CHAPTER IV
ANALYSIS AND
INTERPRETATION OF DATA
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4.1 TREATMENT OF THE DATA

The essential step in the process of research after the collection of data is the organization, analysis, interpretation of the data, formulation of conclusions and generalizations to get a meaningful picture out of the raw information collected.

The mass of data collected needs to be systematized and organized, i.e., edited, classified and tabulated before it can serve the purpose. Here, editing implies checking of the gathered data for accuracy, utility and completeness, classifying refers to the dividing of the information into different categories, classes or heads for use, and tabulating denotes recording of the classified material in accurate mathematical terms.

Analysis of the data means studying the tabulated material in order to determine inherent facts or meanings. It involves splitting down the existing complex factors into simpler parts and putting the parts together in new arrangements for the purpose of interpretation.

Data are meaningless heaps of material without analysis and interpretation. The purpose of analysis is to find out the relationship between variables which lead to the verification of hypothesis. This is achieved by logical organization of data and use of relevant statistical techniques. After analysis, the process of interpretation is
especially one of asking questions like: What do the results show? What is the answer to the original research problem? What are their meaning and significance? Thus, interpretation has to be done carefully, logically and critically by examining the results obtained after analysis, keeping in view limitations of the sample chosen, tools selected and used in the study.

4.2 STATISTICAL TECHNIQUES USED

There are two main types of statistical techniques used to analyze the data namely,

(i) Descriptive Statistics, and

(ii) Inferential Statistics

Both the descriptive as well as the inferential statistical techniques were used to analyze the data.

DESCRIPTIVE STATISTICS

Descriptive statistics is used to describe the data that have been collected from a sample. The advantage of descriptive statistics is that they enable the researcher to use one or two statistics such as the mean and standard deviation to represent all the individual scores of subjects in the sample. Descriptive statistics involves measures of central tendency, measures of variability, skewness, kurtosis, estimated population parameters and graphs.

In the present study, the following descriptive statistical measures have been used.

• Mean

It is used to describe the average of an entire sample of scores.
• **S.D.**

The standard deviation, a measure of variability, is a measure of the extent to which scores in distribution, on an average, deviate from their mean.

• **Graphical Technique**

Bar diagram has been used wherever required.

• **Correlation Co-efficient**

The Pearson 'r' correlation co-efficient is used to study the linear relationship between two variables. In the present study, Pearson's 'r' correlation co-efficient has been used to study the relationship between Scholastic Achievement and Achievement Motivation, Intelligence, Level Of Aspiration and Socio-Economic Status.

**INFERENTIAL STATISTICS**

Inferential statistics is used to make inferences from sample statistics to the population parameters.

**t-test**

The test of significance between two means is known as 't' test. It involves computation of ratio between observed differences between two sample means and error variance. To test the different variables in terms of Scholastic Achievement, Achievement Motivation, Intelligence, Level Of Aspiration and Socio-Economic Status, the 't' test has been used in this study.

4.3 **ANALYSIS OF THE DATA**

For a systematic and clear presentation of the results, the data obtained on the variables under study is
being analyzed under the two sections. Section-I deals with analysis, interpretation and discussion of Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status as correlates on Scholastic Achievement of Elementary School Children, and Section-II deals with Scholastic Achievement as a whole and subject-wise (i.e. Mathematics, Science and Hindi) differential of Elementary School Children at high and low levels of their Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status. The results and discussion according to the scheme are provided below.

SECTION – I
CORRELATION ANALYSIS

4.3.1. SCHOLASTIC ACHIEVEMENT IN RELATION TO ACHIEVEMENT MOTIVATION, INTELLIGENCE, LEVEL OF ASPIRATION AND SOCIO-ECONOMIC STATUS OF ELEMENTARY SCHOOL CHILDREN

In this section, correlation was done between Scholastic Achievement and different independent variables i.e. Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status.

4.3.1.1 Scholastic Achievement (as a whole and subject-wise) in relation to Achievement Motivation of Elementary School Children for Total Sample.

This part of the study deals with the relationship of Scholastic Achievement as a whole and subject-wise with Achievement Motivation of Elementary School Children. The coefficient of correlation between Scholastic Achieve-
ment (as a whole and subject-wise) and Achievement Motivation are provided in Table 4.1 and 4.2.

**TABLE-4.1**

**COEFFICIENT OF CORRELATION (r) BETWEEN SCHOLASTIC ACHIEVEMENT AND ACHIEVEMENT MOTIVATION OF ELEMENTARY SCHOOL CHILDREN AS A WHOLE**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>df</th>
<th>Coefficient of Correlation</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic Achievement</td>
<td>800</td>
<td>798</td>
<td>0.15**</td>
<td>0.01</td>
</tr>
<tr>
<td>Achievement Motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

df=N-2  
N-Total No. of children  
df- degree of freedom  
Table value of 798 df at 0.05 level =0.062*  
 at 0.01 level= 0.081**

It is revealed from the Table 4.1 that the coefficient of correlation between Scholastic Achievement and Achievement Motivation of Elementary School Children is 0.15, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement and Achievement Motivation of Elementary School Children. That means the performance of Elementary School Children did reveal significant positive relationship with their Achievement Motivation. Thus the hypothesis (H1-1) that 'There exists a significant positive relationship between Scholastic Achievement and Achievement Motivation of Elementary School Children' is retained.

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TABLE-4.2
COEFFICIENT OF CORRELATION (r) BETWEEN SCHOLASTIC ACHIEVEMENT (SUBJECT-WISE) AND ACHIEVEMENT MOTIVATION OF ELEMENTARY SCHOOL CHILDREN

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Subjects of Scholastic Achievement</th>
<th>r with Achievement Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>0.707**</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>0.401**</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>0.086**</td>
</tr>
</tbody>
</table>

df=N-2
N-Total No. of children
df- degree of freedom
Table value of 798 df at 0.05 level =0.062*
at 0.01 level= 0.081 **

It is revealed from the Table 4.2 that the coefficient of correlation between Scholastic Achievement in Mathematics and Achievement Motivation of Elementary School Children is 0.707, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement in Mathematics and Achievement Motivation of Elementary School Children. That means the performance of Elementary School Children in Mathematics did reveal significant positive relationship with their Achievement Motivation. Thus the hypothesis (H₁-1) that ‘There exists a significant positive relationship between Scholastic Achievement and Achievement Motivation of Elementary School Children’ was supported.
School Children' with respect to Scholastic Achievement in Mathematics is retained.

It is denoted from the same Table 4.2 that the coefficient of correlation between Scholastic Achievement in Science and Achievement Motivation of Elementary School Children is 0.401, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement in Science and Achievement Motivation of Elementary School Children. That means the performance of Elementary School Children in Science did reveal a significant positive relationship with their Achievement Motivation. Thus the hypothesis (H₁-1) that 'There exists a significant positive relationship between Scholastic Achievement and Achievement Motivation of Elementary School Children' with respect to Scholastic Achievement in Science is retained.

It is seen from the Table 4.2 that the coefficient of correlation between Scholastic Achievement in Hindi and Achievement Motivation of Elementary School Children is 0.086, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement in Hindi and Achievement Motivation of Elementary School Children. That means the performance of Elementary School Children in Hindi did reveal significant positive relationship with their Achievement Motivation. Thus the hypothesis (H₁-1) that 'There exists a significant positive relationship between Scholastic Achievement and Achievement Motivation of
Elementary School Children' with respect to Scholastic Achievement in Hindi is retained.

4.3.1.2. Scholastic Achievement (as whole and subject-wise) in relation to Intelligence of Elementary School Children for Total Sample

This part of the study deals with the relationship of Scholastic Achievement as a whole and subject-wise with Intelligence of Elementary School Children of the total sample. The coefficients of correlation between Scholastic Achievement and Intelligence are provided in Table 4.3 and 4.4

TABLE-4.3

COEFFICIENT OF CORRELATION (r) BETWEEN SCHOLASTIC ACHIEVEMENT AND INTELLIGENCE OF ELEMENTARY SCHOOL CHILDREN AS A WHOLE

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>df</th>
<th>Coefficient of Correlation</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic Achievement</td>
<td>800</td>
<td>798</td>
<td>0.09**</td>
<td>0.01</td>
</tr>
<tr>
<td>Intelligence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

df=N-2
N-Total No. of children
df- degree of freedom
Table value of 798 df at 0.05 level=0.062*
at 0.01 level= 0.081**

It is revealed from the Table 4.3 that the coefficient of correlation between Scholastic Achievement and Intelligence of Elementary School Children is 0.09 which is significant at 0.01 level of significance. It suggested that there is a significant positive relationship between
Scholastic Achievement and Intelligence of Elementary School Children. That means Scholastic Achievement of Elementary School Children revealed a significant positive relationship with their Intelligence. It indicates that the Elementary School Children with high Scholastic Achievement have more Intelligence. Thus the hypothesis (H1-2) that 'There exists a significant positive relationship between Scholastic Achievement and Intelligence of Elementary School Children' is retained.

**TABLE-4.4**

**COEFFICIENT OF CORRELATION (r) BETWEEN SCHOLASTIC ACHIEVEMENT (SUBJECT-WISE) AND INTELLIGENCE OF ELEMENTARY SCHOOL CHILDREN**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Subjects of Scholastic Achievement</th>
<th>r with Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>0.35**</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>0.07*</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>0.67**</td>
</tr>
</tbody>
</table>

df=N-2
N-Total No. of children
df- degree of freedom
Table value of 798 df at 0.05 level = 0.062 *
at 0.01 level = 0.081 **

It is revealed from the Table 4.4 that the coefficient of correlation between Scholastic Achievement in Mathematics and Intelligence of Elementary School Children is 0.35, which is significant at 0.01 level of significance. It suggested that there is significant positive
relationship between Scholastic Achievement in Mathematics and Intelligence of Elementary School Children. That means the performance of Elementary School Children in Mathematics revealed significant positive relationship with their Intelligence. Thus the hypothesis (H1-2) that ‘There exists a significant positive relationship between Scholastic Achievement and Intelligence of Elementary School Children’ with respect to Scholastic Achievement in Mathematics is retained.

It is denoted from the same Table 4.4 that the coefficient of correlation between Scholastic Achievement in Science and Intelligence of Elementary School Children is 0.07, which is significant at 0.05 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement in Science and Intelligence of Elementary School Children. That means the performance of Elementary School Children in Science revealed a significant positive relationship with their Intelligence. Thus the hypothesis (H1-2) that ‘There exists a significant positive relationship between Scholastic Achievement and Intelligence of Elementary School Children’ with respect to Scholastic Achievement in Science is retained.

It is seen from the Table 4.4 that the coefficient of correlation between Scholastic Achievement in Hindi and Achievement Motivation of Elementary School Children is 0.67, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement in Hindi and Intelligence of Elementary School Children. That means the
performance of Elementary School Children in Hindi revealed significant positive relationship with their Intelligence. Thus the hypothesis (H1-2) that 'There exists a significant positive relationship between Scholastic Achievement and Intelligence of Elementary School Children' with respect to Scholastic Achievement in Hindi is retained.

4.3.1.3. Scholastic Achievement (as a whole and subject-wise) in relation to Level of Aspiration of Elementary School Children for Total Sample.

This part of the study deals with the relationship of Scholastic Achievement as a whole and subject-wise with Level of Aspiration of Elementary School Children of the total sample. The coefficients of correlation between Scholastic Achievement and Level of Aspiration are provided in Table 4.5 and 4.6.

TABLE-4.5

COEFFICIENT OF CORRELATION (r) BETWEEN
SCHOLASTIC ACHIEVEMENT AND LEVEL OF ASPIRATION
OF ELEMENTARY SCHOOL CHILDREN AS A WHOLE

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>df</th>
<th>Coefficient of Correlation</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic Achievement</td>
<td>800</td>
<td>798</td>
<td>0.06*</td>
<td>0.05</td>
</tr>
<tr>
<td>Level of Aspiration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

df=N-2
N-Total No. of children
df- degree of freedom
Table value of 798 df at 0.05 level= 0.062*
at 0.01 level= 0.081**
It can be observed from the Table 4.5 that the coefficient of correlation between Scholastic Achievement and Level of Aspiration of Elementary School Children is 0.06, which is significant at 0.05 level of significance. It shows that there is significant positive relationship between Scholastic Achievement and Level of Aspiration of Elementary School Children. That means Scholastic Achievement of Elementary School Children revealed significant positive relationship with their Level of Aspiration. Thus the hypothesis (H1-3) that 'There exists a significant positive relationship between Scholastic Achievement and Level of Aspiration of Elementary School Children' is retained.

TABLE-4.6

COEFFICIENT OF CORRELATION (r) BETWEEN SCHOLASTIC ACHIEVEMENT (SUBJECT-WISE) AND LEVEL OF ASPIRATION OF ELEMENTARY SCHOOL CHILDREN

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Subjects of Scholastic Achievement</th>
<th>r with Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>0.66**</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>0.92**</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>0.56**</td>
</tr>
</tbody>
</table>

df=N-2
N-Total No. of children
df- degree of freedom
Table value of 798 df at 0.05 level = 0.062 *
at 0.01 level= 0.081 **
It is revealed from the Table 4.6 that the coefficient of correlation between Scholastic Achievement in Mathematics and Level of Aspiration of Elementary School Children is 0.66, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement in Mathematics and Level of Aspiration of Elementary School Children. That means the performance of Elementary School Children in Mathematics revealed significant positive relationship with their Level of Aspiration. Thus the hypothesis (H1-3) that 'There exists a significant positive relationship between Scholastic Achievement and Level of Aspiration of Elementary School Children' with respect to Scholastic Achievement in Mathematics is retained.

It is denoted from the same Table 4.6 that the coefficient of correlation between Scholastic Achievement in Science and Level of Aspiration of Elementary School Children is 0.92, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement in Science and Level of Aspiration of Elementary School Children. That means the performance of Elementary School Children in Science revealed significant positive relationship with their Level of Aspiration. Thus the hypothesis (H1-3) that 'There exists a significant positive relationship between Scholastic Achievement and Intelligence of Elementary School Children' with respect to Scholastic Achievement in Science is retained.
It is seen from the Table 4.6 that the coefficient of correlation between Scholastic Achievement in Hindi and Level of Aspiration of Elementary School Children is 0.56, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement in Hindi and Level of Aspiration of Elementary School Children. That means the performance of Elementary School Children in Hindi revealed significant positive relationship with their Level of Aspiration. Thus the hypothesis (H₁-3) that 'There exists a significant positive relationship between Scholastic Achievement and Level of Aspiration of Elementary School Children' with respect to Scholastic Achievement in Hindi is retained.

4.3.1.4. Scholastic Achievement (as a whole and subject-wise) in relation to Socio-Economic Status of Elementary School Children for Total Sample.

This part of the study deals with the relationship of Scholastic Achievement as a whole with Socio-Economic Status of Elementary School Children of the total sample. The coefficients of correlation between Scholastic Achievement and Socio-Economic Status are provided in Table 4.7 and Table 4.8.
### TABLE-4.7

**COEFFICIENT OF CORRELATION (r) BETWEEN SCHOLASTIC ACHIEVEMENT AND SOCIO-ECONOMIC STATUS OF ELEMENTARY SCHOOL CHILDREN AS A WHOLE**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>df</th>
<th>Coefficient of Correlation</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic Achievement</td>
<td>800</td>
<td>798</td>
<td>0.46**</td>
<td>0.01</td>
</tr>
<tr>
<td>Socio-Economic Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ df = N - 2 \]

N = Total No. of children  
df = degree of freedom  
Table value of 798 df at 0.05 level = 0.062*  
\[ \text{at 0.01 level} = 0.081** \]

The Table 4.7 revealed that the coefficient of correlation between Scholastic Achievement and Socio-Economic Status of Elementary School Children is 0.46, which is significant at 0.01 level of significance. It suggested that there is significant positive relationship between Scholastic Achievement and Socio-Economic Status of Elementary School Children. That means Scholastic Achievement of Elementary School Children revealed significant positive relationship with their Socio-Economic Status. Thus the hypothesis (H1-4) that 'There exists a significant positive relationship between Scholastic Achievement and Socio-Economic Status of Elementary School Children’ is retained.
TABLE-4.8

COEFFICIENT OF CORRELATION (r) BETWEEN SCHOLASTIC ACHIEVEMENT (SUBJECT-WISE) AND SOCIO-ECONOMIC STATUS OF ELEMENTARY SCHOOL CHILDREN

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Subject of Scholastic Achievement</th>
<th>r with Socio-Economic Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>0.041</td>
</tr>
</tbody>
</table>

df = N-2
N-Total No. of children
df- degree of freedom
Table value of 798 df at 0.05 level =0.062 *
at 0.01 level= 0.081**

It is evident from the Table 4.8 that the coefficient of correlation between Scholastic Achievement in Mathematics and Socio-Economic Status of Elementary School Children is 0.00, which is not significant at any level of significance. It suggested that there is no significant relationship between Scholastic Achievement in Mathematics and Socio-Economic Status of Elementary School Children. That means the performance of Elementary School Children in Mathematics did not show any significant positive relationship with their Socio-Economic Status.

It is further revealed from the Table 4.8 that
coefficient of correlation between Scholastic Achievement in Science and Socio-Economic Status of Elementary School Children is 0.00, which is not significant at any level of significance. It suggested that there is no significant positive relationship between Scholastic Achievement in Science and Socio-Economic Status of Elementary School Children. That means the performance of Elementary School Children in Science did not reveal any significant positive relationship with their Socio-Economic Status.

Table 4.8 showed that the coefficient of correlation between Scholastic Achievement in Hindi and Socio-Economic Status of Elementary School Children is 0.041, which is not significant at any level of significance. It suggested that there is no significant positive relationship between Scholastic Achievement in Hindi and Socio-Economic Status of Elementary School Children. That means the performance of Elementary School Children in Hindi did not show any significant positive relationship with their Socio-Economic Status.

Thus the hypothesis (H1-4) that ‘There exists a significant positive relationship between Scholastic Achievement and Socio-Economic Status of Elementary School Children’ with respect to Mathematics, Science and Hindi is rejected.
SECTION – II

DIFFERENTIAL ANALYSIS

4.3.2 SCHOLASTIC ACHIEVEMENT DIFFERENTIALS AMONG GROUPS WITH DIFFERENT ACHIEVEMENT MOTIVATION, INTELLIGENCE, LEVEL OF ASPIRATION AND SOCIO-ECONOMIC STATUS.

In this section Scholastic Achievement (as a whole and subject-wise) differentials with respect to Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status have been analyzed and interpreted. Further, independent variables have been categorized by adopting the extreme group analysis strategy. In which, $Q_1$ and $Q_3$ limits have been considered i.e. those scoring below $Q_1$ level are treated as having low level and those scoring above $Q_3$ level are treated as having high level.

4.3.2.1 Scholastic Achievement Differential Between different Achievement Motivation groups:

The Scholastic Achievement differential between high Achievement Motivation and low Achievement Motivation groups with respect to their Scholastic Achievement as a whole and subject-wise are provided in the Table 4.9 and 4.10.
### TABLE-4.9

**SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' ACHIEVEMENT MOTIVATION (H.A.M. & L.A.M.) GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.Ed.</th>
<th>t-ratio</th>
<th>Level of sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic</td>
<td>H.A.M.</td>
<td>240</td>
<td>60.09</td>
<td>5.07</td>
<td></td>
<td>0.38</td>
<td>5.39**</td>
</tr>
<tr>
<td>Achievement</td>
<td>(N₁)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>L.A.M.</td>
<td>360</td>
<td>58.04</td>
<td>4.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(N₂)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

df=N₁+N₂-2=240+360-2=598

Table value of 598 at 0.05 level=1.96*

at 0.01 level=2.58**

It is visible from the Table 4.9 that the mean scores of high and low Achievement Motivation groups of Elementary School Children on Scholastic Achievement are 60.09 and 58.04 with S.D. 5.07 and 4.07 respectively. The t-ratio came out from the above two groups is 5.39 which is significant at 0.01 level of significance. That means there is a significant difference between high and low Achievement Motivation groups of Elementary School Children on Scholastic Achievement. Further, the mean score of high Achievement Motivation group is higher than the low Achievement Motivation group on Scholastic Achievement. Thus, the hypothesis (H₁-5) that 'Elementary School Children with high Achievement Motivation will have higher Scholastic Achievement in comparison to children with low Achievement Motivation' is retained. The findings is also shown in the following figure 4.1:
FIGURE 4.1
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' ACHIEVEMENT MOTIVATION GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT

Table 4.10
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' ACHIEVEMENT MOTIVATION GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subjects of Scholastic Achievement</th>
<th>High Achievement Motivation $N_1=240$</th>
<th>Low Achievement Motivation $N_2=360$</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>58.34</td>
<td>4.25</td>
<td>56.20</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>57.06</td>
<td>4.01</td>
<td>54.33</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>62.34</td>
<td>4.50</td>
<td>59.30</td>
</tr>
</tbody>
</table>

$df= N_1 + N_2 - 2 = 240 + 360 - 2 = 598$
Table value of 598 at 0.05 level $= 1.96^*$
at 0.01 level $= 2.58^{**}$

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It is revealed from the Table 4.10 that the mean scores of high and low Achievement Motivation groups of Elementary School Children on Scholastic Achievement in Mathematics are 58.34 and 56.20 with S.D. 4.25 and 3.91 respectively. The t-ratio came out from the above two groups is 6.48 which is significant at 0.01 level of significance. That means there is significant difference between high and low Achievement Motivation groups of Elementary School Children on Scholastic Achievement in Mathematics. Further, the mean score of high Achievement Motivation group is higher than the low Achievement Motivation group on Scholastic Achievement in Mathematics. It indicates that Elementary School Children with high Achievement Motivation have higher Scholastic Achievement in Mathematics than the low Achievement Motivation group. Thus, the hypothesis (H1-5) that 'Elementary School Children with high Achievement Motivation will have higher Scholastic Achievement in comparison to children with low Achievement Motivation' with respect to Scholastic Achievement in Mathematics is retained.

It is seen from the Table 4.10 that the mean scores of high and low Achievement Motivation groups of Elementary School Children on Scholastic Achievement in Science are 57.06 and 54.33 with S.D. 4.01 and 3.84 respectively. The t-ratio came out from the above two groups is 8.53 which is significant at 0.01 level of significance. That means there is significant difference between high and low Achievement Motivation groups of Elementary School
Children on Scholastic Achievement in Science. Further, the mean score of high Achievement Motivation group is higher than the low Achievement Motivation group of Scholastic Achievement in Science. It indicates that Elementary School Children with high Achievement Motivation have higher Scholastic Achievement in Science than the low Achievement Motivation group.

It is further revealed from the Table 4.10 that the mean scores of high and low Achievement Motivation groups of Elementary School Children on Scholastic Achievement in Hindi are 62.34 and 59.30 with S.D. 4.50 and 3.91 respectively. The t-ratio came out from the above two groups is 8.94 which is significant at 0.01 level of significance. That means there is significant difference between high and low Achievement Motivation groups of Elementary School Children on Scholastic Achievement Hindi. Further, the mean score of high Achievement Motivation group is higher than the low Achievement Motivation group on Scholastic Achievement in Hindi. It indicates that Elementary School Children with high Achievement Motivation had higher Scholastic Achievement in Hindi than the low Achievement Motivation group.

Thus, the hypothesis (H1-5) that 'Elementary School Children with high Achievement Motivation will have higher Scholastic Achievement in comparison to children with low Achievement Motivation' with respect to Mathematics, Science and Hindi is retained presented diagrammatically in figure 4.2:
4.3.2.2. Scholastic Achievement Differentials Between different Intelligence groups:

The Scholastic Achievement differentials between high Intelligence and low Intelligence groups with respect to their Scholastic Achievement as a whole and subject-wise are provided in the Table 4.11 and 4.12

**TABLE-4.11**

**SIGNIFICANCE OF DIFFERENCE BETWEEN ‘HIGH AND LOW’ INTELLIGENCE (H.Intel. & L.Intel.) GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.Ed.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic</td>
<td>H.Intel.</td>
<td>245</td>
<td>60.03</td>
<td>4.23</td>
<td>0.38</td>
<td>2.94**</td>
</tr>
<tr>
<td>Achievement</td>
<td>L.Intel.</td>
<td>363</td>
<td>58.91</td>
<td>5.43</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

df = N1+N2-2=608-2= 606

Table value of 606 at 0.05 level=1.96*

at 0.01 level=2.58**
It is clear from the Table 4.11 that the mean scores of high and low Intelligence groups of Elementary School Children on Scholastic Achievement are 60.03 and 58.91 with S.D. 4.23 and 5.43 respectively. The t-ratio came out from the above two groups is 2.94 which is significant at 0.01 level of significance. That means there is significant difference between high and low Intelligence groups of Elementary School Children on Scholastic Achievement. Further, the mean score of high Intelligence group is higher than the low Intelligence group on Scholastic Achievement. It indicates that Elementary School Children with high Intelligence have higher Scholastic Achievement than the low Intelligence group. Thus, the hypothesis (H1-6) that 'Elementary School Children with high Intelligence will have higher Scholastic Achievement in comparison to children with low Intelligence' is retained depicted in figure 4.3:

FIGURE 4.3
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' INTELLIGENCE GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT
### TABLE-4.12
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' INTELLIGENCE GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subjects of Scholastic Achievement</th>
<th>High Intelligence $N_1=245$</th>
<th>Low Intelligence $N_2=363$</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean S.D.</td>
<td>Mean S.D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>58.36 4.23</td>
<td>56.21 3.90</td>
<td>6.45**</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>57.04 4.02</td>
<td>54.32 3.82</td>
<td>8.51**</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>62.33 4.49</td>
<td>59.29 3.90</td>
<td>8.93**</td>
</tr>
</tbody>
</table>

df = $N_1+N_2-2=608-2=606$
Table value of 606 at 0.05 level = 1.96*
at 0.01 level = 2.58**

It is denoted from the Table 4.12 that the mean scores of high and low Intelligence groups of Elementary School Children on Scholastic Achievement in Mathematics are 58.36 and 56.21 with S.D. 4.23 and 3.90 respectively. The t-ratio came out from the above two groups is 6.45 which is significant at 0.01 level of significance. That means there is significant difference between high and low Intelligence groups of Elementary School Children on Scholastic Achievement in Mathematics. Further, the mean score of high Intelligence group is higher than the low Intelligence group on Scholastic Achievement in Mathematics. It indicates that Elementary School Children with high Intelligence have higher Scholastic Achievement in Mathematics than the low Intelligence group.
It is seen from the Table 4.12 that the mean scores of high and low Intelligence groups of Elementary School Children on Scholastic Achievement in Science are 57.04 and 54.32 with S.D. 4.02 and 3.82 respectively. The t-ratio came out from the above two groups is 8.51 which is significant at 0.01 level of significance. That means there is significant difference between high and low Intelligence groups of Elementary School Children on Scholastic Achievement in Science. Further, the mean score of high Intelligence group is higher than the low Intelligence group on Scholastic Achievement in Science. It indicates that Elementary School Children with high Intelligence group have higher Scholastic Achievement in Science than the low Intelligence group.

It is observed from the Table 4.12 that the mean scores of high and low Intelligence groups of Elementary School Children on Scholastic Achievement in Hindi are 62.33 and 59.29 with S.D. 4.49 and 3.90 respectively. The t-ratio came out from the above two groups is 8.93 which is significant at 0.01 level of significance. That means there is significant difference between high and low Intelligence groups of Elementary School Children on Scholastic Achievement in Hindi. Further, the mean score of high Intelligence group is higher than the low Intelligence group on Scholastic Achievement in Hindi. It indicates that Elementary School Children with high Intelligence have higher Scholastic Achievement in Hindi than the low Intelligence group.

Thus, the hypothesis (H₁-6) that 'Elementary School
Children with high Intelligence will have higher Scholastic Achievement in comparison to children with low Intelligence with respect to Mathematics, Science and Hindi is retained. The finding is also shown in figure 4.4.

**FIGURE 4.4**

**SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' INTELLIGENCE GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE**

4.3.2.3. Scholastic Achievement Differential between different Level of Aspiration Groups:

The Scholastic Achievement differential between high Level of Aspiration and low Level of Aspiration groups with respect to their Scholastic Achievement as a whole and subject-wise are provided in the Table 4.13 and 4.14.
TABLE 4.13
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' LEVELS OF ASPIRATION (H.LOA. & L.LOA.) GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.Ed.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic Achievement</td>
<td>H.LOA. (N₁)</td>
<td>235</td>
<td>61.42</td>
<td>3.09</td>
<td>0.28</td>
<td>7.57**</td>
</tr>
<tr>
<td></td>
<td>L.LOA. (N₂)</td>
<td>353</td>
<td>55.21</td>
<td>3.89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \text{df} = N_1 + N_2 - 2 = 235 + 353 - 2 = 588 - 2 = 586 \]

Table value of 586 at 0.05 level = 1.96*

at 0.01 level = 2.58**

It is revealed from the Table 4.13 that the mean scores of high and low levels of Aspiration groups of Elementary School Children on Scholastic Achievement are 61.42 and 55.21 with S.D. 3.09 and 3.89 respectively. The t-ratio came out from the above two groups is 7.57 which is significant at 0.01 level of significance. That means there is significant difference between high and low Levels of Aspiration groups of Elementary School Children on Scholastic Achievement. Further, the mean score of high Level of Aspiration group is higher than the low Level of Aspiration group on Scholastic Achievement. It indicates that Elementary School Children with high Level of Aspiration have higher Scholastic Achievement than the low Level of Aspiration group. Thus, the hypothesis (H₁-7) that Elementary School Children with high Level of Aspiration will have higher Scholastic Achievement in comparison to children with low Level of Aspiration is retained presented diagrammatically in figure 4.5:
**FIGURE 4.5**
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' LEVELS OF ASPIRATION (H.LOA. & L.LOA.) GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT

**TABLE-4.14**
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' LEVELS OF ASPIRATION GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subjects of Scholastic Achievement</th>
<th>High LOA $N_1=235$</th>
<th>Low LOA $N_2=353$</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>61.41</td>
<td>3.09</td>
<td>59.17</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>61.39</td>
<td>3.34</td>
<td>59.20</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>57.67</td>
<td>3.36</td>
<td>56.30</td>
</tr>
</tbody>
</table>

$df= N_1+N_2-2=235+353-2=588-2=586$

Table value of 586 at 0.05 level=1.96*

at 0.01 level=2.58**
Table 4.14 revealed that the mean scores of high and low Level of Aspiration group of Elementary School Children on Scholastic Achievement in Mathematics are 61.41 and 59.17 with S.D. 3.09 and 3.87 respectively. The t-ratio came out from the above two groups is 8.00 which is significant at 0.01 level of significance. That means there is significant difference between high and low Level of Aspiration groups of Elementary School Children on Scholastic Achievement in Mathematics. Further, the mean score of high Level of Aspiration group is higher than the low Level of Aspiration group on Scholastic Achievement in Mathematics. It indicates that Elementary School Children with high Level of Aspiration have higher Scholastic Achievement in Mathematics than the low Level of Aspiration group.

The Table 4.14 further shows that the mean scores of high and low Level of Aspiration groups of Elementary School Children on Scholastic Achievement in Science are 61.39 and 59.20 with S.D. 3.34 and 3.82 respectively. The t-ratio came out from the above two groups is 7.82 which is significant at 0.01 level of significance. That means there is significant difference between high and low Level of Aspiration groups of Elementary School Children on Scholastic Achievement in Science. Further, the mean score of high Level of Aspiration group is higher than the low Level of Aspiration group on Scholastic Achievement in Science. It indicates that Elementary School Children with
high Level of Aspiration have higher Scholastic Achievement in Science than the low Level of Aspiration group.

It is observed again from the Table 4.14 that the mean scores of high and low Level of Aspiration groups of Elementary School Children on Scholastic Achievement in Hindi are 57.67 and 56.30 with S.D. 3.36 and 3.89 respectively. The t-ratio came out from the above two groups is 4.89 which is significant at 0.01 level of significance. That means there is significant difference between high and low Level of Aspiration groups of Elementary School Children on Scholastic Achievement in Hindi. Further, the mean score of high Level of Aspiration group is higher than the low Level of Aspiration group on Scholastic Achievement in Hindi. It indicated that Elementary School Children with high Level of Aspiration have higher Scholastic Achievement in Science than the low Level of Aspiration group.

Thus, the hypothesis (H₁-7) that ‘Elementary School Children with high Level of Aspiration will have higher Scholastic Achievement in comparison to children with low Level of Aspiration’ with respect to Mathematics, Science and Hindi is retained. The finding is also shown in figure 4.6.
4.3.2.4 Scholastic Achievement Differentials Between different Socio-Economic Status Groups:

The Scholastic Achievement differentials between high Socio-Economic Status and low Socio-Economic Status groups with respect to their Scholastic Achievement as a whole and subject-wise are provided in the Table 4.15 and 4.16
TABLE-4.15
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' SOCIO-ECONOMIC STATUS (H.SES.& L.SES.) GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.Ed.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>H.SES.</td>
<td>216</td>
<td>58.66</td>
<td>3.37</td>
<td>1.27</td>
<td>3.14**</td>
</tr>
<tr>
<td></td>
<td>L.SES.</td>
<td>315</td>
<td>54.67</td>
<td>3.48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

df=531-2=529
Table values of 529 at 0.05 level=1.96*
at 0.01 level=2.58**

It is visible from the Table 4.15 that the mean scores of high and low Socio-Economic Status groups of Elementary School Children on Scholastic Achievement are 58.66 and 54.67 with S.D. 3.37 and 3.48 respectively. The t-ratio came out from the above two groups is 3.14 which is significant at 0.01 level of significance. That means there is a significant difference between high and low Socio-Economic Status groups of Elementary School Children on Scholastic Achievement. Further, the mean score of high Socio-Economic Status group is higher than the low Socio-Economic Status group on Scholastic Achievement. It indicated that Elementary School Children belonging to high Socio-Economic Status have higher Scholastic Achievement than the low Socio-Economic Status group. Thus, the hypothesis (H\textsubscript{1}-8) that 'Elementary School Children with high Socio-Economic Status will have higher Scholastic Achievement in comparison to children with low Socio-Economic Status' is retained presented diagrammatically in figure 4.7:
FIGURE-4.7
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' SOCIO-ECONOMIC STATUS (H.SES.& L.SES.) GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT

![Graph showing comparison between High SES and Low SES on scholastic achievement]

TABLE-4.16
SIGNIFICANCE OF DIFFERENCE BETWEEN 'HIGH AND LOW' SOCIO-ECONOMIC STATUS (High SES & Low SES) GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subjects of Scholastic Achievement</th>
<th>High SES N₁=216</th>
<th>Low SES N₂=315</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1</td>
<td>60.43</td>
<td>3.11</td>
<td>59.02</td>
<td>3.70</td>
</tr>
<tr>
<td>2</td>
<td>59.40</td>
<td>3.34</td>
<td>57.12</td>
<td>3.76</td>
</tr>
<tr>
<td>3</td>
<td>57.34</td>
<td>3.36</td>
<td>56.30</td>
<td>3.81</td>
</tr>
</tbody>
</table>

df = N₁+N₂-2 = 531-2 = 529
Table values of 529 at 0.05 level=1.96*
at 0.01 level=2.58**
It is revealed from the Table 4.16 that the mean scores of high and low Socio-Economic Status groups of Elementary School Children on Scholastic Achievement in Mathematics are 60.43 and 59.02 with S.D. 3.11 and 3.70 respectively. The t-ratio came out from the above two groups is 5.03 which is significant at 0.01 level of significance. That means there is significant difference between high and low Socio-Economic Status groups of Elementary School Children on Scholastic Achievement in Mathematics. Further, the mean score of high Socio-Economic Status group is higher than the low Socio-Economic Status group on Scholastic Achievement in Mathematics. It indicates that Elementary School Children belonging to high Socio-Economic Status group had higher Scholastic Achievement in Mathematics than the low Socio-Economic Status group.

The same Table 4.16 denoted that the mean scores of high and low Socio-Economic Status groups of Elementary School Children on Scholastic Achievement in Science are 59.40 and 57.12 with S.D. 3.34 and 3.76 respectively. The t-ratio came out from the above two groups is 8.14 which is significant at 0.01 level of significance. That means there is significant difference between high and low Socio-Economic Status groups of Elementary School Children on Scholastic Achievement in Science. Further, the mean score of high Socio-Economic Status group is higher than the low Socio-Economic Status group on Scholastic
Achievement in Science. It indicated that Elementary School Children belonging to high Socio-Economic Status group had higher Scholastic Achievement in Science than the low Socio-Economic Status group.

It is also observed from the Table 4.16 that the mean scores of high and low Socio-Economic Status groups of Elementary School Children on Scholastic Achievement in Hindi are 57.34 and 56.30 with S.D. 3.36 and 3.81 respectively. The t-ratio came out from the above two groups is 3.71 which is significant at 0.01 level of significance. That means there is significant difference between high and low Socio-Economic Status groups of Elementary School Children on Scholastic Achievement in Hindi. Further, the mean score of high Socio-Economic Status group is higher than the low Socio-Economic Status group on Scholastic Achievement in Hindi. It indicates that Elementary School Children with high Socio-Economic Status group had higher Scholastic Achievement in Hindi than low Socio-Economic Status group.

Thus, the hypothesis (H1-8) that ‘Elementary School Children with high Socio-Economic Status will have higher Scholastic Achievement in comparison to children with low Socio-Economic Status’ with respect to Mathematics, Science and Hindi is retained depicted in figure 4.8:
FIGURE 4.8
SIGNIFICANCE OF DIFFERENCE BETWEEN ‘HIGH AND LOW’ SOCIO-ECONOMIC STATUS GROUPS OF ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE

TABLE-4.17
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON ACHIEVEMENT MOTIVATION

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Motivation</td>
<td>Girls (N₁)</td>
<td>400</td>
<td>145.57</td>
<td>21.51</td>
<td>0.079</td>
</tr>
<tr>
<td></td>
<td>Boys (N₂)</td>
<td>400</td>
<td>145.45</td>
<td>21.49</td>
<td></td>
</tr>
</tbody>
</table>

df =N₁+N₂-2=798
Table value of 798 at 0.05 level=1.96*
at 0.01 level=2.58**
It is indicated from the Table 4.17 that the mean scores of girls and boys of Elementary School on Achievement Motivation are 145.57 and 145.45 with S.D. 21.51 and 21.49 respectively. The t-ratio came out from the above two groups is 0.079 which is not significant at any level of significance. That means there is no significant difference between girls and boys of Elementary School on Achievement Motivation. Thus, the hypothesis (H₁-9) that 'There exists a significant difference between girls and boys of Elementary School on Achievement Motivation' is rejected presented diagrammatically in figure 4.9:

**FIGURE 4.9**

SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON ACHIEVEMENT MOTIVATION

![Diagram showing the mean scores of girls and boys on Achievement Motivation](image-url)
TABLE-4.18
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON INTELLIGENCE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligence</td>
<td>Girls (N₁)</td>
<td>400</td>
<td>114.41</td>
<td>15.95</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>Boys (N₂)</td>
<td>400</td>
<td>114.67</td>
<td>16.10</td>
<td></td>
</tr>
</tbody>
</table>

df = N₁+N₂-2=400+400-2=798

Table value of 798 at 0.05 level=1.96*

at 0.01 level=2.58**

It is indicated from the Table 4.18 that the mean scores of girls and boys of Elementary School on Intelligence are 114.41 and 114.67 with S.D. 15.95 and 16.10 respectively. The t-ratio came out from the above two groups is 0.22 which is not significant at any level of significance. That means there is no significant difference between girls and boys of Elementary School on Intelligence. Thus, the hypothesis (H₁-10) that 'There exists a significant difference between girls and boys of Elementary School on Intelligence' is rejected depicted in figure 4.10.
FIGURE 4.10
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON INTELLIGENCE

TABLE 4.19
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON LEVEL OF ASPIRATION

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Aspiration</td>
<td>Girls ($N_1$)</td>
<td>400</td>
<td>35.94</td>
<td>15.23</td>
<td>0.125</td>
</tr>
<tr>
<td></td>
<td>Boys ($N_2$)</td>
<td>400</td>
<td>35.80</td>
<td>15.22</td>
<td></td>
</tr>
</tbody>
</table>

$df = N_1 + N_2 - 2 = 400 + 400 - 2 = 798$

Table value of 798 at 0.05 level = 1.96*

at 0.01 level = 2.58**

It is indicated from the Table 4.19 that the mean scores of girls and boys of Elementary School on Level of Aspiration are 35.94 and 35.80 with S.D. 15.23 and 15.22
respectively. The t-ratio came out from the above two groups is 0.125 which is not significant at any level of significance. That means there is no significant difference between girls and boys of Elementary School on Level of Aspiration. Thus the hypothesis (H1-11) that 'There exists a significant difference between girls and boys of Elementary School on Level of Aspiration' is rejected. The finding is also shown in figure 4.11:

**FIGURE 4.11**

**SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON LEVEL OF ASPIRATION**

![Graph showing the comparison between girls and boys on the level of aspiration.](image-url)
### TABLE-4.20
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON SOCIO-ECONOMIC STATUS IN GENERAL

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Economic Status</td>
<td>Girls (N₁)</td>
<td>400</td>
<td>45.97</td>
<td>14.93</td>
<td>0.007</td>
</tr>
<tr>
<td></td>
<td>Boys (N₂)</td>
<td>400</td>
<td>45.98</td>
<td>14.92</td>
<td></td>
</tr>
</tbody>
</table>

df = N₁ + N₂ - 2 = 400 + 400 - 2 = 798

Table value of 798 at 0.05 level = 1.96*

at 0.01 level = 2.58**

It is indicated from the Table 4.20 that the mean scores of girls and boys of Elementary School on Socio-Economic Status are 45.97 and 45.98 with S.D. 14.93 and 14.92 respectively. The t-ratio came out from the above two groups is 0.007 which is not significant at any level of significance. That means there is no significant difference between girls and boys of Elementary School on Socio-Economic Status. Thus, the hypothesis (H₁-12) that 'there exists a significant difference between girls and boys of Elementary School on Socio-Economic Status' is rejected presented diagrammatically in figure 4.12.
FIGURE 4.12
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON SOCIO-ECONOMIC STATUS IN GENERAL

![Bar graph showing comparison between girls and boys on socio-economic status.]

TABLE 4.21
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON SCHOLASTIC ACHIEVEMENT AS A WHOLE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic Achievement</td>
<td>Girls (N₁)</td>
<td>400</td>
<td>63.26</td>
<td>6.14</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>Boys (N₂)</td>
<td>400</td>
<td>63.12</td>
<td>5.98</td>
<td></td>
</tr>
</tbody>
</table>

df=N₁+N₂-2=400+400-2=798

Table value of 798 at 0.05 level=1.96*
at 0.01 level=2.58**
It is indicated from the Table 4.21 that the mean scores of girls and boys of Elementary School on Scholastic Achievement are 63.26 and 63.12 with S.D. 6.14 and 5.98 respectively. The t-ratio came out from the above two groups is 0.33 which is not significant at any level of significance. That means there is no significant difference between girls and boys of Elementary School on Scholastic Achievement as a whole. Thus, the hypothesis (H₁₋₁₃) that ‘There exists a significant difference between girls and boys of Elementary School on Scholastic Achievement’ is rejected presented diagrammatically in figure 4.13.

FIGURE 4.13
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON SCHOLASTIC ACHIEVEMENT AS A WHOLE
TABLE-4.22
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Dimensions of Scholastic Achievement</th>
<th>Girls (N_1=400)</th>
<th>Boys (N_2=400)</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>62.13</td>
<td>12.79</td>
<td>62.05</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>55.70</td>
<td>12.33</td>
<td>55.89</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>56.46</td>
<td>10.92</td>
<td>56.48</td>
</tr>
</tbody>
</table>

\[ df = N_1 + N_2 - 2 = 798 \]

Table value of 798 at 0.05 level = 1.96*

at 0.01 level = 2.58**

It is revealed from the Table 4.22 that the mean scores of girls and boys of Elementary School on Scholastic Achievement in Mathematics are 62.13 and 62.05 with S.D. 12.79 and 12.82 respectively. The t-ratio came out from the above two groups is 0.088 which is not significant at any level of significance. That means there is no significant difference between girls and boys of Elementary School on Scholastic Achievement in Mathematics.

It is denoted from the same Table 4.22 that the mean scores of girls and boys of Elementary School on Scholastic Achievement in Science are 55.70 and 55.89 with S.D. 12.33 and 12.43 respectively. The t-ratio came out from the above two groups is 0.217 which is not significant at any level of significance. That means there is no significant
difference between girls and boys of Elementary School on Scholastic Achievement in Science.

Table 4.22 shown that the mean scores of girls and boys of Elementary School on Scholastic Achievement in Hindi are 56.46 and 56.48 with S.D. 10.92 and 10.91 respectively. The t-ratio came out from the above two groups is 0.026 which is not significant at any level of significance. That means there is no significant difference between girls and boys of Elementary School on Scholastic Achievement in Hindi.

Thus, the hypothesis (H1-13) that 'There exists a significant difference between girls and boys of Elementary School Children on Scholastic Achievement' with respect to Mathematics, Science and Hindi is rejected. The finding is also shown in figure 4.14

FIGURE 4.14
SIGNIFICANCE OF DIFFERENCE BETWEEN GIRLS AND BOYS OF ELEMENTARY SCHOOL ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE
TABLE-23

SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON ACHIEVEMENT MOTIVATION

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Motivation</td>
<td>Rural (N₁)</td>
<td>400</td>
<td>146.37</td>
<td>20.41</td>
<td>2.09*</td>
</tr>
<tr>
<td></td>
<td>Urban (N₂)</td>
<td>400</td>
<td>149.34</td>
<td>19.98</td>
<td></td>
</tr>
</tbody>
</table>

\[ df = N₁ + N₂ - 2 = 798 \]

Table value of 798 at 0.05 level = 1.96*

at 0.01 level = 2.58**

It is indicated from the Table 4.23 that the mean scores of rural and urban Elementary School Children on Achievement Motivation are 146.37 and 149.34 with S.D. 20.41 and 19.98 respectively. The t-ratio came out from the above two groups is 2.09 which is significant at 0.05 level of significance. That means there is significant difference between rural and urban Elementary School Children on Achievement Motivation. Thus, the hypothesis (H₁-14) that 'There exists a significant difference between rural and urban Elementary School Children on Achievement Motivation' is retained. The finding is also shown in figure 4.15:
FIGURE 4.15
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON ACHIEVEMENT MOTIVATION

![Graph showing significance of difference between rural and urban elementary school children on achievement motivation.]

TABLE-4.24
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON INTELLIGENCE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligence</td>
<td>Rural (N₁)</td>
<td>400</td>
<td>114.31</td>
<td>14.94</td>
<td>1.46</td>
</tr>
<tr>
<td></td>
<td>Urban (N₂)</td>
<td>400</td>
<td>115.89</td>
<td>15.81</td>
<td></td>
</tr>
</tbody>
</table>

df=N₁+N₂-2=400+400-2=798
Table value of 798 at 0.05 level=1.96*
at 0.01 level=2.58**
It is indicated from the Table 4.24 that the mean scores of rural and urban Elementary School Children on Intelligence are 114.31 and 115.89 with S.D. 14.94 and 15.81 respectively. The t-ratio came out from the above two groups is 1.46 which is not significant at any level of significance. That means there is no significant difference between urban and rural Elementary School Children on Intelligence. Thus, the hypothesis (H_1-15) that 'There exists a significant difference between rural and urban Elementary School Children on Intelligence' is rejected. The finding is also shown in figure 4.16:

![Figure 4.16](image-url)

**FIGURE 4.16**

**SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON INTELLIGENCE**
## Table 4.25

### Significance of Difference Between Rural and Urban Elementary School Children on Level of Aspiration

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Aspiration</td>
<td>Rural ($N_1$)</td>
<td>400</td>
<td>34.93</td>
<td>14.25</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>Urban ($N_2$)</td>
<td>400</td>
<td>35.79</td>
<td>14.21</td>
<td></td>
</tr>
</tbody>
</table>

$df = N_1 + N_2 - 2 = 400 + 400 - 2 = 798$

Table value of 798 at 0.05 level$=1.96^*$

at 0.01 level$=2.58^{**}$

It is indicated from the Table 4.25 that the mean scores of rural and urban Elementary School Children on Level of Aspiration are 34.93 and 35.79 with S.D. 14.25 and 14.21 respectively. The t-ratio came out from the above two groups is 0.86 which is not significant at any level of significance. That means there is no significant difference between rural and urban Elementary School Children on Level of Aspiration. Thus, the hypothesis (H₁-16) that ‘There exists a significant difference between rural and urban Elementary School Children on Level of Aspiration’ is rejected depicted in figure 4.17.
FIGURE 4.17
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON LEVEL OF ASPIRATION

TABLE- 4.26
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON SOCIO-ECONOMIC STATUS IN GENERAL

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Economic</td>
<td>Rural (N₁)</td>
<td>400</td>
<td>63.25</td>
<td>6.41</td>
<td>0.37</td>
</tr>
<tr>
<td>Status</td>
<td>Urban (N₂)</td>
<td>400</td>
<td>63.09</td>
<td>5.89</td>
<td></td>
</tr>
</tbody>
</table>

\[ \text{df} = N₁ + N₂ - 2 = 400 + 400 - 2 = 798 \]

Table value of 798 at 0.05 level = 1.96 *

at 0.01 level = 2.58 **
It is indicated from the Table 4.26 that the mean scores of rural and urban Elementary School Children on Socio-Economic Status are 63.25 and 63.09 with S.D. 6.41 and 5.89 respectively. The t-ratio came out from the above two groups is 0.37 which is not significant at any level of significance. That means there is no significant difference between rural and urban Elementary School Children on Socio-Economic Status. Thus, the hypothesis (H1-17) that ‘There exists a significant difference between rural and urban Elementary School Children on Socio-Economic Status’ is rejected depicted in figure 4.18.

**FIGURE 4.18**
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON SOCIO-ECONOMIC STATUS IN GENERAL

![Graph showing mean scores of rural and urban children on socio-economic status]
TABLE- 4.27
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT AS A WHOLE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholastic</td>
<td>Rural (N_1)</td>
<td>400</td>
<td>63.61</td>
<td>6.09</td>
<td>3.90</td>
</tr>
<tr>
<td>Achievement</td>
<td>Urban (N_2)</td>
<td>400</td>
<td>62.01</td>
<td>5.67</td>
<td></td>
</tr>
</tbody>
</table>

df=\(N_1+N_2-2=400+400-2=798\)

Table value of 798 at 0.05 level=1.96*

at 0.01 level=2.58**

It is indicated from the Table 4.27 that the mean scores of rural and urban Elementary School Children on Scholastic Achievement are 63.61 and 62.01 with S.D. 6.09 and 5.67 respectively. The t-ratio came out from the above two groups is 3.90 which is significant at 0.01 level of significance. That means there is significant difference between rural and urban Elementary School Children on Scholastic Achievement as a whole. Thus, the hypothesis \(H_{1-18}\) that 'There exists a significant difference between rural and urban Elementary School Children on Scholastic Achievement' is retained depicted in figure 4.19.
FIGURE 4.19
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT AS A WHOLE

TABLE-4.28
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Dimensions of Scholastic Achievement</th>
<th>Rural $N_1=400$</th>
<th>Urban $N_2=400$</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
</tr>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>60.31</td>
<td>11.87</td>
<td>62.09</td>
</tr>
<tr>
<td>2</td>
<td>Science</td>
<td>55.69</td>
<td>11.34</td>
<td>57.98</td>
</tr>
<tr>
<td>3</td>
<td>Hindi</td>
<td>56.96</td>
<td>9.91</td>
<td>54.01</td>
</tr>
</tbody>
</table>

df=$N_1+N_2-2=798$
Table value of 798 at 0.05 level=1.96*
                         at 0.01 level=2.58**
It is revealed from the Table 4.28 that the mean scores of rural and urban Elementary School Children in Mathematics are 60.31 and 62.09 with S.D. 11.87 and 12.01 respectively. The t-ratio came out from the above two groups is 2.11 which is significant at 0.05 level of significance. That means there is a significant difference between rural and urban Elementary School Children on Scholastic Achievement in Mathematics.

It is denoted from the same Table 4.28 that the mean scores of rural and urban Elementary School Children in Science are 55.69 and 57.98 with S.D. 11.34 and 12.01 respectively. The t-ratio came out from the above two groups is 2.82 which is significant at both level of significance. That means there is a significant difference between rural and urban Elementary School Children on Scholastic Achievement in Science.

Table 4.28 shown that the mean scores of rural and urban Elementary School Children in Hindi are 56.96 and 54.01 with S.D. 9.91 and 10.01 respectively. The t-ratio came out from the above two groups is 4.21 which is significant at both level of significance. That means there is a significant difference between rural and urban Elementary School Children on Scholastic Achievement in Hindi.

Thus, the hypothesis (H1-18) that 'There exists a significant difference between rural and urban Elementary School Children on Scholastic Achievement' with respect to Mathematics, Science and Hindi is retained depicted in figure 4.20.
FIGURE 4.20
SIGNIFICANCE OF DIFFERENCE BETWEEN RURAL AND URBAN ELEMENTARY SCHOOL CHILDREN ON SCHOLASTIC ACHIEVEMENT SUBJECT-WISE

![Bar chart showing the comparison of scholastic achievement between rural and urban children in Mathematics, Science, and Hindi.](image-url)