 (a) (Stats Appendix One) indicates that, although there are a number of data points (o) that are higher than expected (x) almost all of the observed values fall within the confidence bands. Thus, total hospital admissions do not decrease in the post-intervention period and the decrease in parasuicide / attempted suicide hospital admissions cannot be attributed to a general decline in admissions to the hospital, but signify a real decrease in parasuicide behaviour among this population group.

TABLE 10 : TOTAL HOSPITAL ADMISSIONS.

MONTH	1991	1992	1993
JAN	1779	1650	1402
FEB	1526	1317	1290
MARCH	1410	1245	1468
APRIL	1373	1204	1336
MAY	1363	1104	1342
JUNE	1276	1050	1323
JULY	1405	1395	
AUG.	1489	1385	
SEPT.	1376	1396	
OCT.	1529	1445	
NOV.	1397	1548	
DEC.	1312	1328	

GRAPH 10.1



#### **4.5 SUMMARY.**

- (a). Descriptive statistics indicate that adolescents under 18 years of age had fewer parasuicide hospital admissions than adolescents over 18 years of age ( $p < 0.05$ ). This is mainly attributable to the significant difference between male adolescents; males under 18 had significantly fewer admissions than males over 18 ( $p < 0.01$ ). There were no significant differences in hospital admissions for female adolescents.
- (b). Gender differences revealed that there were more female than male parasuicide and attempted suicide hospital admissions, both pre and post intervention. This was the finding for both female adolescents under 18 ( $p < 0.01$ ) and over those over 18 ( $p < 0.01$ ).
- (c). Pre-post intervention differences were analysed by means of t-tests and regression analyses. Data indicates that there was a decline in parasuicide and attempted suicide admissions for all adolescents in the post-intervention period. This result is statistically significant for adolescents under 18 as a whole ( $p < 0.01$ ), but when examining gender, this difference is attributable to the significant decline in female admissions amongst this age group. Although male parasuicide admissions decreased in the post-intervention period, this was not statistically significant. For adolescents over 18 years of age, there was a significant decrease in both male and female parasuicide / attempted suicide hospital admissions.
- 
- (d). A comparison of the parasuicide / attempted suicide hospital admissions from both the intervention and control group in the post-intervention period indicates that there were significantly less hospital admissions from the experimental group ( $p < 0.05$ ). When examining gender differences, however, the result is statistically significant only for the female experimental group ( $p < 0.05$ ). Although there were fewer admissions from the male experimental group, this was not a significant difference.

**(e) Analyses of total (general) hospital admissions indicate no difference in admissions for the pre and post-intervention period (F statistic < F +0.5601). This indicates that the decrease in parasuicide hospital admissions is not merely indicative of a trend of declining admissions to the hospital, but is a real decline in parasuicide and attempted suicide amongst Indian adolescents in this area.**



## **CHAPTER 5            DISCUSSION**

Concern over the high rate of suicidal behavior amongst adolescents has prompted a shift in research focus. Proactive measures aim to reach adolescents at risk before a suicidal crisis occurs. The present research utilised the educational system in implementing a primary health care, community based design in an attempt to reduce suicidal behaviour (particularly parasuicide but also attempted suicide) amongst Indian adolescents in this region. The prevention programme aimed to train counsellors in the area of suicide and parasuicide prevention through;

- (a) Ensuring a sound knowledge about suicide and suicidal behaviour.
- (b) Detoxifying negative attitudes towards suicidal behaviour.
- (c) Training counsellors to recognise adolescents at risk for suicidal behaviour.
- (d) Skills training in the area of crisis intervention.
- (e) Providing resources for referral of adolescents at risk.
- (f) Provision of prevention programmes for implementation with pupils in the schools.

A primary health care, community based intervention was seen to be in the community's best long term interests, and as such the intervention attempted to follow principles and practices of this approach (Section 2.11). Primary health care approaches seek to empower community members to participate in the provision of their health care services. Consultation was viewed as an important strategy in the intervention programme, the purpose of the intervention was to consult with the community and train them in the delivery of suicide / parasuicide prevention skills. The project attempted to use a competencies / resource paradigm (Gesten and Jason,, 1987), focusing on building strengths and competencies in the community. Freeman (1992) draws a distinction between top-down and bottom-up approaches to the provision of mental health services. Traditionally health care services have used a "top-down" approach, focusing on health services as the most important factor in health improvements, Primary Health Care emphasises a "bottom-up"

**approach. This means that people participate in decisions which affect their lives, in order to facilitate a sense of empowerment and control over their lives. To facilitate this, counsellors did not meet with the school pupils directly, but trained intermediaries (school counsellors) in parasuicide prevention.**

**School-based programmes have been criticised for the lack of outcome evaluation, therefore this study attempted to follow recommendations in the literature (Garland and Zigler, 1993; Kalafat and Elias, 1991; Ryerson, 1990; 1991) that comprehensive programme evaluation is necessary. In an attempt to ensure comprehensive evaluation, numerous measures have been utilised. Initial evaluation included the following aspects:**

- (a) The video designed specifically for use in the workshop was subject to independent evaluation and was found to promote the idea that suicide is not an effective form of behaviour. (Cockle, 1992).**
- (b) Pre and post-intervention attitude and knowledge changes were assessed immediately following the workshop attended by school counsellors at the end of September 1992 (Burns and Davies, 1992). This evaluation indicated that counsellor attitudes towards and knowledge about suicide and suicidal behaviour changed in a positive manner as a result of participation in the workshop.**
- (c) Participant evaluation of the workshop aimed at assessing "consumer satisfaction", which Kalafat and Elias (1991) state is important in overall evaluation. Evaluation revealed that all counsellors felt the programme was helpful in providing them with skills which would help them identify adolescents at risk and deal with a suicidal crisis. Most counsellors indicated that the majority of the material presented was new to them, and as such the programme was useful in imparting knowledge. Counsellors rated the crisis intervention and role play sections as the most useful part of the programme. Suggestions offered for improving the programme included; holding follow up workshops, implementing workshops for parents and providing real case examples. Timing was seen as the most inconvenient aspect of the programme.**

**This thesis forms part of a two-pronged approach at evaluating the long-term effectiveness of the intervention. An adjacent study (Davies, 1995) seeks to analyse long-term attitude and knowledge change amongst workshop participants, and amongst the school-pupils participating in programmes run by these counsellors.**

**The present study has attempted to follow recommendations (Garland and Zigler, 1993; Kalafat and Elias, 1992) that behavioural measures are necessary in evaluating the effectiveness of school based programmes. For an intervention to be effective changes in attitudes and knowledge should translate into changes in behavior, as measured by changes in parasuicide admission rates at a local general hospital across pre- and post-intervention periods. The recently abolished, immoral apartheid system in South Africa led to the establishment of hospitals serving distinct race groups. The hospital from which data was drawn is the predominant hospital serving the Indian adolescents in the region.**

## **5.1 ANALYSIS OF RESULTS.**

**Although parasuicide is the main behaviour under study, the data includes admissions which were categorised as parasuicide, attempted suicide and deliberate overdose. Most admissions (90%) categorised as 'suicide and self-inflicted injury' were overdose by ingestion and appeared to be relatively non-fatal attempts. However, difficulties inherent in determining lethality of the method chosen and intentionality of the suicidal behaviour have already been discussed (Section 2.9(i)), and were impossible to determine by a retrospective examination of hospital data.**

**Data analysis revealed that adolescents over 18 are at higher risk for parasuicide and attempted suicide than those under 18. This holds true for both male and female adolescents. This might be explained in light of research indicating that arguments with parents over choice of a relationship partner is a major precipitant in cases of suicidal behavior amongst Indian adolescents (Wassenaar, 1987; Pillay, 1991). Adolescents in the**

older age group are more likely to experience conflict with parents over relationship partners.

Female parasuicide and attempted suicide hospital admissions were significantly higher than male admissions, both pre and post intervention. This result is consistent with research indicating that females attempt suicide (Hawton, 1986; Wetzel, Reich, Murphy, Province and Miller, 1987) and parasuicide (Trautman, 1986) more often than males. In addition, an examination of the admission records indicated that the most common method of parasuicide / attempted suicide in this population was overdose of a variety of pills, and this is consistent with data indicating that females tend to prefer less violent methods in attempting suicide (Hawton, 1986), and the most common method is taking pills (Gispert, Davis, Marsh and Wheeler, 1987; Garfinkel et al, 1982).

The results of the study are significant in a number of respects and are discussed below in reference to the hypotheses proposed in the study.

- (a) Hypothesis One : Following implementation of the programme, parasuicide admissions at the local hospital set up to serve the Indian population, will decline when compared with a similar time period in preceding years.

Data confirms this hypothesis - parasuicide/attempted suicide admissions decline significantly in the post-intervention period. In an attempt to take seasonal variations in parasuicide admissions into account, data analysis consisted of month by month comparisons (t-test) and also Regression analyses. Results indicate that there was a decline in adolescent parasuicide and attempted suicide hospital admissions in the post-intervention period for all that age and gender groups. This result is statistically significant for all groups except for males in the under 18 age group. This finding might be explained by research indicating that prevention interventions have more impact on females than on males. A study by Miller, Coombs, Leeper and Barton (1984) indicated that the suicide rate for females under 24 years of age in areas that offered crisis intervention centres

dropped by 55%, whereas in areas without these centers suicide rates among females increased by 85%. Thus, females are more likely to use crisis facilities where these are available. In addition research indicates that females are three times more likely than males to report suicidal ideation or behavior and express their self destructive intent (Bettes and Walker, 1986). Thus, by talking about suicidal intent females are more likely to come to the attention of counsellors and peers trained to notice warning signs, and are more likely to benefit from prevention programmes.

**Hypothesis Two : Parasuicide admissions from adolescents under 18 years of age (school-attending) will show a greater decline than adolescents over 18 years of age.**

It was predicted that adolescents under 18 years of age (many of whom would benefit from prevention programmes implemented in their schools) would show a greater post-intervention decline in parasuicide admissions than those over 18 years of age (and therefore not benefitting from any school-based prevention programme). The results of this study are not consistent with this hypothesis as admissions also declined significantly in adolescents over 18 years of age in the post-intervention period. This, however, might be explained in light of the fact that the Indian community in this region live in a close geographical proximity and transmission of information cannot be controlled for. It may be the case that prevention measures are influencing the community as a whole. In addition, research conducted with this population (Pillay, 1991; Wassenaar, 1987) has utilised family therapy in attempts to prevent suicidal behavior amongst Indian adolescents. Thus, this school-based intervention was implemented at a time when other treatment efforts are also likely to lead to a declining trend in parasuicide/attempted suicide admissions amongst all adolescents in this area.

- (c) **Hypothesis Three : Most parasuicide admissions will come from the comparison group, rather than the experimental group.**

**Analysis of the results indicates that the programme was effective in preventing parasuicide and attempted suicide in adolescents who participated in the programme. In the post-intervention period, there are significantly less parasuicide admissions from the experimental group. On closer examination, however, the data reveals gender differences in effectiveness of the programme. While admissions were lower in the post-intervention period for both male and female adolescents from the experimental group, these were more significant for the female experimental group. This might be explained by the research (Miller et al., 1984) indicating that females are more likely to make use of prevention centers if these are made available. Research has also indicated that there are gender differences in coping styles. Females are more likely to use emotional regulation and social support than males (Stark, Spirito, Williams and Guevremont, 1989). Thus, it appears that females are more likely to seek help for emotional problems. Overholser et al. (1991) point out that teachers and counselors working with adolescents must be made aware of these differences, and they state that intervention efforts aimed at facilitating basic communication skills may be important for adolescent males.**

- (d) **Hypothesis Four : General Hospital Admissions will not decline in the post-intervention period.**

**The data indicates that general hospital admissions did not decline in the post-intervention period. This indicates that the declining trend in parasuicide admissions is not indicative of a general trend of declining admissions to the hospital, but rather a real decline in parasuicide and attempted suicide in this population group.**

### **5.3 Limitations of the study and Recommendations for future research.**

Research into the prevention of suicidal behaviour is a complex and difficult area to study. Literature suggests that school based programmes need to show some measure of effectiveness, in particular analysis of suicide rates, suicide admissions and referrals is lacking in these programmes (Garland and Zigler, 1993; Kalafat et al., 1988) This section will discuss the limitations of this study and discuss how these might be overcome in future research.

#### **(i) *Methodological Limitations.***

Ideally, base line data should be collected for schools in the Experimental and Control groups for the pre-intervention period. In this study, such data was not available and the study therefore rests on the assumption that admissions were the same for both groups prior to intervention. Randomised sampling of schools was utilised in an attempt to overcome this limitation. However, efficient time-series analyses can be conducted when data is available for both groups before and after intervention. In addition establishing base rates for each school could facilitate dividing schools into 'high' and 'low' risk groups, from which random samples could be drawn.

The literature emphasises that the evaluation of school-based suicide prevention measures should include the use of control groups (Smith and Maris, 1986). In this study, schools were divided into lower and upper socio-economic status and from these groups schools were randomly selected for participation in the intervention. In this manner half of the schools in the area formed the experimental group, while the other half formed a control group. Although schools were selected on a random basis, the population size of the schools was not controlled for. Long-term research should attempt to conduct in-depth analysis of schools prior to intervention, and then form experimental and control groups taking factors such as population size, socio-economic status and high risk groups into account.

**(ii) *Determining that effects were caused by the intervention.***

The data suggests that adolescent parasuicide and attempted suicide admissions have declined since implementation of the programme. This declining trend, has, however, occurred for both groups of adolescents (-18 and 18+ ). Although this correlation does suggest programme effectiveness, it does not prove that the change in parasuicide/attempted suicide hospital admissions are entirely due to the intervention. Numerous other variables may have influenced these results, and the Indian adolescent population in Pietermaritzburg has been the focus of treatment efforts in recent years. The significant difference between the experimental and control group in the post-intervention period, however, suggest that, at least for younger adolescents, the intervention had a beneficial effect on preventing suicidal behaviour amongst this population group.

**(iii) *Placebo interventions.***

Studies might attempt to implement placebo interventions in control groups in order to ensure that contact hours with counsellors is equalised. Research designs could divide schools into three groups, i.e. an experimental group (participating in a prevention programme); a control group (in which no intervention is implemented) and a placebo group (in which some activity is implemented by school counsellors). This would be useful in examining which features of prevention programmes are most useful. For example, increased time with school counsellors may have some beneficial impact on school pupils, even if this time is not devoted to suicide prevention or coping skills activities. It may be the case that the mere presence of a caring adult has a positive impact on depressed or suicidal adolescents.

**(iv) *Low level of base line data.***

The process of data collection in the present study was extremely time consuming as each admission file had to be found and examined manually. The introduction of computerised



systems at the hospital should make future data collection easier. Data for the period prior to 1991 had been set aside for destruction and was therefore unavailable for analysis. This resulted in a low level of baseline data. Longer baseline periods are useful for more efficient pre-post-intervention comparison. (i.e, three to four years before implementation of a programme).

**(v) *Longer period of analysis.***

This programme analysed data for a period 9 months after intervention. Longer term evaluation might also prove beneficial in order to determine the length of time that the programme has an effect, and also as an indication of when follow-up workshops are needed.

**(vi) *Dosage.***

Kalafat and Elias, (1991) indicate that the outcome of prevention programmes often reflects an interaction between the dosage (amount) of an intervention and it's salience (relevance) to the target population. In the present study, permission was granted for the programme to be implemented on the condition that the programme was run outside of the school counsellors' normal working hours. This factor, combined with the fact that both consultants and school counsellors had a busy time-table meant that the initial workshop was held on a Saturday morning with one follow-up session held on a weekday afternoon.

This is an important factor, as short-duration interventions have been criticised (Kalafat and Elias, 1991), and in this study the counsellors indicated that the programme should have been longer. In order to overcome this limitation, particularly in light of the seriousness of suicidal behaviour amongst adolescents, schools should make timetable allowances for training of school personnel in the area of suicide and parasuicide prevention.

***(vii) Extent to which programmes were implemented in the schools.***

Primary health care approaches emphasize the training of community members in implementing health care programmes in their community. This was emphasized in the present study, as counsellors were trained in suicide and parasuicide prevention and also equipped with programmes for implementation in the schools. Although implementation of the programmes in schools was subject to follow-up more detailed examination is necessary. In the present study not all counsellors implemented the programmes at the same time and some had a break in the middle of the programme (due to the school holiday in December). Detailed follow-up would aid research in determining whether parasuicide hospital rates declined as more counsellors began implementing programmes, and whether this decline continued throughout the course of the programmes. It would also be useful to keep track of the number of students reached by each counsellor.

***(viii) Parental involvement.***

Research indicates that family factors have an important bearing on suicidal behaviour amongst adolescents (Hawton, 1986), and research in South Africa indicates that cross-generational conflict is associated with parasuicidal behaviour amongst Indian adolescents (Wassenaar, 1987). These factors highlight the importance of including parents in suicide and parasuicide prevention efforts is important. Ryerson (1991) has indicated that programmes need to address parents as well as school staff and pupils, and this has important implications for the present study as a number of counsellors indicated that workshops for parents should be addressed. Time and funding were resources which dictated the issues that could be addressed in the present study. Comprehensive prevention efforts, however, should include interventions aimed at parents.

**(ix) *Postvention.***

Comprehensive programmes should address the issue of postvention in schools, i.e what can be done in the aftermath of youth suicide. Due to limited time available, and the large amount of information to be presented, this study focused on primary and secondary intervention, reaching adolescents at risk before an acute suicidal crisis develops.

**(x) *Combining data on attempted suicide and parasuicide.***

Data from 'suicide and self inflicted injury' admissions at the hospital, indicated that parasuicide and attempted suicide accounts for all admissions under this category, i.e. there were no documented cases of completed suicide, probably because cases of completed suicide would not be taken to the hospital. This indicates that alternate sources should be consulted in order to examine how many actual suicides occurred. For purposes of the present study however, parasuicide, was the main behaviour under examination. Data, however included both attempted suicide and parasuicide as it was difficult to distinguish between these two categories based on examination of hospital records. Thus, hospital records included data on deliberate overdose, parasuicide and attempted suicide. From an examination of the records, it appeared that behaviour was diagnosed as attempted suicide or parasuicide depending on the method utilised, (e.g. slashing wrists was diagnosed as attempted suicide while overdose was diagnosed as parasuicide). Smith and Maris (1986, p.1) point out that "when persons making suicide attempts are studied, an appraisal should be made of the lethality of the attempts. Ordinarily, people who make low-lethality suicide attempts should be studied separately from those who actions are severely life-threatening. If an author combines such groups, then the rationale for doing so should be made explicit". Thus, although although adolescents who attempt suicide and those who are admitted for parasuicide might represent different populations it is not easy to determine lethality of the method, or intention and motivation underlying the behaviour. In order to overcome this limitation, future research might attempt to interview adolescents admitted for suicidal behaviour, and identify which category they fall into thereby ensuring results are not confounded by including data from both populations.

## **CONCLUSION.**

**This thesis attempts to evaluate the effectiveness of a school-based programme designed to prevent suicidal behaviour (particularly parasuicide) amongst Indian adolescents in Pietermaritzburg, Natal. The difficulties inherent in the epidemiologic and statistical research of suicide and suicidal behaviour have been referred to in the study, but the literature stresses that behavioural measures are necessary in evaluating the effectiveness of prevention programmes implemented in schools.**

**Results of this study indicate that there was a significant decrease in parasuicide and attempted suicide hospital admissions in the post-intervention period. This decrease was significant for all male and female adolescents over 18 years of age, and for female adolescents under 18 years of age. Although there was a decrease in parasuicide admissions for male adolescents under 18 years of age this was not significant. When comparing the experimental and control groups, there were significantly less parasuicide hospital admissions from the experimental group. The data indicates that there has been a decline in parasuicide among all adolescents in the area, and the reader is reminded of research and treatment efforts already implemented in the community (Pillay and Wassenaar, 1993,1995; Wassenaar, 1987). Thus, although the data does suggest programme effectiveness it does not prove that the change in admissions is entirely due to the intervention.**

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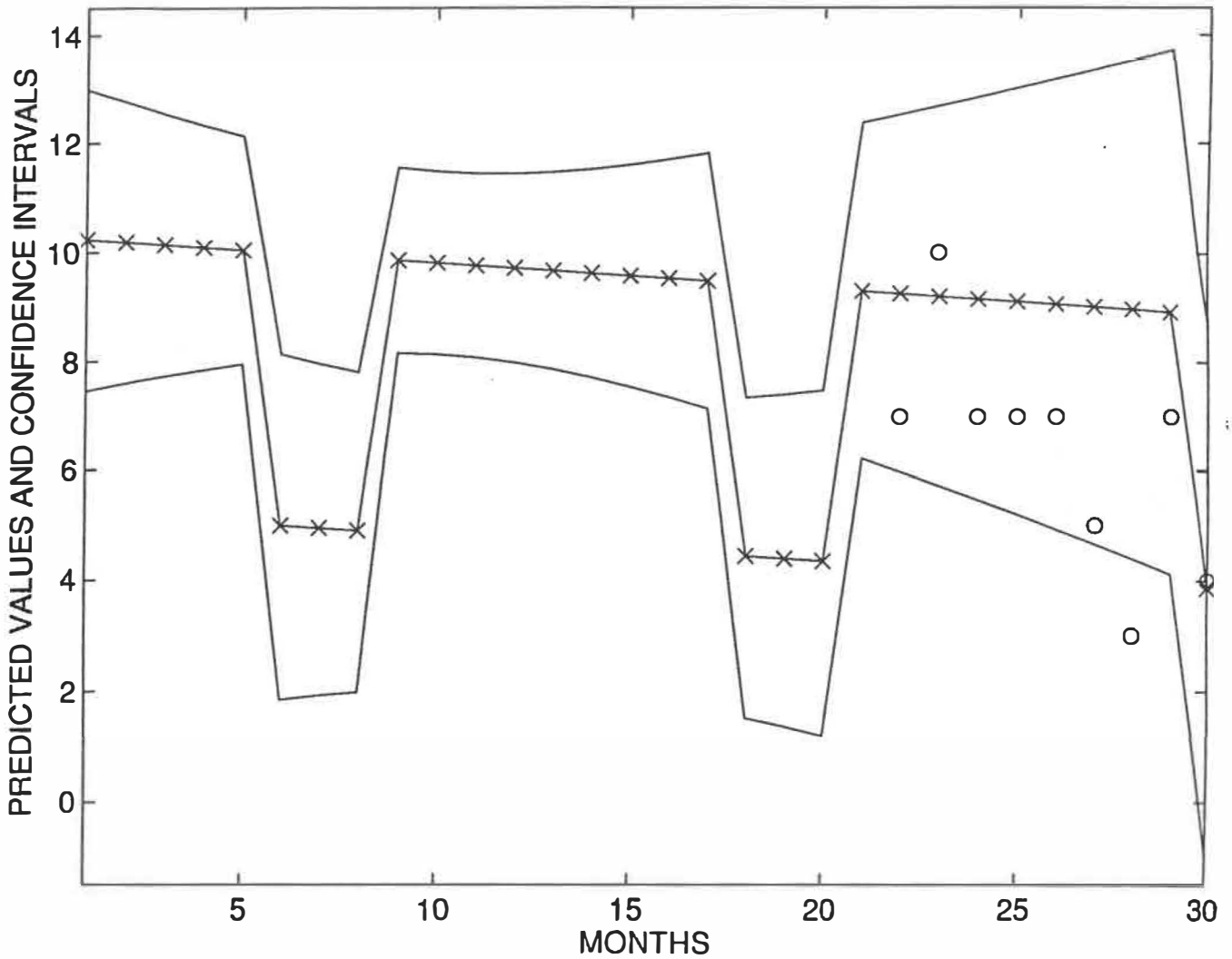
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***STATISTICS APPENDICES***  
***APPENDIX ONE.***

***REGRESSION ANALYSES.***

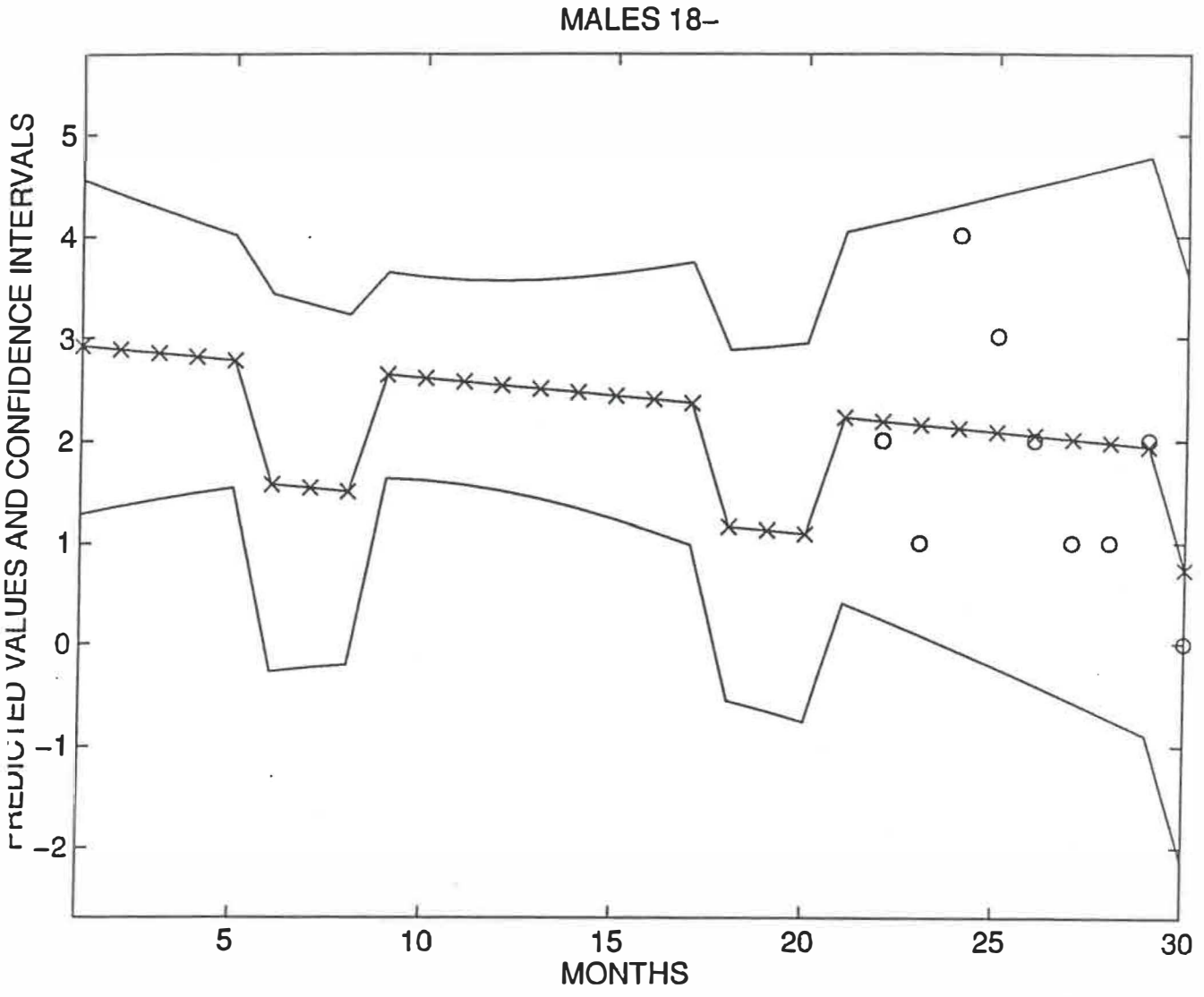
GRAPH 8 (a) : ADOLESCENTS UNDER 18.  
 PREDICTED AND OBSERVED HOSPITAL ADMISSIONS.

GROUP 18-



KEY:	
PRE - INTERVENTION.	MONTHS 0 - 21.
POST - INTERVENTION.	MONTHS 22 - 30.
PREDICTED VALUES	XXXXX
ACTUAL (OBSERVED) VALUES	OOOOO
CONFIDENCE BANDS (95%)	—————

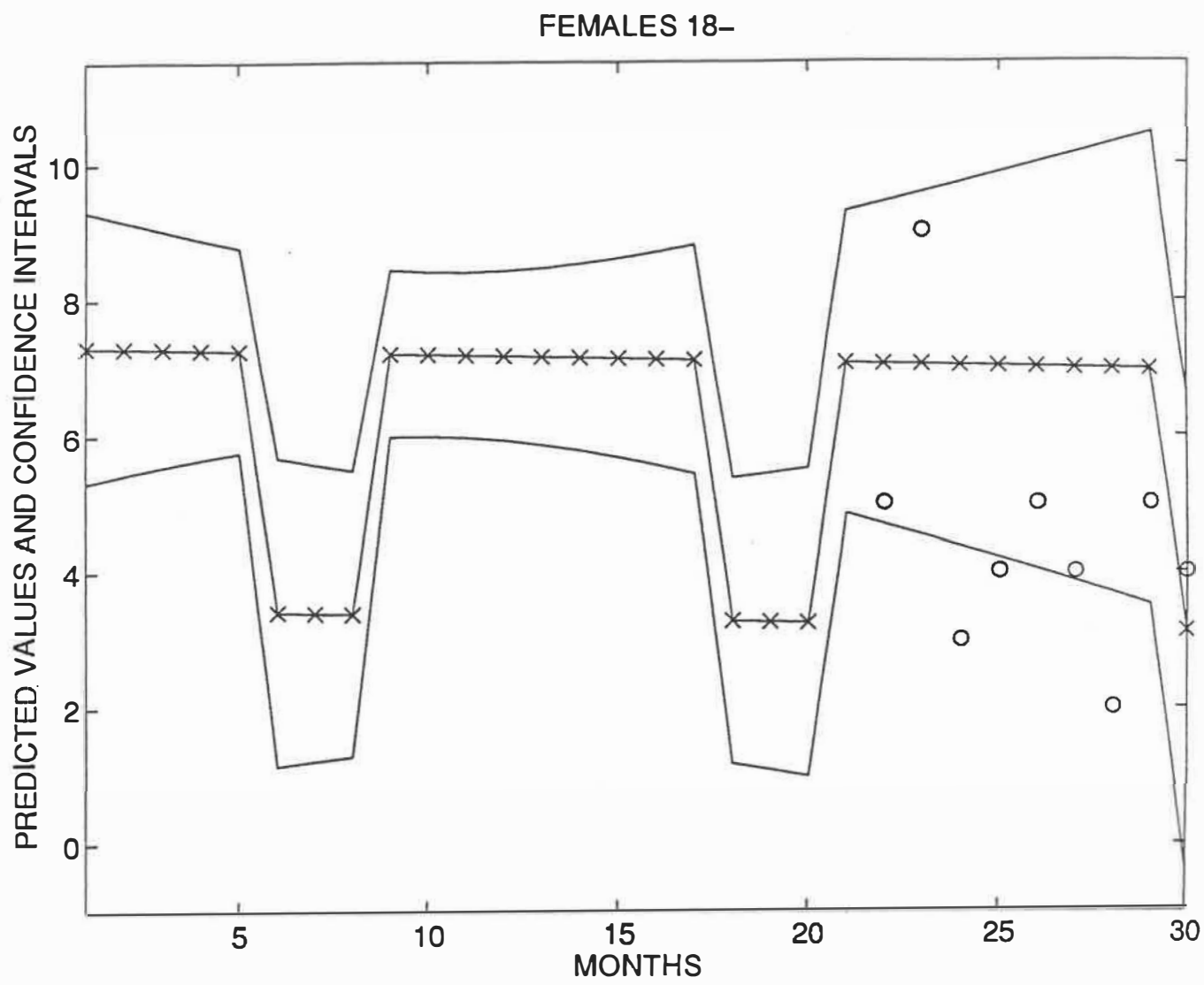
GRAPH 8 (b) : MALE ADOLESCENTS UNDER 18.  
 PREDICTED AND OBSERVED HOSPITAL ADMISSIONS.



KEY:	
PRE - INTERVENTION.	MONTHS 0 - 21.
POST - INTERVENTION.	MONTHS 22 - 30.
PREDICTED VALUES	XXXXX
ACTUAL (OBSERVED) VALUES	OOOOO
CONFIDENCE BANDS (95%)	_____

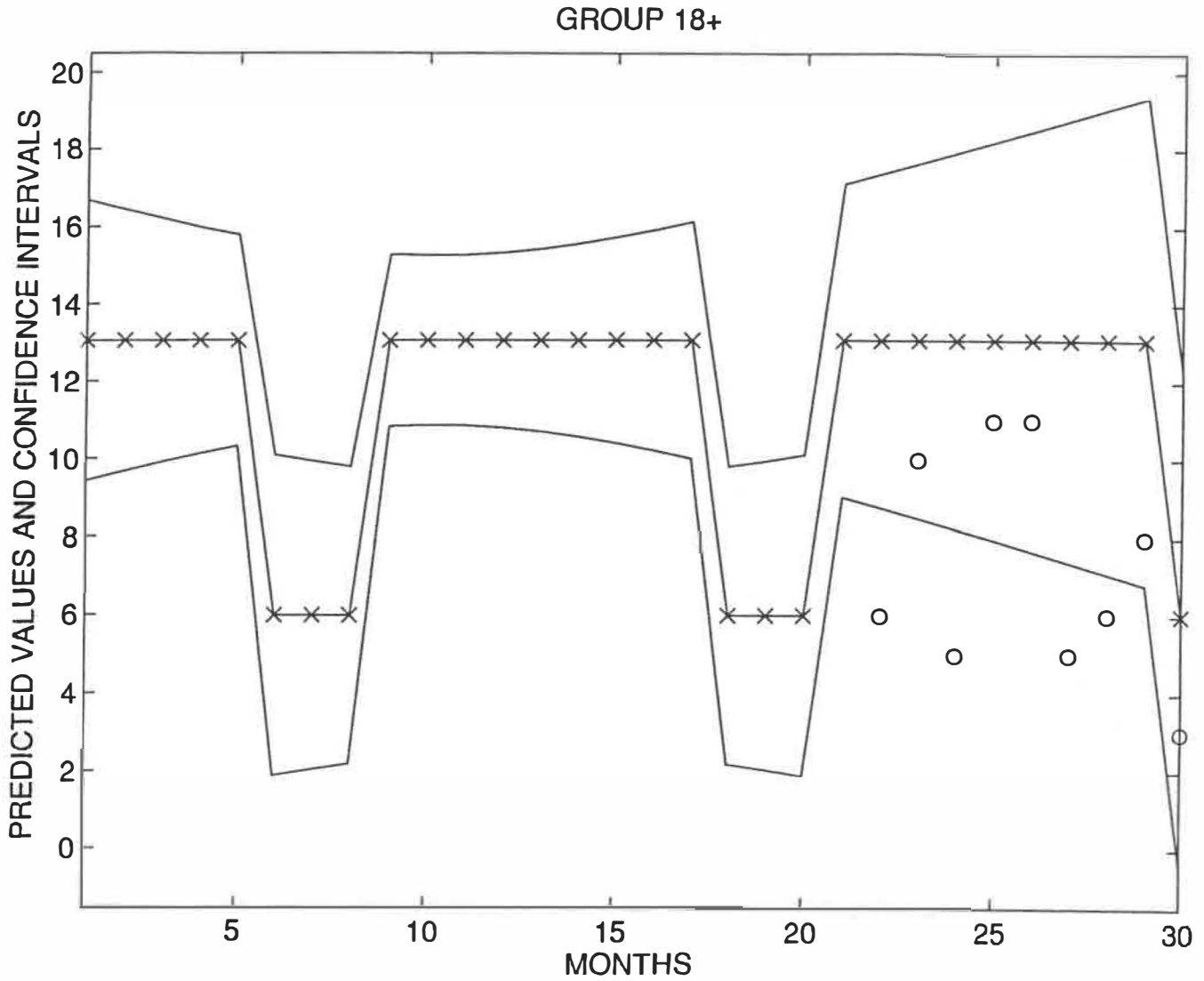


GRAPH 8 (c) : FEMALE ADOLESCENTS UNDER 18.  
 PREDICTED AND OBSERVED HOSPITAL ADMISSIONS.



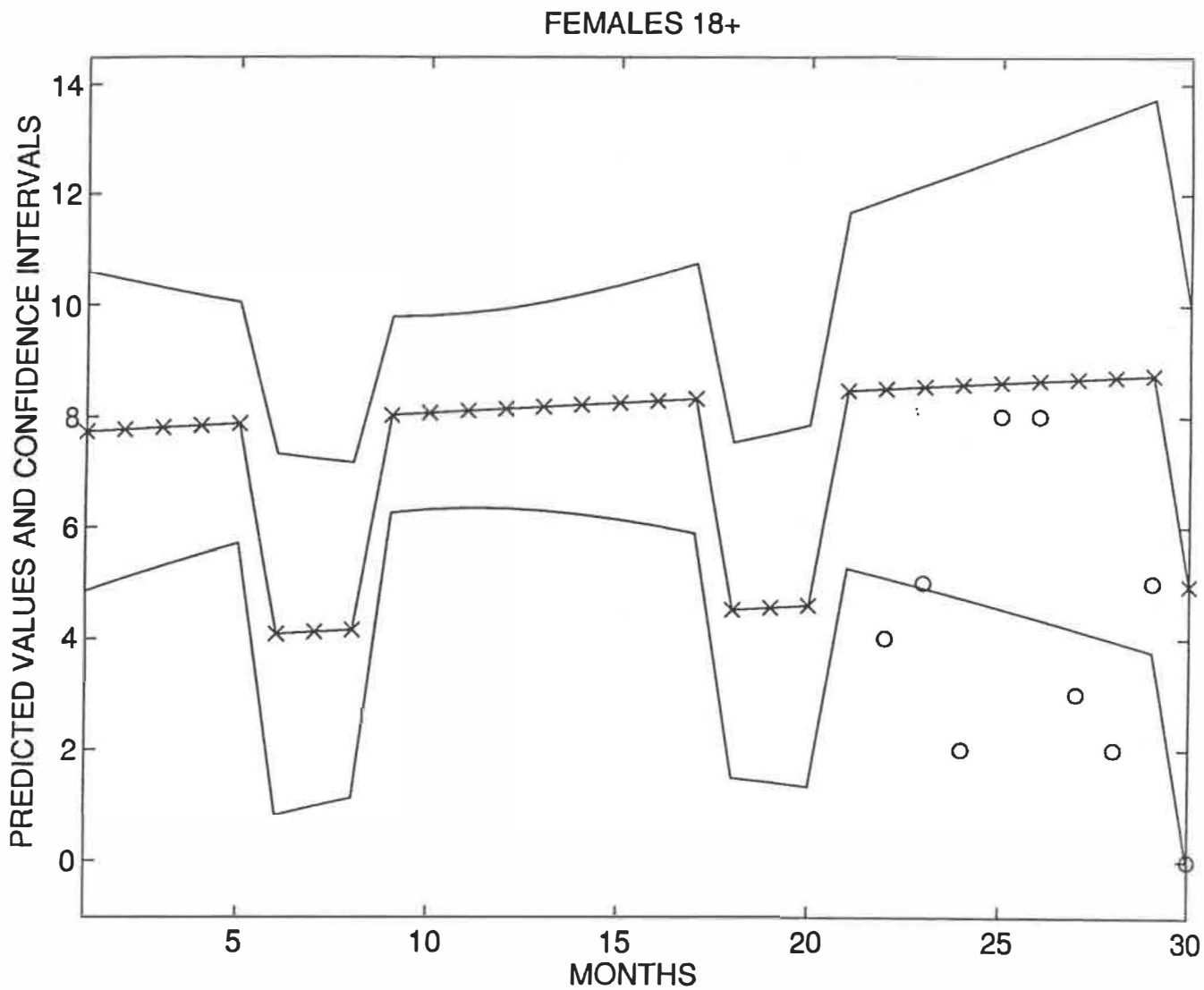
<b>KEY :</b>	
PRE - INTERVENTION	MONTHS 0 - 21.
POST - INTERVENTION	MONTHS 22 - 30.
PREDICTED VALUES	X X X X X
ACTUAL (OBSERVED) VALUES	O O O O O
CONFIDENCE BANDS (95%)	_____

**GRAPH 8 (d) : ADOLESCENTS OVER 18.  
PREDICTED AND OBSERVED HOSPITAL ADMISSIONS.**



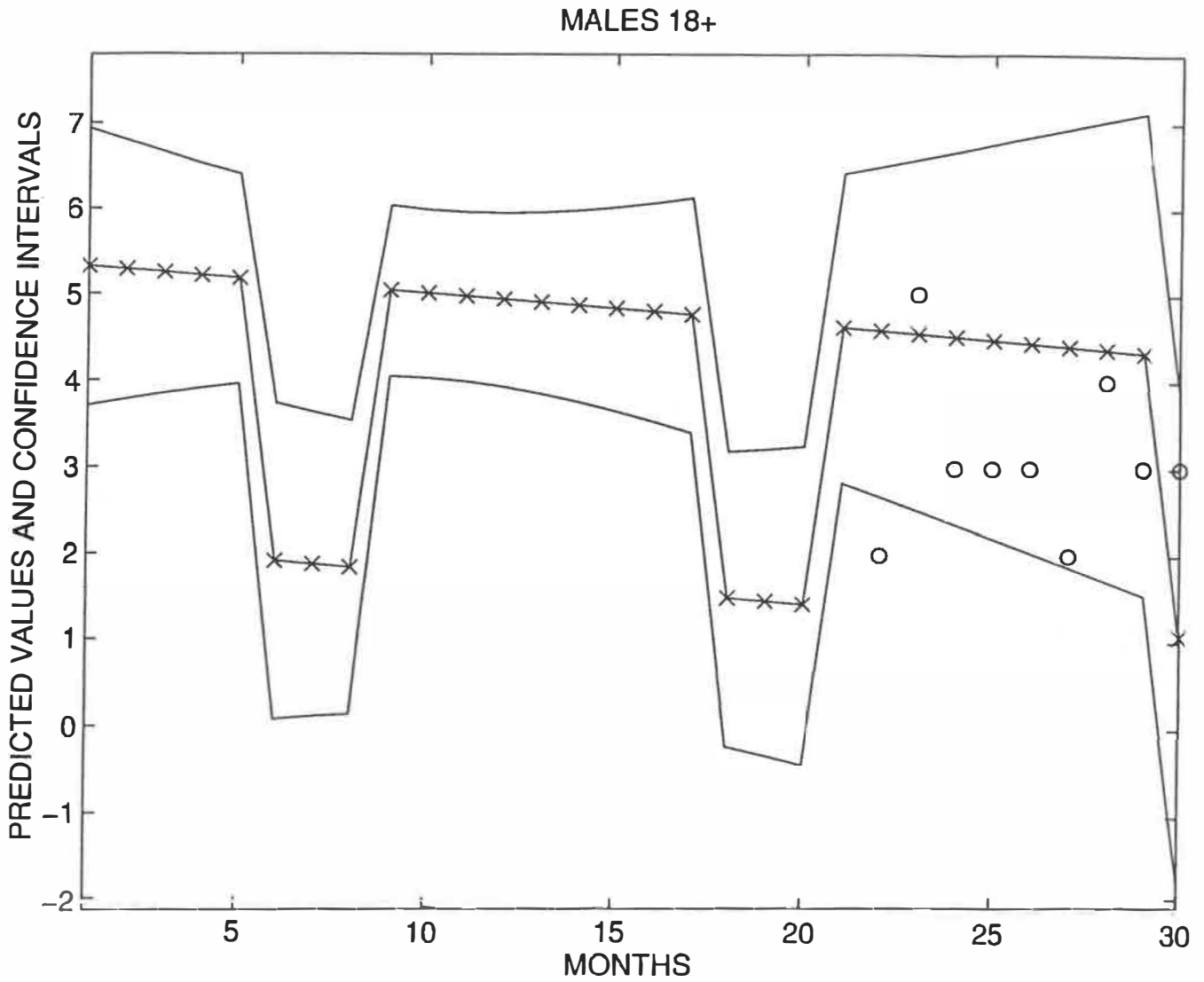
KEY:	
PRE - INTERVENTION.	MONTHS 0 - 21.
POST - INTERVENTION.	MONTHS 22 - 30.
PREDICTED VALUES	X X X X X
ACTUAL (OBSERVED) VALUES	O O O O O
CONFIDENCE BANDS (95%)	—————

**GRAPH 8 (e) : FEMALE ADOLESCENTS OVER 18.  
PREDICTED AND OBSERVED HOSPITAL ADMISSIONS.**



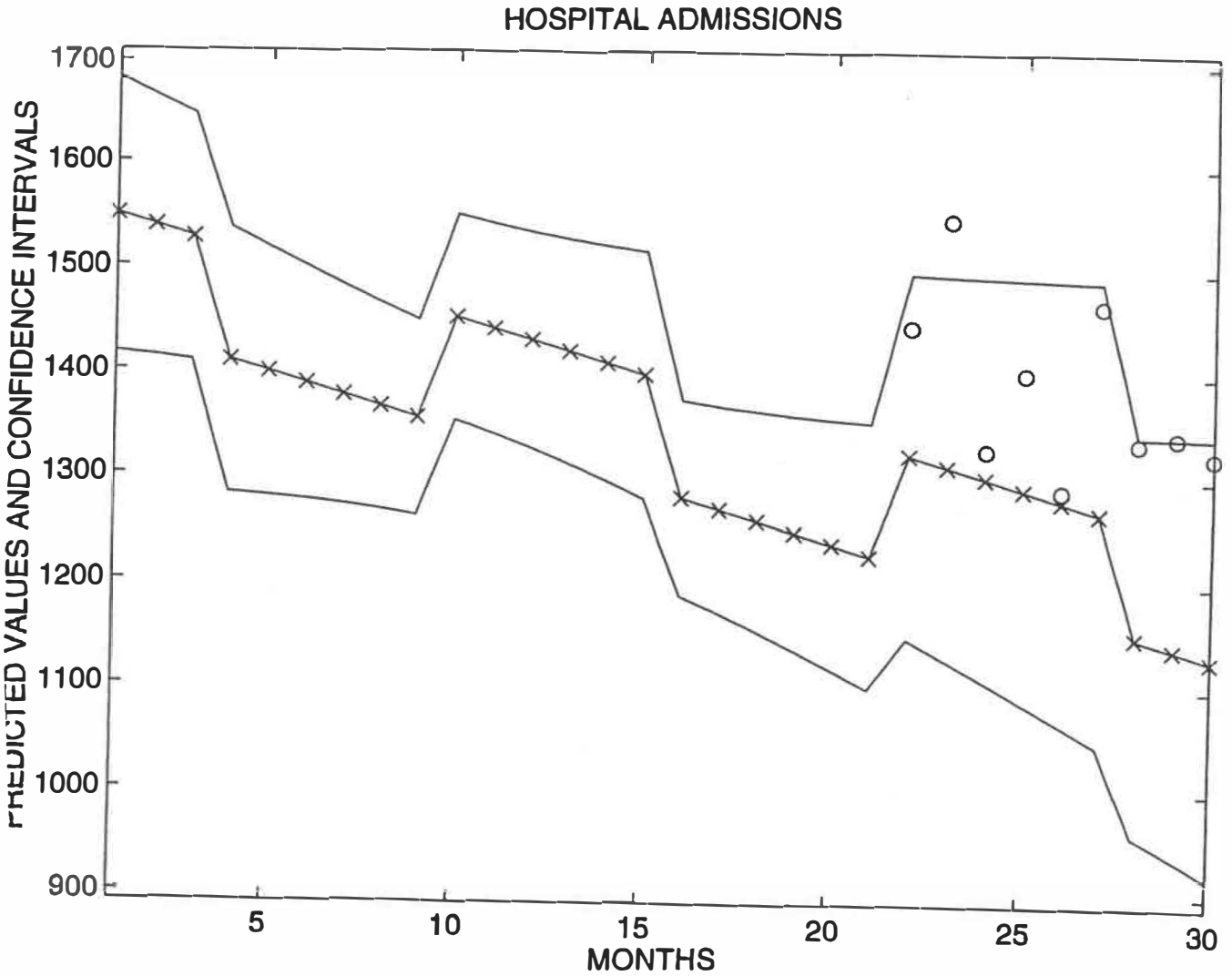
<b>KEY:</b>	
PRE - INTERVENTION.	MONTHS 0 - 21.
POST - INTERVENTION.	MONTHS 22 - 30.
PREDICTED VALUES	XXXXX
ACTUAL (OBSERVED) VALUES	OOOOO
CONFIDENCE BANDS (95%)	—————

**GRAPH 8 (f) : MALE ADOLESCENTS OVER 18.  
PREDICTED AND OBSERVED HOSPITAL ADMISSIONS.**



<b>KEY:</b>	
PRE - INTERVENTION.	MONTHS 0 - 21.
POST - INTERVENTION.	MONTHS 22 - 30.
PREDICTED VALUES	XXXXX
ACTUAL (OBSERVED) VALUES	OOOOO
CONFIDENCE BANDS (95%)	_____

**GRAPH 10 (a) : TOTAL (GENERAL) HOSPITAL ADMISSIONS.  
PREDICTED AND OBSERVED HOSPITAL ADMISSIONS.**



KEY:	
PRE - INTERVENTION.	MONTHS 0 - 21.
POST - INTERVENTION.	MONTHS 22 - 30.
PREDICTED VALUES	XXXXX
ACTUAL (OBSERVED) VALUES	<u>OOOOO</u>
CONFIDENCE BANDS (95%)	—————

**STATISTICAL APPENDIX TWO**

***SAS DATA***

Dependent Variable: VAR18M

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	114.54029	57.27014	5.989	0.0101
Error	18	172.12638	9.56258		
C Total	20	286.66667			
Root MSE	3.09234	R-square	0.3996		
Dep Mean	8.33333	Adj R-sq	0.3328		
C.V.	37.10810				

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	5.273945	1.94636194	2.710	0.0144
TREND1	1	-0.046714	0.11395426	-0.410	0.6867
SEAS	1	5.002535	1.52744060	3.275	0.0042

Obs	Dep Var VAR18M	Predict Value	Std Err Predict	Lower95% Mean	Upper95% Mean	Lower95% Predict	Upper95% Predict
1	10.0000	10.2298	1.318	7.4612	12.9984	3.1677	17.2919
2	6.0000	10.1831	1.229	7.6008	12.7653	3.1919	17.1742
3	12.0000	10.1363	1.145	7.7311	12.5416	3.2086	17.0640
4	8.0000	10.0896	1.066	7.8497	12.3295	3.2176	16.9617
5	9.0000	10.0429	0.994	7.9540	12.1319	3.2186	16.8673
6	6.0000	4.9937	1.493	1.8563	8.1310	-2.2210	12.2083
7	6.0000	4.9469	1.436	1.9306	7.9632	-2.2159	12.1098
8	3.0000	4.9002	1.385	1.9903	7.8101	-2.2184	12.0189
9	10.0000	9.8561	0.810	8.1542	11.5579	3.1401	16.5720
10	17.0000	9.8093	0.799	8.1312	11.4875	3.0993	16.5193
11	13.0000	9.7626	0.804	8.0743	11.4510	3.0501	16.4752
12	9.0000	9.7159	0.824	7.9840	11.4478	2.9923	16.4396
13	11.0000	9.6692	0.860	7.8628	11.4756	2.9260	16.4124
14	11.0000	9.6225	0.908	7.7142	11.5308	2.8513	16.3937
15	4.0000	9.5758	0.968	7.5424	11.6091	2.7682	16.3833
16	7.0000	9.5291	1.037	7.3514	11.7067	2.6771	16.3811
17	14.0000	9.4823	1.113	7.1448	11.8199	2.5778	16.3869
18	3.0000	4.4331	1.385	1.5232	7.3430	-2.6856	11.5518
19	6.0000	4.3864	1.436	1.3701	7.4027	-2.7764	11.5492
20	4.0000	4.3397	1.493	1.2023	7.4771	-2.8750	11.5543
21	6.0000	9.2955	1.467	6.2134	12.3776	2.1047	16.4863
22	.	9.2488	1.564	5.9633	12.5343	1.9685	16.5291
23	.	9.2021	1.663	5.7086	12.6956	1.8256	16.5786
24	.	9.1554	1.764	5.4500	12.8607	1.6762	16.6345
25	.	9.1086	1.866	5.1884	13.0289	1.5207	16.6966
26	.	9.0619	1.970	4.9240	13.1998	1.3593	16.7645
27	.	9.0152	2.074	4.6574	13.3731	1.1922	16.8382
28	.	8.9685	2.180	4.3887	13.5482	1.0198	16.9172
29	.	8.9218	2.286	4.1185	13.7251	0.8422	17.0014
30	.	3.8725	2.312	-0.9854	8.7304	-4.2396	11.9847

Obs	Residual
1	-0.2298
2	-4.1831
3	1.8637
4	-2.0896
5	-1.0429
6	1.0063
7	1.0531
8	-1.9002
9	0.1439
10	7.1907
11	3.2374
12	-0.7159
13	1.3308
14	1.3775
15	-5.5758
16	-2.5291
17	4.5177
18	-1.4331
19	1.6136
20	-0.3397
21	-3.2955



Obs	Residual
22	.
23	.
24	.
25	.
26	.
27	.
28	.
29	.
30	.

Sum of Residuals	0
Sum of Squared Residuals	172.1264
Predicted Resid SS (Press)	220.9442

# Regression Analysis : Adolescents over 18.

The SAS System

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Model: MODEL2

Dependent Variable: VAR18P

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	214.01992	107.00996	6.531	0.0074
Error	18	294.93246	16.38514		
C Total	20	508.95238			
Root MSE	4.04786	R-square	0.4205		
Dep Mean	11.04762	Adj R-sq	0.3561		
C.V.	36.64007				

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	5.985877	2.54777560	2.349	0.0304
TREND1	1	0.001086	0.14916542	0.007	0.9943
SEAS	1	7.069708	1.99941020	3.536	0.0024

Obs	Dep Var VAR18P	Predict Value	Std Err Predict	Lower95% Mean	Upper95% Mean	Lower95% Predict	Upper95% Predict
1	10.0000	13.0567	1.725	9.4326	16.6808	3.8124	22.3009
2	17.0000	13.0578	1.609	9.6777	16.4379	3.9064	22.2091
3	14.0000	13.0588	1.499	9.9104	16.2073	3.9905	22.1272
4	11.0000	13.0599	1.396	10.1279	15.9919	4.0645	22.0554
5	16.0000	13.0610	1.302	10.3266	15.7954	4.1280	21.9940
6	2.0000	5.9924	1.955	1.8856	10.0992	-3.4515	15.4363
7	10.0000	5.9935	1.879	2.0452	9.9418	-3.3826	15.3696
8	5.0000	5.9946	1.813	2.1855	9.8036	-3.3237	15.3129
9	10.0000	13.0654	1.060	10.8376	15.2931	4.2742	21.8565
10	6.0000	13.0664	1.046	10.8698	15.2631	4.2831	21.8498
11	16.0000	13.0675	1.052	10.8575	15.2776	4.2808	21.8542
12	11.0000	13.0686	1.079	10.8015	15.3357	4.2674	21.8698
13	21.0000	13.0697	1.126	10.7051	15.4343	4.2429	21.8966
14	12.0000	13.0708	1.189	10.5729	15.5687	4.2073	21.9343
15	12.0000	13.0719	1.267	10.4103	15.7335	4.1609	21.9829
16	20.0000	13.0730	1.357	10.2225	15.9234	4.1037	22.0422
17	12.0000	13.0741	1.456	10.0142	16.1339	4.0361	22.1120
18	5.0000	6.0054	1.813	2.1964	9.8145	-3.3129	15.3237
19	5.0000	6.0065	1.879	2.0582	9.9548	-3.3696	15.3826
20	9.0000	6.0076	1.955	1.9008	10.1144	-3.4363	15.4515
21	8.0000	13.0784	1.920	9.0440	17.1128	3.6657	22.4911
22	.	13.0795	2.047	8.7788	17.3802	3.5496	22.6093
23	.	13.0806	2.177	8.5076	17.6536	3.4248	22.7364
24	.	13.0817	2.309	8.2314	17.9319	3.2915	22.8718
25	.	13.0827	2.443	7.9511	18.2144	3.1502	23.0153
26	.	13.0838	2.578	7.6673	18.5003	3.0011	23.1665
27	.	13.0849	2.715	7.3805	18.7893	2.8447	23.3251
28	.	13.0860	2.853	7.0911	19.0809	2.6812	23.4908
29	.	13.0871	2.993	6.7996	19.3746	2.5109	23.6632
30	.	6.0185	3.027	-0.3405	12.3774	-4.6003	16.6372

Obs	Residual
1	-3.0567
2	3.9422
3	0.9412
4	-2.0599
5	2.9390
6	-3.9924
7	4.0065
8	-0.9946
9	-3.0654
10	-7.0664
11	2.9325
12	-2.0686
13	7.9303
14	-1.0708
15	-1.0719
16	6.9270
17	-1.0741
18	-1.0054
19	-1.0065
20	2.9924
21	-5.0784

Obs	Residual
22	.
23	.
24	.
25	.
26	.
27	.
28	.
29	.
30	.

Sum of Residuals	0
Sum of Squared Residuals	294.9325
Predicted Resid SS (Press)	391.5023

# Regression Analysis : Males under 18.

The SAS System

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Model: MODEL1

Dependent Variable: M18M

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	7.78010	3.89005	1.166	0.3339
Error	18	60.02942	3.33497		
C Total	20	67.80952			
Root MSE	1.82619	R-square	0.1147		
Dep Mean	2.23810	Adj R-sq	0.0164		
C.V.	81.59570				

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	1.788792	1.14942852	1.556	0.1371
TREND1	1	-0.035035	0.06729595	-0.521	0.6090
SEAS	1	1.168568	0.90203356	1.295	0.2115

Obs	Dep Var M18M	Predict Value	Std Err Predict	Lower95% Mean	Upper95% Mean	Lower95% Predict	Upper95% Predict
1	3.0000	2.9223	0.778	1.2873	4.5573	-1.2482	7.0929
2	1.0000	2.8873	0.726	1.3624	4.4122	-1.2413	7.0159
3	5.0000	2.8523	0.676	1.4318	4.2727	-1.2389	6.9434
4	2.0000	2.8172	0.630	1.4944	4.1400	-1.2411	6.8755
5	4.0000	2.7822	0.587	1.5485	4.0158	-1.2480	6.8123
6	0	1.5786	0.882	-0.2742	3.4314	-2.6820	5.8392
7	1.0000	1.5435	0.848	-0.2377	3.3248	-2.6865	5.7736
8	2.0000	1.5085	0.818	-0.2099	3.2270	-2.6954	5.7125
9	1.0000	2.6420	0.478	1.6370	3.6471	-1.3241	6.6082
10	5.0000	2.6070	0.472	1.6160	3.5980	-1.3556	6.5696
11	5.0000	2.5720	0.475	1.5749	3.5690	-1.3921	6.5361
12	1.0000	2.5369	0.487	1.5141	3.5597	-1.4337	6.5076
13	3.0000	2.5019	0.508	1.4351	3.5687	-1.4803	6.4841
14	1.0000	2.4669	0.536	1.3399	3.5938	-1.5319	6.4656
15	1.0000	2.4318	0.572	1.2310	3.6326	-1.5884	6.4520
16	1.0000	2.3968	0.612	1.1108	3.6828	-1.6497	6.4433
17	6.0000	2.3618	0.657	0.9813	3.7422	-1.7157	6.4392
18	2.0000	1.1582	0.818	-0.5603	2.8766	-3.0458	5.3621
19	3.0000	1.1231	0.848	-0.6582	2.9044	-3.1069	5.3531
20	0	1.0881	0.882	-0.7647	2.9409	-3.1725	5.3487
21	0	2.2216	0.866	0.4015	4.0418	-2.0249	6.4681
22	.	2.1866	0.924	0.2463	4.1269	-2.1128	6.4860
23	.	2.1515	0.982	0.0884	4.2147	-2.2047	6.5078
24	.	2.1165	1.042	-0.0717	4.3047	-2.3003	6.5333
25	.	2.0815	1.102	-0.2336	4.3966	-2.3996	6.5625
26	.	2.0464	1.163	-0.3972	4.4901	-2.5024	6.5952
27	.	2.0114	1.225	-0.5621	4.5849	-2.6085	6.6313
28	.	1.9764	1.287	-0.7282	4.6810	-2.7178	6.6705
29	.	1.9413	1.350	-0.8953	4.7779	-2.8301	6.7128
30	.	0.7377	1.366	-2.1311	3.6066	-4.0529	5.5284

Obs	Residual
1	0.0777
2	-1.8873
3	2.1477
4	-0.8172
5	1.2178
6	-1.5786
7	-0.5435
8	0.4915
9	-1.6420
10	2.3930
11	2.4280
12	-1.5369
13	0.4981
14	-1.4669
15	-1.4318
16	-1.3968
17	3.6382
18	0.8418
19	1.8769
20	-1.0881
21	-2.2216

Obs	Residual
22	.
23	.
24	.
25	.
26	.
27	.
28	.
29	.
30	.

Sum of Residuals	0
Sum of Squared Residuals	60.0294
Predicted Resid SS (Press)	80.6256

# Regression Analysis : Males over 18.

The SAS System

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Model: MODEL2

Dependent Variable: M18P

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	48.53703	24.26851	7.478	0.0043
Error	18	58.41535	3.24530		
Total	20	106.95238			

Root MSE	1.80147	R-square	0.4538
Dep Mean	4.04762	Adj R-sq	0.3931
C.V.	44.50693		

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	2.125656	1.13387033	1.875	0.0772
TREND1	1	-0.035307	0.06638506	-0.532	0.6013
SEAS	1	3.234474	0.88982401	3.635	0.0019



Obs	Dep Var M18P	Predict Value	Std Err Predict	Lower95% Mean	Upper95% Mean	Lower95% Predict	Upper95% Predict
1	3.0000	5.3248	0.768	3.7120	6.9377	1.2107	9.4389
2	5.0000	5.2895	0.716	3.7852	6.7938	1.2168	9.3623
3	6.0000	5.2542	0.667	3.8530	6.6554	1.2184	9.2900
4	5.0000	5.2189	0.621	3.9140	6.5238	1.2155	9.2223
5	7.0000	5.1836	0.579	3.9667	6.4005	1.2080	9.1592
6	1.0000	1.9138	0.870	0.0861	3.7415	-2.2891	6.1168
7	3.0000	1.8785	0.836	0.1213	3.6357	-2.2943	6.0513
8	1.0000	1.8432	0.807	0.1480	3.5384	-2.3038	5.9903
9	6.0000	5.0424	0.472	4.0509	6.0338	1.1299	8.9548
10	4.0000	5.0071	0.465	4.0294	5.9847	1.0981	8.9160
11	8.0000	4.9718	0.468	3.9882	5.9553	1.0613	8.8822
12	2.0000	4.9364	0.480	3.9275	5.9454	1.0195	8.8534
13	6.0000	4.9011	0.501	3.8488	5.9535	0.9728	8.8295
14	4.0000	4.8658	0.529	3.7542	5.9775	0.9212	8.8105
15	4.0000	4.8305	0.564	3.6460	6.0151	0.8647	8.7963
16	7.0000	4.7952	0.604	3.5266	6.0638	0.8035	8.7869
17	7.0000	4.7599	0.648	3.3981	6.1217	0.7376	8.7822
18	1.0000	1.4901	0.807	-0.2051	3.1853	-2.6569	5.6372
19	2.0000	1.4548	0.836	-0.3023	3.2120	-2.7179	5.6276
20	2.0000	1.4195	0.870	-0.4082	3.2472	-2.7834	5.6225
21	1.0000	4.6187	0.855	2.8232	6.4142	0.4296	8.8077
22	.	4.5834	0.911	2.6694	6.4974	0.3422	8.8246
23	.	4.5481	0.969	2.5129	6.5832	0.2508	8.8453
24	.	4.5128	1.027	2.3542	6.6713	0.1557	8.8698
25	.	4.4775	1.087	2.1937	6.7612	0.0570	8.8979
26	.	4.4422	1.147	2.0316	6.8527	-0.0451	8.9294
27	.	4.4068	1.208	1.8681	6.9456	-0.1505	8.9642
28	.	4.3715	1.270	1.7036	7.0395	-0.2591	9.0021
29	.	4.3362	1.332	1.5380	7.1344	-0.3706	9.0431
30	.	1.0664	1.347	-1.7636	3.8965	-3.6594	5.7923

Obs	Residual
1	-2.3248
2	-0.2895
3	0.7458
4	-0.2189
5	1.8164
6	-0.9138
7	1.1215
8	-0.8432
9	0.9576
10	-1.0071
11	3.0282
12	-2.9364
13	1.0989
14	-0.8658
15	-0.8305
16	2.2048
17	2.2401
18	-0.4901
19	0.5452
20	0.5805
21	-3.6187

Obs	Residual
22	.
23	.
24	.
25	.
26	.
27	.
28	.
29	.
30	.

Sum of Residuals	0
Sum of Squared Residuals	58.4154
Predicted Resid SS (Press)	79.6304

# Regression Analysis : Females under 18.

The SAS System

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Model: MODEL3

Dependent Variable: F18M

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	64.17663	32.08831	6.444	0.0078
Error	18	89.63290	4.97961		
C Total	20	153.80952			
Root MSE	2.23150	R-square	0.4172		
Dep Mean	6.09524	Adj R-sq	0.3525		
C.V.	36.61060				

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	3.485153	1.40453836	2.481	0.0232
TREND1	1	-0.011678	0.08223195	-0.142	0.8886
SEAS	1	3.833967	1.10223535	3.478	0.0027

Obs	Dep Var F18M	Predict Value	Std Err Predict	Lower95% Mean	Upper95% Mean	Lower95% Predict	Upper95% Predict
1	7.0000	7.3074	0.951	5.3096	9.3053	2.2113	12.4036
2	5.0000	7.2958	0.887	5.4324	9.1591	2.2508	12.3407
3	7.0000	7.2841	0.826	5.5484	9.0198	2.2849	12.2833
4	6.0000	7.2724	0.769	5.6560	8.8888	2.3134	12.2314
5	5.0000	7.2607	0.718	5.7533	8.7682	2.3361	12.1853
6	6.0000	3.4151	1.078	1.1511	5.6791	-1.7912	8.6213
7	5.0000	3.4034	1.036	1.2268	5.5800	-1.7655	8.5723
8	1.0000	3.3917	0.999	1.2919	5.4916	-1.7453	8.5287
9	9.0000	7.2140	0.585	5.9859	8.4421	2.3676	12.0604
10	12.0000	7.2023	0.576	5.9914	8.4133	2.3602	12.0444
11	8.0000	7.1907	0.580	5.9723	8.4090	2.3467	12.0346
12	8.0000	7.1790	0.595	5.9292	8.4288	2.3270	12.0309
13	8.0000	7.1673	0.620	5.8637	8.4709	2.3012	12.0334
14	10.0000	7.1556	0.655	5.7786	8.5327	2.2694	12.0419
15	3.0000	7.1439	0.698	5.6766	8.6112	2.2315	12.0564
16	6.0000	7.1323	0.748	5.5609	8.7037	2.1877	12.0768
17	8.0000	7.1206	0.803	5.4338	8.8074	2.1381	12.1030
18	1.0000	3.2749	0.999	1.1751	5.3748	-1.8621	8.4119
19	3.0000	3.2633	1.036	1.0866	5.4399	-1.9056	8.4321
20	4.0000	3.2516	1.078	0.9876	5.5156	-1.9547	8.4578
21	6.0000	7.0739	1.059	4.8498	9.2980	1.8848	12.2629
22	.	7.0622	1.129	4.6913	9.4331	1.8086	12.3158
23	.	7.0505	1.200	4.5295	9.5715	1.7275	12.3736
24	.	7.0388	1.273	4.3650	9.7127	1.6417	12.4359
25	.	7.0272	1.347	4.1982	9.8561	1.5515	12.5028
26	.	7.0155	1.421	4.0295	10.0015	1.4571	12.5739
27	.	7.0038	1.497	3.8591	10.1485	1.3586	12.6490
28	.	6.9921	1.573	3.6873	10.2970	1.2562	12.7281
29	.	6.9804	1.650	3.5143	10.4466	1.1500	12.8109
30	.	3.1348	1.669	-0.3708	6.6404	-2.7191	8.9887

Obs	Residual
1	-0.3074
2	-2.2958
3	-0.2841
4	-1.2724
5	-2.2607
6	2.5849
7	1.5966
8	-2.3917
9	1.7860
10	4.7977
11	0.8093
12	0.8210
13	0.8327
14	2.8444
15	-4.1439
16	-1.1323
17	0.8794
18	-2.2749
19	-0.2633
20	0.7484
21	-1.0739

Obs Residual

22	.
23	.
24	.
25	.
26	.
27	.
28	.
29	.
30	.

Sum of Residuals	0
Sum of Squared Residuals	89.6329
Predicted Resid SS (Press)	117.5637

# Regression Analysis : Females over 18.

The SAS System

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Model: MODEL4

Dependent Variable: F18P

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	60.70867	30.35434	2.949	0.0780
Error	18	185.29133	10.29396		
C Total	20	246.00000			
Root MSE	3.20842	R-square	0.2468		
Dep Mean	7.00000	Adj R-sq	0.1631		
C.V.	45.83458				

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	3.860221	2.01942362	1.912	0.0720
TREND1	1	0.036393	0.11823183	0.308	0.7618
SEAS	1	3.835234	1.58477700	2.420	0.0263

Obs	Dep Var F18P	Predict Value	Std Err Predict	Lower95% Mean	Upper95% Mean	Lower95% Predict	Upper95% Predict
1	7.0000	7.7318	1.367	4.8593	10.6044	0.4047	15.0590
2	12.0000	7.7682	1.275	5.0891	10.4474	0.5147	15.0218
3	8.0000	7.8046	1.188	5.3091	10.3002	0.6169	14.9924
4	6.0000	7.8410	1.106	5.5171	10.1650	0.7110	14.9710
5	9.0000	7.8774	1.032	5.7101	10.0448	0.7969	14.9579
6	1.0000	4.0786	1.549	0.8234	7.3337	-3.4069	11.5641
7	7.0000	4.1150	1.490	0.9854	7.2445	-3.3167	11.5467
8	4.0000	4.1514	1.437	1.1322	7.1705	-3.2345	11.5373
9	4.0000	8.0230	0.840	6.2572	9.7888	1.0549	14.9911
10	2.0000	8.0594	0.829	6.3183	9.8005	1.0975	15.0213
11	8.0000	8.0958	0.834	6.3440	9.8475	1.1312	15.0603
12	9.0000	8.1322	0.855	6.3352	9.9291	1.1561	15.1082
13	15.0000	8.1686	0.892	6.2943	10.0428	1.1722	15.1649
14	8.0000	8.2050	0.942	6.2251	10.1849	1.1796	15.2304
15	8.0000	8.2414	1.004	6.1317	10.3510	1.1783	15.3044
16	13.0000	8.2777	1.075	6.0184	10.5371	1.1685	15.3870
17	5.0000	8.3141	1.154	5.8888	10.7394	1.1505	15.4778
18	4.0000	4.5153	1.437	1.4962	7.5344	-2.8706	11.9012
19	3.0000	4.5517	1.490	1.4222	7.6812	-2.8800	11.9834
20	7.0000	4.5881	1.549	1.3329	7.8432	-2.8974	12.0736
21	7.0000	8.4597	1.522	5.2619	11.6575	0.9990	15.9204
22	.	8.4961	1.623	5.0873	11.9050	0.9425	16.0497
23	.	8.5325	1.725	4.9078	12.1572	0.8791	16.1859
24	.	8.5689	1.830	4.7245	12.4133	0.8090	16.3288
25	.	8.6053	1.936	4.5379	12.6727	0.7325	16.4780
26	.	8.6417	2.044	4.3484	12.9349	0.6499	16.6334
27	.	8.6781	2.152	4.1566	13.1995	0.5614	16.7947
28	.	8.7145	2.262	3.9628	13.4661	0.4674	16.9616
29	.	8.7509	2.372	3.7672	13.7345	0.3680	17.1337
30	.	4.9520	2.399	-0.0882	9.9923	-3.4647	13.3687

Obs	Residual
1	-0.7318
2	4.2318
3	0.1954
4	-1.8410
5	1.1226
6	-3.0786
7	2.8850
8	-0.1514
9	-4.0230
10	-6.0594
11	-0.0958
12	0.8678
13	6.8314
14	-0.2050
15	-0.2414
16	4.7223
17	-3.3141
18	-0.5153
19	-1.5517
20	2.4119
21	-1.4597

Obs	Residual
22	.
23	.
24	.
25	.
26	.
27	.
28	.
29	.
30	.

Sum of Residuals	0
Sum of Squared Residuals	185.2913
Predicted Resid SS (Press)	238.9210



# Regression Analysis : Total Hospital Admissions.

Admissions

The SAS System

16:17 Thursday, March 2, 1995 1

Model: MODEL1

Dependent Variable: ADMI

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	156482.32273	78241.16137	4.743	0.0172
Error	27	445354.37727	16494.60657		
C Total	29	601836.70000			
Root MSE	128.43133	R-square	0.2600		
Dep Mean	1382.10000	Adj R-sq	0.2052		
C.V.	9.29248				

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	1391.854663	54.16617684	25.696	0.0001
TIME	1	-4.476033	2.71070436	-1.651	0.1103
SEAS	1	119.247713	46.92468568	2.541	0.0171

Obs	Dep Var ADMI	Predict Value	Std Err Predict	Lower95% Mean	Upper95% Mean	Lower95% Predict	Upper95% Predict
1	1779.0	1506.6	50.806	1402.4	1610.9	1223.2	1790.0
2	1526.0	1502.2	48.785	1402.1	1602.2	1220.3	1784.0
3	1410.0	1497.7	46.833	1401.6	1593.8	1217.2	1778.2
4	1373.0	1374.0	46.073	1279.4	1468.5	1094.0	1653.9
5	1363.0	1369.5	44.235	1278.7	1460.2	1090.8	1648.2
6	1276.0	1365.0	42.489	1277.8	1452.2	1087.4	1642.6
7	1405.0	1360.5	40.849	1276.7	1444.3	1084.0	1637.1
8	1489.0	1356.0	39.328	1275.4	1436.7	1080.4	1631.6
9	1376.0	1351.6	37.940	1273.7	1429.4	1076.8	1626.3
10	1529.0	1466.3	36.032	1392.4	1540.3	1192.6	1740.0
11	1397.0	1461.9	35.061	1389.9	1533.8	1188.7	1735.0
12	1312.0	1457.4	34.277	1387.1	1527.7	1184.6	1730.1
13	1650.0	1452.9	33.693	1383.8	1522.0	1180.5	1725.4
14	1317.0	1448.4	33.320	1380.1	1516.8	1176.2	1720.7
15	1245.0	1444.0	33.165	1375.9	1512.0	1171.8	1716.1
16	1204.0	1320.2	33.165	1252.2	1388.3	1048.1	1592.4
17	1104.0	1315.8	33.320	1247.4	1384.1	1043.5	1588.0
18	1050.0	1311.3	33.693	1242.2	1380.4	1038.8	1583.7
19	1395.0	1306.8	34.277	1236.5	1377.1	1034.1	1579.6
20	1385.0	1302.3	35.061	1230.4	1374.3	1029.2	1575.5
21	1396.0	1297.9	36.032	1223.9	1371.8	1024.2	1571.6
22	1445.0	1412.6	37.940	1334.8	1490.5	1137.9	1687.4
23	1548.0	1408.2	39.328	1327.5	1488.8	1132.6	1683.8
24	1328.0	1403.7	40.849	1319.9	1487.5	1127.1	1680.2
25	1402.0	1399.2	42.489	1312.0	1486.4	1121.6	1676.8
26	1290.0	1394.7	44.235	1304.0	1485.5	1116.0	1673.4
27	1468.0	1390.2	46.073	1295.7	1484.8	1110.3	1670.2
28	1336.0	1266.5	46.833	1170.4	1362.6	986.0	1547.0
29	1342.0	1262.0	48.785	1162.0	1362.1	980.2	1543.9
30	1323.0	1257.6	50.806	1153.3	1361.8	974.2	1541.0

Obs	Residual
1	272.4
2	23.8497
3	-87.6743
4	-0.9505
5	-6.4745
6	-88.9985
7	44.4776
8	133.0
9	24.4296
10	62.6580
11	-64.8660
12	-145.4
13	197.1
14	-131.4
15	-199.0
16	-116.2
17	-211.8
18	-261.3
19	88.1900
20	82.6660
21	98.1420

Model: MODEL1

Dependent Variable: ADMI

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	189774.43926	94887.21963	4.824	0.0210
Error	18	354084.51312	19671.36184		
C Total	20	543858.95238			
Root MSE		140.25463	R-square	0.3489	
Dep Mean		1380.04762	Adj R-sq	0.2766	
C.V.		10.16303			

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob >  T
INTERCEP	1	1452.600424	77.37399170	18.774	0.0001
TIME	1	-10.768034	5.27481833	-2.041	0.0561
SEAS	1	107.089659	64.54322158	1.659	0.1144

Obs	Dep Var ADMI	Predict Value	Std Err Predict	Lower95% Mean	Upper95% Mean	Lower95% Predict	Upper95% Predict
1	1779.0	1548.9	62.980	1416.6	1681.2	1225.9	1871.9
2	1526.0	1538.2	59.574	1413.0	1663.3	1218.0	1858.3
3	1410.0	1527.4	56.457	1408.8	1646.0	1209.7	1845.0
4	1373.0	1409.5	60.411	1282.6	1536.4	1088.7	1730.4
5	1363.0	1398.8	56.607	1279.8	1517.7	1081.0	1716.5
6	1276.0	1388.0	53.055	1276.5	1499.5	1073.0	1703.0
7	1405.0	1377.2	49.809	1272.6	1481.9	1064.5	1689.9
8	1489.0	1366.5	46.933	1267.9	1465.1	1055.7	1677.2
9	1376.0	1355.7	44.499	1262.2	1449.2	1046.5	1664.8
10	1529.0	1452.0	47.048	1353.2	1550.9	1141.2	1762.8
11	1397.0	1441.2	47.927	1340.6	1541.9	1129.8	1752.6
12	1312.0	1430.5	49.357	1326.8	1534.2	1118.1	1742.9
13	1650.0	1419.7	51.292	1311.9	1527.5	1106.0	1733.5
14	1317.0	1408.9	53.678	1296.2	1521.7	1093.4	1724.4
15	1245.0	1398.2	56.457	1279.6	1516.8	1080.5	1715.8
16	1204.0	1280.3	44.499	1186.8	1373.8	971.2	1589.5
17	1104.0	1269.5	46.933	1170.9	1368.1	958.8	1580.3
18	1050.0	1258.8	49.809	1154.1	1363.4	946.1	1571.5
19	1395.0	1248.0	53.055	1136.5	1359.5	933.0	1563.0
20	1385.0	1237.2	56.607	1118.3	1356.2	919.5	1555.0
21	1396.0	1226.5	60.411	1099.6	1353.4	905.6	1547.3
22	.	1322.8	82.993	1148.4	1497.2	980.4	1665.2
23	.	1312.0	87.402	1128.4	1495.7	964.8	1659.2
24	.	1301.3	91.902	1108.2	1494.3	949.0	1653.5
25	.	1290.5	96.481	1087.8	1493.2	932.8	1648.1
26	.	1279.7	101.127	1067.3	1492.2	916.4	1643.0
27	.	1269.0	105.833	1046.6	1491.3	899.8	1638.1
28	.	1151.1	91.236	959.4	1342.8	799.6	1502.6
29	.	1140.3	95.991	938.7	1342.0	783.3	1497.4
30	.	1129.6	100.798	917.8	1341.3	766.7	1492.4

Obs	Residual
1	230.1
2	-12.1540
3	-117.4
4	-36.5283
5	-35.7603
6	-112.0
7	27.7758
8	122.5
9	20.3119
10	76.9903
11	-44.2417
12	-118.5
13	230.3
14	-91.9376
15	-153.2
16	-76.3119
17	-165.5
18	-208.8
19	147.0
20	147.8
21	169.5

Obs Residual

22	.
23	.
24	.
25	.
26	.
27	.
28	.
29	.
30	.

Sum of Residuals	0
Sum of Squared Residuals	354084.5131
Predicted Resid SS (Press)	491318.3444

***APPENDIX A.***

***PERMISSION TO CONDUCT RESEARCH.***

ADMINISTRATION: HOUSE OF DELEGATES  
ADMINISTRASIE: RAAD VAN AFGEVAARDIGDESDepartment of Education and Culture  
Departement van Onderwys en Kultuur

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1992 -08- 25

Mr D.R. Wassenaar  
Department of Psychology  
University of Natal  
P.O. Box 375  
PIETERMARITZBURG  
3200

Sir

REQUEST FOR PERMISSION TO CONDUCT RESEARCH  
Your letter dated 1992-08-07 has reference

1. Permission is hereby granted to you to conduct your research using Counsellors from the schools indicated in your letter provided that :
  - 1.1 principals of the schools concerned are kept fully informed;
  - 1.2 participation in the research is on a voluntary basis;
  - 1.3 research is conducted outside normal teaching time;
  - 1.4 all information pertaining to teachers is treated confidentially.
2. It will be preferable to hold your workshop on a Saturday.
3. Kindly produce a copy of this letter when approaching schools.
4. The Department wishes you every success in your research and looks forward to receiving a copy of the findings.

Yours faithfully

for CHIEF EXECUTIVE DIRECTOR

1992-06-30/conduct/jac

***APPENDIX B.***

***LECTURE : PREVENTING SUICIDAL BEHAVIOUR.***



## **PREVENTION OF SUICIDAL BEHAVIOUR AMONGST ADOLESCENTS.**

### **1. PREVENTION THROUGH :**

- **Education about suicide.**
- **Awareness of the signs of suicidal behaviour.**
- **Promote alternative, adaptive coping skills.**
- **Crisis Intervention training.**

### **2. THE SCHOOL AS A MEDIUM OF PREVENTION.**

**"Since schools provide captive audiences, they constitute an ideal place in which to attempt preventative interventive and postventative efforts with students".**

#### **2.1 ADVANTAGES OF THE SCHOOL SITUATION:**

- **Regular and lengthy contact**
- **Teachers are in a strong position to note changes in:**
  - School grades declining.**
  - Attendance.**
  - Social Involvement**
  - Increasing level of behaviour problems.**
  - Loss of control.**

#### **2.2 FEARS COUNSELLORS MIGHT HAVE:**

- **Are they taking over parental responsibility?**
- **They may err in assessing risk.**
- **May inadvertently encourage suicide.**
- **It is difficult initiating any new programme.**
- **Fear of missing someone who needed help.**
- **Suicide is not a comfortable topic to discuss.**

#### **2.3 SOME BENEFITS OF THE PROGRAMME.**

- **Saves lives.**
- **Communicates caring to the students.**
- **Reduces fear of helping suicidal adolescents.**
- **Quick response is available when teachers have a procedure to follow.**
- **Creates more sensitivity to the problem**
- **Become better informed, breaks down myths and misconceptions.**

### **3. DEFINITIONS OF SUICIDE AND PARASUICIDE**

Definitions vary widely.

This may often cause confusion rather than clarify basic issues.

"A wilful self-inflicted life threatening act which results in death"  
(BECK, 1976)

#### **3.1 Suicide in Children.**

The definition remains the same.

No concept of the finality of death needed.

#### **3.2 ATTEMPTED SUICIDE, PARASUICIDE.**

"Attempted suicide is the fortuitous survivor of an intended suicide".

"Parasuicide is a self inflicted suicide like act which does not have death as its intention".

### **4. SUICIDE AMONGST ADOLESCENTS.**

Attributed to a number of factors

Family Problems

High expectations

Pressure to make choices and decisions.

Economic problems

Uncertain future.

#### **4.1 SUICIDE IN SOUTH AFRICA.**

Epidemiologically :

- Indians have a high parasuicide rate.
- 10.3% of admissions to a local hospital were due to suicidal behaviour.
- People between the age of 16 - 25 were identified as high risk.
- Female : Male Ratio is 2.5:1 or 3:1
- Acculturation / Deculturation Factors  
(- leading to family problems).

## **5. REASONS, MOTIVES AND PREDISPOSING FACTORS FOR ATTEMPTING SUICIDE.**

**Prerequisites for an adolescent to seriously consider suicide.**

- **If faced with a problem which is unexpected, intolerable and unsolvable.**
- **They see this problem as one more in a chain of events which can be expected to continue.**
- **Believe that total escape, (death), is the only answer.**
- **Arrive at this conclusion essentially in social isolation with little or no sharing of the problems with others.**
- **Be able to go against all social norms.**
- **Be able to do so because you feel you are not functioning as part of the society.**
- **Be able to formulate perception of self in such a manner that behaviour contradictory to social norms fits the self description.**
- **Do this by defining the problem situation as not of their own making, unresolved and unsolvable except by suicide.**
- **Remove all other viable options but suicide so that it is not viewed as wrong.**
- **Be self assured that after death will not be a recapitulation of the problem situation.**
- **Difficulties with parents, particularly as these relate to choosing of romantic partnerships.**

### **5.1 ARE OFTEN MOTIVATED BY FACTORS OTHER THAN SUICIDAL INTENT.**

- **Inappropriate problem solving methods.**
- **Inability to discuss the problem.**
- **Temporary escape from high levels of stress.**
- **A cry for a change in the family system.**

### **5.2 OTHER MOTIVES**

- **Relationship problems**
- **Family problems**
- **Failure at an activity / school where much emphasis is placed on success.**

### **5.3 INTERNAL PROCESS**

- **Guilt**
- **Abandonment**
- **Helplessness**
- **Depression**
  - **Denial**
  - **Act out feelings**
  - **Avoidance of dependence and helplessness**

#### **5.4 HOW ADULTS SEE SUICIDE/PARASUICIDE.**

Responses vary but often differ significantly from how the adolescent sees it.

Three motives listed most frequently by adults in this respect are:

- To make people sorry for the way they treated an adolescent.
- To try and influence some particular person and make them change their mind.
- To find out whether someone really loved the adolescent.

#### **5.5 FROM AN ADOLESCENT'S PERSPECTIVE**

- Occurs in an interpersonal context.
- Is a means of expressing inner needs.
- A method of coping.
- A way of escape.

Adolescent suicide is distinctive in many ways.

- It is often not solely an effort to end ones life but rather to ameliorate it.
- More often revenge motivated.
- There is more anger and personal irritation involved.
- Greater impulsivity.
- More negative interpersonal relationships.
- Have more non-fatal attempts.
- Come more often from families which have experienced divorce and suicidal behaviour.
- Less likely to have financial, work or marital sources.
- Involve more risk-taking behaviours which eventuate in death.
- More often involve substance abuse.
- Have lower self esteem.
- Have fewer life accomplishments as fallback options.

#### **6. WARNING SIGNS**

- Declining school results.
- Changes in interests, behaviour and mood.
- Reckless behaviour.
- Drug and/or behaviour abuse.
- Talking about "killing oneself"
- Giving away possessions.
- Social withdrawal.
- Breakup in significant relationships.
- Lack of interest in the future and absence of future goal orientation.
- Quietly putting affairs in order.
- Writing some kind of will.
- Emotional state characterised by decreased attention, self criticism, apathy, feelings of guilty, ideas of self punishment.

## **6.1 SIGNIFICANT LIFE HISTORY.**

- **Recent separation from a significant love object.**
- **Absence of any warm adult parental figure with whom to identify.**
- **Early loss in childhood of a parent through death.**
- **A history of suicide in the family or others important to the adolescent.**
- **Low communication level with significant others in the environment.**
- **Active parental conflict and negative attitudes towards the adolescent.**
- **Child abuse.**
- **Family member is an alcoholic.**
- **Divorce, sense of isolation, loss, guilt or a conflict of loyalties.**
- **History of failure in personal relationships at work or school.**
- **Religious background experienced as judgmental or in conflict with present lifestyle.**

## **6.2 BEHAVIOURAL SYMPTOMS**

- **Loss of appetite.**
- **Crying spells or an inability to cry.**
- **Listlessness or high activity level.**
- **Weight loss or gain.**
- **Excessive sleep or insomnia.**
- **Excessive use of drugs or alcohol.**
- **Sexual promiscuity.**
- **Neglect of personal appearance.**
- **Sudden changes in personality.**
- **Difficulties in concentrating.**
- **Unusual rebellious behaviour.**
- **Accident proneness.**
- **Drawings that portray morbidity.**

## **7. COPING STRATEGIES.**

- **PROCESS OF ADAPTIVE STRATEGIES.**
- **Relaxation techniques.**
- **Organization skills.**
- **Teaching physiology of stress.**
- **The value of exercise.**
- **Assertiveness training.**
- **Communication skills.**
- **Management of anger.**
- **Self-esteem promotion.**

## **7.1 PEER COUNSELLING - WHAT TO DO IF A FRIEND IS THINKING OF SUICIDE.**

**Counsellors should teach students:-**

- **Whether behaviours and clues picked up sound suicidal or not.**
- **Directions and ideas on how to talk with a depressed or suicidal friend.**
- **Support for the friends, fear of failing, and feelings of helplessness in the situation.**
- **A plan for intervention if the individual is assessed as highly suicidal.**

**Things an adolescent should attempt to do if a friend might consider suicide:**

- **Do not be afraid to talk about suicide or to use the word. This will not influence them to do it.**
- **Try and get the friend to talk about what it is in their lives that makes them feel the way they do. The more you can get them to talk the better it is.**
- **Try to convince the person that they need to speak to a trusted adult. Tell them you want them to get more help than you alone can give. Go with your friend to speak to an adult if necessary.**
- **Unless certain the friend has spoken to an adult about suicide you need to speak to an adult yourself about concern for your friend. It is important to tell your friend that you intend to do this.**
- **CONFIDENTIALITY? If your friend asks you not to tell anyone - what should you do?**  
**There is no rule of confidentiality when it comes to suicide. It is better to break confidentiality than for someone to kill him/herself.**

## **7.2 PEOPLE AN ADOLESCENT CAN REACH OUT TO**

**The following is a list to explore**

- **Parents - a mother or father**
- **Friend**
- **Trusted teacher / school counsellor.**
- **Parent of a friend.**
- **Minister**
- **Trusted neighbor**

### **7.3 CHARACTERISTICS OF EFFECTIVE COPING.**

- **Actively exploring reality issues and searching for information.**
- **Freely expressing positive and negative feelings and tolerating frustration.**
- **Actively invoking help from others.**
- **Reducing complex problems to manageable pieces and then working the smaller problems through one at a time.**
- **Being aware of fatigue and tendencies towards disorganisation.**
- **Pacing oneself and maintaining control wherever possible.**
- **Successfully managing feelings by being self-accepting, flexible if necessary, and working on mastery.**
- **Having some sense of self trust and a positive self-concept.**
- **Applying a general optimism about eventual outcomes.**

### **7.4 FACTORS PREVENTING ADOLESCENTS FROM CHANGING.**

- **Fear**
- **Anger**
- **Inappropriate expectations**

## **MYTHS AND MISCONCEPTIONS ABOUT SUICIDE.**

Detailed below are some of the common myths about suicide and suicidal behaviour to be discussed in this workshop.

- **Nothing can be done to prevent an adolescent from killing him/herself once he/she has decided to do so. In fact successful suicide is generally an expression of an individual's desire for greater autonomy and in particular for self-control over his/her own death.**
- **The adolescent who fails at suicide the first time will eventually succeed.**
- **Talking about suicide to depressed adolescents will most likely prompt them to kill themselves.**
- **There is a certain type of adolescent who usually commits suicide, usually from poor families or mentally ill.**
- **People seeing psychiatrists, psychologists or counsellors rarely commit suicide.**
- **Assessing suicidal risk is something best left to mental health professionals.**
- **Suicidal gestures are merely "attention seekers"**

## **QUESTIONS FREQUENTLY ASKED ABOUT SUICIDE AND PARASUICIDE.**

- **Why do people commit suicide?**
- **What are the main reasons for teenagers to attempt suicide?**
- **Is it true that attempting suicide is a cry for help?**
- **If someone in the family has committed suicide, will others in the family attempt suicide if they have problems?**
- **Do people ever attempt suicide to get attention or to make others feel sorry for them?**
- **If a person attempts suicide and fails what is the likelihood of them trying again?**
- **Is it true that people who attempt to kill themselves don't really want to die?**
- **Will a person who is deeply depressed always become suicidal?**
- **Does anyone ever impulsively try to kill themselves and then become sorry for making such an attempt?**
- **How does talking about suicide help prevent it?**
- **Is the person who attempts suicide mentally ill?**
- **Why do some people keep it a secret that there has been a suicide / attempt in the family?**
- **In general what are the most common methods used.**
- **Is there a particular hour of the day that is the most likely time for attempting suicide?**
- **Does everybody think about committing suicide at some point in their lives?**



## 1. THE AIM OF THIS SUICIDE PREVENTION PROGRAM

### PREVENTION THROUGH AWARENESS AND EDUCATION

- (1) To increase awareness of the problem of suicide among the youth through education of students, teachers, counsellors.
- (4) To promote awareness of community resources.
- (5) To develop a programme within the school which should have three facets deals with:
  - Focus on the sigMa of suicide
  - Reasons for suicidal thinking and behaviour
  - Orientation to the counselling services available in the school

Other skills that should be focused on and instilled in the children are:

- Positive self esteem
  - Communication skills
  - Relationships - getting in, maintaining, getting out appropriately.
  - Positive failure/success
  - Build support networks to avoid loneliness and isolation.
  - Stress management
- ( ) To educate counsellors in crisis intervention (managing the suicidal individual).

## 2. WHY THE SCHOOL AS A MEDIUM OF PREVENTION?

Why should the responsibility for the prevention of suicide fall to the school. All to many of societies problems are either blamed on the failure of the schools ore delegated to the schools to correct.

"Since schools provide captive audiences, they constitutes an ideal place in which to attempt preventative, interventative and postventative efforts with students."

Three considerations justify the schools involvement:

1. Schools have the responsibility of helping students develop into productive citizens who can contribute to society.
2. Schools have the responsibility to identify and attempt to resolve problems that interfere with the educational process.
3. Schools have the opportunity and resources to identify and offer assistance to at-risk children.
4. Education is the key to prevention, and education is the mission of schools.

## 2.1 ADVANTAGES OF THE SCHOOL SITUATION:

It is in these schools that the suicidal tendencies will be exhibited and hopefully identified. Teachers are generally excellent observers.

- Their experience of working with thousands of pupils over the years allows them to develop a large sample population from which norms are reliably established. In addition the regular and lengthy contact that a school has with pupils puts the staff in a strong position to note and evaluate changes in attitudes and behaviours, which may be important in identifying the presence of a suicidal risk and reducing the effects of a personal crisis.
- Deviant adolescents and significantly troubled adolescents becomes apparent to the alert teacher.
- Also, it may be to teachers or other school personnel that adolescents will entrust a revelation of suicidal ideation.
- In a school where the suicidal adolescents deterioration can be most clearly visible in terms of declining grades, attendance, social involvement or increasing behaviour problems and loss of control

## 2.2

### SOME FEARS COUNSELLORS MAY HAVE:

- Are they taking over parental responsibility.
- They may err in assessing risk.
- May inadvertently encourage suicide.
- It is difficult initiating any new programme.
- Perhaps they will miss someone who needed help.
- It is really not a comfortable topic to talk about.

CAN YOU THINK OF OTHERS.

## 2.3

### SOME OF THE BENEFITS OF THE PROGRAMME.

- Saves lives.
- Communicates caring to students.
- Reduces fear of helping suicidal students.
- Can respond quickly when you have a procedure.
- Create more sensitivity to the problem.
- Become better informed, break down myths.

## 3.

### DEFINITION OF SUICIDE AND PARASUICIDE

Historically a number of terms have been used to describe suicidal behaviour. Unfortunately this has not had the effect of clarifying the basic issue.

In modern day clinical usage suicide is defined as

" a wilful self-inflicted life threatening act which results in death" (Beck 1976).

### 3.1 SUICIDE AMONGST CHILDREN

With the increasing rate of suicide among children it has become necessary to formulate a definition that could be applied to this age group as well although over the years it has been a debate as to whether a child could be considered suicidal without an understanding of the finality of death. However recent investigations have reported that children do exhibit suicidal behavior and that very distinct ideas of death are evidenced despite the fact that they did not always perceive death as final. It is therefore felt that the definition should be the same as adults except that they do not have to understand the finality of death

Suicide differs from parasuicide in - outcome  
- Intent

### 3.2

#### Attempted suicide, Parasuicide

Attempted suicide is the fortuitous survivor of an intended suicide.

Parasuicide is a self inflicted suicide like act which does not have death as its intention.

### 4.

#### SUICIDE AMONGST ADOLESCENTS

##### ATTRIBUTED TO:

Suicide among adolescents has been increasing consistently since 1960. This can be attributed to a number of factors:-

- a) Family problems, intrafamilial conflict, divorce
- b) High Expectations to succeed placed on the adolescent, which is not obtained lead to poor self esteem and feelings of worthlessness.
- c) Pressure to make choices and decision. These come too early in life, and require high levels of emotional and intellectual maturity, which the adolescent may not have acquired sufficiently to cope.
- d) Economic problems
- e) An uncertain future.

### 4.1

#### SUICIDE IN SOUTH AFRICA

##### EPIDEMIOLOGY

- A) Most research into suicide and para-suicide has been conducted during the 1980's. In a number of epidemiological studies in the greater Durban area, findings indicate that the highest suicide rates across cultural groups are those of Indians.
- B) A study at the largest general hospital for the treatment of Indian patients revealed that 10.3% of all medical admissions were due to suicidal behaviour.
- C) A study on a predominantly Indian sample identified that single people between the ages of 16 to 25 were especially at risk. Other South African studies reflect a similar trend, with Indians showing extremely high rates considering the small number of Indians in South Africa,

- C) A study on a predominantly Indian sample identified that single people between the ages of 16 to 25 were especially at risk. Other South African studies reflect a similar trend, with Indians showing extremely high rates considering the small number of Indians in South Africa,
- D) In line with overseas findings many South African studies report male to female suicide ratios of 2,5:1 and 3:1 (Edwards et al 1981, Minnar et al 1980, Pillay 1984 and Pillay and Pillay 1987). Explanations for sex role differences have been based on traditional social roles, early maturity, social isolation and socialisation in cultural norms. (Curren 1987).  
For females there is less societal acceptance of aggressive and other expressive behaviours that can facilitate the sublimation of angry feelings. In males these forms of expression are permitted and encouraged. Females are socialised to believe that it is unfeminine to externalise their anger, therefore it is not surprising that in times of heightened emotional distress more females than males direct their anger inward. (Curren, 1987)

E) Acculturation/deculturation

Cultural influences have received increasing attention in the context of Indian suicides. Indians are an immigrant group who are subjected to the effects of "deculturation", a factor which often leads to family conflict, resulting ultimately in parasuicide. The influence of Western culture on Indian adolescents has been found to result in increased emancipation and intra-familial tension. Research into family functioning has noted that many Indian adolescent parasuicides were communicating distress related to a developmental difficulty while their families were unable to accommodate successful individuation (Wassenaar, 1987). Families of parasuicide victims have been found to demonstrate more pathological functioning than those of non disturbed individuals, disturbed role functioning, poor problem solving skills and communication difficulties.

## 5. REASONS, MOTIVES AND PREDISPOSING FACTORS FOR ATTEMPTING SUICIDE

### PREREQUISITES FOR AN ADOLESCENT TO SERIOUSLY CONSIDER SUICIDE

1. Be faced with a problem which is unexpected, intolerable, unsolvable.
2. See this problem as one more in a chain of events which can be expected to continue.
3. Believe that total escape, i.e. death, is the only answer.
4. Arrive at this conclusion essentially in social isolation with little or no sharing of the problems with others.
5. Be able to go against all the social norms.
6. Be able to do so because you feel you are not functioning as part of the society.
7. Be able to formulate perception of self in such a form that behavior contradictory to social norms fits the self description.
8. Do this by defining the problem situation as not of their own making, unresolved and unsolvable except by suicide.
9. Remove all other viable options but suicide so that it is not seen as wrong.
10. Be self assured that after death will not be a recapitulation of the problem situation.

#### 5.1

Most studies of young Indians have note that self-harm behaviors are ofeten motivated by factos other than suicidal intent: eg

- As distressed behaviour or an inappropriate problem solving method.
- difficulty or inability to discuss precipitating problems with an adult.
- As a means of temporarily escaping high levels of tension,
- As a form of communication or a call for change (disengagement) in the family system.

#### 5.2

##### OTHER MOTIVES

- RELATIONSHIP PROBLEMS.
- FAMILY PROBLEMS.
- FAILURE AT AN ACTIVITY/SCHOOL WHERE MUCH EMPHASIS IS PLACED ON SUCCESS.

#### 5.3

##### INTERNAL PROCESS

There is considerable evidence to suggest that the essential dynamic of adolescent suicidal behaviour is a constellation of feelings of-

- guilt
- abandonment
- helplessness (the feelings cannot be effectively ameliorated or communicated by other methods).
- Depression is common. However adolescents are frequently able to mask or avoid depressive affects and :

- (a) Capacity for denial. Deny the reality of painful conditions
- (b) Act out feelings. They are more likely to find expression in action than in internal thought and mood.
- (c) Avoidance of dependence and helplessness. Adolescents desire to be independent and take control of their life, however, being depressed incapacitates this. They are therefore forced to seek alternate means for dealing with their depression. Often this will involve activity that will distract them from their problems, i.e. running away, sexual acting out, boredom, restlessness, disturbance of concentration, aggressive behaviour and delinquency.

#### 5.4

##### HOW ADULTS SEE SUICIDE/PARASUICIDE

The reasons behind adolescent suicide attempts can vary considerably depending on who is asked to respond. Adult beliefs about suicide tend to be quite different from those given by adolescent attempters themselves. Adults and some mental health professional tend to view adolescent suicide attempts as manipulative acts designed to manipulate or control others in the environment.

The three motives listed most frequently by adults in this respect are;

- a) To make people sorry for the way they treated the adolescent
- b) To try and influence some particular person and get them to change their mind
- c) Find out whether someone really loved the person or not.

#### 5.5

##### FROM AN ADOLESCENTS PERSPECTIVE

Adolescent suicide attempts view their acts differently, although there is a strong agreement among all adolescents that suicide behaviour occurs in an interpersonal context as a means of communicating inner needs and as a means of escape (Curren 1987). Clearly it is evident that the reasons behind the adolescent attempted suicide are a matter of opinion with variations on all levels. However, adolescent suicide is distinctive in many ways

1. It is a behaviour often not solely an effort to end one's life but rather to ameliorate it.
  1. More often revenge motivated
  2. More anger and personal irritation involved
  3. Greater impulsivity
  4. More negative interpersonal relationships
  5. Have more non-fatal attempts
  6. Come more often from families of origin which have experienced divorce and suicide
  7. Less likely to have financial, work or marital resources

7. Less likely to have financial, work or marital resources
8. Involve more risk-taking behaviours which eventuate in death.
9. More often involved in substance abuse.
10. More romantic and idealistic
11. Have lower self esteem
12. Fewer life accomplishments as fallback options.

6.

#### WARNING SIGNS

- Declining school results.
- Changes in interests, behaviour and mood.
- Reckless behaviour.
- Drug and/or alcohol abuse.
- Talking about "killing oneself" or "not being".
- Giving away possessions.
- Social withdrawal.
- Break up in significant relationships.
- Lack of interest in the future and absence of future goal orientation.
- Quietly putting affairs in order
- Writing some kind of will
- Emotional state characterised by decreased attention, self criticism, apathy, feelings of guilt, ideas of self punishment.

6.1

#### Significant Life History

- Recent separation from a significant love object
- Absence of any warm adult parental figure with whom to identify
- Early loss in childhood of a parent through death
- A history of suicide in the family or others important to the adolescent
- Low communication level with significant others in the environment
- Active parental conflict and negative attitudes towards the adolescent.
- Child abuse
- Alcoholism of a family member
- Divorce or a newly reconstituted feeling, sense of isolation, loss, guilt or a conflict of loyalties.
- History of failure in personal relationships at work or school
- Religious background experienced as judgemental or in conflict with present lifestyle.

6.2

#### Behavioural Symptoms

- Loss of appetite
- Crying spells or inability to cry
- Listlessness or high activity level
- Weight loss or gain
- Excessive sleep or insomnia
- Excessive use of drugs or alcohol

- Excessive use of drugs or alcohol
- Sexual promiscuity
- Neglect of personal appearance
- Sudden changes in personality
- Difficulties in concentrating
- Unusual rebellious behaviour
- Accident proneness
- Drawings that portray morbidity

7.

## COPING STRATEGIES AND SKILLS

### PROCESS OF ADAPTIVE STRATEGIES

Generally coping and problem-solving skills of suicidal adolescents are poorly developed and inadequate to the task of managing stresses and conflicts. This WS needs to include a component that offers alternatives to suicide as a coping mechanism and problem solving strategy.

There are many ways *Proses of adaptive strategies*

- relaxation techniques
- Organization skills
- teaching them the physiology of stress
- the value of exercise
- Self-limit setting- Assertiveness training
- Communication skills
- Anger management
- Promote self-esteem.
  - Help children find their strength and encourage them in both their strength and weaknesses.
  - Actively listen to the children and try to understand their points of view.
  - Encourage children to express both their good and bad feelings.
  - Try to provide opportunities for children to experience success and independence.

The guidance teacher might work with teachers in other subjects areas in finding ways to incorporate the teaching of health problem solving skills into the existing curriculum. Students might be encouraged to discuss what other course of action a suicide victim in history of literature might have taken. It should not be presumed that the modelling of mature and effective coping skills has taken place at home.

7.1

### PEER COUNSELLING - WHAT TO DO IF A FRIEND IS THINKING OF SUICIDE

If adolescents have as extensive contact with suicide as we think they do then they also have many opportunities to respond to the suicidal verbalizations of their friends etc. Adolescents often respond inappropriately and in a unhelpful manner to suicidal verbalizations from peers. Education directed at helpful responses is vital. Students and teachers need preparation in formulation responses to suicidal communications so as to avoid the closed and avoidant responses that are unhelpful and potentially dangerous.



Education directed at helpful responses is vital. Students and teachers need preparation in formulation responses to suicidal communications so as to avoid the closed and avoidant responses that are unhelpful and potentially dangerous. Students in particular as the person most likely to encounter a suicidal intimation need help in this regard. Education in the use of role playing should also include guidelines on how to make a referral as well as discuss the issue of confidentiality.

Counsellors should teach students:-

- (a) Whether the behaviours and clues picked up sound suicidal or not.
- (b) Directions and ideas on how to talk with a depressed or suicidal friend
- (c) Support for the friends, fears of failing and feelings of helplessness in the situation.
- (d) A plan for intervention if the individual is assessed as highly suicidal.

If a friend makes you feel that they might attempt suicide an adolescent should try to do the following things:

1. Do not be afraid to talk about suicide or to use the word. This will not put the idea in their heads or influence them to do it.
2. Try and get the friend to talk about what it is in their life that makes them feel the way they do. The more talking on their part the better.
3. Try to convince them that they need to speak to a trusted adult. Tell them that you want them to get more help than just you alone can give. Go with your friend to speak to an adult if necessary.
4. Unless you are absolutely certain that your friend has spoken to an adult about suicide, you will need to speak to an adult yourself about concern for your friend. It is important to tell your friend that you intend to do this.
5. Confidentiality. If your friend asks you not to tell anyone should you keep it a secret?. NO. There is no rule of confidentiality when it comes to suicide. It does no good to keep a secret and lose a person.
6. Your friend may be angry and try to convince you that you will get into trouble if you tell an adult. If you still believe that your friend is at risk you must act. All you can do is try to convey the idea that you are sincerely trying to help.

## 7.2

### PEOPLE AN ADOLESCENT CAN REACH OUT TO

- Friends
- Trusted teacher, counsellor
- Neighbour
- Parents of friends
- Minister
- Professional counselling help
- Relatives
- Lifeline

## 7.3

### CHARACTERISTICS OF EFFECTIVE COPING

1. Actively exploring reality issues and searching for information.
2. Freely expressing positive and negative feelings and tolerating frustration
3. Actively invoking help from others
4. Reducing complex problems to manageable bits and then working the smaller problems through one at a time
5. Being aware of fatigue and tendencies toward disorganization
6. Pacing one's self and maintaining control wherever possible.
7. Successfully managing feelings by being self-accepting, flexible if necessary, and working on mastery
8. Self-trust and a positive self-concept
9. Applying a general optimism about eventual outcomes.

## 7.4

### FACTORS PREVENTING ADOLESCENTS FROM CHANGING

#### FEAR

Fear of being alone

Fear of being rejected if one reaches out for ones own needs

Fear of being independent in a world that is hostile and unstable.

Fear of being physically abused.

#### ANGER

Anger often creates fear because it so often leads to a feeling of being out of control. May be afraid to express anger because it may make us vulnerable to retaliation from someone more powerful than we are , or we may be afraid of hurting someone we love, and often this anger is turned upon ourselves, leading to depression instead of seeking a solution to the problem.

There are 3 ways of dealing with the problem:

- **SUPPRESSION.** Consequences of suppression lead to depression which we are trying to avoid.

**FORCE.** Force may lead to resentment and often to revenge.

**NEGOTIATION.** Negotiation may involve giving something up on both sides and can lead to a feeling that both have won something valuable. This form of negotiation known as "win-win" is useful for parents and adolescents to learn, because it deals with power issues in a way as to make the parties in conflict, allies rather than adversaries.

## INAPPROPRIATE EXPECTATIONS

Life is difficult for everyone. However everyone has the right to a quality of living that provides a good life. Many people interpret this to mean they are obliged to be happy, and if they aren't happy all of the time, something outside of them is violating this right and needs fixing, or that something is wrong with themselves and they need fixing. Seeing problems as external or internal ideas to feelings of helplessness or worthlessness. Living fully is an ongoing process of growing and changing to meet the external problems that confront and confuse our internal life. it is helpful to develop a personal philosophy of life.

## MYTHS AND MISCONCEPTIONS ABOUT SUICIDE

- a) Nothing can be done to prevent an adolescent from killing him/herself once he/she has decided to commit suicide.

Few suicidal adolescents are totally committed to dying, most want to live and much can be done to help a teenage cope in a more adaptive manner.

- b) The adolescent who fails at suicide the first time will eventually succeed.

Although it may be true that they are more likely to commit suicide at some point they will still eventually be unlikely to attempt suicide. The behaviour usually has more to do with life than death.

- c) Talking about suicide to depressed adolescents may prompt them to kill themselves.

On the contrary talking about it is both essential for assessment and prevention.

- d) There is a certain type of adolescent who usually commits suicide, usually from poor families or the mentally ill.

Psychosis and poverty are infrequent conditions from which adolescent suicide arises.

- e) People seeing a psychiatrist, psychologist or counsellor rarely commit suicide.

Therapy cannot prevent suicide, it is only one part of what needs to be a multi component intervention.

- f) Assessing suicidal risk is something best left to mental health professionals.

Most adolescents who become suicidal are not in counselling and are virtually unknown to mental health professions. There is no one but the non professional left to assess suicidality.

- g) Suicidal gestures are merely "attention seekers"

Many feel that threats of suicide represent attempts at attention seeking behaviour and that as such they are best ignored. Nothing could be further from the truth. A suicidal threat should always be taken seriously.

Verbal clues

"No one will have to worry about me any more"

" I don't want to be anything"

" Maybe I should just kill myself "

"My family would be better off if I were gone"

## CONTENT QUESTIONS ON SUICIDE MOST FREQUENTLY ASKED

### (1) WHY DO PEOPLE COMMIT SUICIDE?

People who commit suicide are having intense feelings of helplessness and hopelessness and don't see any other way out.

### (2) WHAT ARE THE MAIN REASONS FOR TEENAGERS COMMITTING SUICIDE?

Teenagers who commit suicide feel unloved, rejected, perceive themselves as failures in their family or in relationships.

### (3) IS IT TRUE THAT ATTEMPTING SUICIDE IS A CRY FOR HELP?

Suicide attempts are often a conscious or unconscious method of getting others to recognise just how bad the individual is feeling;.

### (4) IF SOMEONE IN THE FAMILY HAS COMMITTED SUICIDE, WILL OTHERS IN THE FAMILY ATTEMPT SUICIDE IF THEY HAVE PROBLEMS?

If someone in the family has committed suicide other family members may be more tempted because that behaviour has been modelled for the, however there is not a genetic predisposition for suicide.

### (5) DO PEOPLE EVER ATTEMPT SUICIDE TO GET ATTENTION OR TO GET OTHERS TO FEEL SORRY FOR THEM?

Anyone who attempts suicide in order to get attention desperately needs attention. It is tragic when a young person feels the need to bargain with their life in order to have their problems taken seriously.

### (6) IF A PERSON ATTEMPTS SUICIDE AND FAILS WHAT IS THE LIKELIHOOD OF THEM TRYING AGAIN?

More than 50% of those who complete suicide have made a prior attempt. However those who receive concerned help often do not try again.

### (7) IS IT TRUE THAT PEOPLE WHO ATTEMPT TO KILL THEMSELVES DON'T REALLY WANT TO DIE?

Most people who kill themselves are ambivalent about whether they want to live or die, right u[ until the moment of death.

### (8) WILL A PERSON WHO IS DEEPLY DEPRESSED ALWAYS BECOME SUICIDAL?

Suicidal feelings often develop in people who are depressed but being depressed does not mean a person will become suicidal.

9) DOES ANYONE EVER IMPULSIVELY TRY TO KILL THEMSELVES AND THEN BECOME SORRY FOR MAKING SUCH AN ATTEMPT?

A person at a particular moment can find the emotional pain they are experiencing absolutely intolerable. They may impulsively make a suicide attempt which in retrospect they might regret later on.

(10) HOW DOES TALKING ABOUT SUICIDE HELP PREVENT IT?

A person who feels that life is too painful to continue usually believes they are worthless and unloved. Showing such individuals real care by listening to and accepting their feelings staying close and getting others to be supportive can really help them feel that life really is worth living. Talking about suicide fuses some of the intensity of these feelings and helps the person to get the help that is needed, it creates a caring climate and alleviates some of the loneliness an individual is experiencing.

(11) IS THE PERSON WHO ATTEMPTS SUICIDE MENTALLY ILL

The majority of people who attempt suicide are not mentally ill but just feel that their lives are intolerable.

(12) WHY DO SOME PEOPLE KEEP IT SECRET THAT THERE HAS BEEN A SUICIDE/ATTEMPT IN THE FAMILY?

The survivors of a suicide are left to deal with feelings of rage, guilt, despair and shame. Recovery from the loss of a loved one by suicide is the hardest form of grief to resolve.

(13) IN GENERAL WHAT ARE THE MOST COMMON METHODS USED?

Lethal methods usually hanging, shooting and drug overdose.

(14) IS THERE A PARTICULAR HOUR OF THE DAY THAT IS THE MOST LIKELY TIME FOR ATTEMPTING SUICIDE?

Young people are probably the most ambivalent about suicide tend to make attempts in the morning or around dinner time when there is a likelihood of rescue.

(15) DOES EVERYBODY THINK ABOUT COMMITTING SUICIDE AT SOME POINT IN THEIR LIVES?

Most people have had thoughts about suicide at some point in their lives.

***APPENDIX C.***

***CRISIS INTERVENTION : LECTURE AND WORKSHOP***

## **CRISIS AND CRISIS INTERVENTION.**

At some time in our lives most of us have witnessed or experienced a crisis of some kind.

### **WHAT IS A CRISIS.**

A crisis is a temporary emotional state of deep distress and upset in a person who has experienced some kind of threat which was unexpected, loss, or dangerous event in which usual coping mechanisms fail (Baldwin, 1979).

In a crisis internal and external systems (family, community, sub-culture) are affected. Thus all the individual's internal and external life systems must be included in any consideration of crisis response.

For each individual there exists a balance between emotional and thought experience. This may be likened to a homeostatic balance and varies from person to person. The primary characteristic is stability for the person. There are numerous experiences which may affect the homeostatic equilibrium and result in uncomfortable feelings and disturbed thought processes.

Each person uses coping process to restore the balance. When a problem situation is encountered in which previously used methods of coping are not available or unsuccessful in solving the problem, the person is confronted by a "critical situation" (Baldwin, 1979, p. 44), in which the resolution of the problem is uncertain. Because the normal problem-solving mechanisms are ineffective the situation is emotionally hazardous and the person may move towards a state of crisis.

It is important to remember that a crisis is a subjective experience. "What may be a mildly difficult situation to one person may be a crisis to another" (ibid). The crisis is not the situation itself but an individual's response to that situation.

There is a highly positive aspect of crises. Crises may represent turning points, in that traumatic episodes can be turned into profitable learning / growth experiences.

### **EXAMPLES OF CRISIS SITUATION.**

Loss of a loved one, family crisis, unwanted pregnancy, divorce, job relocation or loss of job, imprisonment, infidelity, rejection by a lover, retirement, financial problems, suicide attempts.



## **CHARACTERISTICS OF PEOPLE IN CRISIS.**

Three of the most typical emotional responses are anxiety, conflict and frustration. Emotions experienced may include helplessness, depression, panic, despair, anger and hopelessness.

Thinking tends to be disoriented, confused, distracted, unrealistic and repetitive.

## **CRISIS MANAGEMENT.**

"AN OUNCE OF PREVENTION IS WORTH A POUND OF CURE" (Johnson and Maile, 1985).

Crisis management consists of the entire process of working through a crisis situation from initiation to final resolution.

Crisis Management involves many aspects. These include

- (a) The capability to do some form of psychosocial assessment of the person. This includes evaluating risk of suicide.
- (b) The capability to develop/assist in the making of a crisis response.
- (c) The capability to implement or assist in the implementation of the plan, including having the necessary personal, social and material resources available.
- (d) Capability of self-monitoring and self-evaluation of the effectiveness of the schools' role in the above steps.

(Hoff, 1991.)

## **CRISIS INTERVENTION**

Crisis intervention is a more short term process focusing on the immediate needs of the situation and the victim.

Crisis intervention involves

- (a) **ESTABLISHING OR FACILITATING INFORMATION FLOW.**  
Since crisis intervention often operates on the belief that help outside the individual is needed, the flow of information between data bases and networking resources is necessary.
- (b) **ASSISTING VICTIMS TO ADEQUATELY PERCEIVE REALITY.**  
Much of crisis intervention involves helping individuals accurately perceive the reality of the situation. Cognitive constriction and disordered thought process is common in crises, and therefore needs assistance.
- (c) **ASSISTING VICTIMS TO DEAL WITH EMOTIONAL FEELINGS.**  
Due to inefficient information processing, intense emotions tend to develop.

The tactics employed to facilitate immediate coping include providing support, reducing the lethality of the situation (suicide risk) and establishing social support networks for the person in crisis.

## **PATHWAY TO A CRISIS.**

**Baldwin (1979) points out that crises are likely to occur as the final step in a long-term series of stress provoking events. He states that a crisis generally develops through a particular path with the following components;**

**(a) STRESS INDUCING EVENT/SITUATION.**

**This is the external or internal factor which activates a chain reaction which has the potential to lead to crisis. Examples of external factors might be leaving home for the first time. Internal factors may be some specific need which is frustrated, or difficulties with a particular developmental task. These factors place a demand on the person and lead to**

**(b) A VULNERABLE STATE**

**Baldwin (1979) describes this as the individual's subjective feelings or response to the stressor. It may include anxiety, uncertainty or a challenge.**

**(c) THE PRECIPITATING FACTOR.**

**This is the most final and recent link in the chain of events leading to a crisis. This might include a romantic breakup, failure at school.**

**(d) STATE OF CRISIS.**

**This is the emotional response to events leading to the crisis. Usual coping mechanisms have failed at this stage, disorganisation of thought processes and distress results.**

**(e) RE-INTEGRATION.**

**This is an extension of the state of crisis. Since crises by their nature are time limited (maximum 6 to 8 weeks), the individual's distress will subside and some form of re-organisation will occur. This re-organisation may be adaptive or maladaptive. This represents the challenge for crisis intervention - assisting adaptive crisis resolution.**

**Baldwin (1979) expands on the pathway to a crisis by offering a detailed explanation of the different stages of crisis an individual is likely to go through. These are detailed briefly below.**

### **PHASES OF CRISIS.**

**(a) EMOTIONALLY HAZARDOUS SITUATION.**

**The person experiences the beginnings of tension and attempts to use usual problem solving behaviour to restore a sense of balance.**

**(b) THE EMOTIONAL CRISIS.**

**The person experiences an increase in tension and emotional upset, usual coping mechanisms fail. The person attempts new problem solving strategies and may seek help from others.**

**(c) CRISIS RESOLUTION**

**Adaptive Resolution**

**With help, the person comes to terms with feelings, makes decisions and learns new problem solving behaviour. Underlying conflicts might be resolved, and internal and external sources of support are mobilised.**

**Maladaptive Resolution**

**The person may not seek help and internal and external sources of support are not mobilised. Problem resolution does not occur and underlying feelings are not resolved. The person may return to a less adaptive level of functioning than the pre-crisis period.**

**(d) POST-CRISIS ADAPTATION.**

**Adaptive Resolution**

**The individual has learnt new problem solving skills which could be put to use in the future. The individual is therefore less vulnerable in similar situations and future 'emotionally hazardous' situations of a similar kind are reduced.**

**Maladaptive Resolution.**

**The individual remains vulnerable or becomes more vulnerable in particular situations and the possibility that future 'emotionally hazardous' situations will lead to a state of crisis is increased. No new coping mechanisms or problem solving skills are learnt.**

## **BRIEF OVERVIEW OF THE PROCESS OF CRISIS INTERVENTION**

**Baldwin (1979) outlines the following process of crisis intervention:**

**(a) CATHARSIS/INTERVENTION.**

**Goals are to encourage expression of feelings.**

**Explore and define the meaning of the crisis for the individual.**

**Provide and mobilise support networks.**

**Help restore a realistic perception of the crisis situation.**

**Gain only information that is relevant to the crisis.**

**(b) FOCUSING/CONTRACTING.**

**Develop a trusting relationship, in which individual responsibility is highlighted.**

**Develop awareness of behaviour that restrict adaptive coping.**

**Define the core problem.**

**Define a time and goal contract for resolution.**

**Decide on a plan for attainment of goals.**

**(c) INTERVENTION/RESOLUTION**

**Emphasize the individual's strengths.**

**Support the individual directly and appropriately for the crisis situation.**

**Teach or help the individual develop adaptive problem solving skills.**

**Help the individual define progress in meeting the goals.**

**(d) TERMINATION/INTEGRATION**

**Do not prolong termination.**

**Reinforce changes in coping behaviour.**

**Evaluate goal attainment.**

**Discuss possible future situations and how these can be handled.**

**Provide information on health care resources and refer for treatment if necessary.**

## **STEPS OF CRISIS INTERVENTION.**

Johnson and Maile (1987) outline a number of steps a counsellor could follow in suicidal crises. These are;

### **STEP ONE : MAKING PSYCHOLOGICAL CONTACT.**

The goal of this stage is to maintain two-way communication. **Empathic listening, validation of feelings and support** are important in the initial phase of crisis intervention. Reflect acceptance and understanding and attempt to facilitate communication.

### **STEP TWO : EXPLORE DIMENSIONS OF THE CRISIS.**

In crisis intervention collection of data should be limited to those factors immediately relevant to resolving the crisis situation. Obtain information about the nature of the crisis, the precipitants, internal and external resources the individual has.

### **STEP THREE : EXPLORE OPTIONS FOR ACTION.**

From information gathered counsellor and student **together** decide on plans of action. Solutions should be short-term and immediate. In suicide intervention reducing lethality is the primary consideration, then support and resource networking. If suicidal thoughts or tendencies are apparent it is vital to intervene. It is important to determine the level of risk and lethality of the situation. Important factors to consider are

- (a) Whether the person has considered suicide previously.
- (b) Determined a method for suicide.
- (c) Has in their possession the immediate means for death.
- (d) Has a particular time frame in which to complete a suicidal act.

A positive answer to any of the above, puts some at high risk.

Questions to ask include

- (a) How much do you want to die?
- (b) When thinking of suicide how long do these thoughts remain?
- (c) How often do you have these thoughts?
- (d) Have you ever attempted or started to attempt suicide before?
- (e) Do you have a plan for how you will do it?
- (f) Where and when do you plan to do it?
- (g) Is there anything or anyone which could change your mind?

(from Johnson and Maile, 1987)

If there is a clear, immediate threat the adolescent should not be left alone. Possible courses of action include

- (a) Hospitalisation - forced or unforced.
- (b) Referral for psychiatric evaluation / treatment.
- (c) Identification and utilisation of support systems.
- (d) Use of anti-suicide contracting.

Generally the following intervention tactics can be utilised depending on the level of lethality.

<b>LETHALITY LEVEL</b>	<b>INTERVENTION APPROACH</b>	<b>COURSE OF ACTION</b>
<b>HIGH RISK</b>	<b>VERY DIRECTIVE</b>	<b>ACT ON BEHALF OF STUDENT. MOBILISE RESOURCES. TAKE CONTROL.</b>
<b>INTERMEDIATE</b>	<b>FACILITATIVE (IF STUDENT IS COPING). DIRECTIVE (IF NOT COPING).</b>	<b>LISTEN AND GIVE ADVISE. ENCOURAGE CONSTRUCTIVE ACTS. PRESENT AND DISCUSS OPTIONS.</b>
<b>LOW</b>	<b>FACILITATIVE</b>	<b>LISTEN AND EMPATHISE. RESPOND TO REQUESTS FOR HELP. ENCOURAGE CONSTRUCTIVE ACTION. SHARE OPTIONS FOR ACTION.</b>

(Johnson and Maile, 1987).

#### **STEP FOUR : ASSIST IN TAKING ACTION.**

Explore options for action, how these will be carried out, possible obstacles and how they will be met.

## **FACTORS IMPORTANT IN CRISIS INTERVENTION FOR SUICIDAL BEHAVIOUR.**

- (a) **ALWAYS** take a suicide threat seriously.
- (b) Look for warning signs.
- (c) Potential indications for hospitalisation;
  - absence of social support systems.
  - a well thought out plan of how they are going to commit suicide.
- (d) Contracting.  
If the student does not seem at immediate risk an anti-suicide contract can be made. In this case the student promises to contact the counsellor before thinking of suicide.
- (e) Social support networks.  
Family and friends should be aware of the problem in cases of high risk. The suicidal adolescent should not be left alone in critical periods.
- (f) Ethical issues.  
Confidentiality is an important aspect to attain, however, in cases where there is threat a life traditional definitions of confidentiality change. Different criteria come into operation, and if needs be confidentiality may be broken. The most essential aspect is always to prevent a suicidal act, if this involves notifying parents or authorities this must be done.
- (g) It is essential that counsellor know how to make contact with appropriate health care resources and refer on when this is necessary. Counsellors should not try to handle the matter alone if the student does not respond to efforts to help.
- (h) Offer alternatives to suicidal behaviour.  
Expand options, discuss reasons to be alive, encourage activities which take their minds off suicide.
- (i) Crisis intervention carries a heavy emotional load. Counsellors should remain calm and stable, and be prepared for this emotional load and also unusual time demands in times of suicidal crises.
- (j) Allow the student full opportunity to speak. Do not try to make the student happy, undermine feelings, change the subject or make the student feel ashamed of their behaviour.
- (k) Provide a contact number, and also alternative contact number if the student needs help when a counsellor is not available.
- (l) Do not ask a suicidal person to abandon plans. Make a request for a temporary delay.
- (m) If necessary do not leave a suicidal person alone at all.
- (o) During intervention validate the student's feelings. Talk directly about suicide. Do not argue, moralise, judge the student and **DO NOT TAKE UNNECESSARY RISKS.**

## **CRISIS AND CRISIS INTERVENTION**

The crisis intervention section of the programme consists of two parts.

### **1 LECTURE ON CRISIS AND THE PROCESS OF CRISIS INTERVENTION WITH PARTICULAR REFERENCE TO SUICIDE AND PARASUICIDE.**

**This includes:**

**What is a crisis?**

**Pathway to crisis.**

**Phases of crisis.**

**Crisis Management and Intervention.**

**Aspects of Crisis Intervention.**

**Process of Intervention.**

**Determining the level of risk.**

**Lethality level and Intervention Stance.**

**Specific steps to take in cases of suicide and parasuicide.**

**Action counsellors should take.**

### **2 ROLE PLAYING - CRISIS INTERVENTION.**

The role plays will consist of the group being split into units of 3 people each. One person in each group will act as a counsellor, one as a suicidal person and the third as an observer.

The goal of the role play section is to allow each individual the opportunity to gain some experience in the actual process of crisis intervention. Role playing is a useful way to consolidate the information learned and gain practice in putting principles learnt to use.

There is an abbreviated outline of the main points of the lecture in this hangout. However, if you would like to take extra notes please feel free to do so.



## WHAT IS A CRISIS

A crisis is a temporary emotional state of deep distress and upset in a person who has experienced an unexpected threat, loss or dangerous event in which their usual problem solving / coping skills have failed.

The crisis is the emotional reaction of the person, not the situation itself. It is how the person sees the situation (not the situation itself) that is the meaning of the crisis, and this is the target of intervention.

## PATHWAY TO A CRISIS

The development of a crisis generally has the following pathway:

- 1     **THE EVENT WHICH LEADS TO STRESS.**  
This is usually a situation or an internal state which places demands on a person to cope.
- 2     **A VULNERABLE STATE.**  
This is how the particular person feels about the stress-inducing event.
- 3     **THE PRECIPITATING FACTOR.**  
This is the final blow which leads to the crisis.
- 4     **STATE OF CRISIS.**  
This is how the person usually responds emotionally. Distress is experienced and the usual way of coping is ineffective.
- 5     **RE-INTEGRATION**  
Before crises are resolved, distress subsides and some form of resolution will occur. This will either be for better or for worse. In this way a crisis represents both a danger and an opportunity for a person.

## PROCESS OF CRISIS INTERVENTION

### PHASE 1

#### Assess

**Goal** : Answer these questions;  
**Who, What, When, Where, Why?**

### PHASE 2

#### Plan

**Plans need to be:**

- Short-term
- Practical
- Immediate
- Action oriented
- Organised
- Within the capabilities and limitations of crisis workers.
- Made with the 'victims' involvement.
- Provide referrals for other sources of help.

### PHASE 3

#### Implement Plan made in Phase 2

### PHASE 4

#### Check the Plan

### PHASE 5

#### Recap Events with the 'victim'

## GOALS OF CRISIS INTERVENTION

- Help the person return to at least the level of functioning that existed prior to the crisis.
- Prevention of harm.
- Growth promotion - it should enable the person to cope better in the future and makes them less vulnerable to future crises.
- Tension reduction and adaptive problem solving.
- Provide support and a feeling of hope.
- Accurately assess the stress - clarify the problem.
- Identify the meaning of the crisis for the person.
- Focus on strengths and coping skills.
- Makes use of existing support structures.
- May be a prelude to further treatment, referral.

## CRISIS INTERVENTION IN SUICIDE AND PARASUICIDE

Some important points to remember are outlined below:

- 1 **ALWAYS take a suicide threat seriously.**
- 2 **Look for warning signs.**
- 3 **Hospitalization :**  
You need to decide whether the person needs to be hospitalised so as to protect them from committing suicide.  
**Indications for hospitalization**
  - (a) **Absence of strong social support systems.**
  - (b) **An actual well thought out plan of how they are going to commit suicide.**
- 4 **Contracting.**  
If the person does not seem at immediate risk you can attempt to make an agreement with the adolescent that s/he first promises to contact you when thinking about attempting suicide.
- 5 **Social Support systems.**  
Make sure that family and friends are aware of the problem and that they form a support group whereby the person is never left alone during the critical period. This may involve breaking confidentiality, but if a person is at high risk, others must be notified.
- 6 **Offer alternatives to suicide.**  
Most suicidal people are ambivalent, they can only see one solution. Help them by extending their options and thereby reduce cognitive constriction.  
Try and make the person feel that there is a reason to be alive. Encourage them to do things to take their minds off their problems.
- 7 **Intervention:**  
If possible take the person to a private area.  
Tell the person you really want to help.  
Validate (affirm) the persons feelings.  
Talk directly about the suicide. Don't beat around the bush. Focus on the main problem or take problems one at a time. Do not argue, moralise or try to make the person feel guilty.

**REFERENCES FOR MATERIAL USED IN WORKSHOP.**

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**Johnson, S. W. and Maile, L. J. (1987). Suicide and the schools : A handbook for prevention, intervention and rehabilitation. New York : Charles C Thomas.**

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**Poland, S. (1989). Suicide intervention in the schools. New York : The Guilford Press.**

**Polly, J. (1989). Preventing teenage suicide. The living alternative handbook. New York : Human Sciences Press.**

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***APPENDIX D.***

***PROGRAMMES FOR IMPLEMENTATION IN THE SCHOOLS.***

## JUNIOR SCHOOL

### WEEK 1 TRUST BUILDING

#### GOAL:

- ESTABLISH TRUST.
- CREATE CLIMATE WHERE CHILDREN CAN FEEL COMFORTABLE.
- ALWAYS ALLOW THEM TO FEEL THAT THEY CAN ASK ANY QUESTION AT ANY TIME.

#### WAYS TO ACHIEVE THIS:

- THE WEB TECHNIQUE OF BONDING AND SHARING.

### WEEK 2 DISCUSSION ABOUT ARTICLES

Ask the children to cut out of the news paper or magazine any article that they want to talk about in the class. Go around the class to see what kinds of articles have been brought. If there are any on death and suicide use this as an opening to discussion on the issue. If not, talk about some of the articles and then present your own which would have something to do with death or suicide, and create a discussion around this.

#### GOALS:

- DISCUSS THE MEANING OF DEATH. WHAT DOES IT MEAN TO DIE.
- NOW ASK THE DIFFERENCE BETWEEN SIMPLY DYING AND TRYING TO COMMIT SUICIDE (Explain the word suicide)

#### NOTE TO THE TEACHERS:

If you are worried about discussing suicide, remember that suicide is not really the main issue here. What we are really trying to do is teach the children how to identify their feelings both positive and negative and then know how to deal with those feelings in a constructive and healthy way. You can talk about suicide in the context of a person who had sad or bad feelings and did not know how to deal with them. They then dealt with them in the wrong way but "we know better because we are learning the best way to deal with sad/bad feelings".

#### OTHER QUESTIONS TO ASK:

- WHY WOULD ANYBODY WANT TO COMMIT SUICIDE.
- WHAT ARE SOME THINGS THAT WOULD CAUSE A PERSON TO FEEL REALLY UNHAPPY.?
- WHAT COULD HAPPEN AT SCHOOL OR HOME THAT MIGHT BE HARD TO DEAL WITH.?
  - Being picked on.
  - Feeling one does not have any close friends.
  - Feeling like a failure.
  - Being unhappy at home because of problems there.
  - Abuse of any kind.
  - Any kind of loss.

\* NB - WATCH OUT FOR ANY SENSITIVE CHILDREN.

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## LEARNING HOW TO NAME AND IDENTIFY FEELINGS

GOAL:

### DISCUSSING OUR OWN EXPERIENCE

- ENCOURAGE CHILDREN TO VERBALISE THEIR FEELINGS  
(When they come in, in the morning, get each child to name what they are feeling. This can be incorporated with the colour technique which will be discussed. You are encouraging and teaching children to identify and name both good and bad feelings. Perhaps you can draw a chart on the wall with all the different colours and the feelings written next to them. Get the children to point to the feeling they have. It is very important to make sure children are not shy or scared of expressing "negative" feelings. One way would be to express some negative feelings yourself by pointing to the chart, ie sad, tired, worried. Often if teacher does this it then gives the children the licence to go ahead).
- ENCOURAGE CHILDREN TO EXPRESS FEELINGS THROUGH PLAY AND DRAWING.
- THE POST BOX. Make a post box out of some kind of box and put it in a central place in the school where it can be easily reached but where children are not necessarily seen posting a letter. Teach children how to post you a feeling, ie. Kantha has a feeling (sadness). So she draws you blue on a piece of paper. You have agreed in class that sadness is blue. She then writes her name on the back and posts it. You will collect the post and take note of all the children with both positive and negative feelings. The children with positive feelings you can feedback in class openly, ie "its nice to see you were having a good day". Those with negative feelings draw aside and ask them why they were feeling, sad, angry etc.

In this way you teach the children to identify their feelings and then communicate them to someone who can respond appropriately to them. This is a vital coping skill that they must learn.

## WEEK 4 COPING WITH FEELINGS

GOAL:

- EXPLORE WITH CHILDREN WAYS OF COPING WITH DIFFICULT SITUATIONS i.e Talking to pets, writing things down, reading a book, hobbies, listening to music. (create hypothetical situations).

EXAMPLE:

Make up a story about a child who is in a difficult situation. Try to make it real. Find a picture of a child or use a stuffed toy. Tell the children what happened to the child and then discuss the following. Try to write down the feelings and coping mechanisms of the imagined child.

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HOW CAN SUICIDAL FEELINGS DEVELOP:

- Start with drawing an unhappy stick figure.
- Discuss the feelings this figure might be having.
  - Confused.
  - Lonely.
  - Sad.
- What could happen to this figure at home that might be hard to deal with.
  - Divorce.
  - Parents fighting.
- How might this make the figure feel?
  - Guilty.
  - Neglected.
  - Angry.
  - Lost.
  - Confused.
  - Scared.
- How might this situation affect the figure at school.
  - May start to feel depressed.
  - Cannot concentrate.
  - Is not friendly.
  - Wants to cry.
  - Does not do well in tests.
- What will all this now make the figure feel?
  - Worthless.
  - Like a failure.
  - Anxious.
  - What is the use of trying any more.
  - Everything is going wrong.
- What can the figure do (Explore coping skills).  
How can it get out of the situation.  
Who can it turn to.
- What if the figure does not reach out.
- WHAT WOULD YOU DO IF YOU WERE REALLY SAD.  
(Who would you talk to).
  - Your best friend
  - Your dog, cat, pet.
  - Your parents.
  - Your toys.
  - Nobody.

## WEEK 5

### GOAL:

#### LISTENING AWARENESS.

- TEACH CHILDREN HOW TO LISTEN TO EACH OTHER IN A NON-JUDGMENTAL WAY. (Practice through role plays with hypothetical problems. It is always better to work in the third person as it is less threatening for the children. Make it fun but with a serious learning element. You can also divide the group into half. Half can be the one person and half the other. Elect a spokes person for each group. Then each side can, by taking turns, give advice on how to handle the situation).

- REMEMBER:
- Try to be non-judgemental.
  - Ask open-ended questions to allow person to talk as fully as possible about what he/she is feeling ie
    - Tell me what happened.
    - How did that make you feel.
    - Has this happened before.
  - Be supportive.
    - That sounds awful.
    - No wonder you are angry/hurt.
  - Instead of giving direct advice.
    - Have you thought about what you are going to do.
  - At this age one of the most difficult things is getting children to listen. This may be the only thing you achieve especially with the young children and it is very important.

#### QUESTIONS TO ASK CLASS:

- HOW WOULD A DEPRESSED CHILD TALK TO A FRIEND.
- WHAT CAN YOU SAY TO A FRIEND WHO HAS A PAINFUL PROBLEM.
- WHAT KIND OF QUESTIONS CAN YOU ASK TO FIND OUT WHAT YOUR FRIEND IS FEELING.
- It is also very important to impress on the children that if they think that a friend of theirs or a sibling is in a bad way that they are doing the right thing to tell a responsible adult. This may be scary for them and they may be threatened by that person if they do so but it is important that they do. Explore ways how they might deal with this situation.

#### **REFERENCE :**

***Polly, J. (1989). Preventing teenage suicide. The living alternative handbook. New York : Human Sciences Press.***

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***APPENDIX E.***

***SUICIDE OPINION QUESTIONNAIRE.***

THE SUICIDE OPINION QUESTIONNAIRE FOR SCHOOL COUNSELLORS

	Agree		Neutral		Disagree
1. Most people who attempt suicide are lonely and depressed.	1	2	3	4	5
2. Almost anyone at one time or another has thought about suicide.	1	2	3	4	5
3. The suicide rate is higher for Indians than for blacks and whites.	1	2	3	4	5
4. Those who threaten to commit suicide do <u>not</u> often do so.	1	2	3	4	5
5. People who commit suicide are usually mentally ill or unstable.	1	2	3	4	5
6. Most people who try to kill themselves don't really want to die.	1	2	3	4	5
7. Suicide happens without warning.	1	2	3	4	5
8. Most suicide victims are older persons with little to live for.	1	2	3	4	5
9. A person who tried to commit suicide is not really responsible for their actions.	1	2	3	4	5
10. Someone who is thinking about suicide will hardly ever be dissuaded by a "friendly ear".	1	2	3	4	5
11. Those people who attempt suicide are usually trying to get sympathy from others.	1	2	3	4	5
12. Individuals who are depressed are more likely to commit suicide.	1	2	3	4	5
13. Most people who attempt suicide fail in their attempts and do not die.	1	2	3	4	5
14. People do not have the right to take their own lives.	1	2	3	4	5

15.	People who attempt suicide often have problems in relating to their family and feel isolated or misunderstood by them.	1	2	3	4	5
16.	People who attempt suicide are usually less religious.	1	2	3	4	5
17.	The large majority of suicide attempts result in death.	1	2	3	4	5
18.	Suicide attempters are, as individuals, more rigid and less flexible than non-attempters.	1	2	3	4	5
19.	People with no roots or family ties are more likely to attempt suicide.	1	2	3	4	5
20.	Most people who commit suicide do not believe in God.	1	2	3	4	5
21.	People who die by suicide should not be buried in the same cemetery as those who die naturally.	1	2	3	4	5
22.	Potentially everyone of us can be a suicide victim.	1	2	3	4	5
23.	People who did not succeed in their suicide attempts really did not intend to die in the first place.	1	2	3	4	5
24.	People who commit suicide lack solid religious convictions.	1	2	3	4	5
25.	People who commit suicide must have a weak personality.	1	2	3	4	5
26.	The method used in a suicide probably reflects whether the action was impulsive or carefully and rationally planned.	1	2	3	4	5
27.	The probability of committing suicide is greater for older people (those 60 of above) than for younger people.	1	2	3	4	5
28.	The most frequent message in suicide notes is of loneliness and the feeling that nobody understands the victim.	1	2	3	4	5

***APPENDIX F***

***WORKSHOP EVALUATION QUESTIONNAIRE.***

CONFIDENTIAL QUESTIONNAIRE

EVALUATION QUESTIONNAIRE ON SUICIDE / PARA-SUICIDE INTERVENTION

PLEASE EVALUATE THE PROGRAMME IN TERMS OF THE FOLLOWING:

1 AMOUNT OF INFORMATION COVERED

- Too much information covered
- Right amount of information covered
- Not enough information covered

2 LENGTH OF THE PROGRAMME:

- Programme too long
- Programme the right length
- Programme too short

3 PRIOR KNOWLEDGE OF MATERIAL PRESENTED

- None of the material presented was new
- Some of the material was new
- Most of the information was new.

4 THEORETICAL LEVEL OF INFORMATION PRESENTED

- Theoretical level of information too high
- Theoretical level of information just right
- Theoretical level too simple

5 SKILL ACQUISITION GAINED FROM PROGRAMME

- No new skills learnt
- Some new skills learnt
- Lot of skill acquisition

Please evaluate the following aspects of the programme on a scale of 1 to 5, where :

- 5 - excellent (extremely useful)
- 4 - very good (useful)
- 3 - average
- 2 - below average (of little use)
- 1 - poor (no use at all)

1 INFORMATION PRESENTED WAS EDUCATIONAL AND INFORMATIVE:

5    4    3    2    1

2 INFORMATION CLEAR AND EASY TO UNDERSTAND

5    4    3    2    1

3 SUBJECT WAS DEALT WITH IN SUFFICIENT COMPLEXITY

5    4    3    2    1

4 SUGGESTIONS AND HANDOUTS GIVEN USEFUL:

5 4 3 2 1

5 CONVENIENCE OF TIME PROGRAMME WAS HELD

5 4 3 2 1

6 USEFUL IN TEACHING HOW TO HELP OTHERS DEAL WITH FEELINGS OF DEPRESSION OR SUICIDE

5 4 3 2 1

7 THE USE OF ROLE PLAYING

5 4 3 2 1

8 VIDEO USEFUL ASPECT OF THE PROGRAMME

5 4 3 2 1

9 PRESENTERS WERE KNOWLEDGEABLE AND HELPFUL

5 4 3 2 1

10 ORGANIZATION OF THE PROGRAMME

5 4 3 2 1

11 OPPORTUNITY FOR DISCUSSION

5 4 3 2 1

12 AUDIO - VISUAL AIDS

5 4 3 2 1



PLEASE ANSWER THE FOLLOWING QUESTIONS GIVING BRIEF REASONS FOR YOUR ANSWERS.

1 DO YOU THINK THAT THE PROGRAMME WILL BE HELPFUL IN PREVENTING SUICIDE AND PARA-SUICIDE?

YES

NO

---

---

---

2 WAS THE PROGRAMME USEFUL IN LEARNING HOW TO IDENTIFY THOSE AT RISK FOR DEPRESSION AND SUICIDE/PARA-SUICIDE?

YES

NO

---

---

---

3 WAS THE PROGRAMME USEFUL IN HELPING HOW TO RESPOND IN A SUICIDAL CRISIS?

YES

NO

---

---

---

4 WILL YOU BE ABLE TO IMPLEMENT THE KNOWLEDGE AND SKILLS LEARNT?

YES

NO

---

---

---

WHAT DID YOU LIKE LEAST ABOUT THE PROGRAMME?

---

---

---

WHAT DID YOU LIKE MOST ABOUT THE PROGRAMME?

---

---

---

WERE THERE ANY PARTS OF THE PROGRAMME YOU FELT WERE UNNECESSARY?

---

---

WERE THERE ANY ASPECTS YOU FELT SHOULD HAVE BEEN INCLUDED?

---

---

WHAT WAS THE MOST USEFUL/BENEFICIAL PART OF THE PROGRAMME FOR YOU?

---

---

---

SUGGESTIONS FOR IMPROVING THE PROGRAMME.

---

---

---

---

***APPENDIX G.***

***PERMISSION TO EXAMINE HOSPITAL RECORDS.***

22 September 1992

The Deputy Director-General  
Health Services  
Natal Provincial Administration  
Health Services  
Private Bag X 9051  
PIETERMARITZBURG  
3200



University of Natal

Faculty of Social Science  
Department of Psychology

P. O. Box 375 Pietermaritzburg 3200 South Africa  
Telephone (0331) 955369 Fax (0331) 955599  
Telegrams University Telex 643719

Your refs: 66/P  
For Attention: Dr Stewart

Dear Sir,

**PERMISSION TO EXAMINE HOSPITAL RECORDS**

Thank you for your letter dated 20th August 1992 concerning the request by Miss Karen Burns of this department to have access to hospital records for a research project on parasuicide.

I enclose a copy of a letter received from Professor J.R. van Dellen of the Faculty of Medicine who does not feel that permission of the Medical Ethics Committee is required.

I pointed out in my letter to Professor van Dellen that the research project has been ethically approved from the perspective of psychological professional ethics.

All that apparently remains is for permission by yourself and the Superintendent of Northdale Hospital be obtained.

It would be much appreciated if this matter could receive your further attention so that the study may proceed without further delay.

Yours sincerely,

D.R. WASSENAAR  
Senior Lecturer  
Clinical Psychologist

22 September 1992

The Deputy Director-General  
Health Services  
Natal Provincial Administration  
Health Services  
Private Bag X 9051  
PIETERMARITZBURG  
3200



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D.R. WASSENAAR  
Senior Lecturer  
Clinical Psychologist

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ADMINISTRASIE  
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PRIVAATSAK 9061  
 PRIVATE BAG  
3200 PIETERMARITZBURG

Reference: 66/P  
Enquiries: Dr Stewart  
Extension: 2014  
1992 AUG 20

Research Supervisor  
University of Natal  
Faculty of Social Science  
Department of Psychology  
P.O. Box 375  
PIETERMARITZBURG  
3200

Dear Mr Wassenaar

**PERMISSION TO EXAMINE MEDICAL RECORDS**

Your minute dated 23 June 1992 addressed to Dr A.L. Pillay,  
Northdale Hospital refers.

With reference to the application by Karen Burns, M1 Student  
regarding school-based suicide prevention programmes I wish to  
enquire whether the approval of the ethical committee of the  
University of Natal Medical Faculty has been obtained for such  
a research to be carried out.

The abovementioned information is required prior to giving this  
matter further consideration.

Yours faithfully

  
DEPUTY DIRECTOR GENERAL: HEALTH SERVICES

EE/ncj/S.G33

The Chairman  
Ethics Committee  
Faculty of Medicine  
University of Natal  
DURBAN  
4000



University of Natal

Faculty of Social Science  
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31st August 1992

Dear Sir,

**REQUEST TO EXAMINE HOSPITAL RECORDS - NORTHDALÉ HOSPITAL PMB**

As part of an ongoing series of studies on suicidal behaviour in  
the Natal Indian population, we have embarked on a suicide  
prevention project which will be conducted at a number of high  
schools in the Pietermaritzburg area. This study is a  
collaborative project between members of this Department and  
Education staff of the House of Delegates.

A component of the study would be to examine any change in  
hospital admission rates for parasuicide as a consequence of the  
prevention programme.

Practically, we would require some baseline data indicating  
admission rates for parasuicide for the past two years, and  
compare this with the admission rate following the prevention  
programme.

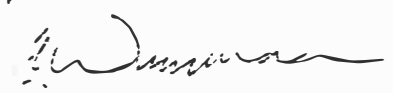
Such data has been accessed by Dr A Pillay (Midlands Hospital and  
Department of Medically Applied Psychology, UND) and myself, with  
the permission of the Senior Medical Superintendent, for earlier  
studies, some of which have been published.

Names of patients will not be required and all demographic and  
clinical data will be treated with the strictest confidence. The  
project has been approved by representatives of the Ethics  
Committee of the Psychological Association of South Africa, of  
which I am the chairman.

It would be appreciated if approval could be granted so that the  
project can proceed without further delay. Please do not  
hesitate to contact me if further information is required.

Thank you for your assistance.

Yours sincerely,

  
D.R. Wassenaar  
Senior Lecturer

