CHAPTER-II
REVIEW OF LITERATURE

The phenomenon of death has mystified and frightened the mankind since the birth of man. The great religious teachers, the philosophers and various scientists have looked at the phenomenon of death from their own perspectives and the last word may never be said.

Historically, the concept of suicide derives from the Latin word Sui (“of oneself”) and cide (“a killing”). Society’s attitudes toward suicide and the suicidal act reveal a wide range between a rational one of acceptance, an irrational one of superstition, and a hostile one of punishment. Edwin Shneidman defines suicide as “Currently in the Western world a conscious act of self-induced annihilation is best understood as a multidimensional malaise in a needful individual who defines an issue for which suicide is perceived as best solution. Suicide is now regarded as an act whose empirical and theoretical dimensions can be investigated scientifically. Scientific research and theory of a sociologic, psychologic and statistical nature began to appear in the literature towards the end of the nineteenth century. These writings provided the systematic foundations of twentieth century suicidology and contributed to the development of a philosophy of suicide prevention. The research and interpretation of suicidal phenomena made their greatest advancement in the twentieth century.

The earliest scientific study of suicide was reported by the French alienist Esquiret in Mental Maladies: A Treatise on Insanity, published in 1838. The section on suicide contained not only case studies but statistical tables also. Two years later the Anatomy of Suicide was published, by Forbes Winston who noted statistical data on suicide. So by the turn of the nineteenth century, the approach to an understanding of suicide had changed from a religious, moral, and philosophical approach to one of a psychologic, statistical and sociologic nature.
Among the theoretical perspectives of suicide the two major one's are those of Emile Durkheim, and Sigmund Freud. Durkheim (1858-1917) theorized that suicide could be understood in terms of man's relation to his society and hence is a sociologic phenomenon. Durkheim differentiated among three types of suicide (Appendix-I). The first was labeled altruistic suicide, in which the customs of a society facilitate or even demand the act. It is recognized by some societies as the honorable way out of an unfortunate situation. The Indian practice of sati, in which the widow would cast herself upon the funeral pyre of her husband, and a Japanese practice of Hara-Kiri are illustrations of such suicides. Second is egoistic suicide, in which the individual fails to identify with the institutions of his society and assumes individual responsibility or blame for bad behaviour i.e., egoistic suicide is that of the person who has too few ties with his community. The third type is anomic suicide, in which an individual's adjustment to society is disrupted, usually by separation from a key figure in his life. It occurs when the familiar relationship between an individual and society ends or change abruptly, as with the loss of a loved one, the loss of a job, or the discovery of a major health problem. The anomic suicide may be said not to share the values supposedly common to his society; hence he may be said to be alienated. All three of these types of suicide are essentially oriented to society.

In brief it can be stated that Durkheim established a model for sociologic investigations of suicide. Durkheim's work has had a profound effect on research throughout the world and even today
is frequently used as a reference. This author was the one to theorize about the causes of suicide. Jack Douglas in 1967 wrote that, “the most significant contribution of the works by sociologist on suicide has been the sociologic perspective itself; the insistence on seeing suicidal actions as in some way is the result of social factors.” He characterized suicidal action as meaningful thus implying that something is fundamentally wrong with the social situation in which they take place.

After a hiatus from Durkheim of more than 50 years, Henry and Short (1954) came up with their masterpiece, “Suicide and Homicide.” Suicide and Homicide was primarily an extension of Durkheim’s anomic type of suicide, as it tested the influence of economic changes on the suicide rate. Henry and Short also expanded the Durkheim’s concept of external restraint to include a Freudian notion of “internal restraint” (such as a strict or punitive superego), and expanded the possible aggressive outcomes from suicide to homicide rates.

If Durkheim’s work was sociologic par excellence, then Henry and Short added important dimensions of psychology and economics. The key concept in suicide and homicide were (i) Dollard’s (1939) and Berkowitz’s (1962) frustration-aggression hypothesis, (ii) social status, and (iii) external and internal restraint. Henry and Short assumed that aggression is after a consequence of frustration, that business cycles produce variation in the differential social status of persons and groups, and the frustrations are generated by interference with the goal response of maintaining a constant or rising position in a status hierarchy. For the last 30 to 35 years, Jack Gibbs has argued that Durkheim’s
concept of “social integration” was not defined operationally and, thus, was untestable. Gibbs has been outspoken, if not outrageous, in his persistent insistence on empiricism in the social study of suicide. The heart of status integration theory is that less frequently occupied status sets imply more unstable and disrupted social relationships, more role conflicts, more incompatible statuses, and thus higher suicide rates.

Within sociology there is a rich tradition in the study of the social relations of suicide. One trend is largely quantitative and grows out to the early research of French social scientist Emile Durkheim (1857/1951). A second trend is mainly qualitative and originated primarily with the “ethno methodology” of Douglas and Garfinkel. Among other things, social suicidologists examine social risk factors in general models of suicide outcomes, such as those listed in Maris et al. (1992) (suicide in one’s family, social isolation, marital disruption, stress and negative life events, loss of social support, living alone, rejection and unemployment).

**Psychologic Contributions**

Sigmund Freud (1856-1939) was responsible for detailing the psychological theory of self-destruction. In his opinion suicide is essentially a basic concept of the human mind and everyone is in some measure vulnerable to suicide. Freud considered suicide an intrapsychic phenomenon originating primarily within the unconscious. The pressure impelling a person towards death could increase, depending on life events, and under conditions of enormous stress, a person could be expected to regress to more primitive ego states. Freud felt that life and death forces are in constant conflict within the individual. He conceptualized that
persons identify ambivalently with their own internalized love objects. When a person is frustrated, the aggressive side of his or her conflicting emotions becomes inner directed. Suicide in this context may be viewed as a form of murder, with the suicide victim unconsciously wanting the other entity of a dyad dead. Litman (1968) traced Freud’s writings on suicide from 1881 to 1939 and described Freud’s explanations of suicide not only as theoretical and philosophical in essence but also based on psychoanalytic experiences.

Gregory Zilboorg (1891 – 1959) viewed suicide as a way of thwarting outside sources which make life impossible. According to Shneidman, Zilboorg found that “every suicidal case contained strong unconscious hostility combined with an unusual lack of capacity to love others. Zilboorg maintained that the role of the broken home in suicidal proneness demonstrated that suicide has intrapsychic and external etiological elements” (Shneidman, 1973). In his study of institutionalized suicides Zilboorg concluded that these suicidals suffered from depressive psychosis, compulsive neuroses and schizophrenia.

Karl Menninger, in his book “Man Against Himself” (1938), describes suicide as the winning of the death instinct over the life instinct—under conditions of stress and conflict. He perceives three main components of suicide: the wish to kill, the wish to be killed, and the wish to die. Menninger further identifies three categories of the suicidal impulse: chronic suicide, as seen in addiction to martyrdom and psychosis; focal suicide, as seen in self-mutilation, multiple accidents, and importance; and organic suicide, where the death wish comes from a physical illness such as some chronic or
terminal disease. Menninger mentions the taboo against suicide when he says: "so great is the taboo on suicide that some people will not say this word, some newspaper's will not print accounts of it and even scientists have avoided it as a subject of research."
The author further emphasized the point that suicide must not be ignored if prevention is to take place (Cf. Hatton, Valente, & Rink, 1977).

The above mentioned discussion suggests that in the scientific study of suicide, two approaches have been most evident. The first, deriving its impetus from psychoanalytic theory, focuses the search for the cause of suicide upon the individual and his idiosyncratic history. The second derives from the sociologist Durkheim and his investigation of the influence of societal variables upon suicide rates. In addition the thwarting-disorientation (TD) theory of suicide developed form the work of Narroll (1963, 1962), is an attempt to afford recognition to the interaction of both sociologic and psychologic factors in determining the suicidal act. In place of distinct sociological and psychological explanations to suicide, Narroll's theory utilizes a concept, thwarting – disorientation (TD) applicable at both the sociological and psychological levels of analysis. Krauss & Krauss (1968) found confirming evidence for Narroll's theory.

Recent work, however, has questioned the observation by Zilboorg (Zilboorg, 1936) that the loss through death of a parent during the patients' childhood was a significant factor in suicide. Barraclough (1987) found that loss of a parent in childhood was no more frequent in his sample of subjects who had committed suicide than it was in his control group. He did find, however, that
the recent death of a parent or spouse had occurred significantly more frequently among the subjects who committed suicide.

In adolescents the factors of parental death and recent object loss tend to merge, since a parent's death is likely to have been a recent event. In any case, what Zilboorg was observing was the impact of such deaths on his patients, an impact he attributed to the patient's identification with a dead parent. It is possible that for suicidal patients, even if the frequency of parent death is not extraordinary, its impact is greater, perhaps, because of such identification.

Interpersonal theorists including Sullivan, Horney, and Fromm reflected Freud's drive theory and stressed the importance of the social and cultural context affecting the individual in understanding suicidal behaviour. Object relations theorists further extended the psychoanalytic formulation of suicidal behaviour suggesting that suicidal acts represent a developmental failure to negotiate the transition from the symbiotic phase of attachment to mother to separation/individuation phase (Kohut, 1971). Kohut (1971) suggested that self destructiveness is often precipitated failures that elicit intense feelings of shame. The suffering ego attempts to do away with the self in order to erase the disappointing reality of failure. The products of narcissistic injury (i.e., fragmentation and narcissistic rage) lead to self destructive acts. Kernberg (1970) describes three types of self destructive patients: 1) the borderline whose self-mutilations is a means of control over inner chaos; 2) the pathologic narcissistic who is at extremely high risk because of grandiosity that is particularly vulnerable to trauma and heightened by aggression; and 3) those
patient's with psychotic feature whose suicide attempts may correspond to autistic fantasies about somatic or psycholigic transformations.

Research in the 1990s has confirmed that mental disorders are an important factors in suicide. Mental illness is considered as an important predictor of suicide and most investigations on this topic have revealed a psychiatric morbidity of more than 50% among subjects committing suicide (Andersen, Andersen, Rosholm, & Gram 2000), 95% of those who kill themselves have been shown to have a diagnosable psychiatric illness in the months preceding suicide (Hendin & Klerman, 1993).

Substantial evidence from psychological autopsy studies of adults (Hagnell, Lanke, & Rorsman, 1981; Robins, 1981) and adolescent suicides (Brent, Kolko, 1990; Shaffer, Garland, & Gould, 1981; Shaffii, Carrigen, & Whittinghill, 1985) reveal that most people who commit suicide were suffering from a major psychiatric illness at the time of their death, although only a small percentage were being treated (Robins, 1981; Shaffii, Steltz-Lenarsky, Denick, et al., 1988).

Numerous studies in the past three decades have established a relationship between suicide and depression at the individual case level by using the psychological autopsy method which consists of "reconstructing the lifestyle and personality of the deceased with details of the circumstances, behaviours, and events that led to the death of that individual". These studies yielded rates of depression among adolescent and young adult suicide victims ranging from 35% to 76% (Marttunen, Aro, & Henriksson, 1991).
The risk for suicidal behaviour and suicide is increased with almost every major psychiatric disorder (Buda & Tsvang, 1990). Studies of both adult and adolescent populations reveal that over 90% of suicide victims suffered from a psychiatric disorder; less than 10% of people who kill themselves have no documentable psychiatric illness (Shaffii, Steltz-Lenarsky, Denick, et al., 1988). Affective disorders followed by alcoholism are the major psychiatric diagnoses associated with suicide (Winokur & Black, 1987; Hagnell, Lanke, & Rorsman, 1981). Of the 90% of adult suicide completers with a psychiatric disorder in these studies, 60% to 80% suffered from a major affective illness. A study (Weissman, Klerman, Markowitz, et al., 1989) reports that 20% of patients with panic disorder and 12% of patients with panic attacks have made suicide attempts. For adolescent populations, between 63-95% of suicide victims suffered from psychiatric illness (Shaffi, Carrigen, & Whittinghill, 1985), with one study demonstrating that one fifth of the suicide victims had a diagnosis of bipolar disorders (Brent, Perper, Goldsein, et al., 1988).

In the context of the role of depression in suicide, in 1970, Guze and Robins reviewed 17 studies of suicide in patients with primary affective disorder. The authors concluded that 15% of depressed patients would die by suicide (Guze & Robins, 1970). In 1990, Goodwin and Jamison reviewed 13 additional studies to replicate the results of Guze & Robins (1970). The authors concluded that 19.9% of depressed patients would die by suicide (Goodwin & Jamison, 1990). The methodologies of these two reviews were similar, containing the same assumptions as well as the same biases. There were three points of particular interest.
First, both reviews considered studies that consisted almost exclusively of hospitalized patients. Second, both reviews calculated proportionate mortality (the percentage of the dead who died by suicide) rather than case fatality (the percentage of the original sample who died by suicide). Third, most of the studies included in both estimates of lifetime suicide risk had follow-up periods of only a few years.

Even though both reviews considered studies that almost exclusively consisted of hospitalized populations, subsequent authors, all citing Guze and Robins, have generalized their 15% figure to populations neither Guze and Robins (Guze & Robins, 1970) nor Goodwin and Jamison (Goodwin & Jamison, 1990) considered. Following this convention, major American textbooks continue to report the 15% figure as correct for all depressed patients (Dubovsky & Buzan, 1999; Andreason & Black, 1995; Roy, 1995). Bostwick & Pankratz (2000) found that the estimate of the lifetime prevalence of suicide in those ever hospitalized for suicidality was 8.6%. For affective disorder patients hospitalized without specification of suicidality, the lifetime risk of suicide was 4.0%. The lifetime suicide prevalence for mixed inpatient/outpatient populations was 2.2%, and for the nonaffectively ill population, it was less than 0.5%.

Further numerous researchers have demonstrated that suicide occurs variably at different points in the natural course of affective illness (Amaddeo, 1995; Malone, 1995; Geddes, Juszczak, 1985; Pokorny, 1983). It is evident that suicide risk decreases as the time from the most recent hospitalization, or treatment increases (Davies, Naiks, & Lee, 1998; Simon, &
Vonkorff, 1998; Amaddeo, Bisoffi, et al., 1995). Also suicide risk is highest during the years immediately following the onset of affective disorders (Malone, Hess, Sweeney, & Mann, 1995; Sharma & Marker 1994; Pokorny, 1983; Geddes, & Juszczak 1968). Thus, depression has been found to be an important correlate of suicidal behaviour.

Beck, Lester, & Albert (1973) made an attempt to examine the relationship between suicidal wishes and symptoms of depression. Subjects were 254 consecutive attempted suicides admitted to a hospital. Data from 7 subjects were discarded since they did not complete the inventory. Subjects were 114 males and 140 females. Results indicated that suicidal wishes were significantly correlated: 0.56 with pessimism, 0.55 with lack of satisfaction, 0.53 with depressed mood, 0.53 with sense of failure, 0.50, with guilty feelings, 0.47 with self-hate, 0.41 with crying spells, 0.42 with work inhibition, 0.39 with social withdrawal, 0.38 with negative body image, 0.34 with self-accusations, 0.30 with indecisiveness, 0.28 with sense of punishment, 0.27 with fatiguability, 0.25 with appetite, 0.23 with loss of libido, 0.17 with irritability, 0.14 with somatic preoccupation, and 0.14 with sleep disturbance. Suicidal wishes were not significantly correlated with weight loss. It can be seen that among these attempted suicidals, suicidal wishes correlated most highly with cognitive factors, such as pessimism and sense of failure and with items dealing with mood and feelings (anhedonia). Suicidal wishes show comparatively low correlation with appetite disturbance, somatic preoccupations, and sleep disturbances. The authors concluded that not all symptoms of depression are equally useful in predicting
accompanying suicidal occupation. Those symptoms relevant to the patients negative attitudes and to his anhedonia are substantially close to the suicidal wishes than are the classical physical and vegetative symptoms of depression.

The severity of depression and hence, the degree of suicidality, may be driven by specific factors occurring along with the core depressive syndrome. These include substance abuse or dependence in the patient or first-degree relative’s anxiety (particularly the malignant anguish or “psychache” described by Shneidman, 1993), impulsivity, aggressivity, and family history of affective illness, suicide or suicide attempts (Bronisch, 1996). Hopelessness is pervasive in suicidal states (Keller & Wolfersdorf, 1993). Goldney and colleagues (Goldney, Positano, Spence, et al., 1985) found that the patients in a series who died as a result of suicide after psychiatric hospitalization had more and longer hospitalizations, more previous suicide attempts, more overt depression, and more neuroleptic use. All these factors, rather than specific components of affective disease, will likely enter into the clinical judgement and result in some patients being admitted to the hospital while others are treated in less restrictive settings.

**Schizophrenia and Suicide Behaviour**

Suicide behaviour is the leading cause of premature death of people with schizophrenia (Allebeck, 1989; Sartorius, 1987). The rate of suicide in schizophrenia has been reported to be 107-1,008 per 10,000, some 20-50 times greater than the suicide rate in the general population (4.9-18.8 per 100,000) Black (1988). 10% to 13% of individuals with schizophrenia complete suicide (Stanley & Stanley, 1986; Black, 1985) and between 20% to 40% of
patients with schizophrenia have been found to make suicide attempts (Landmark, Cernovsky, & Mersky, 1987; Niskanen, Lonnqvist, & Achte, 1974).

The completed suicide rate in schizophrenia ranges from 9% to 12.9% (Newman, 1991; Cohen, Test, & Brown, 1990; Miles, 1977). Approximately 1% -2% of all schizophrenic patients who attempted suicide were reported to complete suicide within a year after their initial attempt, with an additional 1% doing so each year thereafter (Kreitman, 1977; Ehlinger, 1975).

Risk factors for suicide among patients with schizophrenia include more severe illness and frequent relapses and hospitalizations (Addington & Addington, 1992; Modestin, Zarro, Waldvogel, 1992), poor premorbid and current social function (Addington, & Addington, 1992; Modestin, Zarro, Waldiogel, 1992), history of previous suicide attempt (Allebeck, Varla & Kristjansson, 1987; Drake, 1985), significant depressive symptoms, especially hopelessness (Addington, & Addigton, 1992; Dassori, 1990; Roy, 1982) and current substance abuse (Dassori, Mezzick, & Keshavan, 1990; Allebeck, Varla, & Kristjansson, 1987), as well as recent hospitalization (Roy, 1982). According to Drake et al., (Drake, Gates, Colton, & Whitaker, 1984), awareness of the effect of illness, a sense of inadequacy to achieve goals and fear of further mental deterioration are additional risk factors. Thus, schizophrenic patients who have persistent and severe positive and negative symptoms, i.e., narcoleptic resistant schizophrenia might be expected to feel hopeless and be at a particularly high risk for suicide.
It has been estimated that completed and attempted suicide in schizophrenia cost as much as $190 million in 1991 as a result of medical expenses for attempted and completed suicide, investigational cost of completed suicide and lost productivity (Wyatt, Henter, Lear, & Taylor, 1991). Clinicians working with schizophrenics are often aware of the persistence of suicidal behaviour and the devasting consequences of suicidal behaviour for the individual, the family and the community at large.

The World Health Organization (WHO), in a five year follow up study of 1065 patients with psychosis concluded that "the risk for suicide in schizophrenia is as great, if not greater, than the risk of suicide associated with affective disorders (Sartorius et al., 1987).

Further, mental and addictive disorders provide the major context and are the key risk factors for suicide and suicidal behaviour. Findings from psychological autopsy studies from the United States and Europe consistently indicate that more than 90% of completed suicides in all age groups are associated with mental or addictive disorders (Brent, Johnsons, & Bartle, et al., 1993; Henriksson, Hillevi, & Marttunen, et al., 1993; Rich & Runeson, 1992; Marttunen, Aro, & Henriksson, et al., 1991; Rich, Young, & Fowler, 1986; Runeson, 1989).

These disorders are also the strongest observed risk factors for attempted suicide in all age groups (Beautrais, Joyce, & Mulder, 1996; Lewinsohn, Rohde, & Seeley, 1996; Andrews & Lewinsohn, 1992; Merrill & Owens, 1990; Brent, Perper, & Goldstein, 1988; Moscicki, O’Carroll, & Regier,
Thus, researches in the recent past reveal that a psychiatric disorder is necessary for suicide to occur (Shaffer, Garland, & Gould, 1988; Rich, Young, & Fowler, 1986). Mental and addictive disorders alone are not sufficient, however, as the majority of individuals afflicted with these disorders do not die by suicide. Mood disorders, frequently combined with other psychiatric and medical diagnoses, are the most commonly found diagnoses in psychological autopsy studies of completed suicides for both men and women, across all age groups.

**Experience of Hopelessness and Helplessness**

Depression, however, has several traveling companions which often accompany it in varying degrees. Feelings of hopelessness and helplessness are usually also evident. These are perhaps the feelings most accessible to the consciousness of the client and are more easily pointed out when a client first comes for help. Hopelessness has been found to be a more accurate indicator of the seriousness of the suicidal state than depression (Kovacs et al., 1975; Minkoff et al., 1973; Beck & Beck, 1972). In fact, the caregivers may use the client’s ability or inability to project into the future and make plans as a gauge of the seriousness of suicidal intent. Feelings of hopelessness may be more clearly expressed by the client than feelings of depression. Such communications take the form of remarks like “Nothing feels good to me any more and probably never will”, “Things will never work out,” “I can’t see that thing will ever be any different”. In addition helplessness is an expression of the client’s experience of importance. One hears helplessness expressed as “I can’t do anything about it.” No
matter what I do it will never change”, “I can't solve this problem by my self.” It may appear to the caregiver that the client is restored to a helpless state especially if the client should say, “Don't bother- you probably can’t do anything for me, either”. Recognition of this as a covert request for help enables the caregiver to bring this fact to the awareness of the client. More than likely it is an indication that the client has difficulty asking for anything directly. It may be a typical manner of interacting with most other persons in the client’s life.

In several theoretical models of depression, hopelessness has been assigned a critical role in the genesis and maintenance of depressive symptoms (Beck, Steer, & Kovacs, 1985). Moreover, evidence linking hopelessness with suicidal intent and behaviour has also accumulated (Wetzel, 1976; Minkoff, Bergman, & Beck, 1973).

The development by Beck and his group of reliable and valid measures of suicidal intent among suicide attempters (Beck, Schuyler, & Herman, 1974; Beck, Morris, & Beck, 1974) and ideators (Beck, Kovacs, & Weissman, 1979) as well as an instrument for measuring hopelessness (The Hopelessness Scale) (Beck, Weissman, & Lester, 1974) spurred a series of studies investigating the relationships among hopelessness, depression and suicidal behaviour. An investigation of suicide attempters by Minkoff and his associates (Minkoff, Bergman, & Beck et al., 1973) found that the intensity of suicidal intent was more highly correlated with hopelessness than with depression. Hopelessness as measured by the Hopelessness Scale, emerged as the moderator variable linking depression and
suicidal intent. A validation study found that hopelessness accounted for 76% of the association between depression and suicidal intent in 384 hospitalized suicide attempters (Beck, Kovacs, & Weissman, 1975). Beck (1967, 1963) contended that specific cognitive factors (e.g. hopelessness/pessimism about the future) are more closely related to suicidal intent than are affective aspect of depression alone.

Other investigators have supported the positive relationships among hopelessness, depression, and suicidal intent in attempters (Dyer & Kreitman, 1984;). Hopelessness was found to correlate more strongly than depression with suicidal intent in alcoholic suicide attempters (Beck, Weissman, & Kovacs, 1976).

Wetzel, Margulies, Davis, & Karam (1980) examined the relationship of hopelessness to suicide ideation in 73 psychiatric inpatients. They found that although both hopelessness and depression were correlated significantly with suicide ideation, hopelessness accounted for more of suicide ideation variation (56% versus 13%) than depression. When depression was partialled out of the correlation between hopelessness and suicide ideation, the correlation remained significantly high (r=.72, p<.05). On the other hand, when hopelessness was partialled out of the correlation between depression and suicide ideation, the partial correlation was non significant (r=.10).

A study (Beck, Steer, Kovacs, & Garrison, 1985) of hospitalized patients with suicidal ideation found that after a 5 to 10 year follow up period, 14 of the 207 patients in the study committed suicide. Of all the data collected during hospitalization,
only the hopelessness scale and the pessimism item of the Beck Depression Inventory predicted the eventual suicides, correctly identifying 91% of the completed suicides.

These findings, in conjunction with previous studies showing the relationship between hopelessness and suicide intent, indicate the importance of the degree of hopelessness as an indicator of long-term suicide risk across psychiatric diagnoses (Beck, 1986; Beck, Steer, Kovacs et al., 1985; Beck, Kovacs, & Weissman, 1979; Beck, Kovacs, & Weissman, 1975; Beck, Davis, Frederck, 1973; Beck (1986) also described a preliminary study with 1969 outpatients evaluated between 1978-1984 in which a Beck hopelessness score of 9 or above identified 15 (93.8%) of 16 suiciders.

Finally, when patients who had been hospitalized for depression or suicidal risk rather than for a recent suicide attempt were studied, it was again found that hopelessness, rather than depression per se was a determinant of suicidal intent (Wetzel, Marguilies, & Davis et al., 1980; Bedrosian & Beck, 1979).

More recently, Suominen, Isometsa, Henriksson, Ostamo, & Lonnqvist (1997) examined differences in hopelessness, impulsiveness and suicide intent between suicide attempters with either major depression or alcohol dependence, comorbid major depression and alcohol dependence and those without these disorders. A sample of 114 patients from consecutive cases of attempted suicide referred to a general hospital in Helsinki was interviewed and diagnosed according to DSM-III-R. Suicide intent was measured by the Beck Suicide Intent Scale
(SIS) and Hopelessness was assessed by the Beck Hopelessness scale (HS). Impulsiveness of the suicide attempt was measured by two items of the SIS.

Hopelessness was found to correlate significantly with suicide intent ($r = 0.32, P<0.01$) and to correlate strongly with Beck Depression Inventory scores ($r = 0.69, p < 0.001$). By contrast, suicide intent did not correlate significantly with Beck Depression Inventory score ($r = 0.17, P = 0.103$). Impulsiveness was found to correlate inversely and significantly with hopelessness ($r_s = 0.24, P < 0.05$) and Beck Depression Inventory scores ($r_s = 0.21, P < 0.05$), and to correlate highly significantly with suicide intent ($r_s = 0.60, P < 0.001$) (SIS scale items 6 and 15 excluded). Age did not correlate significantly with suicide intent ($r = -0.02, p = 0.87$), hopelessness ($r = 0.08, p = 0.40$) or impulsiveness ($r_s = -0.09, p = 0.35$).

Suicide attempts among subjects in four different diagnostic groups were found to differ from each other in terms of hopelessness. In post-hoc comparisons, subjects with major depression without comorbid alcohol dependence were more hopeless than subjects without major depression or alcohol dependence. None of the possible confounding factors (age, sex, anxiety disorders or any Axis II diagnosis) had a significant main effect, nor were there significant interactions.

Suicide attempters with major depression without comorbid alcohol dependence had higher suicide intent and lower impulsiveness than attempters with non-depressive alcohol dependence. The authors concluded that suicide attempts
may differ between subjects with major depression, alcoholism or both disorders in terms of impulsiveness and suicide intent.

Mendonca & Holden (1996) reported that the intensity of death wishes was more closely related to patients’ unusual quality of thinking than to their degree of pessimism. The purpose of another study by the authors (Mendonca & Holden, 1998) was to expand earlier study (Mendonca & Holden, 1996) beyond simply examining main effects.

Mendonca and Holden (1998) examined the comorbidity among three key symptoms associated with suicidal intent namely hopelessness, depression and unusual thinking. A total of 97 patients with suicidal thoughts were assessed using the Beck Hopelessness Scale, the Anxious Depression and Unusual Thinking* factor scales of the Derogatis Symptoms Checklist-90, and the Beck Scale for suicide Ideation. It was found that in considering the interaction between key symptoms, the combination of hopelessness and unusual thinking (which consisted of symptoms such as 'trouble concentrating' and 'mind going blank') was the strongest predictor of the seriousness of current suicidal inclinations.

Petrie & Chamberlain (1983) demonstrated that hopelessness significantly correlated with parasuicide after social desirability was statistically controlled. However, Linehan & Nielsen (1983, 1981) and Strosrahi, Linehan & Chiles (1984) found a non significant correlation between hopelessness and

*Unusual thinking referred to a state of cognitive distress, resulting in a perception of poor control of one's thoughts.
parasuicide after controlling for social desirability. Linehan & Nielsen (1981) suggested that the strong correlation between hopelessness and parasuicidal behaviour could be largely due to social desirability.

Using structural equation model, Cole (1988) found that hopelessness correlated with attempted suicide in a student client sample when social desirability and depression were controlled for, but not in a nonclient sample. Ivanoff & Jang (1991) examined the relationships among hopelessness, social desirability, and suicidal behaviour in the decade-long dispute about the role of social desirability and the ability of the Beck Hopelessness Scale to predict suicidal behaviour. Using a stratified random sample of state prison inmates, the study found that hopelessness and suicidal behaviour remain significantly correlated even after social desirability is held constant, failing to replicate Linehan & Nielsen’s (1983, 1981) findings. In addition a multivariate regression analysis demonstrated that the utility of hopelessness in predicting suicidal behavior varies with the level of social desirability, consistent with Holden, Mendonca, & Serin’s (1989) results describing an interaction between hopelessness and social desirability.

In sum, these findings do not support Linehan & Nielsen’s (1983, 1981) argument describing a spurious relationship between hopelessness and suicidality. On the basis of their partial correlation analysis, the authors argued that the significant correlation between the two is primarily due to their relationship with social desirability.
On the other hand, the findings are consistent with Holden et al.’s (1989) concerning the interaction between hopelessness and social desirability. Better stated, the ability of hopelessness as measured by Beck Hopelessness Scale to explain suicidality varies with the subject’s level of social desirability. The authors suggested that social desirability should be considered along with hopelessness in assessing suicidality not because hopelessness is a poor predictor or because social desirability helps avoid false-negative predictions, but because social desirability interacts with hopelessness. Although hopelessness may decrease the tendency to respond in a socially desirable manner, as Nevid (1983) suggested, this explanation is not sufficient.

The authors concluded that further research is needed, examining the interaction between hopelessness and social desirability in clinical/non-clinical samples of high social desirability. The relationships of race and ethnicity to these measurements also warrant further study.

Linehan & Nielsen (1981) first administered the Edwards Social Desirability Scale (ESDS; Edwards, 1970), the Beck Hopelessness Scale (BHS; Beck et al., 1974), and the Suicidal Behaviour Questionnaire (SBQ; Linehan & Nielsen, 1981) to Sattle shoppers. They found significant correlations between BHS and SBQ items and ESDS and SBQ items, as well as a significant negative correlation between BHS and ESDS scores. When social desirability was controlled for, the correlations between other measures dropped to insignificant. Linehan and Nielsen concluded that social desirability largely determines the correlation.
between hopelessness and nonfatal suicidal behaviour. Nevid (1983) noted that hopelessness might decrease the tendency to respond in a socially desirable manner, he also questioned the generalizability of Linehan & Nielsen’s (1981) findings to clinical populations.

Petrie & Chamberlain (1983) administered measures of depression, hopelessness, suicidal behaviour, and social desirability to a sample of suicide attempters. They used the Marlowe-Crowne social desirability scale (MCSDS; Crowne & Marlowe, 1964). As in the previous studies, they found a significant correlation between hopelessness and social desirability (r=.30). Unlike the previous studies, the correlation between hopelessness and parasuicide didn’t diminish when social desirability and depression were controlled for. However, the correlation between depression and parasuicide did drop when social desirability was covaried. Petrie & Chamberlain (1983) attributed the discrepancies between their results and Linehan & Nielsen’s (1981) findings to differences between treatment and non-treatment populations.

Linehan & Nielsen (1983, 1981) also administered their battery to 44 psychiatric inpatients and reported a significant correlation between hopelessness and parasuicide and in contrast to their earlier findings, a nonsignificant correlation between social desirability and self-reported probability of future suicide. When social desirability was partialled out, the correlation between hopelessness and suicidal behaviour did not drop significantly.
Petrie & Chamberlain (1983) administered the Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1964) to suicide attempters with measures of depression, hopelessness and suicidal behaviour. They reported a decrease in correlation between hopelessness and attempted suicide when social desirability and depression were controlled. However, when social desirability was covaried, the correlation between depression and attempted suicide dropped. Petrie and Chamberlain suggested that their sample accounted for their different results, whereas Strosahl et al., (1984) attributed the differences to the MCSDS, suggesting that it is a poor measure of social desirability.

Beck, Robert, Steer, Kovacs, & Garrison (1985) studied 207 patients hospitalized because of suicidal ideation but not for recent suicide attempts, at the time of admission. During a follow-up period of 5-10 years; 14 patients committed suicide. Of all the data collected at the time of hospitalization, only the Hopelessness Scale and the pessimism items of the Beck Depression Inventory predicted the eventual suicides. A score of 10 or more on the Hopelessness Scale correctly identified 91% of the eventual suicides. Taken in conjunction with previous studies showing the relationship between hopelessness and suicidal intent, these findings indicate the importance of degree of hopelessness as an indicator of long term suicidal risk in hospitalized depressed patients.

More recently, Mendonca & Holden (1996) associated the link between hopelessness and suicidal intent for two categories of suicidal thoughts, and the associations of these
two categories of thoughts with a range of symptoms were also examined. A total of 97 patients with suicidal thoughts were assessed at the crisis unit of a psychiatric hospital. In interviews suicidal intent was assessed using the Beck Scale for Suicidal Ideation, while psychological distress was assessed using both the Beck Hopelessness Scale and the Derogatis Symptoms Checklist. Ideation items describing the frequency, duration and acceptance of a wish to die were significantly correlated with feelings of hopelessness.

In the overall sample, hopelessness, as well as depression and anxiety with somatic, phobic or interpersonal manifestations were associated with less intense general suicidal desires. Only unusual thinking appeared to be a core characteristic of the more serious ideation involving a plan to kill oneself. In the case of the depressive subsamples, the implications of interpersonal anxiety and hostility, together with serious suicidal intent, have also been corroborated by other researchers (Strang & Orlofsky, 1990; Farmer, 1987). The specific relationship between hopelessness and suicidal intent was not found with other diagnostic groups in this study.

On the other hand findings suggest that unusual thinking and not hopelessness was the strongest predictor of serious suicidal intent. The regression results in fact suggested that hopelessness and even past history of suicidal behavior do not contribute as significant predictors after unusual thinking has been taken into account.

However, items reflecting preoccupation with a method of self-harm showed only a weak correlation with hopelessness,
although the relationship varied according to diagnosis. That is, this preoccupation was significantly associated with hopelessness for depressed patients, but this was not the case for personality disorder, anxiety disorder and substance abuse subgroups. Finally, analyses indicated that the primary predictor of suicidal intent was the patients 'cognitive distortion', not hopelessness.'

The authors concluded that factors other than hopelessness appear to be relevant for understanding suicidal ideation. In particular, self-reported unusual thinking was found to be the most important predictor of various facets of suicide intent for our sample of suicide ideators. This suggests that the evaluation of cognitive distortion may be an important aspect of the assessment of suicidal ideation and risk.

**Extraversion, Neuroticism, Psychoticism and Suicidal Behaviour**

It is significant to emphasize that very few empirical investigations have been made to examine the relationship of suicidal behavior with extraversion, neuroticism and psychoticism. Mehryar, Hekmat, & Khjavi (1977) divided a group of American University students into two groups in terms of contemplated suicide, using subjects' own reports of serious suicidal thoughts. The group admitting serious suicidal thoughts (N = III) differed significantly from the nonsuicidal group (N =356) on 7 of the 9 personality dimensions covered by Lanyon's Psychological Screening Inventory and Eysenck's PEN Questionnaire. More specifically speaking, the findings were very much in line with clinical descriptions (Stengel, 1964) and objective studies of
attempted suicide (Phillip, 1970a, 1970b, 1968) in that they indicated a higher level of personal disturbance (N+ and Dis+)* and interpersonal difficulties (P+ and Al+)* in students who have occasionally entertained serious thoughts of self-destruction. The lower sociability level (E' and Ex')* of the group obtained in the study is also consistent with the social withdrawal and aloofness so often associated with personal and interpersonal disturbances. The authors concluded that “the findings of this study, while not offering conclusive evidence in support of a suicidal personality, indicate that young individuals who have admitted suicidal temptations are characterized by certain traits and attitudes which are associated with psychopathology” (p. 1293).

Pallis & Jenkins (1977), conducted an investigation to study the relationship between extraversion, neuroticism and intent in attempted suicides. Subjects were 151 suicide attempters admitted to a general hospital's Accident and Emergency Department. Form A of the Eysenck's Inventory (Eysenck & Eysenck, 1964), was administered to all admissions upto 48 hours from medical recovery and prior to a research interview. Completed questionnaires were obtained from 124 subjects (82%). Non-responders (n=27) were comparable to responders in respect of sex, age, marital status, social class, psychiatric diagnosis, level of suicide intent, and previous or subsequent suicide attempts. Of the responders, 3 male and 11 female subjects were excluded because of high scores (6+) on the Eysenck Personality Inventory: Lie Scale. Suicidal intent

* N+ Neuroticism; Dis+ Discomfort; P+ Psychoticism; Al+ Alienation; Ef Extraversion; Ex' Expression

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was measured by the first part of the suicide Intent Scale (Beck, et al., 1974) from which ratings of the circumstances of the act can be obtained. Self-reported intent was recorded separately from the subject’s recollection of intent at the time of the act (1=wished to die; 2 = uncertain or did not wish to die). Subjects were further categorised as “recurrent attempters” if they had attempted suicide Prior to the index attempt or if they had repeated the act within a 2 years follow up period. Results revealed that for males there was an association between low intent to die and impulsivity. For female subjects, the result was consistent with that of Kinsinger’s (1971) who found no association between a clinical judgement of intent and extraversion or impulsivity. The study also revealed that for both sexes there was an association between recurrent suicide attempts and neuroticism. Both male and female recurrent attempters had higher neuroticism scores than once-only attempters. Because the Eysenck Neuroticism Scale is highly and positively weighted by trait arousability (Mehrabian & O'Reilly, 1980), the Pallis and Jenkin’s study provided evidence for high arousability as a significant temperament component of those who attempt suicide.

Watson & Kucala (1978), administered an Anhedonia Scale to patients who later died by suicide. Drawing on the contents of their Anhedonia Scale, Watson & Kucala characterized the suicide victims as “active, energetic and emotional” and suggested that suicides are a result of the combination of emotionality and situational stress.
Mehrabian & Weinstein (1985) made an attempt to investigate temperament characteristics of suicide attempters. Subjects were 30 men and 15 women in the 15 to 67 age range (M=33; SD=13). They were recruited for the study primarily through referrals by relatives and friends who had direct knowledge of their suicide attempts. Subjects were blue-collar workers, unemployed persons, or students. Subjects were contacted by telephone and were asked to participate in a study designed to measure attitudes. An appointment was made for one of the experiments to meet them individually and at their convenience to administer some questionnaires. Each subject first responded to a set of three measures that assessed temperament employing a three dimensional scheme (Mehrabian, 1980). Next, the experimenter conducted an interview that sometimes led to a discussion of the suicide attempt. For the 15 subjects (7 men and 8 women) who volunteered information concerning their suicide attempts, a lethality of suicide measure was obtained. These subjects rated their suicide attempts on a scale ranging from 1 (a gesture, e.g., an attempt made with no intention to die) to 5 (a near miss with death and hospitalization). Data from both sexes indicated that suicide-prone individuals have unpleasant, arousable, and submissive temperaments, with arousability a strong discriminator of suicide attempters relative to the general population. Thus, temperament attributes identified for suicide attempters are best described as neuroticism or trait anxiety. The authors concluded that the present findings, together with some of the other reviewed (Lester, Beck, & Mitchell, 1979; Watson &
Kucala, 1978; Pallis & Jenkins, 1977), shed a new light on the personality or temperament of suicide attempters. Contrary to the traditional view that suicide attempters are depressives, they are more likely to be neurotic or anxious types which include unpleasant, submissive and arousability temperament characteristics, the distinguishing characteristic being trait arousability. The additional findings of a significant positive correlation between lethality of the suicide attempt and trait arousability reinforced the importance of high arousability as a temperament characteristic of suicide attempters.

Earlier studies have found that previous suicide attempts, impulsivity, older age, antisocial personality, higher education and depressive mood are risk factors for further suicidal behaviour among subjects with borderline personality disorder (Brodsky, Malone, Ellis, Dulit, & Mann, 1997; Soloff, Lis, Kelly Cornelius, & Wrich, 1994; Paris, Nowlis, & Brown, 1989). Suicide intent (Casy, 1989) and the lethality of an attempt (Corbitt, Malone, Haas, & Mann, 1996) have not been found to differ between patients with or without personality disorders.

In clinical practice, suicide attempts by patients with borderline personality disorders are often estimated to be 'manipulative' and the frequency of suicidal crisis among subjects with borderline personality disorders may cause clinicians to underestimate their seriousness of borderline patients’ intent to die (Kjellander, Bongar, & King, 1998). There have been studies of completed suicide among subjects with personality disorders (Cheng, Mann, & Chan, 1997; Isometsa, Henriksson, Heikkinen, et al., 1996; Brent, Johnson, & Perper et al., 1994) and those
with both borderline personality disorders and lifetime history of suicide attempts (Brodsky, Malone, Ellis, Dulit, & Mann, 1997; Corbitt, Malone, Haas, & Mann, 1996; Soloff, Lis, Kelly, et al., 1994; Fyer, Frances, Sullivan, et al., 1988). Although the association of personality disturbances and attempted suicide (Stengel, 1968) is well known, the clinical characteristics of subjects with personality disorders after a recent suicide attempt are much less investigated.

Verdoux, Liraud, Gonzales, et al., (2001) designed a study to assess the baseline characteristics associated with a greater risk of suicidal behavior (suicide and parasuicide) over the 2 years following a first admission for psychosis, and the associations between suicidality and outcome. First admitted subjects with psychosis (n=65) were assessed at 6-monthly intervals over a 2-year follow-up period. Over this period, 11.3% of the patients displayed suicidal behavior. Baseline predictors of suicidal behavior were a lifetime history of parasuicide before first admission, lower positive and negative symptom scale, positive subscores and a longer duration of first admission. Subjects with suicidal behavior presented with a longer duration of psychotic symptoms (OR = 1.1, 95% CI: 1.02-1.2) and a greater risk of being readmitted (OR = 4.6, 95% CI: 1.1-19.1). Subjects with substance misuse ever the follow up period were seven times (95% CI 1.3-3.9) more likely to engage in suicidal behavior. Subjects with a previous history of parasuicide, with a deteriorating clinical course, or with substance misuse are at increased risk of suicidal behavior in the 2 years after the onset of first psychotic episode.
Although suicidal behavior is a more persistent feature among those with personality disorders, their clinical characteristics at the time of suicide attempt may not differ from those personality disorders.

Soloff, Kevin, et al., (2000) concluded an investigation on “characteristics of suicide attempts of patients with major depressive episode and borderline personality disorder. Comorbidity of borderline personality disorder and major depressive episode may obscure characteristics of suicide attempts that are uniquely related to the psychopathology of each disorder. The authors compared suicidal behavior in patients with borderline personality disorder, major depressive episode, and borderline personality disorder plus major depressive episode to determine whether characteristics of suicide attempts differed between groups and if aspects of core psychopathology predicted specific attempt characteristics. Eighty-one inpatients with borderline personality disorder, including 49 patients with borderline personality disorder plus major depressive episode, were compared to 77 inpatients with major depressive episode alone on measures of depressed mood, hopelessness, impulsive aggression, and suicidal behavior, including lifetime number of attempts, degree of lethal intent, objective planning, medical damage, and degree of violence of suicide methods. No significant differences were found in the characteristics of suicide attempts between patients with borderline personality disorder and those with major depressive episode. However, patients with both disorders had the greatest number of suicide attempts and the highest level of objective
planning. An increase in either impulsive aggression or hopelessness or a diagnosis of borderline personality disorder predicted a greater number of attempts. Hopelessness predicted lethal intent in all three groups and predicted objective planning in the group with both disorders. Medical damage resulting from the most serious lifetime suicide attempt was predicted by number of attempts. Comorbidity of borderline personality disorder with major depressive episode increases the number and seriousness of suicide attempts. Hopelessness and impulsive aggression independently increase the risk of suicidal behavior in patients with borderline personality disorder and in patients with major depressive episode.

Suominen, Isometsa, Henriksson, Ostamo, & Lonnqvist (2000) examined the relation between suicide attempts and personality disorder. The purpose of the study was to compare clinical characteristics of suicide attempters with or without personality disorders. A systematic sample (n=114) of patients from consecutive cases of attempted suicide referred to general hospitals in Helsinki, was interviewed and diagnosed according to DSM-III-R. Forty-six subjects with DSM-III-R personality disorders were identified and divided into clusters A (n=4), B (n=34), and C (n=8). These subjects were compared with 65 suicide attempters, without personality disorders in terms of clinical characteristics and treatment received. Suicide attempters with personality disorders more often had a history of previous suicide attempts, with personality disorders more often had a history of previous suicide attempts and life time psychiatric treatment than comparison subjects. However, suicide attempts
did not differ in terms of suicide intent, hopelessness, lethality or impulsiveness between subjects with or without personality disorders. Although suicidal behavior is a more persistent feature among those with personality disorders, their clinical characteristics at the time of a suicide attempt may not differ from those without personality disorders.

A diagnosis of personality disorder, particularly when borderline, is a risk factor for suicidal behavior. The prevalence of personality disorders in the general population has been estimated at 6-13% (Weissman, 1993; Samuels, Nestadt, Romanoski, & Folstein, & Heigh, 1994). At least one third (31-62%) of people who have committed suicide (Foster, Gillespie, McClelland, & Patterson, 1999; Cheng, Mann, & Chan, 1997), and up to 77% of suicide attempters (Ferreirade, et al., 1998; Engstram, Alling, Gustovrson, et al., 1997; Nimeus, Traskman Bendz, & Alsen, 1997), have suffered from personality disorders. According to a recent meta-analysis the suicide risk among people with personality disorders is seven times the expected value, and among people treated for attempted suicide 38 times the expected value (Harris & Barrachlough, 1997). Suicide attempters with personality disorders have the highest level of repetition (Casey, 1992). Comorbidity of personality disorder with other psychiatric disorders contributes to suicidality (Cheng, Mann, & Chan, 1997; Fyer, et al., 1988; Wetzel, et al., 1997), and may markedly elevate suicide risk (Foster, Gillespie, McClelland, & Patterson, 1999).

Castro, Cunha, Pimenta, & Costa (1998) examined the relation between parasuicide and mental disorders. The main
aim was to provide a better follow-up of parasuicidal subjects, focusing on their diagnostic profile with regard to whether the parasuicide intention was death or not. A total of 235 parasuicidal out-patients (PS) and a comparison group of 235 non-parasuicidal out-patients (CG) were surveyed. A structured interview was applied to both groups. Parasuicide intention was appraised by means of the Suicide Intent scale of Beck. The PS patients were divided into two groups, depending on whether their intention was death (PSD) or not (OPS), and they were matched with their CG counterparts. The diagnostic profile of each group was analysed and differences in diagnosis distribution were found. The rates of major depression, alcohol dependence and schizophrenia were higher among PSD than in OPS patients. The same was true for comorbidity of major depression and alcohol dependence. On Axis II, borderline personality ranks first among PSD patients. The diagnostic profile of PSD approaches that of completed suicide as shown in retrospective and prospective studies.

Isometsa, Markus, & Henriksson et al., (1996) conducted a study to establish relationship of suicide among subjects with personality disorders. A random sample of 229 subjects who committed suicide, representing all suicide victims in Finland within a 12-month period, were comprehensively examined by using the psychological autopsy method and were diagnosed according to DSM-III-R criteria. Within this random sample the authors investigated all subjects with axis-II personality disorders (N=67) and divided them into clusters B (N=43), C (N=23), and A (N=1). Individuals with clusters B and C personality disorders
were separately compared with sex and age matched suicide victims without personality disorders, in terms of sociodemographic characteristics, comorbid axis I and III syndromes, treatment histories, previous suicide attempts, communication of suicide intent, and suicide methods. All suicide victims with a personality disorder received at least one axis I diagnosis. In 95% this included a depressive syndrome, a psychoactive substance use disorder, or both. Individuals with cluster B personality disorders were more likely than comparison subjects to have psychoactive substance use disorders (79% vs. 40%) and previous nonfatal suicide attempts (70% vs. 37%) and were less likely to have axis III physical disorders (29% vs. 50%). Subjects with cluster C personality disorders were not found to differ from the control subjects in any of the variables examined. The authors concluded: Suicide victims with personality disorders were almost always found to have had current depressive syndromes, psychoactive substance use disorders, or both. Suicide victims with cluster B personality disorders differed from other suicide victims in several characteristics, while those with cluster C personality disorders did not.

**Gender Differences in Suicidal Behaviour**

A number of studies have analysed the health–socioeconomic indicators for suicide ideation and behaviour, in which gender is one of the most frequently replicated predictor (Canetto & Sakinofsky, 1998; Moscicki, 1994; Goldacre, 1993). Identifying variables that indicate greater risk of suicide in different genders, as well as investigating weather risk factors associated with suicide differ by gender, are important tasks. Also, very few
studies have examined interactions by gender for each of the risk factors while adjusting for other confounders.

A previous study by Mortensen et al., (2000) found that a history of hospitalised mental disorders, unemployment and being single were all associated with an elevated suicide risk in Denmark. Qin et al.’s (2000) epidemiological study of risk factors for suicide in males and females in Denmark reminds us that there are important gender differences in suicidal behaviour. Qin, Niels, Tor, & Preben (2000), examined the gender differences in risk factors for suicide in Denmark. A time-matched nested case-control design was performed using Danish longitudinal register data-bases to obtain 811 suicide cases and 79871 controls. Data were analysed using conditional logistic regression. A history of hospitalized mental illness was the most marked risk factor for suicide for both genders. Unemployment, retirement, being single and sickness absence were significant risk factors for men, whereas having a child < 2 years old was significantly protective for women. The relative risks for suicide differed significantly between genders according to psychiatric admission status and being the parent of a child< 2 years. However, adjustment for these factors did not eliminate the gender differences in suicide risk. Risk factors for suicide differed by gender and gender differences could not be explained by differential exposure to known risk factors. These reflect not only differences in aetiology, which were the primary focus of Danish study, but also other important variations by gender in relation to risk the nature of suicidal behaviour and its prevention and treatment.
Rates of suicide in most countries, including Denmark, are higher in males than in females. China is one important exception, with very high rate in females, especially young women in rural areas (Cheng & Lee, 2000).

Further, Fuse (1980) noted that the female suicide rate was relatively higher as compared to the male suicide in Asian nations. Lester (1982) reported, for example, that the male/female suicide rate ratio was 1.35 on the average for Far Eastern nations, 2.21 in Western European nations, and 3.45 in South American nations. Barracough (1988, 1987) has looked at the ratio of male to female suicide rates in nations of the world by age. In those aged 5 to 14, the author reported that the female suicide rate often exceeded the male suicide rate, especially in Asian and Latin American nations. For those aged 15 to 24, he reported a wide variation in the male/female suicide rate ratio, with again some nations reporting higher suicide rates for women aged 15 to 24 than for men. Barracough felt that it was important to search for explanations of this variation in the male/female suicide rate ratio.

Lester (1990) sought to explore this variation by examining the male/female suicide rate ratio in a sample of nations for each age group and to explore the associations of the ratio for the different age groups. The sample of nations was all those reporting 1980 suicide rates to the World Health Organization and whose populations were greater than one million (so as to ensure some degree to reliability to suicide rates). Some nations reported zero suicide rates from both sex for particular age groups. These nations were eliminated from the sample.
The ratio of those aged 5-14, and 15-24 were significantly associated (r=0.34). Similarly, the ratios of those aged 35-44 through 75+ were also all positively associated. However, the ratios for younger groups were not associated with the ratios for the older groups. The author further remarked that male youths commit suicide at a relatively higher rate as compared to female youths in the wealthier and more industrialized nations. In contrast the sex ratio of suicide rates in older adults is not related to the sex ratio in youths and, in addition, is higher in the less wealthy and industrialized nations. Thus in wealthier nations, young women commit suicide at a relatively lower rate (as compared to men) while older women commit suicide at relatively higher rate (as compared to men). The ratio of male suicide rate to the female suicide rate for each age group in 31 nations of the world was found to be associated with the wealth of the nations.

In recent years, several countries have experienced an increase in suicide rates in males, particularly in the younger age groups (Cantor, 2000). In contrast, suicide rates of females have declined, especially in older women, or remained fairly stable, particularly in the young. This pattern is especially marked in the UK (Hawton, 1992) with an overall rise in male rates and a decrease in female rates (Kelly & Bunting, 1998). In contrast to suicides, rates of deliberate self-harm (DSH) are usually higher in females than males. The World Health Organization /EURO Multicentre study of suicidal behaviour...
has demonstrated this pattern throughout countries in Europe, with findings from Helsinki, indicating that Finland may be one exception (Schmidtke et al., 1996). There has, however, been an increase in rates of DSH in males in some countries. In the U.K. this trend has been particularly marked in young males (Hawton, 1997). The excess rate of DHS in females, plus the stronger association between the DHS and suicide in males (Hawton & Fagg, 1988; Hawton et al., 1998), suggest that acts of DSH by females are more often based on non-suicide motivation. In females, the appeal function of DSH, whereby DSH is used to communicate distress or to modify the behaviour and reactions of other people, seems more common. In males, DHS is more often associated with greater suicidal intent. It is interesting that in community samples, suicidal ideation is reported far more often by females than males (e.g., Paykel et al., 1974).

It is well recognised that males tend to use violent means of both suicide and DSH more often than do females. Greater suicidal intent, aggression, knowledge regarding violent means and less concern about bodily disfigurement, are all likely explanations for the excess of violent suicide in males. It suggests that causal factors and, possibly, protective factors have changed in different directions in the two genders; social factors, especially linked to changes in gender roles, seem the most likely explanation (Hawton, 1998).

**Biological Markers of Suicidal Behaviour**

The current understanding of suicidal behaviours is that such behaviours are multidetermined and result from an interaction between state and trait-related effects (Arango, 1992). Among the
trait related effects, genetic factors appear to be important, as suggested by the findings of family (Wetzel, 1982; Winokur, 1964), twin (Segal, 1991), and adoption studies (Kety, 1986; Wender, Kety, & Rosenthal, 1986). Whether these genetic factors are similar to those involved in the susceptibility to psychiatric disorders closely related to suicidal behaviours (e.g., manic-depressive disorder, schizophrenia, and alcoholism) is unknown. However, a genetic factor of susceptibility to suicide independent of or additive to the genetic transmission of the psychiatric disorders that are related to suicidal behaviors is strongly suggested by the data of the Copenhagen adoption studies (Kety, 1986; Wender, Kety, & Rosenthal, 1986; Kety, Rosenthal, & Wender, 1979) and a study of Amish families Egeland, & Sussex (1985). In this last study, Egeland & Sussex (1985), showed that most suicides were clustered in families characterized by heavy loading for affective disorders and suicide. Conversely, there were other pedigrees with heavy loading for affective disorders but without suicide.

Studies suggest that reduction of cholesterol concentration and low cholesterol levels may be associated with completed suicide. A meta-analysis of six primary-prevention trials of cholesterol lowering in men (Pooled N = 24,847) revealed that the intervention group, as compared to control subjects, experienced a reduction in the incidence of coronary heart disease but not in total mortality (Muldoon, Manuck, & Matthews, 1990). This discrepancy appeared to be due in part to an increase in non-illness-related mortality (i.e., suicide, violence, and accidents) in the cholesterol-lowering group. The increase in non-illness-related mortality was
not significant in any one study but was statistically quite significant when the results were pooled. These findings have added to concerns about public health recommendations aimed at cholesterol reduction for the general population.

Epidemiological studies have examined the relationship between nonmedical mortality and baseline low cholesterol levels in the general population. In the Varmland's study in Sweden (N = 52,000) the relative risk of suicide was 4.2 for men in the lowest cholesterol quartile compared to those in the highest quartile during the first 7 years follow-up; no difference in risk was found in women (Lindberg, Rastam, Gullberg, & Eklund, 1992). Among men screened for the Multiple Risk Factor Intervention Trail (N= 351,000), men with cholesterol levels less than 160 mg/dl had a greater risk of suicide than men with level of 160 mg/dl as higher during the 12 years follow-up (Neaton, Blackburn, Jacobs et al., 1992) Several other epidemiological studies have not shown an inverse relationship between cholesterol level and suicide (Smith, Shicely, & Marmol et al. 1992; Farchi, Menothi, & Conti, 1987; Pekkanen, Nissinen, Punsar, & Karvonen 1989). However a meta-analysis that pooled the results of 18 prospective epidemiological studies (pooled N = 300,000), excluding the Varmland study and Multiple Risk Factor Intervention Trail, revealed a higher risk of suicide and trauma death in both men and women with low cholesterol concentrations (Jacobs, Black Burn, Higgins et al., 1992).

Several studies have examined the relationship between cholesterol level and psychopathology. Among male homicidal offenders, those who had attempted suicide had lower cholesterol
levels than those who had not attempted suicide (Virkkunen, 1983). Male homicidal offenders who are habitually violent under the influence of alcohol, male criminals with antisocial personality disorder (Virkkunen, Penttinen, 1984), and boys with both attention deficit disorder and aggressive conduct disorder (Virkkunen, 1979) were found to have lower cholesterol levels than comparison subjects.

Whether a low cholesterol level is associated with a history of serious suicide attempts among psychiatric inpatients, life time history of attempted suicide of 650 patients, aged 18-59 years, consecutively admitted to a psychiatric hospital was assessed by semistructured interview. The seriousness of an attempt was rated on the bases of the resulting medical injury. Serum cholesterol levels, obtained from the admission biochemical profiles were divided into quartiles, compared to men with low cholesterol levels above the 25th percentile were less likely to have ever made a serious suicide attempt when age, weight, race, socioeconomic status, alcohol use, and depression were controlled for. There were no association between cholesterol level and attempted suicide in women. Male psychiatric patients with low cholesterol, concentration levels were twice as likely to have ever made a medically serious suicide attempt than men with cholesterol levels above the 25th percentile. Low cholesterol concentration should be further investigated as a potential biological marker of suicide risk.

The authors concluded that “prospective studies with serial cholesterol determinations, although costly, should be done with populations at risk for self-injury and should include the full range of self-directed aggression, from self-mutilation to suicide. If the
findings are replicated, a low serum cholesterol level might serve as an inexpensive and readily available biological marker of suicide risk in men. As the relationship between cholesterol level and suicide risk does not appear linear, future work should also be done to identify a threshold level of cholesterol associated with suicide risk. Such studies might also inform future research on the pathophysiology of suicidal behaviours.

Coping and suicidal Behaviour

Physical health is closely related to emotional and mental health, particularly among middle aged and older adults, a fact documented by a multitude of studies (Felton & Revenson, 1984; Larson, 1978; Palmore & Luikart, 1972). Individuals differ in their adjustment to both acute and chronic illness. However, coping efforts have been proposed as one means of accounting for these differences in adaptation, and numerous studies have documented the importance of individual coping efforts in helping ill adults maintain reasonable levels of emotional well-being (e.g., Moos, 1982; Cohen & Lazarus, 1979). These studies have found typical coping can be broadly defined as the cognitive and behavioral efforts that are expanded by an individual with the intention of reducing the effects of stress (Fleming, Baum, & Singer, 1984). Three main approaches to the conceptualization of coping are apparent in the literature (Menaghan, 1983; Folkman & Lazarus, 1980). The first of these approaches conceptualizes coping in terms of ego processes. Coping is considered as one of a number of defence processes that can be used to reduce tension (e.g., Haan, 1977). This approach has received little attention in the literature, primarily because advocates of it tend to confound coping with outcome-coping is typically considered as the most preferable response to tension (Folkman & Lazarus, 1980). Other researchers have conceptualized coping in trait terms (e.g., Moos, 1974). Coping from this perspective is regarded as a relatively stable predisposition to respond to stressful life events in a particular manner. However, because the existence of stable coping processes has seldom been empirically verified, this approach has also received little support in the literature (Folkman & Lazarus, 1980; Cohen & Lazarus, 1973). The data instead suggest the coping varies as a function of type of situation being faced. On the basis of such results, Lazarus & Folkman (1984) conceptualize coping as a dynamic process, which will be specific not only to the situation, but also to the stage of the encounter.
coping strategies to include: denial, selective ignoring, information seeking, taking refuge in activity, avoidance, learning specific illness-related procedures, engaging in wish-fulfilling fantasy, blaming others and seeking comfort from others.

Unfortunately, many of the studies arguing the importance of coping efforts have relied on case study methods or have confounded measures of coping and adjustment by a priori defining groups of good versus poor copers (e.g., Sanders & Kardinal, 1977; Hackelt & Cassem, 1975). Nonetheless, more recent and more systematically controlled studies have also demonstrated a role for coping in explaining the psychological adjustment of ill adults' (Lambert, 1981; Weissman & Worden, 1976).

Studies considering stresses other than of physical illness have also provided evidence that adults' choices of coping strategies influence the emotional outcome of stressful event (e.g., Menaghan, 1982; Pearlin, Lieberman, Menaghan, & Mullan, 1981; Pearlin & Schooler, 1978). Pearlin et al. (1981) used longitudinal data to confirm that coping affected depression in reaction to involuntary job disruption: people who coped by making positive comparisons of their situations with others' and by devaluing the importance of monetary success were more successful in avoiding economic strain, loss of self-esteem, and depression. Menaghan (1982) evaluated the role of coping in marital problems over a 4-year period and found that coping by making optimistic comparisons of one's situation relative to the past and relative to one's peers was associated with both lowered distress and with fewer subsequent marital problems. Other coping
strategies were effective in only one domain or actually increased distress.

Specific types of coping strategies are more or less effective depending upon the type of stress being faced. Pearlin & Schooler (1978) found that coping strategies involving commitment and engagement with others were most effective in dealing with stresses arising in close interpersonal relations. In contrast, cognitive manipulations that distanced the person from the problem were most effective for stresses in occupational and economic areas, domains more impersonal and less amenable to control (Pearlin et al., 1981). Folkman & Lazarus (1980) found that "palliative", or emotion-focused coping, was more likely to be used than "instrumental", or problem-focused coping, for health problems, especially when the problem was appraised as uncontrollable.

There is sufficient evidence that suggests that depressed and non-depressed individuals may be different in their coping responses. For instance, Coyne, Aldwin, & Lazarus (1981), found that the coping responses of 15 persons whose scores on the Hopkins Symptom Checklist fell in the depressed range differed from those of 72 non-depressed persons. The depressed persons tended to appraise situation as requiring more information before they could act and, surprisingly, to view fewer events as necessitating acceptance and accommodation. They were more likely to use such responses as seeking advice and emotional support and engaging in wishful thinking.

Billings & Moos (1984) studied the effect of coping on unipolar depression among adults. Their study found that coping
responses directed toward problem solving and affective regulation were associated with less severe dysfunction whereas emotional-discharge responses, more frequently used by women, were linked to greater dysfunction.

Coping-skills treatment procedures assume that ineffective strategies for coping with stressful life events are associated with increased, psychopathology. There are some data to support a link between childhood depression and problem-solving deficits (Mullins, Siegel, & Hodges, 1985; Doerfler, Mullins, Griffin, Siegel, & Richards, 1984; Kaslow et al., 1984; Kaslow, Tanenbaum, Abramson, Peterson, & Seligman, 1983), and research with adults has indicated differences between the coping processes of individuals high and low in depressive symptoms (Folkman & Lazarus, 1986; Mitchell, Cronkite, & Moos, 1983). Despite the extensive social problem-solving literature linking deficiencies in the quantity and quality of children's social problem-solving strategies to poor adjustment (e.g., Asarnow & Callan, 1985; Rubin & Krasnor, 1984; Richard & Dodge, 1982; Spivack, Platt, & Shure, 1976; Shure & Spivack, 1972), studies have failed to find relations between depression and the number of alternative strategies generated to solve emotional problems (Mullins et al., 1985; Doerfler et al., 1984).

Investigations have studied the effects of both problem-focused and emotion-focused coping strategies in dealing with negative life changes and chronic strains (Moos & Billings 1982; Folkman & Lazarus, 1980; Pearlin & Schooler, 1978). Among a group of unemployed persons, for example, those who tried to re-evaluate their situation more favourably were less likely to
experience increased symptoms of depression (Pearlin et al., 1981). Similarly, Billings & Moos (1981) found that alcoholic patients and community residents who used more problem-focused coping responses displayed fewer physical and depressive symptoms. The most effective coping styles may involve the use of a wide repertoire of coping responses. For example, although emotion-focused coping may help to maintain emotional balance in the face of adversity, the failure to use problem-focused strategies is likely to result in long-term negative psychological consequences.

Further, several studies have demonstrated a crucial role of coping styles in buffering the impacts of different stressors on the development of overt psychiatric morbidity (Folkman, Lazarus, Gruen, & De Longis, 1986). It appears that it is not the stressor alone that leads to serious outcome, but the way in which the person perceives and responds to it. Thus Lineham et al. (1986) report that individuals who attempt suicide have more difficulties in coping with interpersonal problems than do non-suicidal psychiatric patients or members of the general population. Suicidal patients are less able to consider alternatives (Rydin et al., 1990; Cohen-Sandler, & Berman, 1982) or to think flexibly (Orbach, Bar Joseph, & Dror, 1990; Orbach, Rosenheim, & Harry, 1987; Schotte & Clum, 1982; Patsiokas, Clum, & Luscomb, 1979), and may persist with ineffective problem solving even after more effective strategies have been presented (Levenson & Neuringer, 1971).

Several studies have examined the impact of different coping styles on suicide risk. Kotler et al. (1993) compared a group of suicidal in-patients with a non-suicidal group, and reported that the
suicidal patients were less likely use the coping styles of minimization to deal with life problems. Botsis et al. (1994) compared similar groups and reported that the suicidal patients used almost all coping styles less frequently than the non-suicidal patients. Among suicidal patients, the risk of suicide was negatively correlated with the coping styles of minimization, replacement and blame. Suicide risk was shown to be predicated by coping style.

In another study, Josepho & Plutchik (1994) investigated the relationship between interpersonal problems, coping styles and suicide risk among 71 adult psychiatric in-patients. They showed that interpersonal problems and the coping style of suppression (tendency to avoid a threatening situation) were found to be significantly and positively correlated with suicide risk. Several other coping styles were found to be significantly associated with suicide risk (Josepho & Plutchiic 1994).

Horesh, Rolnick, Lancu, Dannon, Lepkifker, Apter, & Kotler (1996) examined the coping styles and the suicide risk. A total of 30 psychiatric in-patients admitted because of suicidal behaviour were compared with 30 non-suicidal psychiatric in-patients and 32 healthy controls on measures of suicide risk and coping styles. The three groups were similar with regard to demographic variables, but the suicidal groups scored higher on the suicide risk scale. Suicidal patients were significantly less likely to use the coping styles of minimization and mapping. They were unable to de-emphasize the importance of a perceived problem or source of stress. They also lacked the ability to obtain new information required to resolve stressful life events. Four coping styles
correlated negatively with the suicide risk (minimization, replacement, mapping and reversal), while another three (suppression, blame and substitution) correlated positively.

OVERVIEW

1. In the past 20 years the number of patients hospitalized for suicide attempts has increased sharply in most Western countries (Diekstra, 1982). The number of suicide attempts in third world countries has also been increasing progressively (WHO, 1990). Even though a number of studies (Sharma & Sawang, 1993; Banerjee et al., 1990; Shukla et al., 1990; Hudge, 1980) in India have focussed on various aspects of a suicide, it is still an intriguing problem about which the amount of scientific knowledge is quite incomplete.

2. Some of the difficulties in conducting suicide research are due to the fact that researchers have been unable to obtain a definition of suicidal phenomena which simultaneously fits them into mutually exclusive categories and defines them in operational terms. It is possible, however, to propose a more exclusive definition of overt suicidal behaviours. The underlying assumptions of the definition is that there are basically four different types of suicidal behaviours, namely ideators, threats, attempts and commits. It is further assumed that "ideation" is a prerequisite to any form of overt suicidal behavour. Obviously, before some action such as threat, attempt or
commit can take place, thought must have preceded such action. If one applies rules of deductive logic to these assumptions, suicidal behaviour can then be separated into several categories. More specifically it can be noticed that "ideation" is a prerequisite to threatened suicide, attempted suicide or committed suicide.

3. The current high level of admissions for attempted suicide makes considerable demand on medical and psychiatric services. By studying suicide ideation, scientists could hope to achieve a better understanding of the causes of the suicidal behaviour and ultimately, suggest appropriate remedies. Research on suicide ideation and its related factors could help us not only to understand this complex behaviour, but also to effectively institute the preventive and other management strategies.

4. The discussion emphasized that a number of attempts have been made to identify the social and psychological aspects of suicidal behaviour. Most of the research on suicide behaviour has utilized adult clinical populations. Much of this work, however, has been concerned with people who have actually attempted or completed suicide. Because of the difficulty in obtaining data on completed suicides, studies actually focus upon surviving suicide attempters. But it is well known fact that attempted suicides which come to the notice of clinical workers from a very small proportion of the suicidal population as a result most investigators utilize small clinical samples of surviving attempters. To circumvent the methodological
constraints associated with small clinical samples, some researchers have begun to study suicide ideation in general population (Vandivort & Locke, 1979; Paykel et al., 1974; Schwab et al., 1972). Studies of suicide ideation assume that suicide behaviour forms a continuum ranging from suicidal ideas to suicidal acts (Bedrosian, Beck, 1979; Paykel et al., 1974; Beck & Greenberg, 1971). This continuum does not imply that all or even most individuals who contemplate suicide make an attempt. Ideation is viewed as a preliminary stage to the more life-threatening stages on the continuum, although the majority of persons who manifest suicidal ideas do not seem to progress to the later stages. This contention is supported by the findings of Carlson & Cantwell (1982). In a study of adolescents, they found that 42% of the respondents with severe ideation and 34% of those with slight ideation had made an suicide attempt while virtually none of the respondents who reported no suicide ideation had made an attempt.

Thus, suicidal thoughts appears to be a precursor to more extreme suicidal behaviours, and this suggests that one can learn something about the factors that set the stage for suicidal acts by identifying the causes of suicide ideation.

Kandel, Raveis, & Davies (1991) found that 41% of the females and 16% of the males who scored high on the suicidal ideation scale reported having made an attempt to kill themselves. Understanding the dynamics of suicidal ideation in non-clinical samples has important public
health implications, since suicide ideation is a strong predictor of suicidal attempts, especially among females (Bonner & Rich, 1987). Thus, identifying the correlates of suicide ideation which is a prerequisite to threatened suicide is obviously more important because the earlier the identification the more feasible is intervention and prevention.

5. A review of literature reveals that suicidologists have focused almost exclusively on either clinical patients or those who have attempted or completed suicide. While there is obvious merit in such studies, many have lacked adequate control groups. Further, those who study clinical patients miss those who do not seek help, while investigators who focus on those who have attempted suicide may be looking at persons who have changed simply because they survived the attempt. Social scientists may be able to obtain valuable information about the precursors of suicidal behaviour by studying suicide ideation in non-clinical populations in greater depth. As Stengel (1964, p.12) has put it, "There are few if any individuals to whom the idea of suicide has never occured". Thus, identifying the correlates of suicidal ideation which is a prerequisite to threatened suicide, attempted suicide or committed suicide is obviously more important because the earlier the identification, the more feasible is intervention and prevention. It is of prime importance since the main aim of the suicidologist is the eventual prediction of those who are most likely to consider self destruction.
Despite the associations of depression and hopelessness with suicidal behaviour, it seems likely that maladaptiveness in the context of psychoticism is more greater and more life-threatening than even the most debilitating depression and hopelessness. Indeed the extent of maladaptiveness suggests that suicidal behaviours may involve comorbidity of depression with psychoticism in which a circumscribed transient thought disorder suspends the individual’s capacity to comprehend the consequences of their actions. After all many suicidal individuals are not fully cognizent of the potentially irreversible impact-both on themselves and others of their actions at the time of suicidal episode. The apparent suspension of rational decision making at the time of the suicidal attempt appears somewhat comparable to the diminished capacity often observed in homicidal behaviour; this parallel is presumably led Menninger (1938) to refer to suicide as "murder of the self", because the self becomes the target of lethal aggression. the literature suffers from an important omission in the sense that the role of depression and hopelessness in suicide ideation has been examined without bringing ‘psychoticism’ into the purview of the study. The role of psychoticism cannot be ignored in any study of suicide ideation.

The heterogeneous nature of suicidal intent is an important but insufficiently explored issue. Studies investigating suicidal ideation have often used the global score on the Beck Scale for Suicidal Ideation (SSI) to assess suicide
ideation. Some studies have used single global rating scales scores. Both overall ratings of ideation and single global score on the Scale for Suicide Ideation treat ideation as a homogeneous construct and neither of them distinguished between types of ideation, e.g. between 'general inclination' and 'focused inclination' involving plans for self harm. In this context Mendonca & Holden (1996) isolated two dimensions, 'Suicidal desire' and 'Suicide preparation'. Because these two dimensions of suicidal ideation represent two different levels of seriousness of ideation, the use of global measure of suicide ideation seems to be an important methodological flaw. It would be important to clarify their relationships to risk factors.

Keeping in view the above mentioned conclusions the aim of the present study is to examine the relation of different types of suicide ideation with depression, hopelessness and psychoticism.

**HYPOTHESES**

The study starts with the following hypotheses:

1. It is hypothesized that adolescents high on depressive tendencies will score markedly more on general suicidal desire than adolescents low on depressive tendencies.

2. It is expected that the differences between high and low depressive on serious suicidal ideation (i.e. suicide desire and suicide preparation), though significant, would be less intense.
3. It is expected that the adolescents high on hopelessness will score markedly more on general suicidal desire than adolescents scoring low on hopelessness.

4. It is expected that the difference between high and low scorers on hopelessness and serious suicidal ideation, therefore, suicide desire and preparation though, significant, would be less intense.

5. It is hypothesized that adolescents scoring high on psychoticism would score high on general suicide desire as well as serious suicidal ideation (suicide desire and suicide preparation) than adolescents scoring low on psychoticism.

6. It is hypothesized that the highest level of general suicide desire and serious suicidal ideas (suicide desire and suicide preparation) would occur in adolescents who have high scores on depression, hopelessness and psychoticism.