CHAPTER - III

RESEARCH METHODOLOGY
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CHAPTER-III
RESEARCH METHODOLOGY

3.1 Introduction

This chapter signifies the methodological framework of the study, which consists of the following aspects;

i. Restatement of the Problem
ii. Operational Definitions
iii. Research Design
iv. Variables of the Study
v. Hypotheses
vi. Tools Used
vii. Population and Sample of the Study
viii. Data Collection
ix. Data Analysis

Each of the above aspects are briefly described below;

3.2 Restatement of the Problem

The problem selected for the present investigation can be repeated as follows:

"Psycho-Social Correlates of Vocational Aspirations of Secondary School Students"
3.3 Operational Definitions of the terms Used

Although a number of definitions are put forth by different scholars, the researcher has selected only such those definitions which are operationally relevant to the present study.

**Vocation**

Vocation is a series of duties and responsibilities undertaken and related activities performed by an individual to accomplish a goal and/or for financial reward.

**Aspiration**

Aspiration is defined as a "strong desire for realization (as of ambition, idea or accomplishment) (Webster's Dictionary 1976) and as "pure upward desire for excellence - the steadfast desire or longing for something above one. (Oxford Dictionary, 1972).

Level of aspiration represents a person's expectations, goals, claims, or his future achievement in a given task. (Hoppe, 1941).

**Vocational Aspiration**

According to Crite (1969) vocational aspiration means what the individual consider to be ideal vocation for him.
Vocational aspiration is defined as "a goal directed attitude which involves conception of the self in relation to a particular level of the vocational prestige hierarchy" (Haller and Miller, 1971).

**Achievement Motivation**

Achievement motivation is defined as "the desire to excel regardless of social reward and the desire of winning or doing better than some one else" (McClelland, 1961).

Achievement motivation moves or drives an individual to strive to gain mastery of difficult and challenging situations or performances in the pursuit of excellence. It comes into the picture when an individual knows that his performance will be evaluated and that the consequence of his actions will lead either to success or failure and that good performance will produce a feeling of pride in accomplishment.

Thus it is understood that achievement motivation is an urge to achieve success in one’s life in the area of personal interest.

**Personality**

According to Allport (1962) 'personality is the dynamic organisation within the individual, of those psycho-physical systems that determine his unique adjustment to his environment”
Personality is a very dynamic psychological concept it encompasses wider human behaviour. In the present study the personality considered as fourteen dimensions or traits viz., reserved Vs. outgoing, less intelligent Vs. more intelligent, affected by feelings Vs. emotionally stable, phlegmatic Vs. excitable, obedient Vs. assertive, sober Vs. happy-go-lucky, expedient Vs. conscientious, shy Vs. venturesome, tough minded Vs. tender minded, vigorous Vs. doubting, placid Vs. apprehensive, group dependent Vs. self-sufficient, undisciplined self-conflict Vs. controlled, relaxed Vs. tense, which comprised the total personality of an individual.

Parental Influence

The term ‘parental’ involves father, mother or any relative who is the head of the family on whom the child depends. It is the most important duty of the parents to co-ordinate their work for the harmonious development of the child. Parents need to know various experiences the child had at school, in order to guide him properly at home. Thus, the parents see that their child attends school regularly, enquire with teachers, and give support in curricular and co-curricular activities, take personal care, devote sometime for studies at home and encourages the child to progress in school. This incidentally facilitates parental influence.
Socio-Economic Status

Socio-economic status means the position that an individual or family occupies by means of his/her income, education, occupation, cultural possessions and participation in the group activities of the community.

Status is a term used to designate "the comparative amounts of prestige, difference or respect accorded to persons who have been assigned different roles in a group or community". (Aaron et.al. 1970).

Since, X standard students are growing personalities and do not have socio-economic status of their own, their parents SES was considered for the present study.

Locality

In the present investigation, two localities viz., urban and rural are studied, 1991 census defines the terms urban rural as follows:

Urban: The urban locality constitutes an area where there is a municipality or corporation with a density of population of atleast 400 per square kilometer. In addition to this, there should be a minimum population of 5,000 and atleast 75 percent of the male working population engaged in non-agricultural pursuits.
Rural: A locality is considered as ‘rural’ which has definite surveyed boundaries with inadequate transport and communication facilities, which has no hospital, banks, government offices, recreational facilities.

Secondary Schools

Schools having classes VIII to X are called Secondary schools.

Type of School

Type of school refers to the types of management of schools. Schools managed by the government of Karnataka are categorised under governmental schools and schools managed by private managements are categorized as private schools. In private schools there are only two categories, those private schools which are not getting aid by the government are called unaided schools and those private schools which are getting aid from the government are called aided schools.

Medium of Instruction

Schools which are using Kannada as their medium of instruction are called Kannada medium schools. The schools which use English as their medium of instruction are called as English medium schools.
3.4 Research Design

In the present investigation descriptive survey research method was employed.

3.5 Variables of the Study

Independent Variables
i. Achievement Motivation
ii. Personality
iii. Parental Influence
iv. Socio-Economic Status
v. Gender
vi. Location
vii. Medium of Instruction
viii. Type of School

Dependent Variable
i. Vocational Aspiration

3.6 Hypotheses

1. Boys and Girls of X standard do not differ significantly with respect to vocational aspirations.
2. Rural and Urban students of X standard do not differ significantly with respect to vocational aspirations.

3. Government, aided and unaided Secondary school students do not differ significantly with respect to vocational aspirations.

4. Students studying in different medium of instruction (Kannada and English) do not differ significantly with respect to vocational aspirations.

5. Students with high and low achievement motivation do not differ significantly with respect to vocational aspirations.

6. Students with high and low parental influence do not differ significantly with respect to vocational aspirations.

7. Students with high and low socio-economic status do not differ significantly with respect to vocational aspirations.

8. Students with high and low personality trait do not differ significantly with respect to vocational aspirations.

9. Reserved, Average and Outgoing students of X standard do not differ significantly with respect to vocational aspirations.

10. Less intelligent, Average intelligent and More intelligent students do not differ significantly with respect to vocational aspirations.

11. Affected by feeling, Average and Emotionally stable students do not differ significantly with respect to vocational aspirations.
12. Phlegmatic, Average and Excitable students do not differ significantly with respect to vocational aspirations.

13. Obedient, Average and Assertive students do not differ significantly with respect to vocational aspirations.

14. Sober, Average and Happy-go-lucky students do not differ significantly with respect to vocational aspirations.

15. Expedient, Average and Conscientious students do not differ significantly with respect to vocational aspirations.

16. Shy, Average and Venturesome students do not differ significantly with respect to vocational aspirations.

17. Tough minded, Average and Tender minded students do not differ significantly with respect to vocational aspirations.

18. Vigorous, Average and Doubting students do not differ significantly with respect to vocational aspirations.

19. Placid, Average and Apprehensive students do not differ significantly with respect to vocational aspirations.

20. Group dependent, Average and Self-sufficient students do not differ significantly with respect to vocational aspirations.

21. Undisciplined self-conflict, Average and controlled students do not differ significantly with respect to vocational aspirations.
22. Relaxed, Average and Tensed students do not differ significantly with respect to vocational aspirations

23. There is no significant interaction effect of Achievement motivation (High and Low), Parental influence (High and Low) and Socio-economic status (High and Low) on vocational aspirations of students.

24. There is no significant interaction effect of Achievement motivation (High and Low), Parental influence (High and Low) and Personality traits (High and Low) on vocational aspirations of students.

25. There is no significant interaction effect of Achievement motivation (High and Low), Parental influence (High and Low) and Gender (boys and girls) on vocational aspirations of students.

26. There is no significant interaction effect of Achievement motivation (High and Low), Parental influence (High and Low) and Location (rural and urban) on vocational aspirations of students.

27. There is no significant interaction effect of Achievement motivation (High and Low), Parental influence (High and Low) and Types of management (Government, Aided and unaided) on vocational aspirations of students.

28. There is no significant interaction effect of Parental influence (High and Low), Socio-economic status (High and Low) and Personality traits (High and Low) on vocational aspirations of students.
29. There is no significant interaction effect of Parental influence (High and Low), Socio-economic status (High and Low) and Gender (boys and girls) on vocational aspirations of students.

30. There is no significant interaction effect of Parental influence (High and Low), Socio-economic status (High and Low) and Location (rural and urban) on vocational aspirations of students.

31. There is no significant interaction effect of Parental influence (High and Low), Socio-economic status (High and Low) and Types of management (government, aided and unaided) on vocational aspirations of students.

32. There is no significant interaction effect of Socio-economic status (High and Low), Personality traits (high and Low) and Gender (boy and girl) on vocational aspirations of students.

33. There is no significant interaction effect of Socio-economic status (High and Low), Personality traits (high and Low) and Location (rural and urban) on vocational aspirations of students.

34. There is no significant interaction effect of Socio-economic status (High and Low), Personality traits (high and Low) and Types of management (Government, Aided and Unaided) on vocational aspirations of students.
35. There is no significant relationship between vocational aspirations and Gender, Type of management, Location, Medium of instruction, parental influence, SES and personality traits.

36. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations.

37. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations.

38. There is no significant relationship between vocational aspirations and Type of management, Location, Medium of instruction, parental influence, SES and personality traits on boys.

39. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations of boys.

40. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of boys.
41. There is no significant relationship between vocational aspirations and Type of management, Location, Medium of instruction, parental influence, SES and personality traits of girls.

42. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations of girls.

43. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of girls.

44. There is no significant relationship between Vocational aspirations and Gender, Type of management, Location, Medium of instruction, Parental influence, SES and Personality traits of students of government schools.

45. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations of students of government schools.

46. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of students of government schools.
47. There is no significant relationship between Vocational aspirations and Gender, Location, Medium of instruction, Achievement motivation, Parental influence, SES and Personality traits of students of aided schools.

48. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations of students of aided schools.

49. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of students of aided schools.

50. There is no significant relationship between Vocational aspirations and Gender, Location, Medium of instruction, Achievement motivation, Parental influence, SES and Personality traits of students of unaided schools.

51. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations of students of unaided schools.
52. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of students of unaided schools.

53. There is no significant relationship between Vocational aspirations and Gender, Type of management, Medium of instruction, Achievement motivation, Parental influence, SES and Personality traits of students of rural schools.

54. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations of students of rural schools.

55. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of students of rural schools.

56. There is no significant relationship between Vocational aspirations and Gender, Type of management, Medium of instruction, Achievement motivation, Parental influence, SES and Personality traits of students of urban schools.

57. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-
curricular activities, Vocational support and Moral support) with vocational aspirations of students of urban schools.

58. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of students of urban schools.

59. There is no significant relationship between Vocational aspirations and Gender, Type of management, Location, Achievement motivation, Parental influence, SES and Personality traits of Kannada medium students.

60. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations of Kannada medium students.

61. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of Kannada medium students.

62. There is no significant relationship between Vocational aspirations and Gender, Type of management, Location, Achievement motivation, Parental influence, SES and Personality traits of English medium students.
63. There is no significant relationship between parental influence and its dimensions (i.e. Academic support, Personal care, Support for co-curricular activities, Vocational support and Moral support) with vocational aspirations of English medium students.

64. There is no significant relationship between personality trait and its factors (i.e. A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4) with vocational aspirations of English medium students.

65. Gender, Type of management, Location, Medium of instruction, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictors of vocational aspirations of students.

66. Type of management, Location, Medium of instruction, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of boys.

67. Type of management, Location, Medium of instruction, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of girls.

68. Gender, Location, Medium of instruction, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of students of government schools.
69. Gender, Location, Medium of instruction, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of students of aided schools

70. Gender, Location, Medium of instruction, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of students of unaided schools

71. Gender, Type of management, Medium of instruction, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of students of rural schools.

72. Gender, Type of management, Medium of instruction, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of students of urban schools.

73. Gender, Type of management, Location, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of Kannada medium students.
74. Gender, Type of management, Location, Achievement motivation, Parental influence, Socio-economic status and Personality traits are not significant predictor of vocational aspirations of English medium students.

3.7 Population and Sample of the Study

Population

All the students those who are studying X standard in Secondary school comprise the population of the study.

Sampling Design

To study the vocational aspirations of X standard students, the investigator selected three types of management schools in Bijapur district – Government, Aided and Unaided. In Bijapur urban out of 59 Secondary schools only 6 are government managed schools and aided schools are 33 and unaided schools are 20 and in the case of rural out of 554 high schools only 76 schools belong to government management, 298 schools belong to aided, and 180 schools belong to unaided schools. 6 schools from government, 6 schools from unaided and 28 schools from aided schools were randomly selected. Total number of government, aided and unaided schools in Bijapur district are given in table No. 3.1.
Table-3.1: Total Number of Government, Aided and Unaided Schools in Bijapur District

<table>
<thead>
<tr>
<th>District</th>
<th>No. of Govt. Schools</th>
<th>No. of Aided Schools</th>
<th>No. of Unaided Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bijapur (Urban)</td>
<td>6</td>
<td>33</td>
<td>20</td>
</tr>
<tr>
<td>Bijapur (Rural)</td>
<td>76</td>
<td>298</td>
<td>190</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>331</td>
<td>200</td>
</tr>
</tbody>
</table>

The criteria for selecting the schools from the three managements were as follows:

1. The management category must have enough number of schools in urban and rural areas of Bijapur district randomly.
2. Each management should have some boys schools, some girls schools and some mixed schools.
3. Each management should have some new schools, some old schools, some small schools and some big schools.

Selection of Sample of Students from Different Schools

The sample of the study was selected from Bijapur district. Twenty five students studying X standard were randomly selected from each school drawn for this purpose. Proportionate and stratified random sampling
technique was followed for the selection of schools. For the selection of students from the selected schools random sampling method was followed. The total sample consisted of 1012 students, 453 boys and 559 girls studying in X standard in Bijapur district.

**Table-3.2: Composition of Total Sample of Students**

<table>
<thead>
<tr>
<th></th>
<th>Boys in the sample</th>
<th>Girls in the sample</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management-wise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government schools</td>
<td>75</td>
<td>78</td>
<td>153</td>
</tr>
<tr>
<td>Aided schools</td>
<td>298</td>
<td>396</td>
<td>694</td>
</tr>
<tr>
<td>Unaided schools</td>
<td>80</td>
<td>85</td>
<td>165</td>
</tr>
<tr>
<td>Locality-wise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban schools</td>
<td>225</td>
<td>284</td>
<td>509</td>
</tr>
<tr>
<td>Rural schools</td>
<td>228</td>
<td>275</td>
<td>503</td>
</tr>
<tr>
<td>Medium-wise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kannada medium schools</td>
<td>300</td>
<td>343</td>
<td>643</td>
</tr>
<tr>
<td>English medium schools</td>
<td>153</td>
<td>216</td>
<td>369</td>
</tr>
<tr>
<td>Total</td>
<td>453</td>
<td>559</td>
<td></td>
</tr>
</tbody>
</table>

Table-3.2 shows that out of total sample 1012, 153 students belong to government schools and 697 belonging to aided schools and 165 belongs to unaided schools. The total sample consisted of 509 students drawn from
urban schools and 503 from rural schools. Medium-wise 643 students belong to Kannada medium schools and the remaining 369 are from English medium. The total sample of 1012 includes 453 boys and 559 girls from different categories of schools.

Table-3.3: Composition of the Sample—Management-wise

<table>
<thead>
<tr>
<th>Category of management</th>
<th>No. of schools selected</th>
<th>No. of students selected from each school</th>
<th>Total No. of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government schools</td>
<td>6</td>
<td>25</td>
<td>153</td>
</tr>
<tr>
<td>Aided schools</td>
<td>28</td>
<td>25</td>
<td>694</td>
</tr>
<tr>
<td>Unaided schools</td>
<td>6</td>
<td>25</td>
<td>165</td>
</tr>
<tr>
<td>Total sample</td>
<td>40</td>
<td></td>
<td>1012</td>
</tr>
</tbody>
</table>

Table-3.3 shows that the sample consisted of 153 students from government schools, 694 from aided schools and 165 from unaided schools. The total sample being 1012 students.
Table-3.4: Composition of the sample – Location-wise

<table>
<thead>
<tr>
<th>Location</th>
<th>No. of schools selected</th>
<th>Total No. of students selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>20</td>
<td>509</td>
</tr>
<tr>
<td>Rural</td>
<td>20</td>
<td>503</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>1012</td>
</tr>
</tbody>
</table>

The total sample of 1012 students were from Bijapur district urban and rural areas. Altogether 40 schools were selected from Bijapur district.

Table-3.5: Composition of the Sample Medium-wise

<table>
<thead>
<tr>
<th></th>
<th>No. of Kannada medium schools</th>
<th>No. of students from Kannada medium schools</th>
<th>No. of English medium schools</th>
<th>No. of students from English medium schools</th>
<th>Total No. of schools</th>
<th>Total No. of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>10</td>
<td>250</td>
<td>10</td>
<td>259</td>
<td>20</td>
<td>509</td>
</tr>
<tr>
<td>Rural</td>
<td>16</td>
<td>393</td>
<td>4</td>
<td>110</td>
<td>20</td>
<td>503</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>643</td>
<td>14</td>
<td>369</td>
<td>40</td>
<td>1012</td>
</tr>
</tbody>
</table>

Table No. 3.5 shows that 10 Kannada medium schools and 10 English medium schools selected from rural and 16 Kannada medium schools and 4 English medium schools from rural selected for the study.
3.8 Tools Used for Collection of Data

1. Occupational Aspiration Scale – Grewal (1973)
2. Achievement Motivation Inventory – By Prayag Mehta (1969)
3. High School Students Personality Questionnaire – By Cattell (1965)
4. Socio-Economic Status – By Aaron, Marihal and Malatesh (1970)
5. Parental Influence – constructed and standardized by the Investigator

Description of the Tools

3.8.1 Occupational Aspiration Scale

Data relating to occupational aspiration was collected using Occupational Aspiration Scale (OAS). This tool developed by Grewal (1973) which was adopted by getting the prestige rating of 150 occupational titles, identical with the list prepared by the National Opinion Research Centre (NORC, 1974) of the U.S. A. These titles were taken from the Dictionary of Occupational Titles of India. This number was reduced to 108 by a panel of judges who were employed in different occupations. The final list was administered on 200 persons and they were asked to rate each occupation on a five point scale ranging from an occupation of ‘excellent’ to ‘poor’ standing. Social standing of each occupation was calculated out of a rank of 100 by multiplying frequency ratings in each of the five categories by 1.0,
0.8, 0.6, 0.4, 0.2 respectively. Thus, all '0' at '9' depending upon their ranks ranged from '20' to '95' and above. Eighty out of 108 occupations with different prestige values were arranged in mixed order in eight multiple choice items in the format given below:

1.4. Primary school teachers
1.5. Diplomat in foreign service
1.6. Barber
1.7. Psychologist
1.8. Motor mechanic
1.9. Traveling salesman
1.10. Postman.

It should be emphasized to the respondents that there are no "right" or "wrong" answers and that they are not bound by a time limit.

It is reported by Haller and Miller (1967) and also by Grewal (1973) that some of the respondents feel that they need more information. But the semi-projective nature of the Occupational Aspiration Scale requires that the tester gives no information beyond that which is specified leaving the testing situation as unstructured as possible. The test booklets are usable but separate answer sheet can also be provided. Like other tests and scales, the Occupational Aspiration Scale is also favourable. This limitation, however,
can be overcome by giving specific instructions to the respondents. A proper rapport with the respondents is also necessary before the scale is administered.

**Scoring Instructions**

All the eight items are scored in the same way. There are ten alternatives for each question. Only one alternative may be checked. The scores for each alternative are as follows:

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

The total score is the sum of the scores for each of the eight questions.

The raw scores may be converted into standard or ‘t’ scores depending upon the purpose of the study.
Norms

Norms have been determined by administering the scale to 1375 higher secondary students belonging to different sex, age, grade, residence and cultural groups.

Reliability

Co-efficient of stability as determined by the test-retest method was found to be 0.84. The test was further divided into two parallel halves (A and B) for assessing the internal consistency.

The co-efficient of internal consistency between the two halves, A and B, was found to be 0.54.

Validity

The OAS has been validated against Haller and Miller's 'Occupational Aspirational Scale' (1973). The co-efficient of validity was found to be 0.75.

3.8.2 Achievement Motivation Inventory

In the field of achievement motivation, a number of tools are available for the measurement of achievement motivation. To mention a few, some of them are the following. Mehta's (1969) achievement motivation test, a sentence completion test developed by Mukherjee, Mehta's adopted version of McClelland's Thematic Appreciation test, Thematic Appreciation test
For the measurement of achievement motivation in the present study, an inventory developed by Mehta (1969) was used.

The achievement motivation inventory consisted of twenty two items with six alternatives for each item, and the respondents were required to check one of the six alternatives. Among six alternatives, two are task-related, two are achievement related and two are unrelated. For responding to all the statements of the inventory, the time stipulated was thirty minutes.

Administration

Before the administration of the tool, a psychological rapport was built up with the students. The students were taken into confidence and were requested to cooperate and help the researcher in carrying the investigation. They were informed that whatever the information they give would be kept confidential and used for the purpose of research only. Each student was given a copy of the inventory and explained how to respond to the statements in the test.

The students were told to read each item and its responses carefully and to put a tick mark against the response which they thought most
appropriate. An example was also given. The time allotted was thirty minutes.

**Scoring Procedure**

This inventory consists of 22 items and each item is followed by 6 alternatives. The students were asked to mark one of the alternatives among six alternatives, 2 are achievement related, 2 task related and 2 are unrelated. Any respondent indicating a particular response to each statement is given a score according to the scoring key given by Mehta (1969). A score of +1 is given when the student has marked an achievement related alternative. Zero for task related and -1 for unrelated. A total score on the inventory is calculated by subtracting the total number of items marked unrelated (UR) from the total number of items marked achievement related (AR).

**Reliability**

The reliability of achievement motivation inventory developed by Mehta (1969) was established by using the formula K.R.20 and split-half techniques. The coefficients were found to be 0.67 and 0.55 respectively. The coefficients indicate that it is a reliable test to measure achievement motivation as given by author.
Validity

The following table 3.4 as given by the author Mehta (1969) shows the inter-correlations among achievement values and anxiety inventory (AIVI) scores and table 3.6 shows correlation of these scores with need achievement.

Interestingly, the task related (TR) and unrelated to achievement (UR) showed significant negative correlations with need achievement. The TR and UR also showed significant negative correlations with AIVI total score as well as with achievement related (AR) as seen in table 3.6. The factor analysis related similar results. The results AR and AIVI total score showed high positive loading on the first factor, interpreted as need achievement whereas the UR and TR showed high negative loading. These results indicate satisfactory theoretical validity that scores on the AIVI. The results suggested that the AIVI total score and also the AR tend to identify achievement values and the UR tend to show some kind of avoidance motive or achievement anxiety (Mehta, 1969).
Table-3.6 : Inter-Correlation Matrix of AIVI and its Sub-categories

\[(N=937)\]

<table>
<thead>
<tr>
<th>Inventory Scores</th>
<th>No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIVI (Total Score)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AR</td>
<td>2</td>
<td>.852</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR</td>
<td>3</td>
<td>-.365</td>
<td>-.597</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UR</td>
<td>4</td>
<td>-.817</td>
<td>-.692</td>
<td>.109</td>
<td></td>
</tr>
</tbody>
</table>

05 for all correlations

Table-3.7: Correlations between Achievement Categories and Achievement Motivation Inventory Categories

\[(N=937)\]

<table>
<thead>
<tr>
<th>nch categories</th>
<th>AIVI Total score</th>
<th>AIVI Categorieis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TR</td>
<td>UR</td>
</tr>
<tr>
<td>nch Total score</td>
<td>.175(^3)</td>
<td>-.172(^3)</td>
</tr>
<tr>
<td>Unrelated Imagery (Union of India)</td>
<td>-.102(^2)</td>
<td>.114(^2)</td>
</tr>
<tr>
<td>Task Related Imagery (TI)</td>
<td>-.094(^2)</td>
<td>.090(^3)</td>
</tr>
<tr>
<td>Achievement related Imagery (AI)</td>
<td>.151(^3)</td>
<td>-.172(^2)</td>
</tr>
</tbody>
</table>

Significant at .05 level
Significant at .05 level
Significant at .05 level
For selecting Mehta’s Achievement Motivation Inventory

❖ Inventory has been constructed for high school students.
❖ This inventory possesses high reliability and validity coefficients.
❖ Can be administered to a group of thirty to forty students without any difficulty.
❖ The inventory used can be easily understood by the average students.
❖ The system of scoring is easy and can be done quickly.
❖ This inventory has been specially adopted to suit Indian condition.

3.8.3 High School Personality Questionnaire (HSPQ)

The overwhelming verdict of research findings as well as clinical evidence shows that to predict almost anything effectively, at least a dozen unitary traits generally need to be taken into account (Cattelle 1969).

For the general assessment of personality, High School Personality Questionnaire (HSPQ) is a standardized test which measures fourteen distinct dimensions or traits of personality thereby it nearly covers total personality. These fourteen factors are Reserved Vs Warmhearted, Less Intelligent Vs More Intelligent, Affected by feelings Vs Emotionally Stable, Undemonstrative Vs Excitable, Obedient Vs Assertive, Sober Vs Enthusiastic, Disregards Rules Vs Conscientious, Shy Vs Adventurous, Tough-minded Vs Tender-minded,
Zestful Vs Circumspect Individualism, Self assured Vs Apprehensive, Sociably Group-dependent Vs Self-sufficient, Uncontrolled Vs Controlled and Relaxed Vs Tense. These traits are also designated alphabetically as A, B, C, D, E, F, G, H, I, J, O, Q2, Q3 and Q4 respectively. The description of these fourteen personality factors given in Table-3.8.

Keeping this in mind the personality of the children was assessed in the present study, using Cattell's junior- senior High School Personality Questionnaire (HSPQ). The HSPQ covers all the major dimensions of personality which are factor analytically demonstrable in any attempt to describe individual differences comprehensively. It deals with psychologically meaningful and predictively important traits having demonstrable functional unity, such as/ are central to any discussion in general psychological theory.

The HSPQ handles the multiplicity of predictions from one test, but not from one score. It helps to obtain scores on fourteen dimensions of personality. These future dimensions which have been confirmed to various experiments (Catell and Sealy 1965; Coon and Cattell, 1958) cover relatively independent aspects of personality. They represent basic concepts which are understood by psychology, so that insightful understanding of the individual and his development as well as statistical prediction is possible. The above
points weighed in favour of selecting the HSPQ for assessing the personality traits of the children.

Having decided to use the HSPQ the questionnaire was translated into Kannada. The regional language of the subjects on whom it had to be used. The translation was checked by 3 judges who were well versed with psychological testing. Terms which were ambiguous were discussed and resolved. The Kannada version thus prepared was administered to a small group of 10 children of X class. They were asked to answer the items and also check those words which they could not understand such of those terms which the children marked were modified or substituted with simpler words.

Administration

The purpose of the tool and procedure were explained to the students in advance. This HSPQ consisted of 142 questions per booklet. The investigator then readout the instructions and the students were require to put tick mark for one of the statements in answer sheet. Answer sheet is given with the question booklet. 45 minutes of time should be taken for this questionnaire.
Scoring

The completed answer sheet is the usual record for obtaining the score. In special cases, e.g., an unusually young student, who has been allowed to answer directly on the questionnaire booklet, it will save total scoring time to transfer the responses to an answer sheet before scoring.

The answer sheet is scored by a streamlined hand stencil key. An experienced clerk can obtain the fourteen scores on an answer sheet in little more than a minute. Conveniently, the same key is applicable to all four forms. The scoring instructions are as follows:

1. Check to see that each question has been given one and only one, answer. At the same time, note whether there are gross oddities of response which could upset the key. Principally, which for the occasional child who marks all positions, or who proceeds mechanically to mark all right hand responses, etc., Reject such answer sheets.

2. Place cardboard stencil key number 1 on the left hand side of the answer sheet, adjusting it as described right on the key. All necessary instructions for applying the hand stencil key to get "raw scores" for seven of the factors are also printed on the key itself.
Same thing is done with cardboard stencil key number 2 to get the other seven raw scores.

**Standardization: Norms in STENS and CENTILES**

Although there are a few purposes for which the raw scores suffices, most uses require the raw scores, listed on the right of the answer sheet, to be converted to standard scores. The main standard scores are stens, in which a person can score from 1 to 10; but, additionally, scores can be converted to centiles, which show what rank the examinee would have in a group of a hundred people. The average score on the sten scale would be 5.5. (not 5, since there is no 0 in the ten-point range). The average or middle range scores are actually considered as the values 4, 5, 6, and 7. The more extreme sten scores represent a person in the lower (1, 2, 3) or upper (8, 9, 10) ten or fifteen percent of the population (of this age group) on the characteristic indicated. To obtain the sten score or centile rank, simply take the raw score to get from applying the scoring key and enter in the appropriate table in the Tabular Supplement with Norms published separately for this test.
<table>
<thead>
<tr>
<th>FACTORS</th>
<th>LOW SCORE DESCRIPTION</th>
<th>ALPHABETIC DESIGNATION</th>
<th>HIGH SCORE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>RESERVED, DETACHED, CRITICAL, COOL (Sizothymia)</td>
<td>A</td>
<td>OUTGOING, WARMHEARTED, EASY GOING, PARTICIPATING (Affectothymia, formerly cyclothymia)</td>
</tr>
<tr>
<td>B</td>
<td>LESS INTELLIGENT, CONCRETE THINKING (Lower scholastic mental capacity)</td>
<td>B</td>
<td>MORE INTELLIGENT, ABSTRACT THINKING, BRIGHT (Higher scholastic mental capacity)</td>
</tr>
<tr>
<td>C</td>
<td>AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)</td>
<td>C</td>
<td>EMOTIONALLY STABLE, FACES REALITY, CALM (Higher ego strength)</td>
</tr>
<tr>
<td>D</td>
<td>PHLEGMATIC, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)</td>
<td>D</td>
<td>EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE (Excitability)</td>
</tr>
<tr>
<td>E</td>
<td>OBEDIENT, MILD, CONFORMING (Submissiveness)</td>
<td>E</td>
<td>ASSERTIVE, INDEPENDENT AGGRESSIVE, STUBBORN (Dominance)</td>
</tr>
<tr>
<td>F</td>
<td>SOBER, PRUDENT, SERIOUS, TACTurn (Desurgency)</td>
<td>F</td>
<td>HAPPY-GO-LUCKY, IMPULSIVELY LIVELY, GAY ENTHUSIASTIC (Surgency)</td>
</tr>
<tr>
<td>G</td>
<td>EXPEDIENT, EVADES RULES, FEELS FEW OBLIGATIONS (Weaker superego strength)</td>
<td>G</td>
<td>CONSCIENTIOUS, PERSEVERING, STAI!D, RULE-BOUND (Stronger superego strength)</td>
</tr>
<tr>
<td>H</td>
<td>SHY, RESTRAINED, DIFFIDENT, TIMID (Threctia)</td>
<td>H</td>
<td>VENTURESOME, SOCIALLy BOLD UNINHIBITED, SPONTANEOUS (Parmia)</td>
</tr>
<tr>
<td>I</td>
<td>TOUGH-MINDED, SELF-RELIANT, REALISTIC, NO-NONSENSE (Harrla)</td>
<td>I</td>
<td>TENDER-MINDED, DEPENDENT OVER-PROTECTED, SENSITIVE (Premsia)</td>
</tr>
<tr>
<td>J</td>
<td>VIGOROUS, GOES, READILY WITH GROUP ZESTFUL, GIVEN TO ACTION (Zeppia)</td>
<td>J</td>
<td>DOUBTING, OBSTRACTIVE, INDIVIDUALISTIC, INTERNALLY RESTRANDED, REFLECTIVE, UNWILLING TO ACT (Coasthenia)</td>
</tr>
<tr>
<td>O</td>
<td>PLACID, SELF-ASSURED, CONFIDENT, SERENE (Untroubled adequacy)</td>
<td>O</td>
<td>APPREHENSIVE, WORRYING DEPRESSIVE, TROUBLED (Guilt proneness)</td>
</tr>
</tbody>
</table>
Q2 GROUP-DEPENDENT, A “JOINER”  
AND SOUND FOLLOWER  
(Group adherence)  
Q2 SELF-SUFFICIENT, PREFERENCES  
OWN DECISIONS, RESOURCEFUL  
(Self-sufficiency)  
Q3 UNDISCIPLINED SELF-CONFLICT,  
FOLLOWS OWN URGES, CARELESS  
OF PROTOCOL  
(Low integration)  
Q3 CONTROLLED, SOCIAL,  
PRECISE SELF-DISCIPLINED,  
COMPULSIVE  
(High self-concept control)  
Q4 RELAXED, TRANQUIL, TORPID,  
UNFRUSTRATED  
(Low ergic tension)  
Q4 TENSE, FRUSTRATED, DRIVEN  
OVERWROUGHT  
(High ergic tension)

Reliability

The HSPQ was found highly reliable. Its reliability was examined at varying interval of time. The test-retest reliability factor-wise is as follows:

<table>
<thead>
<tr>
<th>Interval Retest</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>.86</td>
<td>.85</td>
<td>.79</td>
<td>.81</td>
<td>.76</td>
<td>.82</td>
<td>.74</td>
<td>.81</td>
<td>.90</td>
<td>.82</td>
<td>.84</td>
<td>.85</td>
<td>.80</td>
<td>.9</td>
</tr>
<tr>
<td>After one day</td>
<td>.85</td>
<td>.78</td>
<td>.77</td>
<td>.80</td>
<td>.74</td>
<td>.76</td>
<td>.72</td>
<td>.81</td>
<td>.88</td>
<td>.81</td>
<td>.83</td>
<td>.82</td>
<td>.78</td>
<td>.8</td>
</tr>
<tr>
<td>After six months</td>
<td>.62</td>
<td>.60</td>
<td>.58</td>
<td>.65</td>
<td>.57</td>
<td>.53</td>
<td>.62</td>
<td>.69</td>
<td>.65</td>
<td>.58</td>
<td>.56</td>
<td>.55</td>
<td>.60</td>
<td>.5</td>
</tr>
<tr>
<td>After one year</td>
<td>.55</td>
<td>.38</td>
<td>.50</td>
<td>.55</td>
<td>.47</td>
<td>.52</td>
<td>.44</td>
<td>.48</td>
<td>.69</td>
<td>.49</td>
<td>.56</td>
<td>.39</td>
<td>.41</td>
<td>.3</td>
</tr>
</tbody>
</table>

Validity

The estimation of validity based on the multiple correlations between the items in each test scale and the corresponding pure factor are shown in the table appended below.
Consistency

The term consistency is used to describe the content to which the individual scales of the test show inter and intra form agreement. This is conceptually broader than what is generally implied by test reliability and subsumes reliability as well as other indices of scale agreement.

Reliability is the agreement of a test with itself over time, when re-administered at brief intervals (dependability), or after longer periods (stability) where maturation, learning or fluctuation – real changes in the trait itself tend to lower the reliability values.

Conclusion

In order to enable the students studying in Kannada medium schools to understand the meaning of the statement better and also to know clearly what is expected from them, the HSPQ was translated into Kannada. The Kannada version of the test was administered on a sample of students to ascertain the clarity of expression.
3.8.4 Socio-economic Status Scale

Among the social factors socio-economic status (SES) is an important one. The socio-economic status influences values, norms of behaviour, achievement motivation and social participation. It is worth studying here whether the socio-economic status has got any bearing on the occupational aspirations of the students in secondary schools.

Different SES scales have been developed by Kuppuswamy (1962), Pareek and Trivedi (1964), Jalota, et.al., (1970) and others. But some of these scales (eg., Kuppuswamy) are constructed to be used on urban samples, while some others (like Pareek and Trivedi) were developed to be used exclusively on rural children. this difficulty is overcome in a scale developed by Aaron, Marihal and Malatesh (1970) since it was constructed to be used on urban as well as rural children.

It contains all relevant items related to the economic status of the family occupational level of the parents, level of education of parents, household possessions, etc., which go to determine the social as well as economic status of the family. Thus, the scale can be reasonably well assumed to have construct validity.
Therefore, in the present study "A Common Socio-economic Status Scale for rural and Urban Areas" constructed by Aaron, Marihal and Malatesh (1970) was used for this study. As the students under the present study hail from rural and urban areas the common SES scale was selected. Following is the brief description of the SES scale.

The authors emphasized the following three ideas which influenced the construction of the scale.

1. The information elicited should be simple and reliable.
2. As for as possible, similar rural and urban sources should be tapped to provide information regarding their respective socio-economic status.
3. The ultimate aim of the scale is to identify and isolate groups of rural and urban people of similar socio-economic status.

Variables of the Scale

The variables used in this scale have been tested by other researchers and the combinations of these and other indicators are correlated well with measures of attitude and behaviour of the 7 variables. First one refers to fathers' education, second one to mothers' education and third one to fathers occupation and fourth one to mothers occupation and fifth one to material possessions and sixth one refers to house and seventh one to hand possession.
Regarding the weightages given to various items under seven categories, the authors followed trail and error method of revising the weightages in a systematic way in order to obtain a normal distribution of the SES scores of rural and urban distributions. By this they arrived at a stage where the chi-square values obtained from rural as well as urban distribution did not turn out to be significant at 0.05 level. The weightages designed at this stage to different items were fixed.

**Validity and Reliability**

The validity and reliability for the entire SES scale were established. The concurrent validity of the scale was obtained by finding to what extent the scores obtained by pupils on the SES scale correspond to an outside criterion i.e., the SES score assigned by the teacher of the class where the pupils were studying. The Pearson’s Product Moment correlation co-efficient was computed. The test-retest reliability was obtained by retesting after one month. The validity and reliability co-efficients were as follows:

\[
\text{Concurrent validity } (N = 28) = 0.61 \text{ significant beyond 0.01} \\
\text{Test-retest } (N= 23) = 0.77 \text{ significant beyond 0.01}
\]
Scoring procedure

There are seven categories viz., Education of father, Education of mother, occupation of father, occupation of mother, material possession, house and land possession in SES scale. The subject was given a score under each of these categories so that the final SES index was the total of these scores. Only the maximum possible score was considered under each category. The scores of course, depended upon the weightage of the item. For instance, under category Vth (material possession) the subject may possess a cycle as well TV and no other material cycle has a weightage of 1 and a TV has a weightage of 2, so the subjects scores under this category is 2. Eventually the scores of all seven categories were added and this represents the SES index.

The SES index was divided into two different levels higher and lower.

A copy of the SES scale used for collecting the data in this study is given in Appendix.

3.8.5 Parental Influence Inventory

Investigator prepared the statements by conducting brainstorming sessions on X standard students. The matter given for brainstorming was
parental influence on various aspects of their life. 20 boys and 20 girls were selected for the brainstorming session.

In total the investigator could gather 400 responses and those are classified systematically in five areas as follows;

   i. Academic support
   ii. Personal care
   iii. Vocational support
   iv. Moral support
   v. Support for co-curricular activities

1. Academic Support: The extent of academic support extended by parents to their child can be ascertained by choice of school, regular visits to school, checking the homework, providing reading and writing materials etc.

2. Personal Care: Personal care by the parents involves providing love and affection, take them along for picnics, speaking in a warm and affectionate manner etc.

3. Vocational support: parents show their vocational support to their child by making them read career books, providing information regarding occupations etc.
4. Moral Support: It is the responsibility of the parents to develop social and moral values in the children through training at home. This includes telling the stories of great people, respecting to the teachers, warn them to away from any form of bad habits etc.

5. Co-curricular Activities: Parents inclinations for specific activities influence their children also, for example advising them to play specific games, motivating them to participate in cultural activities of the school etc.

Out of many responses 150 statements were selected by the investigator. These 150 statements were cross checked for their clarity and content accuracy by reassigning them once again to the five pre-set dimensions of the scale. This was done by five judges. Scrutiny of terms on inter-judge evaluation for lack of brevity, overlap, parameter ambiguity and conceptual inadequacy resulted in ninety items being deleted from the original format. Final format contained sixty items with 12 items under each dimension.

Pre-study

The final list having 60 items was administered to 100 students studying in the X class. These students were selected randomly they included both boys and girls.
Students found it difficult to interpret the meaning of 10 statements and they were eliminated for the pilot study. The final inventory consisted of 50 items with 10 items under each dimension. Clear cut instructions were given at the top of the inventory.

Pilot Study

The printed inventory was administered on random sample of 100 students of standard X of four different schools for the pilot study. In each school the inventory was administered to 25 students at a time.

Tool Description

The data available on the items of the scale can be grouped into fairly universal dimensions of parents influence on their children. The tool contains 50 items categorized into five dimensions namely, academic support, personal care, vocational support, moral support and support for co-curricular activities.

Respondents are asked to give responses to each statement by indicating (✔) tick mark in space provided under ‘Yes’ or ‘No’.
Scoring

The scoring key was prepared along with inventory. If the student response is 'yes' for a statement than '1' score will be allotted and if response was 'No' it is allotted zero score, likewise scoring to all 50 items has to be carried out. The total scores are the index of Parental influence.

Reliability

To establish reliability for the scale the investigator calculated coefficient of correlation using split-half method, it was found to be 0.8574 indicating a high +ve correlation. The validity was found to be 0.9259 since reliability and validity were established the investigator retained the format having 50 items for the final administration.

3.9 Collection of Data

Preliminary steps taken to facilitate collection of data

The investigator personally collected the data from 40 Secondary schools of X Standard students in Bijapur district. For getting permission from the heads of the schools which were selected for study, a letter to each school was sent. Necessary information was provided in the letter to the heads of schools regarding the objective of the study. Co-operation was
solicited for collection of data from the students. Necessary permission was also obtained from the DDPI before the data collection started.

Before administering the inventory, questionnaire and scale to each respondent, all efforts were made to establish rapport with the pupils. The purpose of the administration of the tools was explained to the respondent, well in advance. While collecting data every precaution was taken to ensure normal conditions. The filled in proformas and tools were collected. The Occupational Aspiration Scale, Achievement Motivation Inventory, HSPQ, Socio-Economic Status Scale and Parental Influence Inventory were administered to 25 students of each Secondary school. The confidentiality of the responses was assured. The collected data was systematically pooled for analyses.

3.10 Statistical Techniques Used for Analysis of the Data

The following techniques were used for analyzing the data as per the objectives of the study stated earlier.

i. Measure of Central Tendency

Mean: Mean is a relatively stable measure of central tendency. It has importance in the further statistical analysis and quite amendable to algebraic treatment.
ii. Measure of Variability

**Standard Deviation:** Standard Deviation is most widely used and popular measure of variability. It is understood as a very satisfactory measure of dispersion.

iii. Multiple Classification of Analysis of Variance

The analysis of variance (ANOVA) is a good technique to ascertain whether two or more than two groups differ significantly in their means in the simplest possible manner, whereas the Multiple Classification of Analysis of Variance verifies the significance of combined effect of two or more variables on one dependent variable.

Multiple classifications ANOVA helps the researcher to determine the relationship between one dependent variable and two or more independent variables. The researcher can test the relationship between the dependent variable and various interactions of the independent variables (Popham, 1967).

**Main Effects:** In the present investigation the independent variables self-concept, Academic Achievement, achievement motivation of subjects are
taken as main effects (at two level high and low) on vocational interest and its ten vocational areas/ dimensions.

**Interaction Effects:** When two or more set of variables have got the combined effect on the criterion variable, it is said that interaction effect exist on criterion variable.

**iv. Correlation**

When for each measurement of one variable (X) there is a corresponding value of a second variable (Y), then it is said that there is a correlation between these two variables (X & Y).

When the relationship between two sets of measures is "linear" i.e., can be described by a straight line, the correlation between scores may be expressed by the "product moment" coefficient of correlation, designated by the letter ‘r’ Garrett; (1981).

**Coefficient of Correlation:** Coefficient of correlation is the ratio, which shows the extent to which changes in one variable are accompanied or dependent upon changes in a second variable.

The product moment coefficient of correlation is also known as Karl Pearson’s coefficient of correlation and represented by letter ‘r’. ‘r’ can take

195
the values numerically from \(-1\) to \(+1\). The numerical value of \(\rho\) shows the strength of relationship whereas sign indicates the direction of relationship.

In the present study the Karl Pearson’s Coefficient of Correlations \((r)\) have been computed between Vocational Interest along with its dimensions and personality traits. Academic achievement, self-concept and achievement motivation of the subjects taken for the study.

v. Regression

The term ‘regression’ means the act of returning or going back. The term ‘regression’ first came into use when Francis Galton was studying the relationship between height of fathers and sons.

In the study of the height of about one thousand fathers and sons, very interesting fact surfaced; tall fathers tend to have tall sons and short fathers short sons. But the average height of the sons of all fathers was less than that of the fathers and the average height of the sons of short fathers was greater than that of the fathers. The line describing this tendency to ‘regress’ or going back was called by Galton as ‘regression line’ (Gupta 1975).

Regression is the determination of a statistical relationship between two or more variables in which one variable (defined as independent) is the
cause of the behaviour or another one (defined as independent variable) (Kothari; 1985).

The correlation coefficient merely measures the degree of relationship between two variables (X and Y) whereas the nature of relationship i.e., cause and effect relation can be ascertained by regression analysis only.

When two or more than two variables are having correlations, then by using the known values of the variables, the unknown value of another variable can be predicted and estimated by regression. In this prediction the most probable value of unknown variable can be estimated.