CHAPTER -III
METHODOLOGY
METHODOLOGY

METHOD

This chapter includes a description of:

(a) Sample
(b) Tests used
(c) Administration and scoring of tests
(d) Analysis.

SAMPLE

Participants were 220 adolescents (110 males, 110 females) studying in graduate classes of different colleges. The age of 110 male adolescents ranged from 19 to 23 years (M = 14.02, SD = 1.55), whereas for 110 female adolescents the age ranged from 19 to 23 years (M = 14.90, SD = 0.90).

The reasons for selecting adolescent males and females are given earlier. The variables of marital status, employment status, and urbanism were controlled since all the subjects were unmarried, unemployed and belonged to urban area. Moreover, the population was primarily middle class. More precisely speaking, subjects were similar in age, education, marital status, employment status and area of residence. Here, it is significant to emphasize that in addition to the advantage of homogeneity which resulted from this type of control, there is also an increased danger of bias. Thus, in interpreting the results of the study, one must be aware of that potential. Still, the characteristics of these subjects are similar to those of large segments of the population, and this should enhance the generalizability of the findings. Also, this type of control is appropriate for examining correlates of suicide ideation.

The sample was delimited to the subjects who were available to participate in this study, thus, limiting the assumption of randomization.
The following variables were taken into consideration for the purpose of selecting sample.

1) The sample was non-clinical in the sense that subjects were not receiving psychiatric treatment.
2) There was no evidence of drug-addiction or alcoholism.
3) All the subjects were regular students of different colleges.
4) The subjects belonged to intact families.

DESCRIPTION OF TESTS

The following tests were used:

(A) Measures of Depressive tendencies/Symptoms
   Beck Depression Inventory (BDI: Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

(B) Measures of Cognitive Dysfunction
   2. Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974).

(C) Measures of Personality
   1. IPAT Anxiety Scale Questionnaire (ASQ : Cattell & Scheier , 1963).
   2. Eysenck Personality Questionnaire (Eysenck & Eysenck,1975).

(D) Measures of Social Support
   2. Family Environment Scale (Moos & Moos, 1994)

(E) Scale for Suicide Ideation (Beck, Kovacs, & Weissman, 1979)

A) Measures of Depressive Tendencies/Symptoms

Depression has featured throughout history as perhaps the most pervasive of all psychopathology (Boyd et al., 1982). This is partly reflected in the numerous self-report measures which have been devised to quantify human depression. Reviews of
the literature pertaining to depression measurement have been undertaken by Hughes et al., (1982), Mayer (1977), Levitt & Lubin (1975), Becker (1974), as well as by Kazdin & Petti (1982). Among the frequently employed self-report measures are the Minnesota Multiphasic Personality Inventory – D Scale; the Beck Depression Inventory (BDI: Beck, et al., 1961); the Zung Self-Rating Depression Scale (ZSRS: Zung, 1965), Multiple Affect Adjective Checklist (MAACL: Zuckerman & Lubin, 1965), the Depression Adjective Check List (DACL: Lubin 1967); the Institute for Personality and Ability Testing (IPAT) Depression Scale (Krug & Laughlin, 1976); and the Center for Epidemiological Studies Depression Scale (CES-D Scale: Radloff & Locke, 1984). In the current study, Beck Depression Inventory was used because it has been extensively used by researchers for assessing depression. A brief description of the inventory is given below.

**Beck Depression Inventory (BDI: Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).**

The Beck Depression Inventory is a 21-item scale measuring attitudes and symptoms associated with depression. Each item is scored from 0 to 3 and all items are summed to produce a total score that range from 0 to 63; higher scores indicate greater severity of depressive symptomatology. A typical item is as follows:

0 - I can sleep as well as usual.
1 - I wake up more tired in the morning than I used to.
2 - I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 - I wake up early everyday and cannot get more than 5 hours of sleep.

It is reported to possess adequate internal consistency (Upmanyu & Reen, 1990, 1991; Vredenburg, Krames, & Flett, 1985; Dobson & Breiter 1983) and test-retest reliability (Peterson, Semmel, Von Baeyer, Abramson, Metalsky, & Seligman, 1982; Golin, Sweeney, & Schaeffer, 1981).

Furthermore, a number of studies have also shown adequate reliability and validity when used with both clinical (Barrera & Garrison-Jones, 1988; Schaefer et al., 1985; Stober et al., 1981; Nussbaum, Wittig, Hanlon, & Kurland, 1963) and non-clinical (Barrera and Garrison-Jones, 1988; Teri, 1982) samples of adolescents.
Another study (Baron & Laplante, 1984 cited in Baron & Perron, 1986) conducted with a sample of 374 adolescents (185 males, 189 females) coming from similar environment indicated that the BDI psychometric characteristics were quite satisfactory. In both psychiatric and student samples; the BDI has also shown high convergent validity with psychiatric rating of depression severity (Blumbery, Oliver, & McClure, 1978; Metcalfe & Goldman, 1965; Beck et al., 1961), Zung Self Rating Depression Scale (Reynolds & Gauld, 1981) and behavioural items on the Health Behaviors Questionnaire (Kaplan, Nussbaum, Skomorowsky, Shenker, & Ramsey, 1980).

Although, there has been some controversy concerning the use of the BDI, Beck, Steer, & Garbin (1988) have reviewed a large number of studies that demonstrate the reliability and validity of this measure, and Hill, Kemp-Wheeler, & Jones (1986) have recently provided evidence of discriminant validity in college student samples. Beck, Steer, & Garbin (1988) reported that the BDI has now been used in more than 1,000 different studies. Although, Beck recommended a cutpoint of 10 for mild to moderate depression, a number of authors, especially Pyszczynski, Hamilton, Herring, & Greenberg, 1989; Crocker, Alloy, & Tabachnik Kayne, 1988; Pyszczynski & Greenberg, 1985; Martin et al., 1984; Tabachnik, Crocker, & Alloy, 1983; Alloy et. al, 1984; Abramson, 1982; Harvey, 1981; Krantz & Hammen, 1979; Nelson & Craighead, 1977; Miller & Seligman, 1976) used a cutpoint of 9 to distinguish depressed from nondepressed in college student samples. Pyszczynski et al., (1989) reanalyzed the data using 10 as the cutpoint for inclusion in the depression category and found that the results were unaltered.

In this study, the Beck Depression Inventory has not been used for classifying subjects into different groups, but the inventory has been used to obtain measures of depressive symptoms among adolescents. Scores on the BDI represent the severity of depressive symptoms but are not necessarily indicative of the presence of the full clinical syndrome of depression.

(B) Measures of Cognitive Dysfunction

Although a number of structured self-report questionnaires have been developed to measure various thinking styles associated with depression in adults, most notably the Attributional Style Questionnaire (Seligman, Abramson, Semmel, &
Von Baeyer. 1979), the Automatic Thought Questionnaire (Hollon & Kendall, 1980), the Cognitive Bias Questionnaire (Krantz & Hammen, 1979; Hammen & Krantz, 1976), the Dysfunctional Attitude Scale (Weissman, 1979) and the Irrational Beliefs Test (Jones, 1968), only Lefebvre (1980, 1981) devised a measure with separate subscales for the specific cognitive errors described by Beck et al., (1979).

In the present study, the following measures were used, since they have been extensively used.

1. **Automatic Thought Questionnaire (ATQ: Hollon & Kendall, 1980)**

The Automatic Thought Questionnaire is a self-report questionnaire that asks subjects to rate on a 5-point scale how often they have experienced 30 depression-related cognitions during the past week (Hollon & Kendall, 1980). The items are rated on a 5-point scale: 1 = "not at all", 2 = "sometimes", 3 = "moderately often", 4 = "often" and 5 = "all the time". Examples of typical items are as follow:

1. I am no good.
2. My life is a mess.
3. I am a failure.
4. I am worthless.
5. I hate myself.
6. My future is bleak.

Factor analysis has indicated a four-factor solution: Personal maladjustment and desire to change (e.g., What's the matter with me?), negative self-concept and negative expectation (e.g., My future is bleak), low self-esteem (e.g., I am worthless), and giving up/hopelessness (e.g., It's just not worth it) (Hollon & Kendall, 1980). As usual, scores on the 30 items are summed to give a total score for ATQ Negative. It yields a score ranging from 30 to 150, with higher scores indicating more frequent negative automatic thoughts.

Hollon & Kendall (1980) reported high internal reliability, strong correlation with severity of depression and good item-total statistics. In 348 college students, the Automatic Thought Questionnaire correlated significantly with both the Beck Depression Inventory and the Minnesota Multiphasic Personality Inventory-Depression Scale. The coefficients of correlation ranged from .45 to .70. Also using a college sample, Dobson & Breiter (1983) and Harrell & Ryan (1983) reported that ATQ possessed adequate internal reliability and strong sensitivity to the severity of depression.
depression. The ATQ was the most sensitive measure related to levels of depression. The scale has been shown to differentiate depressed and non-depressed samples (Dobson & Breiter, 1983) and to have greater specificity to depression than the Dysfunctional Attitude Scale (Hollon, Kendall, & Lumry, 1986). Upmanyu & Reen (1991) also found evidence for satisfactory psychometric characteristics of Automatic Thought Questionnaire.

2. **Hopelessness Scale (HS: Beck, Weissman, Lester, & Trewler, 1974)**

   The Hopelessness Scale is a 20-item, true/false, self-report measure intended to tap the degree of respondent’s negative expectations about the future. Those statements were selected which seemed to reflect different facets of the spectrum of negative attitudes about the future and which recurred frequently in the patients verbalizations. For every statement, each response is assigned a score of 0 or 1 (9 items are keyed false and 11 are keyed true). The “total hopelessness score” is the sum of the score on the individual items. Thus, the possible range of scores is from 0 to 20 with higher scores indicating more hopelessness.

   The reliability and validity data presented for the hopelessness scale are deemed sufficient to justify its use on a continuing basis. Beck et al. (1974) reported an alpha coefficient of .93 for the HS, item-total correlation coefficients ranging from .39 to .76, and correlations with clinical ratings of hopelessness ranging from .62 to .86. The hopelessness scale is an instrument that may be used by both clinician and researcher involved in the detection and assessment of hopelessness as an important variable in many psychopathological processes.

(c) **Measures of Personality**

1. **IPAT Anxiety Scale Questionnaire (Cattell & Scheier 1963)**

   Our era has been called “the age of anxiety,” and anxiety manifestations are certainly widespread and protean. In clinical practice or research, whether the diagnosis is for psychotherapeutic purposes, or for problems of internal medicine caused by life stress (Bending, 1959; Thorne, 1955; Selye, 1952), it is increasingly necessary to have standard and dependable estimates of the role of anxiety. There are also many situations in educational and social psychology where accurate measurement of anxiety level is of prime impotence.
IPAT ANXIETY SCALE was developed from extensive research and practice (Rawn, 1958; Cattell, 1955; Rosenthal, 1955; Scheier & Cattell, 1958) as a means of getting principal anxiety information rapidly, objectively, and in standard manner. It is a brief, non-stressful, clinically—valid questionnaire for measuring anxiety, suitable to all but the lowest educational levels and appropriate for ages of 14 or 15 years on upward throughout the adult range. The scale gives an accurate appraisal or free anxiety level, supplementing clinical diagnosis, and facilitating all kinds of responses of mass screening operations where very little diagnostic or assessment time can be spent with each examinee.

Finally, the IPAT ANXIETY SCALE can be easily scored, in about one-half minute, using a standard key, which means that all observers will agree on the exact anxiety level which characterizes a given examinee. Scoring can be done by a technician (quickly enough to have it ready for an examinee's consultation with the clinician) without any drain on the skilled practitioner's time. The filled-out test booklet itself constitutes a useful record of total anxiety level and even the specific qualitative form of the symptoms as indicated by the examinee's answers to individual questions. The Scale can be used not only for initial diagnosis, but also in follow-ups as a "clinical thermometer" for charting progress or change of level" with psychotherapy, medication, change of situation, etc., in research or practice.

The IPAT anxiety scale consist of questions distributed among the five anxiety measuring factors (or components) according each personality component's centrality as or expression of anxiety. The distribution of factors is summarized in Table 1.

**TABLE 1: ITEM COMPOSITION OF THE IPAT ANXIETY SCALE**

<table>
<thead>
<tr>
<th>The Five Factors Which Group Together as Anxiety Components</th>
<th>Weight (Number of Items)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3(-) Defective Integration, Lack of Self Sentiment</td>
<td>8</td>
</tr>
<tr>
<td>C(-) Ego Weakness, Lack of Ego Strength</td>
<td>6</td>
</tr>
<tr>
<td>L Suspiciousness or Paranoid Insecurity</td>
<td>4</td>
</tr>
<tr>
<td>O Guilt Proneness</td>
<td>12</td>
</tr>
<tr>
<td>Q1 Frustrative Tension or Id Pressure</td>
<td>10</td>
</tr>
</tbody>
</table>
Scoring

Apply the cardboard stencil key directly to the test form following the simple instructions printed on the key itself. The scorer simply adds 2’s or 1’s for each item, according to the figures printed by the hole through which the check mark appears. Higher score always means more anxiety. Three kinds of scores are possible:

1. A single total anxiety score based on all 40 items. This is all that is recommended or needed in the majority of cases.

2. A breakdown into (a) an unrealized, covert "cryptic question" anxiety score, Score A, for the 20 items on the left-hand test page; and (b) an overt, symptomatic, conscious anxiety score, Score B, for the 20 right-hand-page items. Scores A + B sum to the total score in paragraph 1 above. When used separately these scores can be presented for interpretation, as a ratio of overt to cryptic anxiety (Score B/Score A), though Bending has recently suggested using, instead, a difference score B—A.

3. A breakdown of total anxiety into the five personality components in anxiety.

The psychometric characteristics of this scale have been well documented in India studies (Upmanyu & Singh, 1984; Upmanyu, Gill, & Singh, 1982; Hundal & Upmanyu, 1974, 1981; Hundal, Sudhakar, & Sidhue, 1972)

2. Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975)

H.J. Eysenck (1947) proposed a three dimensional model of personality: Introversion-Extraversion (E), Neuroticism (N), and Psychoticism (P), and a psychobiological model to parallel the three dimensions (Eysenck, 1967, 1981, Eysenck & Eysenck, 1985). The model is a hierarchical one that conceptualizes each of the three broad dimensions subdivided at a lower level into narrower and more specific traits, which finally may be subdivided into habits of reactions or aggregates of behavioural instances, the number of factors that one regards as personality. H.J. Eysenck & S.B. Eysenck (1969) have chosen to concentrate on the highest level of analysis because the supertraits are more replicable across sex, age, methods (rating vs. self-report methods), and different questionnaires.

The questionnaire was developed using the results of large-scale factor analysis and Eysenck & Eysenck (1976) have claimed that their four factors appear in

71
both first and higher order solutions. Among the first item-factor analysis of the EPQ by researchers other than the Eysenck's, were those undertaken by Loo (1979), Holmes (1980), Barrett & Kline (1980), and McKenzie (1988). Loo's study failed to locate Eysenck's factors at either the first or higher orders. Helmes, whilst finding that the scale means, standard deviations and internal consistencies were comparable to those already published, found lower reliabilities for the P and L-scales. The P scale in particular had values of Cronbach's of 0.59 for males and 0.45 for females, compared with published norms of 0.74 and 0.71 respectively. Helmes also observed highly skewed distributions of the P-scores and managed to retrieve only 14 of the 25 P-items at the first order. The third item factor analysis by Barrett & Kline (1980) was the most comprehensive and provided a wealth of details on both the scale scores and the factors structure. Using principal component analysis followed by a direct oblimin rotation (Jennrich & Sampson, 1966), the researchers covered practically all the E,N, and L-items at second order. However, although P as a factor did appear in most of the samples analysed, there was no clear recovery of the substantial majority of P-items in the female samples. In a later study, Barrett & Kline (1982) concluded that the factor structure of the EPQ was replicable and that the factors appeared with remarkable clarity, the only exception being the low level of retrieval of P-items in some of the samples analysed. McKenzie (1988) concluded that "the analysis provide conclusive confirmation that Eysenck's 4 factors of P, E, N and L are real, reliable and replicable across populations and sexes, that they can be located at the first order and that both P and N are sensitive to dissimulation" (p.809).

Eysenck Personality Questionnaire is one of the most widely used personality questionnaires. Its psychometric characteristics are fairly well documented in many countries including India. (Upmanyu & Upmanyu, 2008)

(D) Measures of Social Support

1. Social Support Questionnaire (SSQ: Sarason, Levine, Basham, & Sarason, 1983)

Social Support Questionnaire (SSQ) developed by Sarason, Levine, Basham, & Sarason, (1983) consists of 27 items. Each one asks a question to which a two-part answer is requested. The item asks the subject (a) to list the people to whom they can
turn and on whom they can rely in given sets of circumstances, and (b) indicate how satisfied they are with these social supports on a 6-point Likert Scale (very satisfied, fairly satisfied, a little satisfied, a little dissatisfied, fairly dissatisfied, very dissatisfied). The SSQ yields two scores: (a) perceived availability of the number of supportive persons (SSQ-N), and (b) satisfaction with available support (SSQ-S). The number (N) score for each item of the SSQ is the number of support persons listed. The social support available to deal with a given problem is rated on a scale ranging from "very satisfied" to "very dissatisfied". This yields a satisfaction (S) score for each item that ranges between 1 and 6. The overall N and S scores are obtained by dividing the sum of N or S scores for all items by 27, the number of items included in the Social Support Questionnaire.

The Social Support Questionnaire has been found to have a number of desirable psychometric properties. It was found to have (a) stability over a 4-week period of time, and (b) high internal consistency among items.

The authors concluded that the modest correlation between SSQ-N and SSQ-S provides a strong basis for analyzing social support into its components. The perceived availability of support reflected by the SSQ-N score, and the satisfaction with the support that is available, reflected by the SSQ-S score, each appear to be worthy of study and analysis.

Kumari & Sharma (1990) concluded that very high SSQ-N/SSQ-S correlation observed in Indian culture, raises some doubt about the cross-cultural generalizability. Sarason et al. (1983) claim that social support is not a unitary concept when assessed by the SSQ, and that perceived availability of support and satisfaction with the support that is available are worthy of study and separate analysis. The authors further concluded that factor analysis of the two SSQ scales in Indian and other Asian cultures will, however, be desirable before a firm statement on this issue can be made. Despite these concerns which are significant, it can be stated that SSQ is a useful tool for research aiming at examining the role of social support. The psychometric characteristics of the questionnaire are well established (Upmanyu & Upmanyu, 2008).
2. Family Environment Scale (FES: Moos & Moos, 1994) The FES has three forms:

- The Real Form (Form R) measures people's perceptions of their current family environment.
- The Ideal Form (Form I) measures people's preferences about an ideal family environment.
- The Expectations Form (Form E) measures people's expectations about family settings.

Form I and Form E are parallel to Form R; that is, each of the 90 items in Form I and Form E corresponds to an item in Form R. For example, the first item in Form R, "Family members really help and support one another," is rephrased in Form I and Form E as "Family members will really help and support one another." The scoring keys and answer sheers for the three forms are identical.

The Real Form

Form R helps people to describe their current family as they perceive it. Clinicians, consultants, and program evaluators use this form to

- understand individuals' perceptions of their conjugal and nuclear families, for example, as part of family counseling or education programs.
- formulate clinical case descriptions and understand the impact of the family on adaptation.
- monitor change and promote improvement in families.
- describe and compare family climates and contrast partners' perceptions or parents' and children's perceptions. predict and measure the outcome of treatment.
- focus on understand the impact of the family on children and adolescents.
- how families adapt to life transitions and crises.
- understand the impact of the family on children and adolescents.
<table>
<thead>
<tr>
<th>FES Subscales and Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relationship Dimensions</strong></td>
</tr>
<tr>
<td>Cohesion</td>
</tr>
<tr>
<td>Expressiveness</td>
</tr>
<tr>
<td>Conflict</td>
</tr>
</tbody>
</table>

**Personal Growth Dimensions**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence</td>
</tr>
<tr>
<td>Achievement Orientation</td>
</tr>
<tr>
<td>Intellectual-Cultural Orientation</td>
</tr>
<tr>
<td>Active-Recreational Orientation</td>
</tr>
<tr>
<td>Moral-Religious Emphasis</td>
</tr>
</tbody>
</table>

**System Maintenance Dimensions**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
</tr>
<tr>
<td>Control</td>
</tr>
</tbody>
</table>
The Ideal Form

Form I allows people to describe the type of family they prefer. The authors developed this form to measure family members' preferences about how a family should function. Some clinicians and consultants use Form I to assess family members' value orientations and how they change over time, such as before and after family counseling. Others use both Form I and Form R to identify areas in which people want to change their family. For example, information about each person's views of the actual and an ideal family can guide attempts to change families and enable them to function more effectively. Similarly, understanding how a youth's perception of the actual and preferred family climate can help in counseling the youth about how best to adapt to and perhaps improve his or her family.

The Expectations Form:- Form E helps people to describe their expectations of what a family will be like. In premarital counseling, Form E clarifies prospective partners' expectations of their family. Form E can identify foster children's expectations of a new family and help members of blended families to focus on how they expect their new family to function. Form E can also identify parents' expectations about their family after a major life transition such as retirement or the youngest child leaving home.

The FES can be used to describe family social environments, to contrast parents' and children's perceptions, and to compare actual and preferred family climates. Adolescent siblings' perceptions of their family can be compared with one another. The scale can also be used to formulate clinical case descriptions, facilitate family counseling and psychotherapy, and teach clinicians and program evaluators about family systems. In addition the FES has some important applications for program evaluation. The scale can be used to plan and monitor family change, evaluate the impact of counseling and other intervention programs, and help a family function more effectively, (Billings & Moos, 1983b; Finney & Moos, 1984., Moos & Moos, 1983.).

Although many applications of the FES focus on aggregate scores and on the family as a whole, the FES can also help clinicians and others whose primary interest is the individual, not the family as a whole. An individual profile reveals how a person views the family and his or her place in it. Unlike most assessment procedures,
which may describe characteristics such as intelligence, personality, or interests, an
individual FES profile reveals a person's perceptions. Thus, as a source of unique
information about the individual, the FES can enhance client assessment. The
psychometric characteristics of the scale are well documented.

(E) The Scale for Suicide Ideation (Beck, Kovacs, & Weissman, 1979)

Since suicide is one of the leading causes of death in the present time, the
measurement of suicidal risk and the identification of persons likely to make fatal or
non-fatal suicide attempts remain high priorities. In recent years, these goals have
been pursued primarily through the assessment of psychological, psychiatric, and
demographic variables. According to extensive reviews of the literature (Brown &
Sheran, 1972; Lester 1970, 1974), standard psychological tests such as the Rorschach,
the TAT, and the MMPI cannot differentiate suicidal from non suicidal individuals
and have not been found to be useful predictors of suicidal risk. These same reviewers
suggest that at the present time, the best predictors of the criterion behaviour are
specially constructed scales that encompass various attributes of suicidal behaviours
(Beck, Kovacs, & Weissman, 1979).

In recent years, the bulk of the work in suicidology has been targeted on two
of the three populations, namely attempted suicides and completed suicides. The third
category of suicidal behaviours, namely suicide ideators has not been given much
attention. Suicide ideators are individuals who currently have plans and wishes to
commit suicide but have not made any recent overt suicide attempt (Beck et al.,
1972). Since suicide ideation logically precedes a suicide attempt or completed
suicide, it seems appropriate to focus on the intensity, pervasiveness, and characteris-
tics of the ideation and wish in order to assess current suicidal intention and
potentiality to predict later suicidal risk.

The development of the Scale for Suicide Ideation was prompted by the need
for a valid research instrument to identify suicidal individuals and to investigate
meaningful correlates of suicidal ideation. The Scale for Suicide Ideation was
designed to quantify the intensity of current conscious suicidal intent by scaling
various dimensions of self-destruction, thoughts or wishes. Suicidal ideation also
courasses "suicidal threats" that have been expressed in overt behaviour or
verbalized to others. The authors emphasised that at present, the Scale for Suicide
Ideation is primarily a research tool to be employed in the investigation of suicidal ideation and its correlates.

The items on the scale were partly clinically derived and partly rationally derived. Systematic observations and interviews of suicidal patients yielded a list of salient preoccupations, concerns and wishes, and thinking and behaviour patterns. Those areas were then selected which seemed to reflect the spectrum of suicidal preoccupations most frequently observed in the patients' verbalizations and behaviours.

Previously reported research studies yielded additional content areas. An initially devised 30-items scale was administered to 35 suicidal patients. Those items were eliminated that were found to overlap other items, that were unwieldy, or that were difficult to score. On the basis of this selection process, the clarity and wording of the remaining items were improved and a 19-items scale was constructed. Each-item consists of three alternative statements graded in intensity from 0 to 2. The total score is computed by adding the individual item scores. Thus, the possible range of scores is 0 to 38.

The items assess the extent of suicidal thoughts and their characteristics as well as the patients attitude towards them; the extent of the wish to die, the desire to make an actual suicide attempt and details of plans, if any; internal deterrents to an active attempt; and subjective feelings of control and/or courage regarding a proposed attempt.

The internal consistency of the SSI was evaluated through two methods. First, an item analysis showed that each item had a positive correlation with the total scale score and that 16 of the 19 coefficients were significant. The second method of evaluating internal consistency was the determination of coefficient alpha, KR-20 (Cronbach, 1951). For the 90 cases, a reliability coefficient of .89 was obtained.

With respect to interrater reliability, twenty-five of the 90 consecutively admitted patients were seen concurrently by two clinicians who alternated in interviewing successive patients. Following the interview, each clinician independently completed the SSI. The interrator reliability coefficient was .83 (p<.001). Puri (1988) after administering this scale to the University students in India found coefficient alpha (KR-20) to be equal to .90.
Concurrent validity of the SSI was evaluated by determining how well the scale scores correlated with other measures of suicidal ideation or suicidal risk such as clinical evaluations and psychological inventory scores.

The SSI scores were also compared to the "Self-harm" item of the Beck Depression Inventory (BDI: Beck, 1972), independently obtained by a research assistant. The correlation between ideation scores and the BDI item was .41 (p<.001). The relatively low correlation may reflect the limited range (0-3) on the BDI item.

Since the SSI was partly designed as a research screening instrument, it may be expected to discriminate between groups who, on apriori basis, can be assumed to differ in degree of suicidal intent. Comparison of the SSI scores of the 90 patients hospitalized for suicidal ideation (M=9.43, SD=8.44) and 50 outpatients who sought psychiatric treatment for their depression (M=4.42, SD=5.77) yielded a significant between-groups difference [t=4.14, p<.001]. The two groups were similar in degree of depression as measured by the Beck Depression Inventory, t=.67, NS. Evidence for construct validity was also obtained. The construct validity of the scale has been also confirmed by Wetzel (1975).

SSI provides an ideal tool as an independent variable in the investigation of psychological and clinical correlates of suicidal ideation. It may also be employed as a dependent variable measure in studies that assess the efficacy of treatment intervention with suicidal individuals. At the present time, the SSI appears to have real potential as a research instrument. It may be used not only as an independent variable to discriminate among individuals varying in degree of suicidal ideation but also as a dependent measure to quantify change resulting from treatment interventions. Moreover, the scale may also be of help to the clinician in the systematic gathering and quantification of data relevant to patients or clients thoughts, plans and wishes about suicide (Beck, Kovacs, & Weissman, 1979).

Administration of Tests

The tests were administered in five sessions, following uniform sequence. In the first session, Beck Depression Inventory was administered. In the second session, Automatic Thought Questionnaire and Hopelessness Scale were completed. In the third session, IPAT Neuroticism scale Questionnaire and Eysenck Personality Questionnaire were administered. In the fourth session Social Support Questionnaire and Family ℹ️
Environmental Scale were administrative. In the fifth session, Beck’s Scale for Suicide Ideation was administered.

The tests were administered to subjects in groups of 5 to 7 subjects in accordance with the instructions given by authors of the tests. The instructions for different tests were read aloud to the group comprising of 5 to 7 subjects. The instructions in typed form were also provided to the subjects. The doubts of the subjects were removed before permitting them to take the test. Each form was checked to see if any omission was there and if so, the particular subject was asked to complete that question or questions.

Strict supervision was exercised in order to see that the subjects do not discuss or take up help from each other while performing on the tests. The general testing conditions were satisfactory. Sincere efforts were made to establish rapport with the subjects in order to elicit reliable and authentic information.

Subjects were told that information was being collected purely for research purpose. They were also assured that information to be collected would remain strictly confidential and presented only in a form in which no person could be identified. The promise of privacy appears to have gone a long way in establishing psychological rapport, since a large number of subjects enquired about their performance on the tests used.

**Scoring of Tests**

The tests were scored strictly in accordance with the procedures suggested by the authors of different tests.

As a result of scoring different tests, several measures mentioned below were obtained.

I. Depression scores obtained by scoring Beck Depression Inventory;

II. Two measures of cognitive dysfunction;

1. Negative automatic thoughts;

2. Hopelessness;

III. IPAT Anxiety Scale Questionnaire was scored for deriving scores pertaining to Factors Q3, C, L, O, and Q4.
IV. Four measures concerning psychoticism, neuroticism, extraversion, and social desirability were obtained by scoring Eysenck Personality Questionnaire.

V. Social Support Questionnaire was scored for measures, namely SSQ-N and SSQ-S.

VI Ten measures concerning Family Environment.

VII One global measure of Suicide Ideation.

**Analysis**

The data were analysed to obtain the following information:

1. Frequency distribution, mean, standard deviation, skewness, and kurtosis for different measures.
2. Bivariate correlations between different measures.
3. Factor analysis for the measures of suicide ideation, depression, negative automatic thoughts, hopelessness, psychoticism, neuroticism, social desirability, extraversion, social support and different components of family environment.

The analyses were done separately for: (a) male adolescents and (b) female adolescents. The reasons for separate analysis have been discussed earlier in Chapter II.