CHAPTER 5

SUMMARY OF PROCEDURES, CONCLUSIONS AND SUGGESTIONS

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5.1. STUDY IN RETROSPECT

The prime objective of the present study is to find out the effect and the relationship of achievement in Social Science with each of the select correlates of achievement motivation. The study is also meant to predict the achievement in social science from a set of select correlates of achievement motivation. The study was conducted on a sample of 800 secondary school students studying in Standard IX. Selection of samples was made by using the stratified random sampling method. Standardized tools were administered on 800 secondary schools students from Malappuram and Calicut districts. Appropriate statistical techniques were used for the analysis of the data. The summary of the procedures, conclusions and suggestions are given below.

5.1.1. Statement of the Problem

The problem under investigation is entitled as A STUDY OF THE EFFECT AND THE RELATIONSHIP BETWEEN SOME SELECTED CORRELATES OF ACHIEVEMENT MOTIVATION AND ACHIEVEMENT IN SOCIAL SCIENCE OF SECONDARY SCHOOL STUDENTS.

5.1.2. Variables of the Study

5.1.2.1. Dependent variable

Achievement in Social Science is taken as the dependent variable.
5.1.2.2. Independent variables

Correlates of Achievement motivation was taken as the independent variable. For the present study the following variables were selected as the correlates of Achievement motivation.

1. Achievement Motivation
2. Intelligence
3. Study Habits
4. Self Concept
5. Examination Anxiety
6. Family Income level
7. Family Occupation Level
8. Family Education Level.
9. Socio Economic Status
10. Home Learning Facility
11. Family Acceptance of Education
12. Family Cultural Level
13. Family Environment
14. Socio Familial Adjustment
15. Level of Aspiration.
5.1.3. Objectives

1. To find out the effect of each of the correlates of achievement motivation on achievement in social science.

2. To test whether significant difference exists in the mean scores of achievement motivation variables between 3 pair groups—high and low achievers, high and average achievers and low and average achievers in social science.

3. To find out the extent of relationship between each of the correlates of achievement motivation and achievement in social science for the whole sample and the relevant sub samples.

4. To predict achievement in social science by using select correlates of achievement motivation.

5.1.4. Hypotheses

1. There will be significant effect of each of the correlates of achievement motivation on achievement in social science.

2. There will be significant difference in the mean scores of achievement motivation variables between 3 pair groups high and low achievers, high and average achievers and low and average achievers in social science.

3. There will be significant relationship between each of the correlates of achievement motivation and achievement in social science for the whole sample and the relevant sub-samples.
4. Criterion variable – Achievement in Social Science can be predicted significantly from a set of select correlates of Achievement motivation.

5.1.5. Methodology

5.1.5.1. Sample

The study was conducted on a sample of 800 secondary school students studying in Standard IX. Sample was drawn from ten schools of Calicut and Malappuram districts. The samples were selected by using stratified random sampling technique by considering factors like sex, locale and type of management of schools.

5.1.5.2. Tools used

a. Kerala Scale of Achievement Motivation

b. Kerala University Group Test of Intelligence (verbal)

c. Kerala Self Concept Scale

d. Study Habits Inventory

e. Kerala Examination Anxiety Scale

f. Kerala Socio Familial Adjustment Inventory

g. Kerala Socio-Economic Status Scale

h. Level of Aspiration Measure

j. Achievement test in social science for Standard IX.
5.1.5.3. Statistical Techniques Used

The main statistical techniques used for the analysis and interpretation of the data were

1. One way Analysis of variance
2. Scheffé’ Test of Multiple Comparison
3. Pearson’s Product Moment Coefficient of Correlation ‘r’
   a. Test of significance of the coefficient of correlation ‘r’.
   b. Confidence interval of ‘r’
   c. Verbal interpretation of ‘r’
   d. Shared variance $r^2 \times 100$
4. Stepwise Regression Analysis (ANOVA) Approach
5. Co-efficient of Determination $R^2$.

5.2. MAJOR FINDINGS OF THE STUDY

Major findings of the study disclosed through the different statistical analysis are briefly discussed below

5.2.1. One-way Analysis of Variance

One-way Analysis of variance of the effect of each of the correlates of achievement motivation on Achievement in Social Science revealed that all the select correlates of achievement motivation have significant effect on achievement in social science. That is high, average
and low achievers in social science differ significantly in the mean scores of all the select correlates of Achievement Motivation, viz.

1. Achievement Motivation

2. Intelligence

3. Study habits

4. Self concept

5. Examination anxiety

6. Family income level

7. Family occupation level

8. Family Education level

9. Socio Economic Status

10. Home Learning Facility

11. Family Acceptance of Education

12. Family Cultural Level

13. Socio Familial Index

14. Level of Aspiration

15. Family Environment Index

5.2.2. Scheffe' Test of Multiple Comparison

By the Scheffe’ test of multiple comparison for pairwise group difference it was found that significant difference exists between all the
three groups viz. high and average achievers, high and low achievers and average and low achievers in the mean scores of all the select correlates of achievement motivation viz.

1. Achievement Motivation
2. Intelligence
3. Study habits
4. Self concept
5. Examination anxiety
6. Family income level
7. Family occupation level
8. Family Education level
9. Socio Economic Status
10. Home Learning Facility
11. Family Acceptance of Education
12. Family Cultural Level
13. Socio Familial Index
14. Level of Aspiration
15. Family Environment Index

5.2.3. Estimation of the Coefficient of Correlation

Estimation of the coefficient of correlation (Pearson’s r’s) between achievement in social science and each of the correlates of achievement
motivation revealed that all the fifteen select correlates of achievement motivation have significant correlation at 0.01 level with achievement in social science for the whole sample and the relevant sub samples viz. boys and girls and rural and urban subjects. These variables in the order of the index of correlation are as follows:

- **Achievement Motivation** $r = 0.9668$
- **Examination anxiety** $r = -0.9359$
- **Study habits** $r = 0.9185$
- **Socio Familial Index** $r = 0.9127$
- **Intelligence** $r = 0.9054$
- **Family Acceptance of Education** $r = 0.8768$
- **Self concept** $r = 0.8588$
- **Family Environment Index** $r = 0.8412$
- **Family Cultural Level** $r = 0.8371$
- **Family Education level** $r = 0.7861$
- **Socio Economic Status** $r = 0.7580$
- **Home Learning Facility** $r = 0.7359$
- **Family occupation level** $r = 0.6776$
- **Family income level** $r = 0.5106$
- **Level of Aspiration** $r = 0.4312$
5.2.4 Step-wise Regression Analysis

Step wise regression analysis by ANOVA was carried out for predicting achievement in Social Science from a set of select correlates of achievement motivation for the whole sample (N=800).

When predictor variable (Achievement Motivation) was entered in the Step I analysis, the percentage variance was found to be 93.471. When Examination anxiety was combined with achievement motivation in the second step analysis, the increment in R and percentage variance was found to be 0.01178 and 2.291 respectively. In the third step analysis, the increment in percentage variance was increased by 0.772 when family acceptance of education was entered with achievement motivation and examination anxiety. In the IVth Step analysis self concept was introduced along with the predictor variable achievement motivation, examination anxiety and family acceptance of education the percentage variation was increased by 0.461. In the Vth Step analysis study habits was combined with the predictor variables achievement motivation, examination anxiety, family acceptance of education and self concept. Then the increase in percentage variance was obtained as 0.312. In the VIth Step analysis, family cultural level was introduced along with achievement motivation examination anxiety, family acceptance of education, self concept and study habits an increment in percentage variation of 0.113 was noticed. In the VIIth Step analysis when family educational level was combined with variably achievement motivation
examination anxiety family acceptance of education, self concept, study habits, and family cultural level the percentage variation was increased by 0.062. In the VIII\textsuperscript{th} Step analysis, variable intelligence was introduced combined with Achievement Motivation, Examination Anxiety, Family Acceptance of Education, Self-Concept, Study Habit, Family Cultural Level, Family Educational Level an increase of 0.013 was observed in the percentage variance. The value of increase in R was 0.00006. This suggested that further addition of predictor variable cause a little change in R and percentage variance. So the analysis was stopped.

Details of R, R\textsuperscript{2} x 100, increment in R and the increase in the percentage variation of the correlates of achievement motivation after step 8 are as follows:

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Variable</th>
<th>Percentage variance R\textsuperscript{2} x 100</th>
<th>Increment in the percentage variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Achievement Motivation (X\textsubscript{1})</td>
<td>93.471</td>
<td>2.291</td>
</tr>
<tr>
<td>2.</td>
<td>Examination Anxiety (X\textsubscript{5})</td>
<td>95.762</td>
<td>0.772</td>
</tr>
<tr>
<td>3.</td>
<td>Family Acceptance of Education (X\textsubscript{11})</td>
<td>96.534</td>
<td>0.461</td>
</tr>
<tr>
<td>4.</td>
<td>Self-Concept (X\textsubscript{4})</td>
<td>96.995</td>
<td>0.312</td>
</tr>
<tr>
<td>5.</td>
<td>Study Habits (X\textsubscript{3})</td>
<td>97.307</td>
<td>0.113</td>
</tr>
<tr>
<td>6.</td>
<td>Family Cultural Level (X\textsubscript{12})</td>
<td>97.420</td>
<td>0.062</td>
</tr>
<tr>
<td>7.</td>
<td>Family Educational Level (X\textsubscript{8})</td>
<td>97.482</td>
<td>0.013</td>
</tr>
<tr>
<td>8.</td>
<td>Intelligence (X\textsubscript{2})</td>
<td>97.495</td>
<td></td>
</tr>
</tbody>
</table>
The result shows that out of the fifteen predictor variables only eight variables predict best the criterion variable – achievement in social science. They are given below in the order – found in step wise regression analysis.

The criterion variable - Achievement in social science can be predicted using eight predictor variables from the fifteen select variables which have significantly related with achievement motivation. The predictor variables in the order found in step wise regression analysis are given below.

1. Achievement Motivation (X\textsubscript{1})
2. Examination Anxiety (X\textsubscript{5})
3. Family Acceptance of Education (X\textsubscript{11})
4. Self-Concept (X\textsubscript{4})
5. Study Habits (X\textsubscript{3})
6. Family Cultural Level (X\textsubscript{32})
7. Family Educational Level (X\textsubscript{8})
8. Intelligence (X\textsubscript{2}).

From the regression weights calculated, the regression equation for predicting achievement in social science can be written as:

\[
Y' = 0.379977 X_1 - 0.180259 X_5 + 0.083485 X_{11} + 0.048521 X_4 + 0.031109 X_3 + 0.096891 X_{12} + 0.044028 X_8 + 0.013595X_2 + 15.986086.
\]
This equation for predicting achievement in Social Science shows that for every unit increase in $X_1$, $X_5$, $X_{11}$, $X_4$, $X_3$, $X_{12}$, $X_8$ and $X_2$, $Y$ is increasing by 0.379977, -0.180259, 0.083485, 0.048521, 0.031109 , 0.096891, 0.044028 and 0.013595 respectively. It may be inferred that addition and improvement of each of the above predictor variables will result in betterment in social science achievement.

5.2.5. Relative efficiency of the significant predictors

The coefficient of determination $R^2$ in terms of $\beta$s and r’s was computed to find out the relative efficiency of each of the eight predictor variables.

**TABLE 5.1**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Variable</th>
<th>Beta</th>
<th>$R$</th>
<th>Bxr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Achievement Motivation</td>
<td>0.4012</td>
<td>0.9688</td>
<td>0.3886</td>
</tr>
<tr>
<td>2</td>
<td>Examination Anxiety</td>
<td>0.1733</td>
<td>0.9359</td>
<td>0.1621</td>
</tr>
<tr>
<td>3</td>
<td>Family Acceptance of Education</td>
<td>0.0993</td>
<td>0.8768</td>
<td>0.0870</td>
</tr>
<tr>
<td>4</td>
<td>Self Concept</td>
<td>0.1355</td>
<td>0.8588</td>
<td>0.0870</td>
</tr>
<tr>
<td>5</td>
<td>Study Habits</td>
<td>0.1214</td>
<td>0.9185</td>
<td>0.1115</td>
</tr>
<tr>
<td>6</td>
<td>Family Cultural Level</td>
<td>0.0624</td>
<td>0.8371</td>
<td>0.0522</td>
</tr>
<tr>
<td>7</td>
<td>Family Educational Level</td>
<td>0.0399</td>
<td>0.7861</td>
<td>0.0313</td>
</tr>
<tr>
<td>8</td>
<td>Intelligence</td>
<td>0.0286</td>
<td>0.9054</td>
<td>0.0258</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>0.9455</strong></td>
</tr>
</tbody>
</table>
It was found that $B X_r = 0.9455$. This indicates that $R^2 = 0.9455$. This means that 94.55 per cent of variation in achievement in Social Science is the contribution of the eight variables obtained as best predictors by step wise regression analysis. This also means that the remaining 5.45 per cent is attributable to some other variables.

It was found that out of the eight predictor variables, Achievement Motivation is the best predictor of achievement in Social Science. The predictor variables are listed below according to the extent of predicability of achievement in social science.

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Motivation</td>
<td>0.3886</td>
</tr>
<tr>
<td>Examination Anxiety</td>
<td>0.1621</td>
</tr>
<tr>
<td>Self Concept</td>
<td>0.1163</td>
</tr>
<tr>
<td>Study habit</td>
<td>0.1115</td>
</tr>
<tr>
<td>Family Acceptance of Education</td>
<td>0.0870</td>
</tr>
<tr>
<td>Family Cultural level</td>
<td>0.0522</td>
</tr>
<tr>
<td>Family Education Level</td>
<td>0.0313</td>
</tr>
<tr>
<td>Intelligence</td>
<td>0.0258</td>
</tr>
</tbody>
</table>

The results revealed that about 94.55 per cent of variation in achievement in social science is the contribution of the eight variables obtained as best predictors by step wise regression analysis. This also means that the remaining 5.45 per cent is attributable to some other variables. The predictor variables are listed below according to the extent of predictability of achievement in social science.
5.3. TENABILITY OF THE HYPOTHESES

1. The first hypothesis set for the study is that there will be significant effect of each of the select correlates of achievement motivation on achievement in social science. This hypothesis is substantiated since all the selected correlates of achievement motivation have significant effect on achievement in social science.

2. The second hypothesis states that there will be significant difference in the mean scores of achievement motivation variables between high, average and low achievers in social science. Since there exists significant difference in the mean scores of each of the select dependent variables between three groups (high-low, average, high low average) of achievers in social science. This hypothesis is also fully accepted.

3. The third hypothesis states that there will be significant relation between each of the correlates of achievement motivation and achievement in social science for the whole sample and the relevant sub samples. In this case also the hypothesis is substantiated as the correlation between each of the select correlates of achievement motivation and achievement in social science were very high and significant at 0.01 level for the whole sample and the relevant sub samples.
4. The fourth hypothesis states that achievement in social science can be predicted with the help of a few select correlates of achievement motivation.

Results suggests that out of fifteen correlates of achievement motivation, eight variables when combined are capable of predicting the achievement in social science. Hence the Vth hypothesis is also substantiated.

5.4. EDUCATIONAL IMPLICATION OF THE STUDY

The present study was highlighted certain implications in the field of Education. Implication for the specialist in education, teachers, students, councilors and parents are given below:

1. The study revealed that there is significant effect and relation between each of the independent variable and achievement in social science. Since there is significant effect and relation between need for achievement and scholastic achievement among the secondary school students. Ample opportunities should be given for the students to develop motive to achieve while designing and implementing the curriculum.

2. Each student in the class should be instructed to set a realistic goal (aspiration level) and strive for excellence since over expectation (not matching with the ability) creates personality problems.
3. Since examination anxiety has negative correlation with scholastic achievement, measures should be adopted to reduce the same while framing evaluation tools. Evaluation should be made anxiety free.

4. Description of curricula, instructional methods, teacher behaviour etc will be altered in terms of the findings of the study.

5. Parents should be instructed to understand the importance of achievement motivation in scholastic achievement, through parental guidance programme.

6. Students should be understood the importance of proper study habits and teachers should monitor and channelize them to follow the proper study habits.

7. Stimulating and congenial environment should be created in the home and class room for improving scholastic achievement.

8. Opportunities should be provided for each student to develop self concept which encourage achievement motivation.

9. Introduction of special individualized instructional programmes to develop motive to excel others’ and one’s own earlier achievement and thereby progress of the nation.

5.5. SUGGESTIONS FOR FURTHER RESEARCH

The present study provides guidelines regarding the areas where further research is needed. Some of the areas which merit further study are presented below.
1. The present study can be extended to higher educational level – notably to higher secondary and university education.

2. The present study can be replicated by using samples from primary level on a state-wide basis.

3. The present study can be extended to incorporate other psycho socio familial variables as independent variables