CHAPTER III

METHODS & PROCEDURES
In this chapter the design, methods and procedures of the study have been discussed with regard to the following heads:

1- Population
2- Sample
3- Variables Involved
4- Tools used
5- Collection of Data
6- Statistical Techniques used

The Population

In research population means observation of all the units. In the present study the female students, studying in B.A. final year of co-educational aided colleges of Bundelkhand University, Jhansi have been described as the population. Names of the degree colleges are as follows:-

1- Atarra College, Atarra
2- Bundelkhand College, Jhansi
3- D. V. Degree College, Orai
4- Gandhi Degree College, Orai
5- Kalpi Degree College, Kalpi
6- Mathura Prasad Patel Degree College, Konch
7- Pt. J. L. N. Degree College, Banda
8- Bipin Bihari College; Jhansi
9- B. N. V. College, Rath
10- Nehru Degree College, Lalitpur
11- Shri Agrasen Degree College, Mauanipur.
The Sample

It is difficult to study the whole population. So sample has been selected from the population which represents all the characteristics of the population. For conducting this study out of 11 aided co-educational colleges of Bundelkhand University Jhansi, six colleges were selected randomly through lottery system. According to the population of the different categories of the students a proportionate sample of 240 female students of General, 140 female students of Other backward classes and 80 female students of Scheduled castes were drawn from the population.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Co-educational colleges</th>
<th>No. of selected students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-</td>
<td>Atarra College, Atarra</td>
<td>102</td>
</tr>
<tr>
<td>2-</td>
<td>Bundelkhand College, Jhansi</td>
<td>45</td>
</tr>
<tr>
<td>3-</td>
<td>D.V. (P.G.) College, Orai</td>
<td>106</td>
</tr>
<tr>
<td>4-</td>
<td>Gandhi Degree College, Orai</td>
<td>60</td>
</tr>
<tr>
<td>5-</td>
<td>Mathura Prasad Patel Degree College, Konch</td>
<td>92</td>
</tr>
<tr>
<td>6-</td>
<td>Pt. J.L.N. Degree College, Banda</td>
<td>95</td>
</tr>
</tbody>
</table>

Variables Involved

Following variables were involved in this study.

(i) Personality Traits/Factors

(ii) Adjustment

Personality

In the present study a dynamic concept of personality has been considered by which a person adjusts with his environment. Personality is not a stable thing but it is dynamic and various changes take place from time to time, these changes contribute in development of an individual personality. Development of personality takes place in social circumstances and it shows by
mutual interaction with the people. In this study following sixteen personality traits/factors have been studied.

1- A Warmth 2- B Intelligence
3- C Emotional maturity 4- E Dominance
5- F Impulsivity 6- G Superego strength
7- H Boldness 8- J Sensitivity
9- L Trust 10- M Imagination
11- N Shrewdness 12- O Confidence
13- Q_1 Radicalism 14- Q_2 Self-Sufficiency
15- Q_3 Self-Sentiment 16- Q_4 Tension.

Factor A

The A⁻ pole refers to as sizothymia and the A⁺ pole as affectothymia. The sizothymia individual has a temperamental inclination to cautious in emotional expression, uncompromising and critical in outlook and awkwardly a loof in manner the more consistent features of affectothymia are easygoingness, accessible emotions, interest in people, predominance of affect, etc.

Factor B

The B⁻ pole refers to Low intelligence and the B⁺ Pole to High intelligence. The low intelligence individual tends to be slow to learn and grasp, dull, given to concrete and literal interpretation on intelligence. His dullness may be simply a reflection of low intelligence or it may represent poor functioning due to psychopathology. The high intelligence person tends to be quick to grasp ideas, a fast learner. There is some correlation with level of culture, and some with alertness. High scores contraindicate deterioration of mental functions in pathological conditions.

Factor C

The C⁻ pole refers to emotional instability or ego weakness and the C⁺ pole as higher ego strength. Lower ego strength individual tends to be low in frustration, tolerance for unsatisfactory conditions, changeable and plastic,
evading necessary reality demands, neurotically fatigued, fretful, easily emotional and annoyed, active in dissatisfaction, having neurotic symptoms. The more consistent features of higher ego strength are emotionally mature, stable, realistic about life, unruffled, possessing ego strength, better able to maintain solid group morale. Sometimes he may be a person making a resigned adjustment to unsolved emotional problems.

Factor E

In women, the dominance traits 'hypochondrical', 'socially poised', 'prominent' and 'attention-getting' are more highly loaded in the dominance factor than they are in men. The $E^-$ pole refers to as submissiveness and the $E^+$ pole as dominance. The submissive person gives way to other, to be docile and to conform and often dependent, confessing, anxious for obsessional correctness while dominant individual is assertive, self assured, independent minded, hostile, authoritarian (managing others) and disregards authority.

Factor F

The $F^-$ pole refers to as desurgery and the $F^+$ pole as surgency. The disurgent person is more restrained, reticent, introspective, sober and dependable. While surgey show more cheerful, active, talkative, frank, expressive, effervescent and carefree. He is frequently chosen as an elected leader. He may be impulsive and merciful. Examination of origins show that surgey persons have generally had an easier less punishing, more optimism creating environment or that they have a more happy-go-lucky attitude through less exacting aspirations while the desurgent show more headache, worrying irritability, depressive retardation, phobias and nightmares.

Factor G

The $G^-$ pole refers to weaker superego strength and the $G^+$ pole as stronger superego strength. Lower superego strength individual tends to be unsteady in purpose and he is often casual and lacking in effort for group undertaking and cultural demands. His freedom from group influence may lead
to anti social acts but at time make him more effective while his refusal to be bound by rules, causes him to have less somatic upset from stress. Stronger superego strength person tends to be exacting in character, dominated by sense of duty, persevering responsible, planful, "fills the unforgiving minute". He is usually conscientious and moralistic, and he prefers hard working people to witty companions.

Factor H

The H⁻ pole refers to as threctia and the H⁺ pole as parmia. The threctia individual tends to be shy, withdrawing, cautious, retiring a wallflower. He usually has a inferiority feelings and to be slow and impeded in speech and in expressing himself, dislikes occupations with personal contacts, prefers one or two close friends to large groups and is not given to keeping in contact with all that is going on around him while parmia person tends to be sociable, bold, ready to try new things, spontaneous and abundant in emotional response.

Factor I

The I⁻ pole refers to as harria and the I⁺ pole as premsia. The harria individual tends to be practical, realistic, masculine. independent, responsible but skeptical of subjective, cultural elaboration. While the premsia person tends to be tender minded, day dreaming, artistic, fastidious feminine, seeking help and sympathy, anxious about self, he dislikes crude people and rough occupations.

Factor L

The L⁻ pole refers to as alaxia and the L⁺ pole as protension. The alaxia person tends to be free of jealous tendencies, adaptable, cheerful, un-competitive, concerned about other people, a good teamworker. The protension person tends to be mistrusting and doubtful. He is often involved in his own ego is self opinionated and interested in internal, mental life. He is usually deliberate in his actions concerned about other people, a poor team member.

Factor M

The M⁻ pole refers to as praxenia and the M⁺ pole as autia. The praxenia individual tends to be practical, careful, conventional, regulated by
external realities, proper. Autia individual tends to be unconventional, unconcerned over everyday matters, bohemian, absent minded, self motivated, imaginatively creative, concerned with 'essentials' and oblivious of particular people and physical realities etc.

The M⁻ individuals in groups tends to feel unaccepted but unconcerned. They participate and make original leadership suggestions.

**Factor N**

The N⁻ pole refers to as artlessness and N⁺ pole as shrewdness. The artlessness individual tends to be unsophisticated, sentimental and simple. He is sometimes crude and backward but easily pleased and content with what comes and is natural and spontaneous. The shrewdness individual tends to be polished, experienced, worldly, shrewd. He is often hardheaded and analytical. He has an intellectual, unsentimental approach to situations, an approach akin to cynicism.

**Factor O**

The O⁻ pole refers to as untroubled adequacy and O⁺ pole as guilt proneness. The untroubled adequate person tends to be placid, self assured, confident, secure, complacent etc. The guilt proneness individual tends to be depressed, moody, a worrier, full of foreboding and brooding.

In the questionnaire responses the O⁺ individual feels that he is unstable, reports from exciting situations is unstable to sleep through worrying is easily downhearted and remorseful is inclined to piety, prefer books and quiet interests to people and noise.

**Factor Q₁**

The pole Q₁⁻ refers to as conservatism of temperament and the Q₁⁺ pole as radicalism. The Q₁⁻ individual tends to be conservative, respecting established ideas, tolerant of traditional difficulties. The more consistent features of radicalism are experimenting, liberal, analytical, free thinking etc.

Q₁ items show that they express more interest in science than religion, more interest in analytical thought, in modern essays, in reading as
opposed to class instruction, in breaking the crust of custom and tradition, and in leading and persuading people.

**Factor Q₂**

The Q₂⁻ pole refers to as group dependency and the Q₂⁺ pole as self sufficiency. The group dependent prefers to work and make decisions with other people, likes and depends on social approval and admiration, in conventional and fashionable. The self sufficient person prefers own decisions, and resourceful.

Occupationally Q₂ is very high for farmers, writers, scientists and criminals.

**Factor Q₃**

The Q₃⁻ pole refers to as low self sentiment integration and the Q₃⁺ pole as high strength of self sentiment. Low integration individual is undisciplined, selfconflict, careless of protocal, lax and follows own Urges. High self concept control person is controlled exacting will power, socially precise, compulsive, following self image, etc.

**Factor Q₄**

The Q₄⁻ pole refers to as low ergic tension and the Q₄⁺ pole as high ergic tension. Low ergic tension individual is relaxed, tranquil, torpid, unfrustrated, composed. High ergic tension individual is tense, frustrated, driven, overwrought, fretful.

Person high in Q₄ rarely achieve leadership. Also, they take a poor view of the degree of group unity.

**ADJUSTMENT**

In the present study adjustment means a relationship between the individual and his environment through which individuals needs are satisfied in accordance with their social demands because a person attempts to meet its demands with the resources of his environment. In the present study five areas of adjustment are included -

(46)
(i) Home Adjustment

Home adjustment means adjustment of an individual at his home. If his behaviour is good at home, he obeys his parents and elders, he loves his youngers and consequently he is said to be well adjusted at home. Low scores indicate satisfactory adjustment. Individuals scoring high tend to be unsatisfactory adjusted towards their home surroundings.

(ii) Health Adjustment

If a person has good health and has no tension about his health, has no worries and no diseases, he is well adjusted in terms of health. Low scores indicate satisfactory health adjustment and high scores unsatisfactory adjustment.

(iii) Social Adjustment :- Social adjustment means adjustment of individuals to their social groups. It provides an index of their social relations and popularity. It reduces their tensions, make them happy and socially efficient. They participate in group activities and feel social ease in group situations. They are unselfish and concrete on their duties. They do not like to enjoy special privileges. Individuals scoring low are submissive and retiring. High scores indicate aggressive behaviour.

(iv) Emotional Adjustment

Emotional adjustment refers to individual's adjustment to emotional situations and stability in his nature. It leads to tension, reduction and facilitates concentration, motivation and learning. An emotionally adjusted person is comparatively free from tensions, worries, strains, stresses, conflicts and is stable in his behaviour. High scores indicate unstable emotion. Individuals with low scores tends to be emotionally stable.

( 47 )
(v) Educational Adjustment

Educational adjustment means adjustment of students to their curricular and co-curricular programmes. Educationally well adjusted students select their courses according to their abilities and interest. They have good study habits, positive attitude towards schooling and stronger need for scholastic achievement. They enjoy their educational programme and respect their teachers.

Individuals scoring high are poorly adjusted towards their curricular and co-curricular programmes. Persons with low scores are interested in the educational activities.

TOOLS

In order to investigate any problem the researcher has to apply various tools and techniques for the collection of data. In the present study two tools were used for the collection of data.

Personality Traits/Factors

In the present study for the measurement of personality factors Hindi adaptation of Cattell's Sixteen Personality Factors Questionnaire (16PF) FORM A (IPAT's - 1967 Edition) was selected. This test was prepared by RAYMOND B. CATTELL and HERBERT W. EBER. The adaptation has been done by S.D. Kapoor and is widely used in India. This is an objectively scorable test devised by basic research in psychology to give the most complete coverage of personality possible in a short time. The test was designed for use with individuals aged sixteen and above.

Comprehensive coverage of personality rests upon measurement of sixteen functionally independent and psychologically meaningful dimensions isolated and replicated in more than thirty years of factor analytic research on normal and clinical groups. Each of the sixteen personality factors is listed with its alphabetic designation and brief descriptions of low and high scores. The
test is most appropriate for the fully literate persons i.e. whose educational level is equivalent to that of the normal high school students.

The 16 dimensions measured by the 16 P.F. test are essentially independent of each other, i.e. the correlation between one dimension and other is usually small. It is because of its independence and having a certain position on one dimension. Thus the information gathered from this test is superior to many other multi-dimensional tests of personality. These qualities of the scale led to its inclusion in the present study.

In the test there are ten to thirteen items for each factor. The questions are arranged in a roughly cyclic order determined by a plan to give maximum convenience in scoring by stencil and to ensure variety and interest for the examinee. For every question three alternative answers have been provided. The answers are given on a separate answer sheet. No item is to be left unanswered. Scoring was done by means of hand scoring keys. Separate scores obtained for all the sixteen factors. There was no limitation of the time for the test but it took 45-60 minutes approximately.

As regards reliability of the test, dependability coefficients (based on short term test retest) and stability coefficient (based on retest after a longer interval) have been reported for all the factor scales. These coefficients were found to be significantly high as shown in table.

**TABLE - 3.1**

16 PF : Test Retest with DEPENDABILITY COEFFICIENTS

2 TO 7 Day Intervals

**Source Trait**

| Form | A | B | C | E | F | G | H | I | L | M | N | O | Q₁ | Q₂ | Q₃ | Q₄ |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|----|----|
| A    | 86| 79| 82| 83| 90| 81| 92| 90| 78| 75| 77| 83| 82| 85| 80| 72 |
| A*   | 81| 58| 78| 80| 79| 81| 83| 77| 75| 70| 61| 79| 73| 73| 62| 81 |
| B    | 75| 54| 74| 80| 81| 77| 89| 79| 77| 70| 60| 81| 70| 75| 62| 87 |
| A*   | Canadian Subjects : N = 243, high School males and females. |
| A    | American Subjects : N = 146, 79 employment counsellors and 67 undergraduate students |

(49)
ADMINISTRATION AND SCORING

Firstly, the investigator tried to establish good 'rapport' with the examinees by saying that he was not giving them any test. To begin with, he gave each of them a booklet and a separate answer sheet. Although simple and clear instructions were printed for the examinees on the cover page of the test booklet yet the investigator himself had read loudly all the instructions and told his examinees to be frank and honest in giving answers. He asked them to fill their identification i.e. name, name of the institution, father's name, age, correspondence address, etc. He also gave them five minutes for reading the instructions silently.

After reading the general instructions, the investigator enquired from the examinees whether they had understood the instructions? The quarries made by the students were replied to their satisfaction. The investigator then asked the students to open their booklets and proceed. This test was untimed but the investigator reminded the examinees that they should tally and should give immediate answers. After ten minutes, he reminded by saying, "most students were now doing question ..............." (according to the observation). An average student took forty five to sixty minutes to complete the test. Before collecting the answer sheets, he had seen that all the students have filled their names, etc. and one and only one, answer was given for every question on the test.

Procedure for scoring

The scoring of the 16 PF Questionnaire was very easy. Each answer scored 0, 1 or 2 points, except the factor B (intelligence) answer which score 0 (incorrect) or 1 (correct). The score of each item contributes to only one factor total. Tests can be either hand scored with a stencil key or machine scored but in this investigation, hand scoring was done by stencil key. The answer appeared as pencil marks in the boxes on the given answer sheet. Two cardboard stencil scoring keys were used, one covered Factors A, C, F, H, L, N, Q₁ and Q₃ and the other Factors B, E, G, I, M, O, Q₂ and Q₄. The method
was very simple. Firstly, the investigator had to fit stencil 1 over the answer sheet and had to count the marks visible through the holes for Factor A, allowing either 2 or 1 score as indicated by the number printed adjacent to the hole. The total of these scores was entered in the space indicated by the arrow on the stencil for Factor A (raw scores) but not that factor B (intelligence) is peculiar in that each correct mark visible in a hole gives a score of 1 only and all the raw scores of the factors were counted in the same manner.

Before using the stencils, the investigator had to take a quick look at each answer sheet to make sure that there were no odd unscorable responses, e.g. marking two out of three alternatives or entirely omitting any response to an item.

ADJUSTMENT

There are a number of adjustment's inventory to measure the adjustment for example.

(i) Highschool Adjustment Inventory - Singh and Sen Gupta
(ii) Adjustment Inventory for School Students - Sinha and Singh
(iii) Adjustment Inventory Hindi - R.K. Ojha
(iv) Adjustment Inventory Hindi - V.K. Mittal

The investigator carried out a survey of various adjustment inventories and out of these inventories the 'Adjustment Inventory for college students' (AICS) by A.K.P. Sinha and R.P. Singh2 was selected due to the following reasons:

(1) This adjustment inventory has been designed for use with Hindi college students of India.

(2) This inventory discriminates between well adjusted and poorly adjusted students. It measures adjustment in five areas of adjustment (Home, Health, Social, Emotional, Educational). The test is helpful in screening the poorly adjusted students who may need further psychodiagnostic study and counselling.
(3) It can be administered and scored easily. It has 102 items of 'Yes' and 'No' types. Ordinarily an individual takes 18 minutes in completing the test.

(4) It has been standarized on randomly selected representative sample of 2280 students (1550 M, 730 F) of Patna and Magadh university.

(5) It is evident from the table 3.2 that this inventory is the most reliable tool.

**TABLE 3.2**

<table>
<thead>
<tr>
<th>Method Used</th>
<th>Home (क)</th>
<th>Health (ख)</th>
<th>Social (र)</th>
<th>Emotional (घ)</th>
<th>Educational (च)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spilt half</td>
<td>.87</td>
<td>.83</td>
<td>.96</td>
<td>.95</td>
<td>.97</td>
<td>0.94</td>
</tr>
<tr>
<td>Test-retest</td>
<td>.85</td>
<td>.82</td>
<td>.95</td>
<td>.94</td>
<td>.96</td>
<td>0.93</td>
</tr>
<tr>
<td>Hoyt's method</td>
<td>.86</td>
<td>.85</td>
<td>.95</td>
<td>.95</td>
<td>.94</td>
<td>0.94</td>
</tr>
<tr>
<td>K-r formula-20</td>
<td>.84</td>
<td>.82</td>
<td>.92</td>
<td>.94</td>
<td>.93</td>
<td>0.92</td>
</tr>
</tbody>
</table>

(6) In item analysis validity coefficients determined for each item by biserial correlation method and only such items were retained which yielded biserial correlation with both the criteria (i) total score and (ii) area score, significant at .001 level.

Intercorrelations among the five areas of inventory were calculated. The correlation matrix is presented in the following table

**TABLE 3.3**

<table>
<thead>
<tr>
<th>Areas</th>
<th>a (क)</th>
<th>b (ख)</th>
<th>c (र)</th>
<th>d (घ)</th>
<th>e (च)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a (क) Home</td>
<td>-</td>
<td>.22</td>
<td>.16</td>
<td>.26</td>
<td>.25</td>
</tr>
<tr>
<td>b (ख) Health</td>
<td>.22</td>
<td>-</td>
<td>.14</td>
<td>.25</td>
<td>.22</td>
</tr>
<tr>
<td>c (र) Social</td>
<td>.16</td>
<td>.14</td>
<td>-</td>
<td>.21</td>
<td>.20</td>
</tr>
<tr>
<td>d (घ) Emotional</td>
<td>.26</td>
<td>.25</td>
<td>.21</td>
<td>-</td>
<td>.32</td>
</tr>
<tr>
<td>e (च) Educational</td>
<td>.25</td>
<td>22</td>
<td>.20</td>
<td>.32</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 3.3 reveals that correlation among various areas vary from 0.14 to 0.32 with an average of 0.22.
(7) Percentile norms were also available for both males and females of all the five areas of adjustment separately and also for the whole inventory.

The same procedure for selecting this test was applied as for 16 PF Questionnaire. This test is available in the form of reusable booklets and separate answer-sheets for giving answers. The investigator, first had distributed the booklets and answer sheets and had read the instructions aloud. Then he asked the students to start the work.

Following instructions were given on the front page of adjustment inventory.

1- Do not open or turn any page of this booklet until you are told to do so.
2- Do not make any mark in this booklet and handle it with care.
3- You have this booklet in which some questions relating to your personality are given and your answers to be marked on the separate answer sheet provided.
4- You will find two cells against each question on the answer sheet. Look from your side left hand cell is indicating 'Yes' response while right hand cell is indicative of 'No' response. Out of these two cells you have to draw a circle around any one which is applicable on you.
5- Your responses will be kept completely secret, so answer them without hesitation.
6- There is no limit, but try to finish it as early as possible.

The scoring of the answer sheet was very easy. Transparent scoring keys were used for each area and responses marked under circle were noted and each was assigned a weightage of one (1) score. The five different categories of adjustment were 'A' which stood for excellent, 'B' for good 'C' for average, 'D' for unsatisfactory and 'E' for very unsatisfactory. The following table presents the classification of adjustment for total scores.
TABLE 3.4
Classification of Adjustment in terms of Categories

<table>
<thead>
<tr>
<th>Categories</th>
<th>Description</th>
<th>Range of Scores</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Excellent</td>
<td>12 and below</td>
<td>12 and below</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>13-28</td>
<td>13-27</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>29-45</td>
<td>28-42</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Unsatisfactory</td>
<td>46-61</td>
<td>43-57</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>62 and above</td>
<td>58 and above</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.4 shows the classification of adjustment for male and female.

Table 3.5 shows the classification of adjustment for male and female in respect of the five areas- Home, Health, Social, Emotional and Educational.

TABLE 3.5
Classification of Adjustment in terms of Categories in the Five Areas

<table>
<thead>
<tr>
<th>Area</th>
<th>Category</th>
<th>Description</th>
<th>Range of Scores</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>A</td>
<td>Excellent</td>
<td>0 - 1</td>
<td>0 - 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Good</td>
<td>2 - 3</td>
<td>2 - 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>Average</td>
<td>4 - 7</td>
<td>4 - 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>Unsatisfactory</td>
<td>8 - 9</td>
<td>6 - 8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>10 and above</td>
<td>9 and above</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>A</td>
<td>Excellent</td>
<td>0 - 1</td>
<td>Zero</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Good</td>
<td>2 - 3</td>
<td>1 - 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>Average</td>
<td>4 - 5</td>
<td>3 - 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>Unsatisfactory</td>
<td>6 - 8</td>
<td>7 - 9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>9 and above</td>
<td>10 and above</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>A</td>
<td>Excellent</td>
<td>0 - 2</td>
<td>0-3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Good</td>
<td>3 - 6</td>
<td>4-6</td>
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<tr>
<td></td>
<td>C</td>
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<tr>
<td></td>
<td>D</td>
<td>Unsatisfactory</td>
<td>10 -12</td>
<td>10 -12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>Very Unsatisfactory</td>
<td>13 and above</td>
<td>13and above</td>
<td></td>
</tr>
</tbody>
</table>
Table 3.6 shows Mean and S.D. of male and female in respect of five areas.

TABLE 3.6

<table>
<thead>
<tr>
<th>Area</th>
<th>Male Mean</th>
<th>Male SD</th>
<th>Female Mean</th>
<th>Female SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>a (क) Home</td>
<td>4.95</td>
<td>2.82</td>
<td>4.24</td>
<td>2.16</td>
</tr>
<tr>
<td>b (ख) Health</td>
<td>4.26</td>
<td>2.64</td>
<td>4.04</td>
<td>2.92</td>
</tr>
<tr>
<td>c (र) Social</td>
<td>8.14</td>
<td>2.48</td>
<td>8.46</td>
<td>2.56</td>
</tr>
<tr>
<td>d (ध) Emotional</td>
<td>11.21</td>
<td>5.65</td>
<td>11.48</td>
<td>5.83</td>
</tr>
<tr>
<td>e (ञ) Educational</td>
<td>7.25</td>
<td>3.90</td>
<td>6.69</td>
<td>3.60</td>
</tr>
</tbody>
</table>

Statistical Technique used

First purpose of this study was to compare the adjustment and the personality traits/factors of female students of different categories. The data obtained on various dimensions of adjustment and personality traits/factors were tabulated separately. Mean scores and Standard Deviations of each group on various dimensions of these variables were calculated. Profiles for different groups were prepared on the basis of mean scores and plotted in figures to give a comparative picture.
Hence the comparison between different groups were made on the basis of the t-test with 0.05 and 0.01 levels of confidence considered significant. Hypothesis from 1 to 2 were tested applying two tailed t-test. The following formula has been used:

\[
t = \frac{\text{Difference between means}}{\text{Standard error of the difference}}
\]

\[
t = \frac{M_1 - M_2}{\sqrt{\frac{\sigma^2_1}{N_1} + \frac{\sigma^2_2}{N_2}}}
\]

Where

- \( M_1 \) = Mean of Group 1
- \( M_2 \) = Mean of Group 2
- \( \sigma_1 \) = S. D. of Group 1
- \( \sigma_2 \) = S. D. of Group 2
- \( N_1 \) = Total number of Students in Group 1
- \( N_2 \) = Total number of Students in Group 2

The technique of chi-square was applied to find out the relationship between adjustment and personality traits of different categories. Technique of chi-square was used to test the hypothesis No 3. The technique of chi-square was applied by preparing 3x3 contingency table for different variables. The scores on different dimensions of adjustment and personality traits were divided into the three categories, using manuals. The equation of chi-square is stated as follows:

\[
\chi^2 = \sum \frac{(fo - fe)^2}{fe}
\]

(Chi-square formula for testing agreement between observed and expected results)

in which

- \( fo \) = frequency of occurrence of observed or experimentally determined facts.
- \( fe \) = expected frequency of occurrence on same hypothesis.
The difference between observed and expected frequencies are squared and divided by the expected number of each case and the sum of these quotients is $\chi^2$.

The degree of freedom were calculated as follows

$$\text{df} = (r - 1)(c - 1)$$

In which $r$ is the number of rows and $c$ is the number of columns in which the data are tabulated.

The contingency coefficient ($C$), provides a measure of correlation when each of the two variables under study have been classified into two or more categories. In the present study $C$ is calculated by the following formula

$$C = \sqrt{\frac{\chi^2}{N + \chi^2}}$$

Where $N$ is the total number of frequency.
REFERENCES
