3.0. Methodology
3.0 METHODOLOGY

3.1 Research Design
3.2 Sample.
3.3 Instruments Used.
3.4 Procedure.
In the previous chapters the theoretical concepts underlying the research findings have been unfolded and the status of the presently available studies in the area have been delineated. In the present chapter, highlights the design, sample, instruments and the procedure used. The variables of the study have been described and justified. Their operational definitions have been specified and the tools for assessing them have been described. The selection of the sample and the selection of measures used have also been elaborated here. The procedure of data collection and the statistical tools employed have been narrated.

3.1 RESEARCH DESIGN

The objective of the study is to explore, whether the impact of Test Anxiety, Academic Overload and Perceived Parenting and the nature of their relationship affect self-concept. Therefore, the study has been undertaken based on correlation research Design.

In correlation research design an attempt is made to discover or clarify relationships using correlation coefficients. The purpose is to express in mathematical terms the degree of relationships between the two variables. The quality of correlational studies is determined not by the complexity of the design, or the sophistication of correlational techniques used by the depth of the rationale and theoretical constructs that guide the research design. It cannot be used to determine the cause-and-effect relationships, although they are used to explore or predict relationships between two variables. Correlation coefficients are best used to measure the degree of relationship between two variables and to explore possible causal factors that can later be tested in an experimental design.

The correlation method allows the researcher to analyze how several variables, either singly or in combination, might affect a particular pattern of behaviour. (Borg & Gall, 1991).
SCHEMATIC REPRESENTATION OF THE RESEARCH DESIGN

INDEPENDENT VARIABLE

TEST ANXIETY
Measured by (TAI)
Test Anxiety Inventory

Emotionality  Worry

ACADEMIC OVERLOAD (AO) by
Academic Overload Questionnaire

Personal Aspects  Familial Aspects  Aspects Around Teachers  Aspects Around Peers  Societal Aspects

PERCEIVED PARENTING STYLES
Measured by (PPS)
Perceived Parenting Scale by

Rejection Vs Acceptance  Carelessness Vs Protection  Neglect Vs indulgence  Utopian expectation Vs realism

Least Vs Morality  Freedom Vs Discipline  Faulty Role Expectation Vs realistic Role Expectation

Marital conflict Vs Marital Adjustment

DEPENDANT VARIABLE

SELF CONCEPT
Measured by (SCQ) by

Physical  Social  Temperamental  Education  Moral  Intellectual

FIGURE NO : 3
3.2 SAMPLE

The study was conducted with urban adolescents in the age group of 14-18 years, studying in different schools of Kolkata with a record of consistently good result in the Board examinations.

This particular group was selected for the study as it was assumed that children studying in schools of standard, average to good would actually be the most prone to Test Anxiety, Academic overload and most effected with the Parenting Style they perceived that was maintained in their home. This is so because students studying here was more or less of high competence level coming from parents of varied educational and occupational backgrounds, where the (minimum level of educational qualification was found to be graduate.) The occupational category of the parents ranges from Doctors, IT professionals, Scientists, Teachers, Bank employees and Business persons. It was assumed that the expectation level of their parents, teachers and peers from their wards/students/friends to perform well would be high. This would ultimately show some effect on their Test Anxiety and Academic Overload level in this examination dominated environment. Coupled with these the Perceived Parenting of the samples would consequently affect the Self-concept of the adolescents.

This was also the age group that faced both the board exams of class X and XII, and the entrance examinations of the various esteemed colleges and universities in the country. The adolescents were also restricted within the urban population and those living with both their parents, as it was felt that the pressure to excel and stand out for future financial gains was mainly an urban phenomena than a rural one. India still has villages cut off from the outside world. Where this so called academic pressure in unheard of and those dwelling there do not realize the existence of such.
General Inclusion Criteria

Age of the subject: 14-18 years.
Sex: Both girls and boys.
Class: IX, X, XI, XII
Locality: Calcutta Metropolis.
Parental Income: Middle Income level.
Parental Education: Minimum University Graduate
Intelligence Level of the: Within average range.
Participants

General Exclusion Criteria

♦ ♦ Histories of any major break in the family for eg. divorced, dead parents or orphans.
♦ ♦ Incomplete responses.

Purposive Sampling, technique is adopted to select the sample. The sample was broken based across class and gender. It was further broken on the basis of four variables and then further according to their dimensions. Initially the number of participants in the sample was 400, but after choosing only those who fit with the inclusion criteria, the total sample of the study was down to 302. The constitution of the sample is represented in the following table.

Table - 1

<table>
<thead>
<tr>
<th>S</th>
<th>IX</th>
<th>X</th>
<th>XI</th>
<th>XII</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIRLS</td>
<td>38</td>
<td>36</td>
<td>40</td>
<td>36</td>
<td>152</td>
</tr>
<tr>
<td>BOYS</td>
<td>40</td>
<td>36</td>
<td>40</td>
<td>36</td>
<td>150</td>
</tr>
<tr>
<td>TOTAL</td>
<td>78</td>
<td>72</td>
<td>80</td>
<td>72</td>
<td>302</td>
</tr>
</tbody>
</table>
3.3 INSTRUMENTS

In the following section, the selection and description of the measures of the variables have been presented.

3.3.1. A detailed information schedule or personal information sheet: for collecting personal and familial information. This consisted of the subject’s age, sex, class, stream, school, address, family constitution, income, occupation of the parents and educational qualifications of both the parents.

3.3.2. Cattell’s Culture Fair Intelligence Test:

Description of the Tool: The test was designed by Cattell in 1959. The Culture Fair Intelligence Test measures Individual Intelligence in a manner designed to reduce, as much as possible, the influence of verbal fluency, cultural climate and educational level. The main aims in the design and construction of the tests were:-

- To create a psychometrically sound instrument upon a comprehensive theoretical foundation, with maximum possible validity and reliability.
- To minimize irrelevant influences of cultural learning and social climate while preserving the productive utility of the tests across a broad spectrum of concrete behaviours.
- To provide high administrative and scoring convenience and maximum economy of testing time.

The test recognizes that intelligence though important is only one element of a larger set of individual attributes that need to be considered in order to predict human behaviour comprehensively. The Culture Faire Test consists of three scales. But for the purpose of the present study only scales 2 and 3 has been used as scale 1 is to be used for mentally handicapped individuals. Scales 2 & 3
can be employed on children from 13 or 14 years onwards. Both the Scales consists of four subsets (namely Series, Classifications, Matrices and Conditions respectively) totaling to 46 and 50 items for scale 2 and 3 respectively. The Scale has very high reliability and validity as follows –

The reliability of the scale 2 is 0.87, 0.80, 0.84 over items, parts and time for full test (A+B). And the reliability for Scale 3 is 0.85, 0.82 and 0.82 over items, parts and time for full test (A+B).

The test also has very high concept and concrete validity for both Scale 2 and Scale 3.

Administration:

The test can be administered individually or in a group, as they are non-verbal and require only that examinees be able to perceive relationships in shapes and figures. The time allotted for each test is 12 ½ minutes. While administering the test it must be seen that the room should be well lighted, temperature comfortable and desks widely spaced.

Before distributing the test booklets sheets the group should be cautioned that the booklets are not to be opened until they are told to do so.

Scoring and Interpretation: The scoring method used here is a straight scoring method, with each having five alternatives to respond from and each of the alternatives are scored in the manner 1, 2, 3, 4, 5.

The interpretation of the test were done with the help of mean 100 and standard deviation 16 so as to yield a standardized IQ score. The interpretation of the scores was done with the help of the norm table given in the manual.
Reasons for selecting the Questionnaire:

This is a valuable instrument in—

1. Selecting students for accelerated educational programmes within an age group and grade.

2. Advising students in regard to probable success in college.

3. Both the scales can be employed from age 13 or 14 onwards.

3.3.3. Self-concept Questionnaire (SCQ):

Description of the tool:

Saraswat, R.K. designed the self-concept questionnaire in 1992. The inventory has six dimensions and these are—physical, social, temperamental, educational, moral and intellectual. It consists of 48 items of which 8 items fall under each of the above dimensions, and each item is provided with fine alternatives.

Saraswat (1992) developed SCQ based on the assumption that self-concept is a dominant element in personality pattern. There are various methods of measuring self-concept. Lynche Norem-Hebeisen and Gergen (1981) suggested that attention should be shifted from global measures of self-concept to configurations of responses across self-concept dimensions.

Adolescence is a period of life with its own peculiar characteristics and problems. Hence the need for a deeper penetration into their perceptions of their own physical, social, temperamental, educational, moral and intellectual spheres that need to be explored.

The scale has very high internal consistency. The reliability was found to be 0.91 for the total self-concept measure, while the reliability coefficients of
the 6 dimensions varied from 0.67—0.88. The reliability coefficients of each of the dimensions are 0.77 for physical (A), 0.83 for social (B), 0.79 for temperamental (C), 0.88 for educational, 0.67 for moral and 0.7 for intellectual. The scale has both content and construct validity. The questionnaire has been developed to be administered on the students within the age range 14-189 of both sexes and of classes IX, X, XI & XII.

Administration:

This is a self-administering questionnaire with multi-choice answers. There is no time limit to complete it, but 20 minutes have been found sufficient for responding all the items.

Scoring and Interpretation:

The scoring method used here is a straight scoring method, with each having five alternatives to respond from and each of the alternatives are scored in the manner 5, 4, 3, 2, 1, whether the items are positive or negative.

Thus, a high score in this inventory indicates a higher self-concept while a low score indicates low self-concept. Each of the scores needs to be added on the scoring sheet provided in the questionnaire. The sum total scores under each of the dimensions (with code) will give the score of the particular dimension of self-concept.

The scores are then interpreted according to the norm provided as follows:-

Interpretation and classification of raw scores for all dimensions

<table>
<thead>
<tr>
<th>Score dimension score</th>
<th>Interpretation (Category)</th>
</tr>
</thead>
<tbody>
<tr>
<td>33-40</td>
<td>High self-concept</td>
</tr>
<tr>
<td>25-32</td>
<td>Above average self-concept</td>
</tr>
<tr>
<td>17-24</td>
<td>Average self-concept</td>
</tr>
<tr>
<td>9-16</td>
<td>Below average self-concept</td>
</tr>
<tr>
<td>Upto 8</td>
<td>Low self-concept</td>
</tr>
</tbody>
</table>
Interpretation and classification of raw scores for total self-concept

<table>
<thead>
<tr>
<th>Raw Score</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>193-240</td>
<td>High self-concept</td>
</tr>
<tr>
<td>145-192</td>
<td>Above average self-concept</td>
</tr>
<tr>
<td>97-144</td>
<td>Average self-concept</td>
</tr>
<tr>
<td>49-96</td>
<td>Below average self-concept</td>
</tr>
<tr>
<td>1-48</td>
<td>Low self-concept</td>
</tr>
</tbody>
</table>

**Reasons for selecting the questionnaire:** The scale was chosen for the following reason:

a) It catered to the adolescents within 14-18 years, which was same as the sample considered for the study.

b) The scale is compact, yet it dealt with all the dimensions of an adolescent thinking process.

c) Administration and scoring of the scale is simple and uncomplicated.

d) This was an Indian scale i.e. based on Indian samples, with helped to merge with the cultural milieu of the subjects in question.

3.3.4. Perceived parenting Scale

**Description of the tool:** Perceived parenting scale was designed by Bharadwaj, Sharma & Garg in (1998). The scale includes eight models of parenting which are as follows:

(A) Rejection Vs Acceptance.
(B) Carelessness Vs Protection
(C) Neglect Vs Indulgence
(D) Utopian expectation Vs Realism
(E) Lenient standard Vs Moralist
(F) Freedom Vs Discipline.
(G) Faulty role expectation Vs Realistic role expectation.
(H) Marital conflict Vs Marital adjustment.
The scale represents a dichotomy in each parenting model. This can be studied as the role of mothering and fathering separately as well as parenting as a whole, except the marital conflict vs marital adjustment which can only be associated with the study of adequate or inadequate parenting as a whole.

Parenting as the style of child upbringing refers to a responsibility of mother, father, together or independently to prepare the child for society and culture (Veenes, 1973a) which provides ample opportunity to a child to find roots, continuity and a sense of belonging (Sirohi & Chauhan, 1991) and also serve as an effective agent of socialization. (Bharadwaj et al, 1996). They developed the perceived parenting scale because parenting as a perception of the parents, of their own attitudes towards the child happens to be of great significance in the dynamics of behaviour for socio-psychological researchers. But how the child perceives his/ her parenting always remains a neglected phase of researcher and should be deemed most important as he or she is the one whose process of socialization stands for furtherance. (Bharadwaj, 1996). Individual experiences not only help in making the sense of self-identity but also lead him to perceive, think and act in a self-directed manner. Thus the child’s perception of parental attitude toward himself must be of great concern in the dynamics of behaviour, and may open new avenues of research for deeper probe in the domain of parent-child relationship.

The final form of the scale has 40 items related to 8 different modes of parenting and are spread in a meaningful manner except the one related to the marital conflict vs marital adjustment. These items were placed in a block at number 36-40. The numbered items 4, 11, 18, 25 & 32 are stated negatively to check the habitual disposition of responses.

The scale has very high internal consistency. The reliability was done with the help of test-re test method and it was found to be 0.72 for the total
Perceived Parenting Style measure, while the reliability coefficients of the 8 modes of parenting are:

- 0.79 for (A) Rejection Vs Acceptance.
- 0.54 for (B) Carelessness Vs Protection
- 0.64 for (C) Neglect Vs Indulgence
- 0.59 for (D) Utopian expectation Vs Realism
- 0.67 for (E) lenient standard Vs Moralist
- 0.56 for (F) Freedom Vs Discipline.
- 0.74 for (G) Faulty role expectation Vs Realistic role expectation.
- 0.69 for (H) Marital conflict Vs Marital adjustment.

The validity coefficient was found to be as follows:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.45</td>
</tr>
<tr>
<td>B</td>
<td>0.39</td>
</tr>
<tr>
<td>C</td>
<td>0.42</td>
</tr>
<tr>
<td>D</td>
<td>0.62</td>
</tr>
<tr>
<td>E</td>
<td>0.38</td>
</tr>
<tr>
<td>F</td>
<td>0.52</td>
</tr>
<tr>
<td>G</td>
<td>0.57</td>
</tr>
<tr>
<td>H</td>
<td>0.36</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0.75</td>
</tr>
</tbody>
</table>

Administration:

The scale can be administered either individually or to a large group extent at a time. During the first 35 minutes they are asked to respond at a stretch with 5 minutes break between the recording of responses for mothers and fathers separately. The items 36-40 are to be responded separately as they cater to the relations between both the parents only at once.
Scoring and Interpretation:

The scoring is a bit quantitative type and is based on a 5 point scale as suggested by Likert. The scoring and determination of mothering, fathering and parenting is a complex one, with reminders as follows: Each item is to be scored as 1, 2, 3, 4, & 5, while items no. 4, 11, 18, 25 & 32 will be in reverse order i.e. 5, 4, 3, 2, 1.

The raw scores are then to be added separately for mothering and fathering to obtain the total raw score for mothering and fathering. The obtain raw scores for different modes of parenting are to be transformed into “Z” scores (table provided in the manual). The total ‘Z’ scores for each mode of parenting for both the parents is to be considered as parenting score for that particular parenting and the grand total of each is the total parenting score.

The ‘Z’ score for the marital conflict Vs marital adjustment mode of parenting is to be added only once with other ‘z’ scores obtained for different modes of parenting to determine the scores for mothering and fathering.

Each mode of parenting can be studied separately except one of marital conflict Vs marital adjustment in terms of both the roles of mothering and fathering.

Interpretation:

The interpretation is done with the help of ‘sten scores’ (Catell, Eber & Tatsuoka, 1970). It is a linear transformation of the familiar ‘z’ scales and obtained by multiplying the ‘Z’ score by 2, The SD and adding to 5.5 to bring the lowest score. Thus, the range from 1-10 is achieved with mean 5.5. (Porter & Cattell, 1972).
Reasons for Selecting the Scale:

a) The scale would measure perceived parenting from the adolescents point of view in the Indian cultural setting.

b) It intends to measure the perceptions of the individual, as to how one is brought up by his/her parents on eight dichotomous modes of parenting, across two distinct roles of parenting (fathering and mothering). Parenting as a whole can be measured separately.

c) Can be administered widely on large samples.

d) The test can be administered or applicable to the children who are 10 years and above.

3.3.5. Test Anxiety Inventory (TAI)

Description of the test:

Speilberger (1978) developed this self-reporting psychometric scale, (TAI) to measure individual differences in test anxiety as a situation-specific personality trait. In addition to measuring individual differences in anxiety proneness in test situations, the TAI subscale assesses worry and emotionality as major components of test anxiety.

Persons high in test anxiety tend to perceive evaluative situations as personally threatening; they are often tensed, apprehensive, nervous and emotionally aroused in test-situations. Moreover the negative self-centered worry cognition’s which they experience distract their attention and interfere with concentration with during examinations. Research indicates that these worry reactions contribute to the performance decrements of test-anxious students on cognitive – intellectual tasks. (Liebert & Morris, 1967).
The TAI test form consists of 20 items in one page and includes directions and space for recording responses. Although it has been developed to measure test anxiety in high school and college students, the TAI has also been used successfully with junior high school students.

The inventory and its subscales is internally very consistent, and the alphas are as high as 0.92 or higher (both females and males) for the total scale. And the median alphas for TAI/W is 0.88 and TAI/E is 0.90 depicting satisfactory internal consistency. The scale has both concurrent and discriminative validity. The correlation for TAI and other scales in TA like TAS, the WEQ, STAI A-Trait and A-STATE scales are very higher for both the sexes.

**Administration:**

This is a self-administering test that may be given individually or in groups. Although there are no time limits, they normally complete within 10 minutes. While administering the test, the tester has to avoid the term anxiety and should refer TAI as test attitude Inventory. The instructions of the Inventory should be read out to the subjects, any questions that arise during the testing session should be responded supportively and be non-committal. At the same time, they should be requested to respond to all the items.

**Scoring and Interpretation:**

The subjects are scored based on a four-point scale to report how frequently they experience specific symptoms of anxiety in test situations. The scores are like 1,2,3,4 for items 2-20. While for item no. 1 it is 4,3,2,1. The minimum score is 20 and the maximum score is 80.

The items on TAI/W subscale are 3,4,5,6,7,14,17 & 20. While the items on TAI/E subscale are 2,8,9,10,11,15,16 and 18. If a subject omits one item, prorate score for each of the subscale may be calculated according to the
directions in the manual, but if the items are omitted then more than 1 in either subscale, the validity of the inventory is questionable.

Since it is a western test the interpretation of the test were done with the help of a local norm derived from the sample which is as follows: The local norm is as follows:

<table>
<thead>
<tr>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.84</td>
<td>11.9</td>
</tr>
</tbody>
</table>

**INTERPRETATION**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High Test Anxiety</td>
<td>54 and above</td>
</tr>
<tr>
<td>Medium Test Anxiety</td>
<td>31-54</td>
</tr>
<tr>
<td>Low Test Anxiety</td>
<td>30 and below</td>
</tr>
</tbody>
</table>

**Reasons for Selecting the Scale:**

a) Most widely used test at present.
b) Suitable for the included age range.
c) Can measure test anxiety before, during and after a testing situation.
e) The inventory is short and simple in language and is less time consuming. The scoring technique is simple.

3.3.6. Academic Overload Questionnaire (AOQ)

**Development of the test:**

Mitra and Sengupta (2005) developed the academic overload questionnaire in order to measure the academic burden which is beyond the
individual's means to satisfy. Thus feeling of burden surfaces due to various other curricular and co-curricular activities, school homework coupled with regular class tests. Due to the deadlines of each of these activities that they have to comply with, their schedule is so tight that they get no leisure time to do something of their choice, for e.g. read story book, watch television or even just do nothing.

The questionnaire has 33 items and tests academic overload of adolescents within the age 14-18 years of both the sexes. It has five dimensions measuring the overload due to personal, familial, teacher, peer group and societal aspects.

Development of AOQ:

The following steps were undertaken for developing the academic overload questionnaire. The dimensions of academic overload that have been identified through survey of literature and informal interactions with a number of adolescent children, parents and teachers are as follows:-

I PERSONAL ASPECTS
Inadequate Leisure hours. (A)
Overlapping of a number of activities (B)
Insufficient time for homework (C)
Desire to be the best (D)
Continuous feeling of helplessness (E)
Feeling of being exhausted and stressed (F).

II FAMILIAL ASPECTS
Parental pressure involving performance (A)
Parental reactions in being unsuccessful. (B)
Lack of Family support. (C)
III ASPECTS CONCERNING TEACHERS
High expectation of the teachers. (A)
Teachers reaction on being unsuccessful (B)

IV ASPECTS CONCERNING PEERS
High expectation from friends (A)
Competition (B)

V SOCIETAL ASPECTS
Attitude of the society (A)
Expectation from the people around. (B).

From each sub-dimension, four statements (items) have been developed through informal interactions with a number of school children, parents and teachers. The initial draft consisted of 62 items, which was administered to a small group of children consisting of 10 boys and girls between the age range of 14-18 years. This helped to identify the ambiguities in language and instructions, following which some items were revised and modified. Any difficulty faced by the students regarding the item was noted, following which the test was modified.

The questionnaire was then administered on a group of 100 students between the age group of 14-18 years and their responses were scored. The same group was re-tested within a span of 21 days. While scoring the questionnaire it was found that some students who were present on the test day were not present on the re-test day and vice-versa. Again, there were some that did not answer all the items. Because of which, although the test was administered on 100 students, the responses of only 85 students could be considered. The remaining were eliminated.
The test-re-test reliability of the questionnaire was found out of 85 children and represented on the accompanying table.

**Table no: 2**

<table>
<thead>
<tr>
<th>Interval between test-re-test</th>
<th>No. Of Participants</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 days</td>
<td>100</td>
<td>0.747</td>
</tr>
</tbody>
</table>

The validity of the questionnaire found out by finding the inter-item consistency and is represented in the following table.

**Table no: 3**

**Inter – item consistency of the AOQ**

<table>
<thead>
<tr>
<th></th>
<th>I Personal</th>
<th>II Familial</th>
<th>III Teachers</th>
<th>IV Peers</th>
<th>V Society</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>r</td>
<td>0.487</td>
<td>0.530</td>
<td>0.551</td>
<td>0.729</td>
<td>0.510</td>
</tr>
<tr>
<td></td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>

** ** Correlation significant at the 0.01 level.
* Correlation significant at the 0.05 level.

At least two items for each sub-dimension with the highest inter-item consistency value were selected for the final form of the test from amongst the original four items. The number items in the final questionnaire was down to 33. The test was then administered to 659 adolescent boys and girls in the age range of 14-18 years, from which the following norm was derived.

Mean = 100.46  Standard Deviation = 17.13
Administration:
The administration of the test is very simple. It can be administered individually or in groups. There is no time limit, the participants normally took 15 minutes to finish.

Scoring and Interpretation:
The items are scored on the basis of choice of any one of the five alternatives provided with the test. Each item is to be scored as 1,2,3,4 & 5. The norm of the questionnaire is as follows:

<table>
<thead>
<tr>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.46</td>
<td>17.13</td>
</tr>
</tbody>
</table>

**INTERPRETATION**

<table>
<thead>
<tr>
<th>Academic Overload</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Academic Overload</td>
<td>Over 118</td>
</tr>
<tr>
<td>Medium Academic Overload</td>
<td>83-118</td>
</tr>
<tr>
<td>Low Academic Overload</td>
<td>Below 83</td>
</tr>
</tbody>
</table>

**FIGURE: 4**

HISTOGRAM AND OGIVE OF THE TOTAL SAMPLE OF ACADEMIC OVERLOAD SCORES
3.4 PROCEDURE

The entire set of instruments were administered in groups. Institutions were made use of as it gave access to a large number of the type of subjects that the researcher was looking for. A number of schools were approached keeping in mind the medium of instruction and the boundary of the geographical location under study.

Schools were selected according to the following criteria:

1) The schools that allowed the researcher to collect data, were included for the study.

2) Those that were available on a first come first serve basis, as well as those that had a heterogeneous constitution were included in the study.

3) and those that ranked in the board exams or so called good schools were considered for the study.

The principal or the vice-principal was approached and the purpose and relevance of the study was explained. After getting permission from the school authorities, the students were approached. Rapport was first established with them, and it was ensured that all the response would be kept confidential and was in no way going to affect their school achievement. The general outline of instruction was then explained to them. They were requested to be frank and honest in responding to the items as far as possible and to answer independently without consulting anybody.

All the five questionnaires were given one after the other. The entire exercise was completed in two days with 90 minutes each day of which 10 minutes were devoted for explanation. At the end of the testing session the pupils, the teachers and head of the institutions were thanked for their active
cooperation for the fulfillment of the purpose. After completion of the entire data collection the responses were then scrutinized and scored accordingly to the norm specified in the respective manual. While doing so it was found that among 400 data collected, only 302 of them could be included, as 98 data had to be eliminated. Hence, the sample size was finally reduced to 302 in number. The information schedule was then coded and a profile of the sample was drawn from it. Then the statistical treatment of the data was attempted. Hence the sample size was finally reduced to 302 in number, for the sake of keeping homogeneity with respect to intelligence, family constitution and socio-economic status. In order to achieve this the information schedule was taken help of.

Apart from qualitative analysis of the data, the following types of statistical techniques were used. The statistical tools were selected in accordance with the objective of the study.

**Descriptive statistics** – Means and standard deviations of all the variables were calculated from the total sample across gender and grades.

**Correlation and Regression** – Pearson's Product Moment Correlation Coefficients were calculated to determine the association between the dependant and the independent variables, with the help of which the research hypotheses were tested.

**Significance of difference between the means** – This method was used in order to find out the statistically significant difference in the four variables across gender and grades of the adolescents considered for the sample.