3.2.2 SAMPLE

“A Sample is the small proportion of the population that is selected for observation and analysis. By observing the characteristics of the sample, certain inferences can be made about the characteristics of the population from which it drawn” (Best, 2008).

Keeping in view of expenses, time, utility and suitability, the sample comprised of 400 students of the age group of 14 to 17 years old studying in 11th standard in Haryana state. To meet the requirements of the study, multistage random sampling method was used in selecting the sample. The whole of Haryana divided into four zones i.e. East, West, North and South. From each zone, one district was picked up randomly i.e. Sonipat, Hisar, Yamunanagar and Faridabad. From each district, four schools (two rural + two urban) were selected using random sampling technique. A sample of 50 students (25 male and 25 female) from schools of rural residential area and 50 students (25 male and 25 female) from schools of urban residential area from each district were randomly selected making a total sample to 400 students. Thus the final sample consisted of 400 students equally divided into sex and residence (100 urban male + 100 rural male + 100 urban female + 100 rural female adolescents) of 11th class.
Table 3.1
List of Sampled Schools

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>District</th>
<th>Schools Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sonipat</td>
<td>Govt. Sr. Secondary School, Model Town, Sonipat</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Swami Dayanand Sr. Sec. School, Sisana, Sonipat</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Baba Chhotu Nath Sr. Secondary School, Sisana, Sonipat</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Govt. Girls Sr. Secondary School, Murthal Adda, Sonipat</td>
</tr>
<tr>
<td>5</td>
<td>Hisar</td>
<td>Sarvodaya Sr. Secondary School, Azad Nagar, Hisar</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>J. D. Sr. Sec. School, Rishi Nagar, Hisar</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Govt. girls Sr. Secondary School, Narnaund, Hisar</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Govt. boys Sr. Secondary School, Narnaund, Hisar</td>
</tr>
<tr>
<td>9</td>
<td>Yamunanagar</td>
<td>S.D. Sr. Sec. School, Jagadhri workshop, Yamunanagar</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>GSSS Yamuna Nagar, SNV Model Town, Yamunanagar Town</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>GSSS Buria, Jagadhri, Yamuna Nagar</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Venus Sr. Sec. School, Harnaul, Yamunanagar</td>
</tr>
<tr>
<td>13</td>
<td>Faridabad</td>
<td>Govt. Boys Sr. Sec. School, Tikona Park, Faridabad</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>Govt. Girls Sr. Sec. School, NIT-3, Faridabad</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Govt. Sr. Sec. School, Ankhir Village, Faridabad</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>Fhoghat Sr. Sec. School, Samepur village, Ballabgharh, Faridabad</td>
</tr>
</tbody>
</table>
A detailed description of the sample has been given below in figure 3.1

Figure 3.1
Figure 3.2

Split-up of Total Sample

HARYANA
N=400

HISAR
N=100

URBAN= 50

MALE=25

FEMALE=25

RURAL= 50

MALE=25

FEMALE=25

SONIPAT
N=100

URBAN= 50

MALE=25

FEMALE=25

RURAL= 50

MALE=25

FEMALE=25

YAMUNANAGAR
N=100

URBAN= 50

MALE=25

FEMALE=25

RURAL= 50

MALE=25

FEMALE=25

FARIDABAD
N=100

URBAN= 50

MALE=25

FEMALE=25

RURAL= 50

MALE=25

FEMALE=25
3.2.3 TOOLS USED FOR THE STUDY

Every Descriptive type of research employs some of relevant tools of research. Following tools were chosen for the collection of data in the present study.

1. Academic Cheating Scale (2011) constructed and standardized by Kalia and Kirandeep
4. Locus of Control Scale (1992) constructed and standardized by Hasnain and Joshi.
5. Marks obtained by the students in the Xth class examination conducted by Haryana Education Board were taken as indicator of Academic Achievement.

3.2.4 DESCRIPTION OF THE TOOLS USED

The brief description of all the tools used in the study is given below:

3.2.4.1 Academic Cheating Scale (ACS)

Academic Cheating Scale constructed and standardized by Kalia and Kirandeep (2011) was used to measure Academic Cheating. It measures Academic Cheating in five areas namely- Cheating in Examination, Plagiarism, Lying about Academic Assignments, Interference during instructions and Damaging Intellectual Property. It also provides a Global academic cheating score.

A detailed description of areas along with items is given below:
The operational definitions of academic cheating and its six dimensions are adopted from a report of the academic dishonesty and plagiarism subcommittee chaired by Maslach (2004).

Academic Cheating: Academic Cheating is defined as fraud, deceit or dishonesty in an examination or in an assignment or in class by using or attempting to use methods which are prohibited or inappropriate.

(i) Cheating in Examination: Unfair means used before or during or in context of examinations by providing or receiving answers. (1 to 12 items)

(ii) Plagiarism: Claiming others’ creative work or intellectual material as own, without acknowledging its source in the submission of formal or informal academic assignment. (13 to 17 items)
(iii) **Creating an improper disadvantage to other students**: Cheating done by hiding or damaging library books for personal advantage or the disadvantage of others, or spoiling or changing lab samples in the laboratory.

(iv) **Lying about Academic Assignments**: Taking other’s help to complete assignments but furnishing false information of doing it himself/herself. (18 to 34 items)

(v) **Interference during instructions**: Failure to comply with the instructions of the instructor or disruption of classes or other academic activities. (35 to 38 items)

(vi) **Damaging intellectual property**: Sabotaging or stealing another student’s assignments, notes, files etc. or improperly accessing via computer for private purposes, other than studies. (39 to 40 items)

The Academic Cheating Scale contains 40 items in all. Each item is provided with five alternatives. Responses are obtained on the test booklet itself. It takes around 25 minutes for responding all the items.

**Reliability**

The final version of the scale was administered to 100 male and female students in the age group of 14 to 15 years old studying in X class. The odd items versus even items were correlated using Spearman Brown Split Half method and also Guttman’s Split Half method. The Spearman Brown coefficient was .87 and Guttman’s Split Half coefficient was .86 and the Cronbach’s alpha as .91 suggesting the high reliability of the scale.

**Validity**

The scale was validated against the criterion of content validity. All the 72 items were presented to twenty judges (recognized professors in the department of Education and Psychology) for their opinion and only 50 items were retained which had received 80% unanimity. All the items were found consistent with academic cheating. Therefore, on the basis of face validity and content validity, it appears reasonable to assume that Academic Cheating scale measures academic cheating among adolescents.

**Scoring method**

Each item is followed by five alternatives ranging from ‘always’ to ‘never’ depicting degree of respondents’ involvement in different types of academic cheating. The options Always, Frequently, Sometimes, Hardly Ever and Never carries scores 4, 3, 2, 1, 0 respectively. The score of each respondent is obtained by adding the scores on all the
individual items under each dimension of academic cheating. The possible maximum score of an individual is 160. Whichever option is encircled, its corresponding score is counted. The sum of all the scores of 40 items provides the Global academic cheating score of an individual. A high score on this scale indicates his high involvement in academic cheating; while a low score shows less involvement in academic cheating.

### Interpretation and Classification of the Raw Scores for all Dimensions

<table>
<thead>
<tr>
<th>Academic Cheating Dimensions Score</th>
<th>Interpretation (Category)</th>
</tr>
</thead>
<tbody>
<tr>
<td>82 and above</td>
<td>High academic cheating</td>
</tr>
<tr>
<td>76-81</td>
<td>Above moderate academic cheating</td>
</tr>
<tr>
<td>64-75</td>
<td>Moderate academic cheating</td>
</tr>
<tr>
<td>55-63</td>
<td>Below Moderate academic cheating</td>
</tr>
<tr>
<td>Up to 54</td>
<td>Low academic cheating</td>
</tr>
</tbody>
</table>

### 3.2.4.2 Stress Inventory for School Students (SISS)

The inventory is constructed and standardized by Rani and Singh (2008) and is devised to identify the academic stress among school students. It consists of 40 items.

**Reliability**

The inventory has both test-retest reliability and internal consistency reliability. For calculating Test-retest reliability, the inventory was administered twice with a gap of 14 days on a sample of 200 adolescents. Test-retest reliability was found to be 0.80 which was not only high but also statistically significant and internal consistency reliability by odd-even method was found to be 0.79 (corrected to full length) which was highly significant. Thus, inventory possessed a sufficient degree of reliability.

**Validity**

1. The face validity of questionnaire appeared to be fairly high.
2. The content validity is adequately assured as only those items are selected for the Questionnaire for which there is complete agreement amongst the experts.
Scoring

The scoring method of this inventory is very easy. There are 40 items in this inventory. Every question has 4 options. Option – Very worried is given 4 marks, Option – Worried is given 3 marks and little worried and Not worried are assigned a score of 2 and 1 respectively. A student can obtain maximum 160 score and minimum 40. All the 40 items selected are indicative of academic stress in the students. This indicates that higher the score, higher stress of the students and lower the score, lower stress of the students.

Qualitative Interpretation

The obtained score on inventory can also be qualitatively interpreted for knowing about the degree or magnitude of stress.

<table>
<thead>
<tr>
<th>Range of Score</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>121-160</td>
<td>High Level of Stress</td>
</tr>
<tr>
<td>80-120</td>
<td>Moderate Level of Stress</td>
</tr>
<tr>
<td>0-79</td>
<td>Low Level of Stress</td>
</tr>
</tbody>
</table>

3.2.4.3 Locus of Control Scale (LCS)

Locus of Control Scale (LCS) constructed and standardized by Hasnain and Joshi (1992) was used to study the locus of control. It was developed to measure internal and external continuum of the students. The test has been developed in Hindi language. The scale contains 36 items with 16 positive items reveal internal locus of control and 20 negative items reveal external locus of control.

Reliability and validity

Reliability of LCS was measured with Spearman Brown Method and Test-Retest Method were found to be 0.55 and 0.76 respectively. The criterion validity of this scale was measured with correlating Roma Pal’s Scale and was found to be 0.76.

Scoring

The three point scale was used to identify internal locus of control and external locus of control. Score 2, 1, 0 was assigned to always, sometimes and never for responses of Positive items and 0, 1, 2 score was assigned for negative responses.
3.2.4.4 Ego Strength Scale (E.S.S.)

Ego strength was measured by using Ego Strength Scale (ESS) by Hasan (2010). The Scale has 32 items.

Reliability

The odd-even reliability of the adapted scale having 32 items was found to be 0.78 (corrected) which is slightly higher than odd-even reliability (=0.76) reported by Barron for his 68 item scale. With the gaps of 2 and 5 weeks between subsequent administrations, the test-retest reliability co-efficient of the adopted scale were found to be 0.86 and 0.82 respectively.

Validity

The scale according to the author is highly valid and is fit to measure ego strength of adolescents.

Scoring

One mark is given for each of the ‘No’ (X) responses.

3.2.4.5 Academic Achievement

Marks obtained by the students in the Xth class examination conducted by Haryana Education Board were taken as indicator of Academic Achievement.

3.3 INSTRUCTIONS FOR ADMINISTRATION OF SELECTED TOOLS

1. Introduce yourself to maintain friendly relationship
2. Ask the students to sit properly in a way that they cannot get influenced by other students’ responses.
3. Tell the students the purpose of the test and the importance of their true response for the study.
4. Assure them confidentiality of the responses and invoke honesty in responding.
5. Distribute the booklets of the selected tools to each student one by one.
6. Ask them to supply necessary introductory information by filling all the columns
7. Read the instructions clearly from the test booklet and invite any doubt before they start responding.
8. Ask them to respond independently, truly and honestly.
9. Supervise them by moving around in the room.
10. Clarify the meaning of certain items if needed.
11. Collect the test booklets back making sure that all the entries have been filled and all the items have been responded, and then count them.

3.4 STATISTICAL TECHNIQUES USED

The following statistical techniques were applied to analyze the data:

SPSS version 22 (latest version) were applied to measure various Statistical values/Parameters with maximum accuracy. Descriptive statistics such as means, SDs and SEMs were worked out on the scores of Academic Cheating, Academic Achievement, Academic Stress, Locus of Control and Ego Strength. To determine the significance of difference between means of different groups, t-test was applied. To test the significance of ‘t’ values, the following level of significance were established-

0.01 Level of Significance
0.05 Level of Significance

In order to measure the relationship between different variables i.e. Academic Cheating, Locus of Control, Academic Achievement, Academic Stress and Ego Strength, Pearson Product Moment Correlation was applied. Bar Diagrams were made to represent the data pictorially.