CHAPTER IV
METHOD AND PROCEDURE

Research methodology is a way to solve the research problem systematically. To carry out the research process systematically and scientifically, it is necessary to choose a series of actions of appropriate design and methodology and follow a sequence to give a course of action to the research.

4.1 Statement of the Problem

“Conflict Management Styles of Undergraduates in Relation to their Emotional Intelligence, Spiritual Intelligence and Personality Types”

4.2 Operational Definitions

4.2.1 Conflict management styles

Every person encounters conflict in his daily life in one form or the other and follows some strategy to come out of that conflict. A conflict management style refers to the pattern of behaviour that an individual develops while dealing with conflicts. It is the skill needed to resolve different situations. An individual may use one or more conflict management styles. Conflict management styles tend to be unswerving over time.

There are many conflict management styles that have been given by various psychologists, but in the present study, five conflict management styles i.e. competing, collaborating, compromising, avoiding and accommodating as measured by the Thomas Kilmann Conflict Mode Instrument (2007) have been taken into consideration.

4.2.2 Emotional intelligence

The capacity and skill of an individual to perceive, interpret and act according to the emotions of one’s own self and others, which determine one’s ability to succeed in life is what describes emotional intelligence. Though there are many dimensions of emotional intelligence, but in the present study, emotional intelligence has been defined in terms of emotional sensitivity, emotional maturity and emotional competency as measured by the EQ Test by Chadha and Singh (2006).
4.2.3 Spiritual intelligence

Spiritual intelligence is the blend of cognition with morality and nonmaterial aspects of reality. Spiritual intelligence is the intelligence of the soul which helps to analyze the cause of a person’s existence and to attain heightened states of consciousness. Various psychologists have given various dimensions on which spiritual intelligence can be measured, but in the present study, spiritual intelligence has been measured on four dimensions i.e. critical existential thinking, personal meaning production, transcendental awareness and conscious state expansion as assessed on SISRI-24 (Spiritual Intelligence Self Report Inventory) by King (2007).

4.2.4 Personality types

Personality is the summation of an individual’s behavioral and emotional characteristics which embrace his attitudes, feelings, emotions, behavior, opinions and actions. Unlike the trait theories of personality, the type theories of personality aim to classify people into two distinct and discontinuous categories: introverts and extroverts.

In the present study, the two personality types have been taken into consideration, i.e. introverts and extroverts as mentioned by the SIED (scale for introversion-extraversion dimension) by Psy-Com Services (1993). Introverts are the individuals who prefer to be by themselves than to have social contacts with other people. They score low on the dimensions of boldness, competition, enthusiasm, self-sufficiency and social warmth on SIED. Extroverts are the individuals who are social, overtly enthusiastic, expressive, assertive and adventurous. They score high on the dimensions of boldness, competition, enthusiasm, self-sufficiency and social warmth on SIED.

4.3 Design of the Study

The present study is essentially a descriptive research. It is descriptive because it envisages about what exists at present by determining the nature and degree of existing conditions. Descriptive studies are more than just a collection of data; they involve measurement, classification, analysis, comparison and interpretation. Descriptive studies investigate phenomena in their natural settings. Their purpose is both immediate and long range. According to Best and Kahn (1989), a descriptive
study describes and interprets ‘what is’, describing, recording, analyzing and interpreting conditions that exist. The descriptive study deals with associations or disparities and attempts to discover relationships between prevalent non-manipulated variables. It also involves events that have already taken place and may be related to the present conditions. It also deals with the testing of hypotheses and elements of generalizations.

On the basis of techniques employed to gather data, the present research is a survey study which is confined to gather data concerning detailed description of existing phenomena. The researcher does not have direct control over the variables used in the study, i.e. conflict management styles, emotional intelligence, spiritual intelligence and personality types.

4.4 Sampling Procedure

The sampling technique employed was in accordance with the nature and objectives of the study. The sampling was stratified random sampling. The data was collected from four Govt. degree colleges of Chandigarh, i.e. Post Graduate Govt. College for Girls, Sector 42, Post Graduate Govt. College for Girls, Sector 11, Post Graduate Govt. College, Sector 46 and Post Graduate Govt. College, Sector 11. The undergraduates studying in the third year of the humanities stream in these four colleges were enlisted into two stratas; i.e. males and females. After this, the sample was selected randomly which comprised of 500 male and 500 female undergraduates.

4.4.1 Initial sample

The investigator conducted the survey in four degree Govt. colleges of Chandigarh on the third year students from the humanities stream. The initial sample comprised of 1000 students which included 500 male and 500 female undergraduates, i.e. 250 undergraduates from each college. Each college had 6 to 9 sections in the third year humanities stream. Five sections were selected randomly from each college. Each section had approximately 60 to 85 students. After selecting the sections, 50 undergraduates were selected randomly from each section. A pictorial form of the initial sample has been presented in Figure 4.1.
After responses of the undergraduates on the four scales, i.e Thomas-Kilmann Conflict mode instrument, Emotional Quotient test, Spiritual Intelligence Self-Report inventory and Scale for introversion-extraversion dimension; the test booklets were collected by the investigator. The test booklets were assessed for incomplete, missing or invalid responses. The test booklets which had incomplete or missing responses, or the ones in which the Vi score (Validity indicator score) was greater than 7 were excluded from the final sample. After eliminating the respondents whose responses were incomplete or invalid, the final sample comprised of 954 undergraduates, out of which 471 were male and 483 female undergraduates. The pictorial form of the final sample has been presented in Figure 4.2.

**Figure 4.1. Pictorial form of the initial sample**

**4.4.2 Final sample**

**Figure 4.2. Pictorial form of the final sample**
4.5 Hypotheses

The following hypotheses were formulated to test the objectives:

1.
   a. There exist significant differences in the conflict management styles of male and female undergraduates.
   b. There exist significant differences in the emotional intelligence of male and female undergraduates.
   c. There exist significant differences in the spiritual intelligence of male and female undergraduates.
   d. There exist significant differences in the personality types of male and female undergraduates.

2.
   a. There exist significant differences in the conflict management styles of undergraduates in relation to their emotional intelligence.
   b. There exist significant differences in the conflict management styles of undergraduates in relation to their spiritual intelligence.
   c. There exist significant differences in the conflict management styles of undergraduates in relation to their personality types.

3.
   a. There exist significant differences in the conflict management styles of male undergraduates in relation to their emotional intelligence.
   b. There exist significant differences in the conflict management styles of male undergraduates in relation to their spiritual intelligence.
   c. There exist significant differences in the conflict management styles of male undergraduates in relation to their personality types.

4.
   a. There exist significant differences in the conflict management styles of female undergraduates in relation to their emotional intelligence.
   b. There exist significant differences in the conflict management styles of female undergraduates in relation to their spiritual intelligence.
c. There exist significant differences in the conflict management styles of female undergraduates in relation to their personality types.

5.

a. There exist significant relationship between conflict management styles and emotional intelligence of undergraduates.

b. There exist significant relationship between conflict management styles and spiritual intelligence of undergraduates.

c. There exist significant relationship between conflict management styles and personality types of undergraduates.

6.

a. Significant variance towards competing conflict management style of the undergraduates is contributed by emotional intelligence, spiritual intelligence and personality types.

b. Significant variance towards collaborating conflict management style of the undergraduates is contributed by emotional intelligence, spiritual intelligence and personality types.

c. Significant variance towards compromising conflict management style of the undergraduates is contributed by emotional intelligence, spiritual intelligence and personality types.

d. Significant variance towards avoiding conflict management style of the undergraduates is contributed by emotional intelligence, spiritual intelligence and personality types.

e. Significant variance towards accommodating conflict management style of the undergraduates is contributed by emotional intelligence, spiritual intelligence and personality types.

4.6 Tools

In the present study, the following tools were used for data collection:

2. Know Your EQ (Emotional Quotient test) by Chadha and Singh (2006)
3. The Spiritual Intelligence Self-Report Inventory by King (2008)
4.7 Description of the Tools

4.7.1 Thomas Kilmann Conflict Mode Instrument (TKI)

The TKI is designed to measure a person’s behavior in conflict situations. “Conflict situations” are those in which the concerns of two people appear to be incompatible. The TKI is also named as "Management-of-Differences Exercise," or the MODE instrument. The TKI is a self-report questionnaire (Appendix I) designed to measure individuals’ tendencies in dealing with interpersonal conflict. Developed in early 1970s, it describes five different conflict handling modes that are used most often. The TKI consists of pairs of statements carefully matched for desirability, so that no conflict handling mode sounds better than the other. It also shows how each conflict mode can be useful for dealing with conflict in certain situations.

In conflict situations, the behavior of a person is described along two basic dimensions:

(i) **Assertiveness**: It refers to the extent to which an individual endeavors to persuade his or her own concerns, and

(ii) **Cooperativeness**: It refers to the extent to which a person tries to satisfy the concern of the other person.

Thomas and Kilmann have given five methods of dealing with conflict. Assertiveness and cooperativeness form the basis for defining these methods. These modes of handling conflict are as mentioned:

*Competing* is a power-oriented conflict handling mode. While using this style, a person is assertive and uncooperative. He tries to follow his own concerns at the cost of other person; in doing so, he uses any means that seem pertinent to win his stand. Competing might mean standing up for one’s own rights, defending one’s position that a person thinks is correct, or simply trying to win.

*Collaborating* is a conflict management style which is assertive as well as cooperative. An individual endeavors to work with the other person to find a resolution which fully satisfies the apprehensions of both. While collaborating, a person delves deep into an issue to spot the underlying concerns of both the persons and attempts to find an alternative that meets the concerns of both sets. It might take the form of investigating a disparity to learn from each other’s insights, resolving
some condition that would otherwise put them in competition for resources, or confronting and trying to find an inventive solution to an interpersonal dilemma.

*Compromising* is intermediate between assertiveness and cooperativeness. While using the compromising style of conflict resolution, an individual intends to find a convenient and mutually satisfactory solution that is partially persuading for both parties. This style of conflict management falls on midway between competing and accommodating. While using this style, an individual concedes more than competing but less than accommodating. It addresses a concern more directly than avoiding but doesn’t explore it in as much depth as collaborating. Compromising in conflict management implies splitting the variation, exchanging concessions, or seeking a swift middle-ground situation.

*Avoiding* style of managing conflict is unassertive as well as uncooperative. A person using the avoiding style is not immediately concerned about his own concern or those of the other person. He does not venture to tackle the conflict, rather diplomatically sidesteps an issue, adjourns it for a better time, or simply withdraws himself from threatening circumstances.

*Accommodating* style of conflict management is contrary to competing. When using this style, an individual is unassertive and cooperative, whereby he neglects his or her own concerns to abide by the concerns of the other person. There is a component of self-sacrifice in this mode. Accommodating takes the form of altruistic kindness or charity, conforming to view point of the other person, when a person would prefer not to, or complying with the perspective or opinions of the other people.

The TKI consists of 30 pairs of statements printed on a four page booklet. The front page contains the instructions for answering the questions. The 30 pairs of statements describe the possible behavioural responses when an individual is confronted with conflict. For each pair, there are two possible outcomes A and B. The person taking the test has to circle either of the two responses that best characterizes his behavior. In many cases, neither of the statements may be very typical of an individual’s behaviour, but he has to select the response he is more likely to use. There are no right or wrong choices. The TKI is a power test as there is no time limit to complete the test. The TKI can be administered and interpreted easily and quickly. It takes about 15 minutes to answer the questions.
**Scoring:** The responses given by the respondents are converted to raw scores on the sheet provided in the test wherein, the choice for each response (A or B) is fitted in the appropriate conflict management style. The raw score on each conflict-handling mode is simply the number of times a person chooses a TKI statement for that mode. An individual’s dominant mode is the one that he feels and uses most natural in a conflict situation. It is likely to fit with his personality, beliefs and values.

For most people, identifying a dominant conflict handling mode is a sufficiently good measure of his conflict style. However, two special cases may arise: Ties: If two conflict handling modes are tied for highest percentile score, then the individual’s style is an amalgam of both modes and he may likely to feel relatively comfortable with both modes and both may seem equally valuable.

Close Second: If a second mode is almost as high as the second mode, scoring within 10 percentile points of it, then an individual has a strong back up-mode. The backup mode is a strong secondary influence on one’s conflict handling style. It is the mode one tends to go to when the dominant mode won’t work.

**Reliability:** The internal consistency coefficients for competing, collaborating, compromising, avoiding and accommodating are 0.71, 0.65, 0.58, 0.62 and 0.43 respectively. Except the accommodating mode, the internal consistency coefficients of TKI are in the moderate range. The average alpha coefficient for the TKI is .60, while that for the Lawrence-Lorsch is .45 and Hall instrument is .55 (The Lawrence-Lorsch and Hall instrument also measure the conflict management styles).

The test-retest reliabilities for competing, collaborating, compromising, avoiding and accommodating styles are fairly high and consistent, measuring 0.61, 0.63, 0.66, 0.68 and 0.62 respectively. These coefficients compare favorably with the other instruments as well. The average test-retest reliability coefficients for the MODE, Lawrence-Lorsch, Blake-Mouton and Hall instruments are 0.64, 0.50, 0.39 and 0.55 respectively.

**Concurrent test validities:** The intercorrelations between the MODE Instrument and the average intercorrelations of three other conflict-handling instruments (Blake-Mouton, Lawrence-Lorsch and Hall) on each of the five conflict modes, i.e. competing, collaborating, compromising, avoiding and accommodating are 0.45, 0.22, 0.12, 0.27 and 0.20, respectively. These intercorrelations involving the
MODE instrument are low for compromising, modest for collaborating, avoiding and accommodating, and moderately high for competing.

4.7.2 The Emotional Quotient Test (The EQ Test) by Chadha and Singh (2006)

The Emotional Quotient Test developed by Chadha and Singh (Appendix II) is based on the operational definition proposed by Singh (2003) that ‘emotional intelligence refers to the capacity of an individual to suitably and effectively respond to a wide variety of emotional stimuli which are evoked from the inner self and immediate environment. Emotional intelligence comprises of three psychological dimensions, namely, emotional sensitivity, emotional maturity and emotional competency, which motivate an individual to identify truthfully, infer honestly and handle tactfully the dynamics of human behaviour.’ This test measures all the three dimensions.

**Emotional sensitivity:** An emotionally sensitive individual is appreciative of the threshold of emotional arousal; manages the immediate environment; preserves rapport, accord and comfort with others and along with it, makes others feel comfortable in one’s company. Emotional sensitivity also involves being truthful in interpersonal dealings, truthfully interpreting emotional cues; realizing communicability of emotions, dispositions and feelings; and having an insight into how others appraise and relate to a person.

**Emotional maturity:** It is the ability to evaluate emotions of oneself and others; identify and articulate feelings; balance the state of heart and mind; appreciate others’ viewpoint; develop others; delay gratification of immediate psychological satisfaction; and being adaptable and flexible.

**Emotional competency:** It is the ability to diplomatically respond to emotional stimuli evoked by diverse situations; having high self-esteem and sanguinity; communication skills; enjoying emotions; ability to relate to others and emotional self-control. It also includes the ability to tackle emotional upsets like conflicts, frustrations, egoism and inferiority complexes and the capacity to avoid emotional exhaustion such as stress and burn out and learning to avoid negativity of emotions.

The EQ test is a psychological test that helps a person to know more about himself and the people around him. The test measures the way a person uses his emotional skills in his personal and professional life. The test consists of 22 questions,
which are in fact 22 situations which measure the respondents’ emotional responses to different situations. The respondent is expected to answer on the basis of what he feels about that particular situation and not how he thinks. Each situation is followed by four possible outcomes and the respondent is expected to tick one response that is most suitable to his behaviour. There are no right or wrong responses and there is no time limit to finish the test. It usually takes 15-20 minutes to complete the test.

**Scoring:** The responses of the 22 situations are marked on the answer sheet provided in the test. These responses are then transferred to the calculation sheet. The response of each question (a, b, c or d) is followed by a certain score (i.e. 5, 10, 15 or 20). The scores are added to get the total EQ score of the respondent. Of the 22 situations available, 5 situations (nos. 2, 8, 16, 17, and 22) refer to the dimension of emotional sensitivity, 7 situations (nos. 4, 6, 9, 11, 12, 18, and 21) refer to the dimension of emotional maturity and the remaining 10 situations (nos. 1, 3, 5, 7, 10, 13, 14, 15, 19, and 20) pertain to the dimension of emotional competency to give the scores in the individual dimensions of sensitivity, maturity and competency. The scores in the dimension of sensitivity range from 25-100, maturity from 35-140 and competency from 50-200. The total EQ score ranges from 110-440.

The scores in the individual dimensions as well as the total EQ scores are then converted to percentile ranks according to the percentile table given in the test and the scores are interpreted accordingly. Percentiles 40, 50, 70 and 90 indicate low, moderate, high and extremely high EQ respectively.

**Reliability:** The EQ test has been standardized for professional managers, businessmen, bureaucrats, artists and graduate students. The test-retest reliability of this test is 0.94 and the split half reliability is 0.89.

**Validity:** The EQ test has validated with the help of two types of validities, i.e. face validity and empirical validity. The empirical validity of the scale was assessed by correlating the scale with the test designed by Goleman (1998). The validity coefficient of the test was found to be 0.92.

**4.7.3 Spiritual Intelligence Self Report Inventory-24 (SISRI-24) by King (2008)**

A self-report measure of spiritual intelligence has been developed and validated by King (2008). The tool is called the SISRI-24 (Spiritual Intelligence Self Report Inventory). The SISRI (Appendix III) is a valuable initiational tool for
measuring spiritual intelligence. The long-term goal of the SISRI is the analysis and prospective progress of performance task measures of spiritual intelligence. The preliminary test was administered on a sample constituting 305 undergraduate students from university and consisted of 42 items. Out of 42 items, 18 items were removed from the SISRI due to redundancy, high residual correlations, and cross-loadings, leaving a final pool of 24 items. As compared to the 42-item pool and alternate models, the 4-factor model with the reduced set of 24 items revealed moderate-adequate fit and performed significantly better.

In the SISRI consisting of 24 items, spiritual intelligence is defined as a set of adaptive rational capacities based on non-material and transcendent aspects of actuality. These mental capacities are particularly those which are related to the temperament of one’s survival, personal meaning, transcendence, and extended states of perception. In application, these processes are adaptive in their ability to facilitate distinct means of problem-solving, abstract-reasoning, and coping. The four main components of spiritual intelligence as measured by SISRI-24 are as follows:

**Critical existential thinking** (CET): It is the capacity to decisively contemplate meaning, purpose, and other existential/metaphysical issues (e.g., existence, reality, death, the universe); an individual with CET is able to come to factual existential conclusions or philosophies of life, and also has the capacity to ponder upon the non-existential issues in relation to one’s survival (i.e., from an existential perspective).

**Personal meaning production** (PMP): It is the capability to derive personal meaning and purpose from all physical and mental experiences, including the capacity to create and master a life purpose.

**Transcendental awareness** (TA): It is the ability for identification of transcendent patterns of the self (i.e., a transpersonal or transcendent self), of the physical world (e.g., holism, nonmaterialism), and of other individuals during normal states of consciousness. It also includes the capacity of an individual to identify his relationship to his own self and to the physical world.

**Conscious state expansion** (CSE): It is the ability to enter and exit higher/spiritual states of consciousness (e.g., pure consciousness, cosmic consciousness, unity, oneness) at one’s own discretion (as in deep contemplation or reflection, meditation, prayer, etc.).
The SISRI consists of 24 statements which are designed to determine diverse behaviours, course of thought, and rational characteristics. This is followed by a 5-point rating scale. The scale is printed on a two page booklet and the top of the first page contains the instructions for answering the questions. The respondent is expected to go thoughtfully through each statement. He has to choose amongst one of the five possible responses which best reflects him by marking the equivalent number. The instructions further describe that if the person is not certain about a statement, or feels that the statement does not appear to pertain to his behaviour, then he must choose the answer that seems the best. The respondent is requested to reply truthfully and make responses based on how or what he actually is rather than how he would like to be. The five possible responses are: 0 - Not at all true of me, 1 - Not very true of me, 2 - Somewhat true of me, 3 - Very true of me, and 4 - Completely true of me. For each item, the respondent is expected to circle one response that most accurately describes him.

The SISRI is easy to administer and takes around 15-20 minutes for completion. There is no time limit to take the test. For the present study, the SISRI was translated into Hindi as well and administered bilingually, with prior permission of the author.

**Scoring:** The scoring of SISRI is quite simple and objective. The scores of each item are the same as the point scale i.e. the score of each item ranges from zero to four and the total score range of the test is thus, 0 to 96. There is reverse coding for item no. 6 for which the zero point refers to a score of four and the 4 point refers to a score of zero. The higher the score for each question, the higher is the level of spiritual intelligence for the corresponding capacity. Further, the 24 statements are divided to find out the score on the components of spiritual intelligence. Total 7 items (nos. 1, 3, 5, 9, 13, 17, and 21) determine the critical existential thinking, ranging its score from 0-28 and 5 items (nos. 7, 11, 15, 19, and 23) determine the score on personal meaning production, ranging its score from 0-20. Seven items (nos. 2, 6, 10, 14, 18, 20, and 22) determine the transcendental awareness, ranging its score from 0-28 and 5 items (nos. 4, 8, 12, 16, and 24) determine the score on conscious state expansion, ranging its score from 0-20.

**Reliability:** The preliminary statistical properties were based on an exploratory factor analysis of 619 university undergraduate students and the final
statistical properties (confirmatory factor analysis and validation) were based on a sample of 305 university undergraduate students. The Cronbach’s Alpha (which represents an appropriate internal reliability) for the SISRI-24 is 0.920. The individual subscales of CET, PMP, TA and CSE also display adequate alpha coefficients of 0.78, 0.78, 0.87 and 0.91 respectively. The average inter-item correlations with regard to CET, PMP, TA and CSE are 0.34, 0.42, 0.49 and 0.69 respectively. Further, the average inter-item correlations for all the 24 items is 0.34, with a split-half reliability of 0.91. The test-retest reliability (calculated at a time gap of four months) for the total SI score is 0.89. The correlations for revised subscales of CET, PMP, TA and CSE at a time gap of four months are 0.84, 0.69, 0.84 and 0.78, respectively.

**Validity:** In order to validate and investigate the SISRI, several psychological measures were employed. The coefficients of correlations of total spiritual intelligence score with these psychological tests were worked out. The coefficients of correlations of total spiritual intelligence score with MLQ (Meaning in Life Questionnaire by Steger et al., 2006), MSC (Metapersonal Self-Construal Scale by DeCicco & Stroink, 2003), MSD (Mysticism Scale - Research Form D by Hood, 1975), AUIE (Age Universal Intrinsic-Extrinsic Religiosity Scale by Gorsuch & Venable, 1983), SLS (Satisfaction with Life Scale by Diener et al., 1985), BIDR (Balanced Inventory of Desirable Responding - social desirability by Paulhus, 1984), EIS (Emotional Intelligence Scale by Schutte et al., 1998) and MAB-II (Multidimensional Aptitude Battery-II by Jackson, 1998) are 0.21, 0.67, 0.63, 0.48, 0.20, 0.16, 0.43 and 0.07, respectively, all of which are significant, except the correlation coefficient for MAB-II. It shows that SI is significantly related to meaning in life, self-construal, mysticism, intrinsic-extrinsic religiosity, satisfaction with life, social desirability and emotional intelligence. Non significant correlations between IQ and SI ruled out IQ as a confounding variable.

**Inter-Subscale Correlations:** All inter-subscale correlations calculated for the SISRI-24 are significant and moderate in strength, ranging from 0.42 to 0.61. The correlation coefficients between PMP & CET, PMP & TA and PMP & CSE are 0.42, 0.59 and 0.52 respectively. The correlation coefficients between TA & CET, TA & PMP and TA & CSE are 0.61, 0.59 and 0.56 respectively. The correlation coefficients between CSE & CET, CSE & PMP and CSE & TA are 0.43, 0.52 and 0.56 respectively.
4.7.4 Scale for Introversion Extraversion Dimension by Psy-Com Services (1993)

The SIED is a personality questionnaire, where ‘SIED’ stands for “Scale for Introversion Extraversion Dimension” (Appendix IV). This scale of Introversion Extraversion comprises five basic personality dimensions. These five personality dimensions were selected from twenty basic Multi dimensional Assessment of Personality (MAP) series on the basis of their pertinence to the personality complex of introversion and extraversion. The five dimensions are as follows:

Dimension Bo: Boldness
Dimension Co: Competition
Dimension En: Enthusiasm
Dimension Ss: Self-Sufficiency
Dimension Sw: Social-Warmth

**Boldness** (Bo): Individuals who have high scores on Bo are outgoing, courageous, innovative, spontaneous and copious in emotional response. Such people are “very pushy”, keenly fascinated to the opposite sex, enjoy being in the center of attention in a group and have no stage fright. Individuals who have low scores on this dimension are likely to be shy, retreating and watchful. They generally suffer from inferiority feelings and are usually sluggish and impeded in communication and expression.

**Competition** (Co): Individuals who score high on Co are firm, confident and self-sufficient. They are likely to be rigorous, hostile, austere, extra punitive and authoritarian. Individuals who score low on Co tend to give way to others and are docile. They are often dependent, confessing, and anxious for obsessional correctness.

**Enthusiasm** (En): Individuals who score high on En tend to be jovial, energetic, frank, talkative, expressive, vibrant and have a happy-go-lucky attitude. Such individuals are preferred leaders, impetuous and mercurial; and enjoy parties, variety and travel. Individuals scoring low on En tend to be reserved, uncommunicative and introspective. They tend to be sober and dependable individuals. Occasionally, they are pessimistic, gloomy and cynical; they are unduly deliberate and hence could be considered arrogant and conceited by others.
**Self-Sufficiency** (Ss): Individuals who score high on Ss social prefer to work with other people make decisions with them. They are most likely to work in solidarity as they like and depend on social consent and appreciation. Such individuals are deficient in individual resolution and they tend to go along with the group. Those who score low on Ss are temperamentally self-sufficient, habituated to go their own way, make decisions on their own and take actions accordingly.

**Social warmth** (Sw): Individuals who score high on Sw tend to be good natured, easy going, emotionally expressive, ready to cooperate, attentive to people, soft hearted, kind and adjustable. They enthusiastically form dynamic groups and are liberal in interpersonal relations. However, individuals scoring low on Sw tend to be firm, cool, doubtful and detached. They like things rather than people and like to work alone. They may also tend to be critical, obstructive and cautiously searching for intellectual companionship.

Introversion-Extraversion (Total): Individuals who score high on this dimension are highly social in nature. They are overtly enthusiastic, talkative, expressive, assertive, adventurous and uninhibited in emotional response. They have high extraversion tendencies. Individuals who score low on this dimension prefer to be by themselves, than to have social contact with other people. However, a little contact goes a long way for them. They have high introversion tendencies.

The SIED consists of 40 items, out of these, 34 are dimension questions (measuring Introversion Extraversion), and 6 questions are “Validity Index” questions to give Validity Indicator Score (Vi score). Due to the indirect nature of questions, the validity index fairly well guarantees an accurate and reliable measure of the introversion-extraversion dimension. The scale usually requires 10 minutes time, and is designed to indicate the amount of introversion-extraversion tendencies which an individual applicant, employee, or a student has. The score on SIED can also be used for guiding to make appropriate educational and vocational choices. Indirectly, the test measures the individual’s general adjustment to social demands, and his ability to adapt himself to the people.

The scale is printed on a four page booklet. The front page contains the instruction for answering the questions with a few examples. Pages 1 and 2 contain the actual test items to be answered by the subject, and the back page contains the
profile sheet, where subject’s scores are transferred after scoring is over. The scale is a power test (i.e. there is no time limit). However, the average subject requires approximately 10-15 minutes to complete the test in full. It can be given both individually and in group situations.

**Scoring:** The procedure in SIED is very objective and simple. Transparent Stencil Scoring Key is used. At first, it has to be ensured that each question has one and only one answer and the subject has not skipped more than five questions. The scoring key is placed over the column of answer boxes. Each answer scores either 2 or 1 as indicated by the numbers printed over the boxes. The scores for each dimension are written down at the bottom of the booklet in the space provided for that dimension. Each item in this test measures some or the other dimension as indicated in the key. The scores of all the dimensions are added (excluding the Vi dimension) to obtain the total score for page 1. The procedure is repeated for page 2 also. The score for page 1 and 2 are added to obtain the total raw score for each dimension as well as the total score on the test. The raw scores are converted to sten scores according to the procedure mentioned in the norms. These scores are plotted on the profile sheet printed at the back page of the booklet. The sten score of 4-7 indicates average strength of the introversion-extraversion. Sten score above 7, i.e., from 8-10 indicates that the subject is high on extraversion dimension. The score less than 4 indicate high on introversion dimension.

**Reliability:** The reliability or internal consistency of SIED, i.e., the agreement of the dimension scores with itself under some change of condition are calculated in all relevant ways. For calculating the split-half reliability, a trial run of the present scale was made. Reliability of coefficients were computed for 1625 individuals, using Spearman Brown formula. The scale was divided into two parts using odd even method. The coefficients of correlation between two halves on Bo, Co, En, Ss, Sw and total dimensions of personality types were found to be 0.89, 0.87, 0.92, 0.93, 0.88, and 0.89 respectively.

The test-retest reliability was also calculated by using the coefficient of correlation between two sets of scores of the same individuals on the same scale at different time intervals. The first retest was given after 2-7 day’s interval. The coefficients of correlation on Bo, Co, En, Ss, Sw and total I-E dimensions were 0.86,
0.83, 0.90, 0.92, 0.85 and 0.87 respectively. The second retest was given after 2-6 month’s interval and the coefficients of correlation on Bo, Co, En, Ss, Sw and total I-E dimensions were 0.85, 0.82, 0.78, 0.88, 0.81 and 0.83 respectively.

**Validity:** The SIED scale has validity index or lie index. The SIED consists of 6 questions on “Validity Index” to give Validity Indicator Score (Vi score). Against the dimensions to be measured, present scale constitutes only those items which continue to have significant validity against the dimension to be measured, even after successive factor analyses. The construct validity values for SIED scale are exceptionally high. Direct Concept validity coefficients of its different dimensions i.e. Bo, Co, En, Ss and Sw (N=625) are 0.86, 0.71, 0.88, 0.84 and 0.80 respectively. The indirect concept validity coefficients of its different dimensions i.e. Bo, Co, En, Ss and Sw (N=625) are 0.86, 0.71, 0.88, 0.84 and 0.80 respectively.

**Interpretation of SIED scores:** Each sten score (i.e. from 1-10) gives a brief description of the job behavior which may be expected from an individual with that particular score.

- **Sten score 10:** These individuals need job assignments which are highly sociable in nature. They have more extraverted personality than 19 out of every 20 adults. They would definitely be maladjusted in a job where there are no people around.

- **Sten score 9:** These individuals have more extraverted personality than 9 out of every 10 adults. They may develop adjustment problems if they have to work in solitary conditions. This score is most desirable for employees who are to be selected as salesmen.

- **Sten score 8:** These individuals also rank high on extraversion dimension and need social situation in their job duties. Their assignments should involve contact with people. They have more extraverted tendencies than 4 out of every 5 people. They will usually get bored with paper work and machine assignments.

- **Sten score 7:** These individuals are not the strong extrovert; they do not need social contact job of a continuous nature, but still need some social situation in their job duties. These individuals can work at an inside desk job, but preferably in a large department where they at least receive some social reciprocation outlet in terms of working among a group of employees.
Sten score 5-6: These individuals make the approximately average introversion-extraversion score, they are generally termed as “ambiverts”. They like both social contacts and aloof job situations, but not too much of either.

Sten score 4: They are the borderline introverts and prefer to be by themselves, than to have contact with other people. Three out of every 5 adults like contact more than they do. Their assignment to a large extent should be of a non-contact in nature. This score is the most desirable for office clerks, factory workers, technical professional etc.

Sten score 3: These individuals prefer to be by themselves. On a strictly inside desk job, they will be quite efficient and steady, and will do uninterrupted work. It is desirable for jobs such as number clerks, office machine operators, semi-skilled worker, factory machine operator, scientist etc.

Sten score 2: They fall into the extreme introvert classification. They perform well in assignments where no social contact duties are required of them. Personality wise, they will do excellent conscientious, precision work with accounts, machinery, electrical equipment, paper work of a continuous nature. But they will not be gregarious employee or well understood by others.

Sten score 1: These individuals have an extreme self-sufficiency and withdrawal tendencies. They are happy to work things and ideas, with no sense of deprivation, even if they have no contact with other people at all. They would show characteristics, such as being inaccessible and hard to understand. They will tend to be melancholic, cold, stiff, depressed, withdrawing and individualistic.

4.8 Procedure of Data Collection

The data was collected personally by the investigator. Initially, the investigator sought permission from the Principals of all the colleges for collection of data. After this, the number of sections in the third year of humanities stream was assessed in each college. A total of five sections in each college were selected randomly. This was followed by the procurement of the roll number-wise list of the undergraduates of selected sections from the administrative office of each college. A total of 50 undergraduates were selected randomly from each section of the college and the enlisting of selected students was done. The students were contacted in their English lecture, being a compulsory subject.
The questionnaires containing all the four tests, i.e. CMS inventory, EQ test, SISRI and SIED were administered on the students. The purpose of the study was explained to the students by the researcher and the students were asked to answer honestly. The queries, if any, were answered personally by the investigator. After the completion of all the tests, the booklets were collected. After the collection of the booklets, the scoring on each of the four tests was done according to scoring procedures given in the respective manuals of the tests. The respondents with incomplete or invalid responses were excluded from the final sample. Lastly, the scores on each test were entered in a master table prepared by the investigator and the data was subject to final analysis.

4.9 Statistical Analysis

In the present study, the following statistical techniques were employed to test the research hypotheses:

1. Descriptive statistics i.e. mean, median, mode, SDs, range, skewness and kurtosis for all variables were obtained to ascertain the nature of distribution of scores of conflict management styles, emotional intelligence, spiritual intelligence and personality types.

2. t-test was applied to compare the male and female undergraduates on the variables of conflict management styles, emotional intelligence, spiritual intelligence and personality types.

3. To find out the mean differentials between the undergraduates scoring low and high on the variables of emotional intelligence, spiritual intelligence and personality types, the sample was classified into three categories, i.e. high, average and low for all the three variables. The classification was done on the basis of Kelley’s criteria of top and bottom 27% cases. The top 27% of cases were considered as falling into high category, while the bottom 27% cases were considered as falling into low category. The rest 46% of the undergraduates were regarded as falling into the average category.

4. Coefficients of correlation were worked out to examine the relationship of conflict management styles with emotional intelligence, spiritual intelligence and personality types of undergraduates.
5. In order to examine and compare the predictive efficiency of independent variables of emotional intelligence, spiritual intelligence and personality types towards the prediction of criterion variable of conflict management of undergraduates, regression analysis was done.

6. Graphical representation was done wherever necessary.