CHAPTER - III

METHODOLOGY

SAMPLE

Sample for the present study was drawn from various public and government schools of Sirsa district of Haryana. A total of 411 participants (204 males and 207 females) were selected randomly from 10+1, 10+2 and under-graduate classes of the educational institutions about equal number of participants were selected from Science, commerce and arts streams. The ages of the participants ranged between 16 to 22 years with a mean age of 19.5 years. They participants were belonging to middle class families and their academic atmosphere may be treated as homogeneous. The selected sample covers all walk of society.

MEASURES:- The following measures were used in the study to assess the participants.

1. Time Questionnaire (TQ)

The Questionnaire (TQ) is developed by Robert Yufit and Bonnie Benzies (1979) to explore and quantitatively assesses suicidal potential among adolescent. The Questionnaire consisted of 39-item and used semi-projective technique for assessing time perspective as an indicator of potential suicide intent. The TQ consists of 3 sections-the Present, Future, and the Past-which contain both multiple choice and open-ended items. The sum of three section scores yields the total
TQ scores. Time perspective in each section is assessed against 4 primary parameters: extent of future time projection, degree of elaboration of and involvement in specific future hopes and aspirations, consistency of these projections, and the amount of realistic change projected in the future.

The TQ present section consists of 15 items in which 8 items are multiple choice items, 2 items are open-ended and rest of the items are on rating scales. The TQ present section represents a description of present feelings and attitudes. It seeks to provide information about the degree of trust, depression, impulse control, mood states and habit patterns currently existing. The future section consists of 17 items in which 11 are open-ended and 6 are multiple choice items. Similarly in past section, there are 10 items in which 6 items are multiple choice items and one is open ended question. This section solicits recall of the past experience and the degree of the person’s satisfaction with the present. It is assumed that the recall of the past will be different for the suicide prone person than for the non-suicidal person. The hypothesized difference is that the suicide prone person will feel fitter, conflicted or guilty about many past experiences, whereas the non-suicidal person’s view of the past will be more nostalgic.

A high positive TQ scores, suggesting projection and investment in the future, balanced attitudes about the present, and judicious recall of the past. It is interpreted as a time perspective that is generally incompatible with highly lethal suicidal behavior. A high negative TQ score, showing little or no projection in the future, a
negative present self-appraisal, and a conflicted or guilt-ridden recall of the past, reflects a time perspective that correlates with pronounced suicide risk. The TQ possible score range is 74 to -123. Scores above 25 imply low suicide potential and below zero suggested high suicidal potential. Test retest coefficient ranged between .54 and .78.

Concurrent validity is being evaluated by comparative analysis with a battery of clinical procedures that focuses on the assessment of suicide potential. Informal analysis of patients receiving the battery indicates consistent findings across similar instruments. A more formal study has been completed comparing the TQ with another instrument relating to time orientation (Flynn, 1974). The study reveals that time perspective does shift when the suicidal crisis is judged to be past. However, when the suicidal wish is present, either consciously or unconsciously, the time perspective appears to remain relatively constant with low future perspective and high orientation to the past. TQ scores are also correlated with some measures of depression (Yufit et al., 1973).

2. **Social capital questionnaire by Onyx and Bullen (2001)**

The questionnaire was developed by Onyx and Bullen (2000) to provide a measure for social capital and its dimensions for the individuals. Social capital is a “bottom up” phenomenon that originates with the people forming social connections and networks based on principle of trust mutual reciprocity and norms of action. Social capital questionnaire consisted of 36-item which measure eight distinct dimensions. These can be categorized in two broad categories i.e. capacity building block and social arenas. Each item
takes the form of a brief question (e.g. “Do you help out at a local group as a volunteer?”), that is designed to assess one’s level of a specific dimension four sub-scales termed as capacity building blocks i.e. feeling of Trust and Safety, Social Agency, Tolerance of diversity, and value of life. The other four sub-scales are related to the Social arenas i.e. community connections, neighborhood connections, family and friends and work connections. Respondents indicate their answers to each question using the “4-point likert-type response scale” provided below each question. A choice of equates to an answer of “No, not at all”, 2 equates to “No, not much,” 3 equates to “Yes, frequently,” and 4 equates to “Yes, definitely”. Response scores are tallied to provide both a specific measure of each dimension and a general, overall measure of social capital. This tool was developed on the basis of extensive research and empirical analysis. The number of questions and response style given in questionnaire were having in the advantage of being short, easy to administer and conducive to group administration. The questionnaire provides the score for both the specific dimensions as well as the general concept of social capital. Higher scores indicate a greater degree of social capital. As for as the psychometric properties of the questionnaire are concerned, the cronbach’s alpha of .84 was obtained, which exceeds standards acceptable level of .70 (as reported by the authors). This indicates a good degree of internal consistency reliability.

The SCQ is also said to be “partially validated” based on the fact that factors scores for individuals from urban and rural communities differed in a way that was statistically significant and consistent with theories of social capital. This suggests some degree
of construct validity. Onyx and Bullen (2000) argue that their measure has validity based on the fact that the three factors of the SCQ that accounts 30% of the variance. O’Brien et. al. (2004) do not discuss reliability and validity extensively, though they do note that “preliminary evidence suggests the social capital questionnaire is reliable and valid.

3. Multidimensional Measure of Emotional Intelligence (MMEI)

The Multidimensional Measure of Emotional Intelligence was constructed by Darolia (2003) to provide reliable and valid measurement of emotional intelligence. The test is based on Goleman’s (1995) modal of emotional intelligence. According to him, emotional intelligence is multi-dimensional construct, which taps at least five broad dimension, self-awareness, managing emotion, motivating one-self, impact and handling relationships in view of these indications, the multi dimension measure of emotional intelligence was designed to cover the widest possible range of emotional intelligence and to be equally useful with high school student to supervisor adults and applicable in different like settings.

The MMEI is comprised of 80 multiple choice items distributed in five dimensions each consisting 16 items per dimension. Each item is answered on a five point scale, very true, mostly true, somewhat true, mostly false and very false. The test has been designed so as to control response sets through the balancing of affirmative and negative statement. This has been done for each dimension separately. The dimensions of EI were found independent
to personality and temperament. The dimension of emotional intelligence as measured by MMEI may be described as under:

(a) **Self-awareness**: Observing your-self and recognizing of feeling as it happens.

(b) **Managing Emotions**: Handling feeling so that they are appropriate, realizing what is behind a feeling, finding ways to handling tears and anxiety anger and sadness.

(c) **Motivating Oneself**: Channeling emotions in the service of a goal, emotional self-control, delaying gratification and stifling impulses.

(d) **Empathy**: Sensitivity to others feeling concerns and taking their perspective, appreciating the difference in how people feels about things.

(e) **Handling Relationship**: managing, emotions in others, social competence and social skill.

Two types of reliability coefficient were worked out for all the five scales the coefficient alpha which is more meaningful for tests like MMEI ranged between .76 and .81. The test retest reliability coefficient were obtained by read ministering the test of a sample of 126 adults after an internal of 40 days the. Test retest coefficient ranged between .79 and .84. The MMEI scales were validated in term of construct validity principle component analysis revealed the construct validities of the scales are substantial, which range from .68 to .76. These values express the extent to which scales scores correlate with the emotional intelligence factor. Apart from factorial validity, overall MMEI score was correlated with
Schutte’s et. al’s (1998) measure of emotional intelligence, the correlation between the two was found to be .78. Therefore, the validity of the measure may be regarded as satisfactory.

4. **The General Self-Efficacy Scale (GSE)**

This scale is developed by Matthias Jerusalem and Ralf Schwarzer in German in 1979 and later revised and adapted to 26 other languages by various co-authors. It assess a general sense of perceived self-efficacy with the aim in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. The scale is uni-dimensional and it consists 10 items in a response on a 4-point scale. Sum up the responses to all 10 items to yield the final composite score with a range from 10 to 40. The construct of Perceived Self-Efficacy reflects an optimistic self-belief (Schwarzer, 1992). Perceived self-efficacy is an operative construct, i.e., it is related to subsequent behavior and, therefore, is relevant for clinical practice and behavior change. Cronbach’s alphas ranged from .76 to .90, with the majority in the high .80. Criterion-related validity is documented in numerous correlation studies where positive coefficients were found with favorable emotions, dispositional optimism, and work satisfaction. Negative coefficients were found with depression, anxiety, stress, burnout, and health complaints. In studies with cardiac patients, their recovery over a half-year time period could be predicted by pre-surgery self-efficacy.
5. Beck Hopelessness Scale (BHS)

The scale was developed by Beck, Weissman, Lester and Trexler (1974) to assess the extent of negative attitude about the future as perceived by adolescents and adults. The BHS was originally developed by Aaron T. Beck and his associates at the Center for cognitive Therapy (CCT) to measure pessimism in psychiatric patients considered to be suicidal risk, but it has been used subsequently with adolescent and adult normal populations (Greene, 1981; Johnson and McCutcheon, 1981).

The BHS adheres closely to Stotland’s (1969) conception of hopelessness as a system of cognitive schemas in which the common denominator is negative expectancy about the short and long term future. Hopeless individuals believe (1) that nothing will turn out right for them (2) that they will never succeed at what they attempt to do, (3) that their important goals can never be obtained and (4) that their worst problems will never be solved. This definition of hopelessness corresponds to the third component of the negative triad in Beck’s (1967) cognitive model of depression, consisting of (1) a negative view of the self (2 a negative of present functioning and (3) a negative view of the future.

The BHS consists of 20 true-false statements that assess the extent of negative expectancies about the in mediate and long-range future. Each of the 20 statements is scored 1 or 0. Of the 20 statements 9 are keyed FALSE (item no. 1, 3, 5, 6, 8, 10, 13, 15, 19) and 11 are keyed True (item no. 2, 4, 7, 9, 11, 12, 14, 16, 17, 18, 20) to indicate endorsement of pessimism about the future. The item
scores are summed to yield a total score that can range from 0 to 20 with higher scores indicating greater hopelessness. The BHS requires between 5 and 10 minutes to complete when self-administered. The Kuder –Richardson (KR-20) reliabilities for the different samples i.e. suicide ideators, suicide attempters, alcoholics, heroin addicts, single-episode Major Depression disorders, recurrent-episode Major Depression disorders, and Dysthymic disorders were found .92, .93, .91, .82, .92, .92 and .87, respectively. These estimates indicate that the BHS maintains high internal consistency across the several clinical samples. Durham (1982) found that reliability coefficient was low in college students sample (KR-20=.65). The concurrent validity BHS with Beck depression inventory is (r=.63,P<.001). Further the authors estimated the validity of scale by different methods i.e. content validity, concurrent validity, discriminant validity, Predicative validity, factorial validity and construct validity. The validity for the scale has obtained ranges from .62 to .74.

6. **Life Orientation Test-Revised (LOT-R)**

The test was developed by Scheier, Carver, and Bridges (1994). The scale consists of 10 statements designed to assess levels of generalized optimism, or the generalized expectations of favorable outcomes. This measure has been used in a good deal of research behavioral, affective, and health consequences of the optimism/pessimism dimension. Lot –R is a revised version of original LOT (Scheier and Carver, 1992). The original LOT had 12 items out & these were worked positively, 4 were worded negatively and 4 were fillers. In LOT-R, there are 10 items out of these four
were filler items and six were scale items (3 items of the scale measure were related to optimism and 3 items measures of pessimism). The test includes three positively worded and three negatively worded items (these are reverses coded). Each of the items on the LOT-R was a simple description of a symptom of either optimism or pessimism. Participants were asked to indicate the extent to which they agree with each statement on a 5-point likert scale, using the response format, “strongly agree” to strongly disagree”. Each item has five possible answers choices: 0=strongly agree” to strongly disagree”, 1=disagree, 2=natural, 3=agree and 4=strongly agree. Participants are asked to indicate the extent to which they agree with each statement on a 5-point Likert scale. The total score was ranging from 0 to 24. The higher scores indicating more optimism and vice-versa. For each assessment, there is a scoring algorithm leading to one the three acuity ranges low moderate and high. Scheier et al. (1994) found acceptable internal consistency, reporting a Cronbach’s value of .78. In an undergraduate sample, test-retest reliabilities ranged from .68 to .79, with higher correlations corresponding to successive increases in test-retest intervals (Scheier et al., 1994). Criterion validity was strong; the LOT-R was significantly negatively correlated with hopelessness \((r = -.65, \ p < .001)\) and depression \((r = -.60, \ p < .001)\) (Hirsch, Britton, and Conner, 2010).

7. **Resilience Scale (Wagnild & Young, 1993)**

The first version of scale was developed by Wagnild and Young (1993). It consist 25 items to evaluate the level of resilience in
the general population. The aim of the scale was to assess the individual resilience degree through the five personal characterizes i.e. Self-resilience, meaning fullness, equanimity, Perseverance and existential aloneness. They administered the resilience sale on 810 North American older adults and found principal component analysis (PCA) and oblimin rotation, a two factor solution as the most reliable. The first factor titled “Personal competence” composed 17 items and second factor titled “Acceptance of self and life” composed eight items. The two factor solution explained 49% of the construct variance. The RS-25 has been consistently reliable with alpha coefficients ranging from .84 to .94 convergent validity as well as test retest reliability have been extensively presented in various validation and adaptation studies.

The short version of the resilience scale (RS-14) was developed to provide clinicians’ and researchers a shorter instrument to reduce participant’s burden. This short form of the scale is an offshoot of the 25 item scale and measures similar psychological concept. The short version consist 14 items and each item is rated on a 7- point Likert scale. The response pattern was strongly disagree (1) to strongly agree (7). The scale was intended to assess the capacity to withstand life stressor, to thrive and make meaning from challenges. The total scores for the scale ranges from 14 to 98. The 14 items of RS contains five dimensions refereeing to “self-reliance” (1, 5, 7, 12, and 14), “meaningfulness” (2, 9, and 13), “equanimity” (3 and 10), “perseverance” (6 and 8), and “existential aloneness” (4 and 11).
The Cronbach’s alpha coefficient for the scale was .81. The internal consistency of the RS-14 has been reported to be excellent ($\alpha=.93$) and it correlates strongly ($r=.91$) with the original Resilience Scale (Wagnild, 2009). The factor analysis of the RS-14 resulted in one strong factor solution, which was also found in a later study (Nishi et al, 2010). The RS-14 has shown similar negative correlations with depression and anxiety (Abiola and Uclotia, 2011) and positive correlations with self-actualization and stress management (Wasnild, 2009). The scale has content and constructs validity demonstrated by Wagnild (2009). The RS-14 is strongly concurrent correlated with RS ($r=.97$, $p<.001$) and moderately correlated with depressive symptom ($r=-.41$) and life-satisfaction ($r=.37$) (Wagnild and Young, 1993).

**ADMINISTRATION OF THE TESTS**

The participants were contacted personally in their respective educational institutions for data collection after obtaining permission from the institute authorities. At the first the investigator approached the subjects in various institutions and a good rapport was established for creating congenial environment to make them comfortable and to extract authentic information from them. After getting willingness of participants, a cordial rapport was established to make them comfortable. They were assured about the confidentiality of the data, so that they could give their responses without any hesitation. After imparting instructions to the participants, the tests were administered in small group setting. During the test administration, only the investigator and participants were present in the testing room. When the subjects
were comfortable and ready to answer then after obtaining consent of the subject to act as respondent, firstly following instructions were given: “you will be given seven questionnaires in which there are some personal questions regarding your personal data and you have to respond on the basis of your preference. Please read questions carefully before filling the information. All questionnaires will take ten to fifteen minutes to complete and you have to fill it rapidly. Success of present work directly depends upon your valuable cooperation and sincerity”. All the tests were scored as per the instructions provided in respective test manual.

**SCORING OF THE TESTS**

Scoring of all the tests was completed following strictly the procedure mentioned in their respective manual.

1. **Time Questionnaire (TQ):** The Questionnaire (TQ) was scored as per the procedure given in manual. Scoring of each question is independently mentioned in the manual for multiple choice item and open ended questions.

2. **Social capital questionnaire (SCQ):** SCQ was scored for seven variables: Feelings of Trust and Safety, Social Agency, Tolerance of Diversity, and Value of Life, Community Connections, Neighborhood Connections, Family and Friends, and others. The participants rate the items on a scale from 1 (disagree) to 5 (agree). Score of each statement were from 1 to 5. Total score of the subject ranged from 36 to 180 on this test.
3. Multidimensional Measure of Emotional Intelligence (MMEI)

MMEI was scored for five variables: self awareness, managing emotions, motivating oneself, empathy and handling relationships. Score of each positive statement were assigned from 5 to 1 and for negative statement from 1 to 5. Total score of the subject ranged from 80 to 400 on this test. The scoring can be accomplished by using stencil keys. The scoring keys of 80 items are as under:-

**Self Awareness (SA):** Positive statements are 7, 8, 28, 52, 61, 67, 74, 80 and Negative statements are 4, 15, 29, 39, 40, 47, 68, 77.

**Managing Emotions (ME):** Positive statements are 6, 26, 31, 46, 57, 58, 63, 71 and Negative statements are 13, 17, 19, 22, 37, 51, 69, 76.

**Motivating Oneself (MO):** Positive statements are 3, 9, 16, 30, 38, 43, 44, 62, 72 and Negative statements are 14, 18, 27, 54, 59, 60, 78.

**Empathy (E):** Positive statements are 1, 10, 24, 34, 35, 41, 55, 66, 70, 75 and Negative statements are 2, 23, 49, 50, 65, 73.

**Handling Relationship (HR):** Positive statements are 12, 25, 36, 42, 48, 56, 64, 79 and Negative statements are 5, 11, 20, 21, 32, 33, 45, 53.

4. The General Self-Efficacy Scale (GSE): The scale is unidimensional and it consists 10 items in a response on a 4-point scale. Sum up the responses to all 10 items to yield the final composite score with a range from 10 to 40. Low scores indicate low self-efficacy and high scores indicated high self-efficacy.
5. Beck Hopelessness Scale (BHS):- The scoring of the scale can be done easily by applying scoring Key. It can be scored by summing the keyed responses of hopelessness for each of the 20 items. To use the key, place it over the questionnaire and line up the logs, BHS. Responses indicating hopelessness will appear within the circles on the score key and receive a score of 1. Responses not appearing in circles indicate non-hopelessness and receive a score of 0. Add the total number of hopelessness responses to find out hopelessness level. The total scores range from 0 to 20, with higher scores indicating higher levels of hopelessness and low score indicating low level of hopelessness.

6. Life Orientation Test-Revised (LOT-R):- It consists of 10 statements designed to assess levels of generalized optimism, or the generalized expectations of favorable outcomes (Scheier & Carver, 1992). Participants are asked to indicate the extent to which they agree with each statement on a 5-point Likert scale, resulting in a total score ranging from 0 to 24. The participants rate the items on a scale from 1 (disagree) to 5 (agree). High scores more optimistic and low scores indicates more pessimistic characteristics.

7. Resilience Scale (Wagnild & Young, 1993):- The Resilience Scale (RS) consists 14-Item contains five items are scored manually on seven point scale. The participants rate the items on a scale from 1 (strongly disagree) to 7 (strongly agree). Scores below 125 reflect low resilience, scores between 126 and 145 indicate moderately low to moderate levels of resilience, and scores of 146 and higher indicate high resilience.
**Statistical Analysis:**

The investigator uses appropriate statistical techniques to make analysis on different types of scores available to draw inferences. The analysis is done with the help of SPSS. The obtained data were processed for descriptive analysis, t-test, Pearson’s product movement correlation and regression analysis. Discriminant analysis is also used to find out the potent predictors of group membership between low suicidal potential and high suicidal potential groups.