Chapter III
RESEARCH METHODOLOGY

- Introduction
- Need for the study
- Statement of the problem
- Aim of the study
- Objectives of the study
- Research design
- Hypotheses
- Universe
- Sampling technique
- Pilot Study
- Variables selected for the study
- Tools of data collection
- Description of the tools
- Pre testing
- Data Collection Process
- Statistical analysis of data
- Operational Definitions
- Rationale for selecting the universe
- Problems encountered by the Researcher
- Limitations of the study
- Schemes of Presentation.
Research Methodology

This chapter deals with the methodology adopted for the study, which includes need for the study, statement of the problem, aim and objectives of the study, research design, pilot study, hypotheses, universe and sampling technique, tools of data collection, pre-testing, data collection process, statistical analysis of the data, variables selected for the study, operational definitions, problems encountered by the researcher, Scheme of presentation and limitations of the study.

Need for the study

Women constitute 48 per cent of the Indian population. Education is the milestone for women empowerment because it enables them to respond to opportunities, to challenge their traditional roles and to change their lives. Similar ideas were supported in International Conference 1994, it was said that Education is one of the most important means of empowering women with the knowledge, skills and self confidence necessary to participate fully in the development process. Educating women benefits the whole society. Hence higher the education widen will be the opportunity it opens to us.

Study beyond the level of secondary education is higher education. Importance of women’s education was recognized as the most potent agent for improving their status in society. There are so many measures taken by both government and nongovernmental organisations for the basic education of women. However, backwardness is still there at the higher education level. During the last five decades the participation of girls has increased in higher education from 10.0 per cent to 36.89 per cent, so more than half of the female population are not getting higher education( Source: selected educational statistics 2000-2001,P.14). However, this change is confined to urban areas only and among the educated classes, girls belonging to the urban slum and rural areas continue to lag behind.

In general the various studies which attempt to explain the intervening elements in education are parents (family factors), teachers (academic factors) and students (personal factors). Among personal variables most studied are motivation and self
concept. Another group of factors are the social/family factors. Among family factors of greatest influence are social class variables and the educational and family environment. With regard to social class, relevant research tells us that one’s results and expectations for the future are better the higher one belongs on the social ladder. Other factors like availability of education services like institutions, hostel facilities and, exposure and fear of co-education colleges, social practices like child marriage and sex stereotyping, traditional practice of gender bias also influence women’s education.

Therefore the researcher tried to portray the social and psychological attributes of rural girls in aspiring for higher education which focuses on demographic condition, socio-economic status, Attitude towards education, Achievement motivation, Academic achievement motivation, Self-concept, Study involvement along with the higher education interest of twelfth standard students in rural areas.

**Statement of the problem:**

Importance of women’s education was recognized as the most potent agent for improving their status in society. There are various factors responsible for women’s higher education interest and aspirations.

For the present study, the following variables have been chosen.

1. Socio-economic status
2. Self concept
3. Study involvement
4. Achievement motivation
5. Academic achievement motivation
6. Attitude towards education

Women in rural areas find difficult to get complete school education, for them attainment of higher education is even more difficult. The socio-economic status plays a vital role in determining the need fulfilment of a person, if the socio-economic status is low and the rural poor working for hand to mouth and primary needs (food, cloths, shelter) cannot get access or even think about education especially higher education. The poor socio-economic status influences the self concept. The material inadequacy can influence the psychological attributes hence the socio economic status impacts on
one’s self-concept. The self concept is not strong enough then it affects motivation to achieve some thing. Motivation is considered to be the element that indicates the subject’s involvement in learning. When a student is strongly motivated all his personality are directed toward the achievement of a specific goal, thus bringing to bear all his resources. Academic achievement motivation is very important for academic upward mobility which is based on the involvement of the students in studies. The attitude towards education must be important to shine and to acquire excellence in education. Low attitude will affect the interest, involvement and motivation of a person. All these factors will definitely influence the higher education aspiration especially among rural girls with lack of proper sources of motivation and exposure.

Therefore the researcher attempted to know the higher education aspiration among rural girls and to what extent the above mentioned social and psychological attributes influence their higher education interest/ desire.

**Aim of the study**

To study the social and psychological attributes influencing rural girls in aspiring for higher education.

**Objectives of the study**

- To describe the demographic characteristics and socio economic status of the respondents.
- To find out the level of achievement motivation among the respondents.
- To assess the attitude of the respondents towards education.
- To measure the perceived level of self- concept among the respondents.
- To identify the level of study involvement among the respondents.
- To find out the level of academic achievement motivation of the respondent.
- To study the influence of the key variables on the respondent’s higher education aspiration.
- To assess what extent the different variables are interrelated and influence each other.
- To suggest appropriate measures to be taken to enhance women’s education.
Research Design

The researcher had adopted descriptive research design for the present study in order to describe the social and psychological attributes influencing higher education aspiration. This study attempts to portray the various demographic characteristics of the respondents. It also tried to find out the interaction and influence of selected attributes namely socio-economic status, self-concept, study involvement, attitude towards education, academic achievement motivation and achievement motivation on the higher education aspiration of the respondents.

Hypotheses
1. There is a significant difference between the respondent’s higher education aspiration with regard to their Socio-economic status.
2. There is a significant difference between the respondent’s higher education aspiration with regard to their Academic Achievement Motivation.
3. Higher the level of self concept higher will be the Achievement Motivation.
4. As the level of study involvement increases Academic Achievement Motivation also increases.
5. There is a significant association between the attitude towards education and academic performance of the respondents.
6. There is a significant association between the study involvement and academic performance of the respondents.
7. There is a significant association between the presence of graduates in the respondent’s family with regard to their higher education aspiration.
8. As Achievement Motivation increases Academic Achievement Motivation also increases.
9. There is a significant relationship between the respondent's attitude towards education and Academic Achievement Motivation.

Universe

The universe of the study comprises of all girl students, those who are studying twelfth standard in government higher secondary schools in the academic year June 2009-April 2010 in Pennagaram block of Dharmapuri district. There are totally seven government higher secondary schools located in Kullanur, Perumbalai, Eriyur, Neruppur, Papparapatti, Pennagaram and Chellamudi, offering education to girls in that
The girl students studying school final year in those schools were classified in to four major groups namely Mathematics, Science, Commerce and Vocational. The total strength of the students in the above mentioned groups as per the school register was 926 which formed the universe of the study.

**Sampling technique**

The population of the study is being a finite one. The lists of the students were obtained from the respective schools which served as the sampling frame. The probability sampling method was applied so that every item of the universe had an equal chance of being included in the sampling population. After consultation with the research supervisor, the researcher used stratified sampling primarily to ensure that different groups of the population are adequately represented in the sample, so as to increase the accuracy. The sampling units of the study comprised of mathematics, science, commerce and vocational group. Sample from the four different strata each comprising 40 per cent was selected using **stratified proportionate random sampling**, the sample drawn from each stratum being proportional to the population size of the stratum. The total sample size for the study comprised of 370 respondents in all the four major groups.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Strata</th>
<th>Population</th>
<th>Sample (40%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maths (Computer Science &amp; Biology)</td>
<td>347</td>
<td>139</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>256</td>
<td>102</td>
</tr>
<tr>
<td>3</td>
<td>Commerce (Computer Science &amp; History)</td>
<td>213</td>
<td>85</td>
</tr>
<tr>
<td>4</td>
<td>Vocational (Tailoring, Agriculture, Nursing &amp; Accounts /Auditing)</td>
<td>110</td>
<td>44</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>926</strong></td>
<td><strong>370</strong></td>
</tr>
</tbody>
</table>

**Pilot Study**

The researcher met the Chief Educational Officer of Dharmapuri district and had discussion with him and the researcher came to know that Pennagaram is the lowest rural literacy rate block in Dharmapuri district and as per the guidance of Chief
Educational Officer of Dharmapuri the researcher conducted study in government Higher Secondary Schools of Pennagaram block. Then the researcher visited the schools and met the Headmasters and teachers and explained them about the purpose and nature of the study. This helped the investigator to establish rapport and get permission for dates of data collection from the Headmasters and made it possible to collect the required data in time.

**Variables selected for the study**

**Independent variables**

- Age
- Religion
- community
- Type of family
- Nature of family
- Family size
- Socio economic status
- Course of study
- Order of birth
- Mother’s occupation
- Parent’s educational qualification
- Parenthood
- Number of siblings and their education
- Parents and teacher’s support towards education
- Higher education exposure
- Academic performance
- Higher education aspiration

**Dependent variables**

- Self-concept
- Study involvement
- Attitude towards Education
- Academic achievement motivation
- Achievement motivation
Tools of data collection

The researcher used questionnaire as the tool for collecting the data for the present study, since the respondent’s medium of instruction is in Tamil, the entire questionnaire was translated into Tamil. Before finalizing the tools of data collection to be used, the researcher had discussion and clarification with Education technology experts and education officers and decided the relevant questions and areas to be covered in the study. Apart from this, existing literature survey also helped the researcher to finalize the appropriate tools of data collection.

Description of the tools

The first part of the questionnaire included the questions pertaining to personal data; socio demographic characteristics with their educational background, parents and teacher’s support, family environment, higher education interest along with their academic performance and the social problems in their society. Added to this the following tools were also used for the present study.

Socio-Economic Status Scale

This scale was established by Meenakshi (1985). The socio economic status scale portrays the individual’s socio-economic status in a society which he is surrounded by and of which he is a member, which he affects and is affected by. The questionnaire which has been designed for this purpose is a point-scale; points ranging between 3 and 10 depending upon the component of the variable under assessment.

The scale is comprehensive in nature and does not discriminate between rural/urban of male/female subjects. It has been standardized on a sample of 1127 rural/urban students of classes VIII through XII.

Reliability: On 153 boys of class XI in a Senior Secondary School, the Test-retest reliability has been found to be $r = .82$, with a time interval of 10 days.

Validity: Two samples of $N_1 = 37$ and $N_2 = 42$ of students of a reputed public school and an ordinary Government school respectively were taken to have an idea of the validity of the scale. The average scores of these two groups of differentiating ‘t’ standing at 9.29, significant at .01.
Administration and Scoring

The SESS is given to students in groups of 15 to 20 and the purpose of the instrument is explained. They are asked to put a tick mark (✓) against the statements which fit them and a cross mark (x) which do not fit them. For each tick mark (✓) weightage is shown below part wise.

Part- I (Education)

Count the ticks (✓) against each serial number and record the total in the last column. Suppose father and mother are both Ph.D’s and one sister is also Ph.D. against serial No.1 there will be 3 ticks. Multiply 3 by 10 to obtain a score of 30. The total of ticks against serial No. 2 will be multiplied by 9 and against serial No. 3 by 8 and so on. The range of scores will be from 1 to 50.

Part – II (profession)

The scoring method as used in Part-II is to be repeated. The maximum score will be 50 and minimum will be one.

Part- III (Monthly income)

Award a score of 10 for the tick (✓) against (a) nine for the tick against (b) and so on. The maximum score will be 10 and minimum will be one.

Part- IV (Wealth)

There are three columns in this section. Marks for each tick are given below:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>10</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>9</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>3.</td>
<td>8</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>4.</td>
<td>7</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5.</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>5</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>4</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>
The maximum score in this section will be 30. The minimum may be 03.

**Part-V (Property)**

Here the questions are on point scales.

Q.1  
(a) 4 marks  
(b) 3 marks  
(c) 2 marks  
(d) 1 mark  
(e) zero

Q.2  
(a) 5 marks  
(b) 3 marks  
(c) 1 mark

Q.3  
(a) 6 marks  
(b) 5 marks  
(c) 4 marks  
(d) 3 marks  
(e) 2 marks  
(f) 1mark

Q.4  
(a) 2 marks  
(b) 1 mark

Q.5  
(a) 5 marks  
(b) 4 marks  
(c) 3 marks  
(d) 2 marks  
(e) 1 mark  
(f) zero

Maximum score will be 22 and minimum will be 03.

**Part- VI**

Surrounding or Locality

This is again a point scale.

Q.1  
(a) 5 marks  
(b) 3 marks  
(c) 1 mark

Q.2  
(a) 6 marks  
(b) 5 marks  
(c) 4 marks  
(d) 3 marks  
(e) 2 marks  
(f) 1mark

Q.3  
For each employee i.e. servant/cook/Mali etc. give one mark.

Q.4 to 21  
In this section there are 18 items.

For (a) give a score of 3, for (b) a score of 2, for (c) a score of one and for (d) a score of zero.

In this part maximum score will be 54 and minimum will be 0.
Part-VIII (Social Status)

Q.1  (a) 5 marks  (b) 4 marks  (c) 3 marks  (d) 2 marks  (e) 1 mark
Q.2  a) 5 marks  (b) 4 marks  (c) 3 marks  (d) 2 marks  (e) 1 mark  
Q.3  a) 5 marks  (b) 4 marks  (c) 3 marks  (d) 2 marks  (e) 1 mark
Q.4  a) 5 marks  (b) 4 marks  (c) 3 marks  (d) 2 marks  (e) 1 mark
Q.5  a) 5 marks  (b) 4 marks  (c) 3 marks  (d) 2 marks  (e) 1 mark

The maximum score will be 25 and the minimum will be 05.

Categorization

Category of SES Status

<table>
<thead>
<tr>
<th>Category of SES Status</th>
<th>Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>105 or above</td>
</tr>
<tr>
<td>Above average</td>
<td>Between 90 to 104</td>
</tr>
<tr>
<td>Average</td>
<td>Between 65 and 89</td>
</tr>
<tr>
<td>Below average</td>
<td>Between 50 and 64</td>
</tr>
<tr>
<td>Poor</td>
<td>49 or below</td>
</tr>
</tbody>
</table>

These categories are based on a limited data of only 832 respondents.

Self-concept questionnaire

This questionnaire was developed by Dr. Rajkumar Saraswat (1971). The self-concept inventory provides six separate dimensions of self-concept, viz., physical, social, Intellectual, Moral, Educational and Temperamental self-concept. It also gives a total self-concept score.

Self-Concept Dimensions Along with their Item Numbers

<table>
<thead>
<tr>
<th>Self-Concept Dimensions</th>
<th>Code. NO.</th>
<th>Item Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>A</td>
<td>2,3,9,20,22,27,29,31</td>
</tr>
<tr>
<td>Social</td>
<td>B</td>
<td>1,8,21,37,40,43,46,48</td>
</tr>
<tr>
<td>Temperamental</td>
<td>C</td>
<td>4,10,14,16,19,23,24,28</td>
</tr>
<tr>
<td>Educational</td>
<td>D</td>
<td>5,13,15,17,25,26,30,32</td>
</tr>
<tr>
<td>Moral</td>
<td>E</td>
<td>6,34,35,41,42,44,45,47</td>
</tr>
<tr>
<td>Intellectual</td>
<td>F</td>
<td>7,11,12,18,33,36,38,39</td>
</tr>
</tbody>
</table>
The inventory contains 48 items. Each dimension contains eight items. Each item is provided with five alternatives. Responses are obtained on the test booklet itself. There is no time limit but generally 20 minutes have been found sufficient for responding all the items.

**Scoring Method**

The respondent is provided with five alternatives to give his response ranging from most acceptable to least acceptable description of his self-concept. The alternatives or responses are arranged in such a way that the scoring system for all the items will remain the same i.e. 5,4,3,2,1, whether the items are positive or negative. If the respondent put (✓) mark for first alternative the score is 5, for second alternative the score is 4, for third alternative score is 3, for the fourth it is 2 and for the fifth and last alternative score is one. The summated score of all the forty-eight items provide the total self-concept score of an individual. A high score on this inventory indicates a higher self-concept, while a low score shows low self-concept. Transfer the score of each item on the front page against that item. Now add all the scores of eight items given in that column, this will give you score for that particular dimension of self-concept.

**Reliability:** Reliability of the inventory was found by test-retest method, and it was found to be .91 for the total self-concept measure. A reliability coefficient of its various dimensions varies from .67 to .88. The following table shows the test-retest reliability for each dimension.

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Self-Concept Dimension</th>
<th>No. of Items</th>
<th>Reliability coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Physical</td>
<td>8</td>
<td>.77</td>
</tr>
<tr>
<td>B</td>
<td>Social</td>
<td>8</td>
<td>.83</td>
</tr>
<tr>
<td>C</td>
<td>Temperamental</td>
<td>8</td>
<td>.79</td>
</tr>
<tr>
<td>D</td>
<td>Educational</td>
<td>8</td>
<td>.88</td>
</tr>
<tr>
<td>E</td>
<td>Moral</td>
<td>8</td>
<td>.67</td>
</tr>
<tr>
<td>F</td>
<td>Intellectual</td>
<td>8</td>
<td>.79</td>
</tr>
<tr>
<td></td>
<td>Total Self-Concept</td>
<td>48</td>
<td>.91</td>
</tr>
</tbody>
</table>
Validity: Experts opinion was obtained to establish the validity of the inventory. 100 items were given to 25 Psychologists to classify the items to the category to which it belongs. Items of highest agreement and not less than 80% of agreement were selected. Thus the content and construct validity were established.

Interpretation and Classification of Raw Scores for all Dimensions

<table>
<thead>
<tr>
<th>Self-Concept Dimension Score</th>
<th>Interpretation (Category)</th>
</tr>
</thead>
<tbody>
<tr>
<td>33 to 40</td>
<td>High self-Concept</td>
</tr>
<tr>
<td>25 to 32</td>
<td>Above Average Self-Concept</td>
</tr>
<tr>
<td>17 to 24</td>
<td>Average Self-Concept</td>
</tr>
<tr>
<td>9 to 16</td>
<td>Below Average Self-Concept</td>
</tr>
<tr>
<td>Up to 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 to 240</td>
<td>High self-Concept</td>
</tr>
<tr>
<td>145 to 192</td>
<td>Above Average Self-Concept</td>
</tr>
<tr>
<td>97 to 144</td>
<td>Average Self-Concept</td>
</tr>
<tr>
<td>49 to 96</td>
<td>Below Average Self-Concept</td>
</tr>
<tr>
<td>1 to 48</td>
<td>Low Self-Concept</td>
</tr>
</tbody>
</table>

Study involvement inventory

This inventory was developed by Asha Bhatnagar(1971). The Study Involvement Inventory has 40 items in a Likert type format with three point response scale namely ‘Yes’, ‘Undecided’ and ‘No’. It also has two filler items.

Reliability: The test-retest reliability of the inventory is .87(N=150) with a time interval of one month. The split- half reliability applying the Spearman- Brown formula has been found to be .67(N=150) with an index of reliability of .70.
Validity: Inventory has a high content and construct validity as expressed by 33 experts of Psychology.

Scoring

All statements are scored as 2, 1, and 0. However, the direction of the scoring varies between positively worded statements and negatively worded statements. Item Numbers, 13 and 37 are scored in a reversed order.

The total score of the respondent is obtained by adding the scores on all the individual statements in the Study Involvement Inventory. The possible maximum score is 80.

Interpretation and Norms

The inventory has been standardized on a sample of 600 students (boys and girls of class X of Delhi Schools). The percentile norms have been prepared to interpret student involvement in studies. The percentile distribution shows that scores on the inventory range from 16 to 76. The scores can be interpreted in terms of norms given in the Table below.

Norms for the classification of involvement in studies

<table>
<thead>
<tr>
<th>Category</th>
<th>Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Involvement</td>
<td>63-80</td>
</tr>
<tr>
<td>Average Involvement</td>
<td>53-62</td>
</tr>
<tr>
<td>Low Involvement</td>
<td>52-16</td>
</tr>
</tbody>
</table>

Author, however, favours development of local norms for more accurate interpretation.

Attitude towards education

It was developed by S.L. Chopra (1971). The reliability of the scale was calculated by “Split-half” method. The statements were ranked in order of scale values and then divided into two groups. The odd numbered statements were put in one group and the even numbered in the other. The r, corrected by the Spearman-Brown formula was .89 and this also suggests that the scale is quite reliable.
Scoring

Each of the respondents is given a copy of the Scale (without the scale values indicated thereon) and he or she is asked to put a (√) in front of the statements with which he or she fully agrees and a cross (x) in front of the statements with which he or she is not in full agreement. The test provided a direct numerical score indicating the feeling of the individuals towards educators. The scores range from 0-22. Median value is used to categorize the attitude of the respondents towards education. The interpretation as below,

<table>
<thead>
<tr>
<th>High Attitude</th>
<th>18 and above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Attitude</td>
<td>below 18</td>
</tr>
</tbody>
</table>

Scoring Key

Award one mark if fully agree has been ticked in case of items no.1,4,5,8,10,12,13,15,16,20,21 and if fully disagree has been ticked in case of items at Sr. No. 2,3,6,7,9,11,14,17,18,19,22.

Deo-Mohan Achievement motivation scale

It was developed by Prof. Pratibha Deo and Asha Mohan (1971).

This scale has 50 items and out of 50 items, 13 are negative and 37 are positive items.

Reliability of the Scale: Test-retest method was applied to obtain the reliability coefficient of the scale. Taking different sets of sample; the administration of the scale was repeated on several occasions. The results are given below:

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>Interval</th>
<th>R</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed group</td>
<td>51</td>
<td>4 weeks</td>
<td>.69</td>
<td>.01</td>
</tr>
<tr>
<td>Males</td>
<td>33</td>
<td>5-6 weeks</td>
<td>.67</td>
<td>.01</td>
</tr>
<tr>
<td>Females</td>
<td>50</td>
<td>5-6 weeks</td>
<td>.78</td>
<td>.01</td>
</tr>
</tbody>
</table>
These coefficients of reliability are sufficiently high and the scale can be considered as reliable for use. Earlier, Entwistle (1968) for 24 items inventory obtained test-retest reliability coefficient of .83 with an interval of 2 ½ months. Lynn (1969) found that his achievement motivation questionnaire correlated to the extent of .34 with the factor of Cattell’s 16 PF, as .16 with super age and .21 with surgency. Bending (1964) established the reliability coefficient of .82 for scale / and .73 for scale. Smith (1973) computed a split-half reliability coefficient of .56 for his 10 items quick measure of achievement motivation. Taking into considered these results, the present scale reliability coefficients by test-retest method for the total group, as well as for the separate male and female groups, are very satisfactory and the scale can be taken as quite reliable for use.

Validity of the Scale: As far as the validity of the scale is concerned, in the first instance the item validity established by the high-low discrimination method was accepted as the validity of the whole measure. Besides, this scale was also used for validating the projective test of Achievement Motivation. The coefficient of correlation between the scale and the projective test was observed to be .54 which speaks for the validity of the scale also, the validity being of the concurrent nature. Finally, the scale scores were also correlated with the scores obtained by administering the Aberdeen Academic Motivation Inventory Entwistle (1968) yielding a coefficient of correlation as .75 for a mixed sample of .93. This correlation is high enough to establish the validity of the scale. Regarding the r of .54 between the scale and the projective test, McClelland (1958) explains that self-descriptive and projective measures are usually not correlating high with each other. Even Carney (1966) observed that questionnaire measures correlated poorly with McClelland’s projective measures. These explanations support the results of present scale of achievement motivation to be sufficiently valid for use for measuring achievement motivation.

Scoring

Two stencil keys are to be used for scoring, one for positive items and one for negative items. A positive item carries the weights of 4,3,2,1 and 0 for the categories of Always, Frequently, Sometimes, Rarely and Never respectively. The negative item is to be scored 0,1,2,3 and 4 for the same categories respectively that are given above. Separate keys for positive and negative items are provided. The total score is the
summation of all the positive and negative items scores. The minimum score obtained can be 0 (zero) and the maximum can be 200, other scores ranging in between these limits.

**SCORING STENCIL**

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>26</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>28</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>29</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>30</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>31</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>32</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>33</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>34</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>35</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>36</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>37</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>38</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>39</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>40</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>41</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>42</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>43</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>18</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>44</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>19</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>45</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>46</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>47</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>48</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>23</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>49</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>50</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>25</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The scores can theoretically range from 0 to 200. Ordinarily, an obtained score will be in between the two limits. The median value was used to interrupt the data.
Category | Score range
---|---
High Achievement motivation | 159 and above
Low Achievement motivation | below 158

**Academic Achievement Motivation Test**
It was established by T.R. Sharma (1984). Three methods were tried to determine the reliability of the scale. The reliability of the scale is,

- (a) Split-half 0.697
- (b) Rational Equivalence 0.7506
- (c) Test- Retest 0.807

**Validity:** Three types of validities – content, criterion and construct, were established. The items of the test were selected on the basis of pooled judgement of nearly 40 judges (experts) in the field of testing. This sufficed for content validity. For criteria validity, on the basis of consideration judgements of class teachers and twenty students. Significant differences were found in the mean test-scores of the two groups. Data are given below:

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Score</th>
<th>S. D.</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>High motivated</td>
<td>10</td>
<td>33.1</td>
<td>2.60</td>
<td>6.30</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Low motivated</td>
<td>10</td>
<td>20.7</td>
<td>4.18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

And as mentioned previously each item was correlated with total test and items showing not significant r were deleted from the test. This establishes the construct validity of the test.

The values of Sk and Ku are given below:

\[
Sk = -0.4189 \\
Ku = 0.3612
\]

This shows that scores are nearly normally distributed.
Use

The test provides a direct numerical score indicating how much an individual a boy or girl is motivated in the field of academic achievement. The scores range from 0-38.

Ready-reckoner given below serves as a quick guide.

(a) High motivated Girls 34 or above
(b) Average motivated Girls between 27 and 33
(c) Low motivated Girls 26 or below

Scoring Key

Award one mark if box A has been ticked in case of items No. 1, 3, 4, 6, 8, 10, 12, 13, 15, 16, 17, 18, 21, 25, 27, 31, 35, 36 and 37 and if box B has been ticked in case of items at Sr. No. 5, 7, 9, 11, 14, 19, 20, 22, 23, 24, 26, 28, 29, 30, 32, 33, 34, 38.

Pre testing

Prior to the finalization of the questionnaire and standardized tools before data collection, it was pre tested with 10 students in the selected universe in order to ascertain its suitability and adaptability. It provided the researcher with an idea about the drawbacks in the questionnaire. Accordingly a few questions were deleted from the Socio-demographic profile, further the responses were carefully scrutinized and analyzed since standardized tools had been used and found that no modification was required.

Data Collection Process

The Researcher collected the data from all the 7 Government Higher secondary schools in Pennagaram block namely Government Higher Secondary Schools of Pennagaram, Papparappatti, Chellamudi, Perumbalai, Neruppur, Eriyur and Kullanur. Initially the researcher met the Chief Educational Officer or Dharmapuri district and got permission from him. Then she got permission from the corresponding school Head Masters, with the help of the teachers the researcher assembled the respondents in a hall and distributed the questionnaire and gave detailed orientation to them regarding the content, nature and purpose of the study. She read questions to them and clarified the queries raised by them regarding the statements of the tools. The students were divided
in to groups and each group consisted of 25 respondents and it took 1 ½ hours to collect data from a group likewise the researcher took 3-5 days to collect data in a school. Similar method was followed in all the selected schools. As she could not collect the data on consecutive days due to school examination and holidays, it took one and half months between July 2009 to August 2009 to collect the relevant data.

**Statistical analysis of data**

The data collected were carefully analyzed and processed. Statistical test such as mean, median, Standard deviation, chi-square, Z-test, One way analysis of variance and Karl person’s co-efficient of correlation were applied to interpret the data to draw meaningful inferences. The mean values were used for the quantitative data such as age, family size, number of siblings and so on. Median was used to find out the levels of perception of the subject towards the key variables namely attitude towards education and achievement motivation.

The one way analysis of variance was used to find out the significant difference among the various groups. While ‘Z’ test was used to find out the significant difference between the two mean scores of the two groups. The chi-square test was used to find out the association between two variables. The Karl person’s co-efficient of correlation was used to find out the relationship and the extent of relationship between the variables such as Self concept, Achievement motivation, Academic Achievement motivation, Attitude towards education, study involvement and socio economic status. The same test was also used to find out the relationship between the personal data (Age, family size, number of educated persons, order of birth, number of siblings and income.) and above mentioned variables.

**Operational Definitions**

**Socio-economic status**: Financial and material resources on one hand social recognition, support and freedom on the other hand that determine the status of an individual in a society which he is surrounded by and of which he is a member.

**Education**: Individual’s level of education

**Profession**: Occupation of the individuals.
**Possession**: Total cash or debts indicate total money which an individual possesses or the wealth of the individual.

**Property**: Assets like house, land etc.

**Surrounding locality**: It means the place where an individual resides, schooling, mode of transportation and automobile, electronic and electrical goods he/she possesses.

**Social Status**: It refers to the social recognition of a person in a society which he is surrounded by and of which he is a member.

**Self-concept**: The Self concept is the individual’s way of looking at himself.

**Physical self-concept**: Individual’s view of their body, health, physical appearance and strength.

**Social self-concept**: Individual’s sense of worth in social interactions.

**Temperamental self-concept**: Individual’s view of their prevailing emotional state or predominance of a particular kind of emotional reaction.

**Educational self-concept**: Individual’s view of themselves in relation to school, teachers and extra curricular activities.

**Moral self-concept**: Individual’s estimation of their moral worth, right and wrong activities.

**Intellectual self-concept**: Individual’s awareness of their intelligence and capacity of problem solving and judgements.

**Study Involvement**: The involvement of students in their scholastic pursuits (studies). Involvement is defined as identification with the task to be accomplished.
Attitude towards education: The degree of positive or negative feeling associated with education.

Academic Achievement Motivation: It is the motivation for success in academic competition with others with same standard of excellence set by the individual.

Achievement motivation: As a disposition to strive for success in competition with others with some standard of excellence, set by the individual.

Higher education: The study beyond higher secondary school education. It includes science, professional, technical education offered by colleges, professional, technical and teacher training schools and institutions. After a prescribed period of time, degree, diploma or certificate will be awarded.

Higher education aspiration: A person’s desire, interest and motivation to continue education after completing higher secondary school education.

Rural girls: Girls students those who are studying in XII standard at Government higher secondary schools in Dharmapuri district.

Social Attributes: Social attributes refer to the socio demographic and economic status of the respondents.

Psychological Attributes: Psychological attributes in this study refer to self-concept, Achievement motivation, Academic Achievement motivation, Attitude towards education and study involvement.

Rationale for selecting the universe

The researcher conducted the research in Dharmapuri district, because it is one of the lowest literacy rate districts in Tamil Nadu State. As per 2001 census by the Department of School Education, Dharmapuri district was found the lowest literacy rate district in Tamil Nadu (Source: http://www.tn.gov.in/schooleducation/statistics/table 7 and 8/htm). The total literacy rate of the district was 59.23 per cent, gender wise classification indicates that male literacy rate was 68.82 per cent and
female literacy rate was 49.10 per cent which has -14.25 per cent deviation from the State average literacy rate, especially male literacy rate has -13.5 per cent deviation and female literacy rate has -15.45 deviation. This influenced the researcher to conduct the study in Dharmapuri district. After finalisation of the district under the guidance of the research supervisor, the researcher met the Chief Educational Officer of Dharmapuri district during her pilot study and came to know that among the eight Blocks of Dharmapuri district, Pennagaram is the lowest rural literacy rate Block which has 52.29 per cent total literacy rate with 63.48 per cent of male literacy rate and 40.22 per cent of female literacy rate, which served as a reason for selecting the universe for the study. The study was conducted in Government Higher Secondary schools where most of the rural poor get formal education.

Problems encountered by the Researcher
1. The questionnaire was administered for data collection amongst the Government Higher Secondary School students, whose medium of instruction is in Tamil, hence all the questions had to be translated into Tamil. However, the researcher could prepare an appropriate version in Tamil with the help of literature people.
2. As the questionnaire was a lengthy one, data collection consumed a lot of time.
3. The researcher had to travel a long distance from Tiruchirapalli to reach the respondents in Dharmapuri district. There she had to travel a lot to reach seven schools of Pennagaram Block where there was no frequent bus facility.
4. The XII standard students were involved in the sample, so the researcher found it difficult to assemble them since the schools have given them strict schedule to prepare well for their board exams.

Limitations of the study
This study bears the following limitations
1. This study has been confined only to the Government Higher Secondary School of Pennagaram Block and thus the conclusions drawn from this study cannot be generalized and universalized.
2. Another limitation of this study is that the study was undertaken only with XIIth Standard students.
3. The Social and Psychological attributes of rural girls were restricted only the key factors like Socio economic status, achievement motivation, academic achievement motivation, study involvement, attitude towards education and self concept.

4. This study did not probe in detail in to the sources of motivation, Teachers and Parents support towards the respondent’s higher education aspiration.

**Schemes of Presentation**

The first chapter deals with education, problems in women’s education, higher education, reforms in higher education and women’s participation in higher education, while the second chapter deals with relevant literature surveyed. Research methodology followed for the present study is presented in the third chapter, which is followed by analysis and interpretation of the data, in the Fourth chapter. The fifth chapter, which is the last chapter, portrays the major findings of the study, besides summary and scope for study in future.