CHAPTER -III
METHOD OF THE STUDY

In the preceding chapters, theoretical rationale of the problem, discussion of variables, objectives, hypothesis, development and description of tools have been discussed. The present chapter deals with the method of study which covers sample selection, tools employed, design of the study, procedure followed and statistical techniques applied to analyse the data.

3.1 SAMPLE SELECTION

The most important factor in determining the generalizability of research results is the selection of the sample used in collecting the research data. Thus, care has been taken in the selection of sample to meet the requirements of efficiency, representativeness, reliability and flexibility.

In order to select the sample, the purposive sampling technique has been followed. All teacher education institutions with at least 3 years of standing and affiliated to the three Universities of Punjab State i.e., Guru Nanak Dev University, Amritsar; Panjab University, Chandigarh and Punjabi University, Patiala, have been selected. In total 23 teacher education institutions of Guru Nanak Dev University, Amritsar; 34 teacher education institutions of Panjab University, Chandigarh and 39 teacher education institutions of Punjabi University, Patiala; have been selected. The distribution of the selected teacher education institutions along with the number of teacher educators have been presented in the Table 3.1 and Figure 3.1 below respectively:
### TABLE 3.1

SAMPLE DISTRIBUTION OF SELECTED TEACHER EDUCATION INSTITUTIONS AND TEACHER EDUCATORS FOR THE STUDY

<table>
<thead>
<tr>
<th>S.NO</th>
<th>NAME OF THE UNIVERSITY</th>
<th>TEACHER EDUCATION INSTITUTIONS</th>
<th>TEACHER EDUCATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Guru Nanak Dev University, Amritsar.</td>
<td>23</td>
<td>182</td>
</tr>
<tr>
<td>2</td>
<td>Panjab University, Chandigarh.</td>
<td>34</td>
<td>271</td>
</tr>
<tr>
<td>3</td>
<td>Punjabi University, Patiala.</td>
<td>39</td>
<td>230</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>96</td>
<td>683</td>
</tr>
</tbody>
</table>

**FIG 3.1:** UNIVERSITYWISE AND DISTRICTWISE DISTRIBUTION OF SELECTED TEACHER EDUCATORS AND TEACHER EDUCATION INSTITUTIONS
In the selected teacher education institutions, the teacher educators filled the personal data blanks. All the teacher educators have been classified into various sub-groups, viz.

1. On the basis of educational qualifications, the teacher educators have been classified into three categories:

   C-I Teacher educators with M.A / M.Sc. / M.Com; M.Ed./ B.Ed as educational qualification.

   C-II Teacher educators with M.A / M.Sc./ M.Com.; M.Ed.; NET/ SLET as educational qualification.

   C-III Teacher educators with M.A/M.Sc./ M.Com.; M.Ed.; M.Phil / Ph.D. with or without NET /any other higher research qualification as educational qualification.

2. On the basis of the gender, teacher educators have been classified into two categories:

   1. Male teacher educators (M)

   2. Female teacher educators (F)

3. On the basis of the type of the teacher education institution, all the teacher educators have been classified into three categories:

   Government teacher education institutions (GTEI)

   Government-aided teacher education institutions (GATEI)

   Self-financed teacher education institutions (SFTEI)

4. On the basis of the age, all the teacher educators have been classified into three categories:

   Teacher Educators up to 30 years of age X (age)

   Teacher Educators with 31 to 40 years of age Y (age)

   Teacher Educators with more than 40 years of age Z (age)

5. On the basis of the teaching experience, all the teacher educators have been classified into three categories:

   Teacher Educators with teaching experience below 2.5years a (T.E)

   Teacher Educators with teaching experience between 2.5 to 5years b (T.E)

   Teacher Educators with teaching experience more than 5years c (T.E)
The distribution of sample has been as under:

**TABLE 3.2**

**SAMPLE DISTRIBUTION OF TEACHER EDUCATORS**

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>VARIABLES</th>
<th>CATEGORIES</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EDUCATIONAL QUALIFICATION</td>
<td>1. C-I</td>
<td>202</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. C-II</td>
<td>211</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. C-III</td>
<td>270</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>683</td>
</tr>
<tr>
<td>2</td>
<td>GENDER</td>
<td>1. MALE</td>
<td>127</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. FEMALE</td>
<td>556</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>683</td>
</tr>
<tr>
<td>3</td>
<td>TYPE OF THE TEACHER EDUCATION INSTITUTION</td>
<td>1. GTEI</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. GATEI</td>
<td>189</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. SFTEI</td>
<td>459</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>683</td>
</tr>
<tr>
<td>4</td>
<td>AGE OF THE TEACHER EDUCATORS</td>
<td>1. X (AGE)</td>
<td>393</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Y (AGE)</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Z (AGE)</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>683</td>
</tr>
<tr>
<td>5</td>
<td>TEACHING EXPERIENCE OF THE TEACHER EDUCATORS</td>
<td>1 a (T.E)</td>
<td>231</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. b (T.E)</td>
<td>228</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. c (T.E)</td>
<td>224</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL</td>
<td>683</td>
</tr>
</tbody>
</table>
3.2 DESIGN OF THE STUDY

To test the proposed hypotheses, the design of the study has been envisaged as follows:

1. The factorial design 3×3 has been employed on the scores of teacher stress of teacher educators belonging to three categories of educational qualifications in all the selected teacher education institutions at three levels of locus of control (individual locus of control, chance control and control by powerful others). Teacher stress has been studied as a dependent variable. Locus of control has been studied as an independent variable and has been used for the purpose of classification (individual locus of control, chance control and control by powerful others). The layout of the design has been presented in the Figure 3.2 below:

![Diagram](image)

**FIG. 3.2:** THE SCHEMATIC REPRESENTATION OF THE 3×3 FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO LOCUS OF CONTROL AND EDUCATIONAL QUALIFICATIONS
2. The factorial design $2 \times 3$ has been employed on the scores of teacher stress of male and female teacher educators in all the selected teacher education institutions at three levels of locus of control (individual locus of control, chance control and control by powerful others). Teacher stress has been studied as a dependent variable. Locus of control has been studied as an independent variable and has been used for the purpose of classification (individual locus of control, chance control and control by powerful others). The layout of the design has been presented in the Figure 3.3 below:

![Diagram](image)

**FIG. 3.3:** THE SCHEMATIC REPRESENTATION OF THE $2 \times 3$ FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO LOCUS OF CONTROL AND GENDER
3. The factorial design 3×3 has been employed on the scores of teacher stress of teacher educators belonging to government, government-aided and self-financed teacher education institutions at three levels of locus of control (individual locus of control, chance control and control by powerful others). Teacher stress has been studied as a dependent variable. Locus of control has been studied as an independent variable and has been used for the purpose of classification (individual locus of control, chance control and control by powerful others). The layout of the design has been presented in the Figure 3.4 below:

![Diagram of 3×3 factorial design](image)

**FIG. 3.4:** THE SCHEMATIC REPRESENTATION OF THE 3×3 FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO LOCUS OF CONTROL AND TYPE OF TEACHER EDUCATION INSTITUTION
4. The factorial design 3×3 has been employed on the scores of teacher stress of teacher educators with three different age levels in all the selected teacher education institutions at three levels of locus of control (individual locus of control, chance control and control by powerful others). Teacher stress has been studied as a dependent variable. Locus of control has been studied as an independent variable and has been used for the purpose of classification (individual locus of control, chance control and control by powerful others). The layout of the design has been presented in the Figure 3.5 below:

**FIG. 3.5:** THE SCHEMATIC REPRESENTATION OF THE 3×3 FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO LOCUS OF CONTROL AND AGE OF TEACHER EDUCATORS
5. The factorial design $3 \times 3$ has been employed on the scores of teacher stress of teacher educators with three levels of teaching experience in all the selected teacher education institutions at three levels of locus of control (individual locus of control, chance control and control by powerful others). Teacher stress has been studied as a dependent variable. Locus of control has been studied as an independent variable and has been used for the purpose of classification (individual locus of control, chance control and control by powerful others). The layout of the design has been presented in the Figure 3.6 below:

![Diagram](image)

**FIG. 3.6:** THE SCHEMATIC REPRESENTATION OF THE $3 \times 3$ FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO LOCUS OF CONTROL AND TEACHING EXPERIENCE OF TEACHER EDUCATORS
6. The factorial design 3×2 has been employed on the scores of teacher stress of teacher educators belonging to three categories of educational qualifications in all the selected teacher education institutions at two levels of family environment (rich and poor). Teacher stress has been studied as a dependent variable. Family environment has been studied as an independent variable and has been used for the purpose of classification viz., rich family environment and poor family environment. The layout of the design has been presented in the figure 3.7 below:

![Diagram of the 3×2 factorial design](image)

**FIG.3.7:** THE SCHEMATIC REPRESENTATION OF THE 3×2 FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO FAMILY ENVIRONMENT AND EDUCATIONAL QUALIFICATIONS
7. The factorial design 2×2 has been employed on the scores of teacher stress of male and female teacher educators in all the selected teacher education institutions at two levels of family environment (rich and poor). Teacher stress has been studied as a dependent variable. Family environment has been studied as an independent variable and has been used for the purpose of classification viz., rich family environment and poor family environment. The layout of the design has been presented in the figure 3.8 below:

![Diagram](image.png)

**FIG.3.8:** THE SCHEMATIC REPRESENTATION OF THE 2×2 FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO FAMILY ENVIRONMENT AND GENDER
8. The factorial design $3 \times 2$ has been employed on the scores of teacher stress of teacher educators belonging to government, government-aided and self-financed teacher education institutions at two levels of family environment (rich and poor). Teacher stress has been studied as a dependent variable. Family environment has been studied as an independent variable and has been used for the purpose of classification viz., rich family environment and poor family environment. The layout of the design has been presented in the figure 3.9 below:

![Diagram](image-url)

**FIG.3.9:** THE SCHEMATIC REPRESENTATION OF THE $3 \times 2$ FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO FAMILY ENVIRONMENT AND TYPE OF TEACHER EDUCATION INSTITUTION
9. The factorial design $3 \times 2$ has been employed on the scores of teacher stress of teacher educators with three different age levels in all the selected teacher education institutions at two levels of family environment (rich and poor). Teacher stress has been studied as a dependent variable. Family environment has been studied as an independent variable and has been used for the purpose of classification viz., rich family environment and poor family environment. The layout of the design has been presented in the figure 3.10 below:

```
TEACHER STRESS
   /
  /   
/X(Age) Y(Age) Z(Age)
   |    |    |
   R-FE P-FE R-FE P-FE R-FE P-FE
```

FIG.3.10: THE SCHEMATIC REPRESENTATION OF THE $3 \times 2$ FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO FAMILY ENVIRONMENT AND AGE OF TEACHER EDUCATORS
10. The factorial design $3 \times 2$ has been employed on the scores of teacher stress of teacher educators with three levels of teaching experience in all the selected teacher education institutions at two levels of family environment (rich and poor). Teacher stress has been studied as a dependent variable. Family environment has been studied as an independent variable and has been used for the purpose of classification viz., rich family environment and poor family environment. The layout of the design has been presented in the figure 3.11 below:

![Diagram of the factorial design]

FIG.3.11: THE SCHEMATIC REPRESENTATION OF THE $3 \times 2$ FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO FAMILY ENVIRONMENT AND TEACHING EXPERIENCE OF TEACHER EDUCATORS
11. The factorial design 3×3 has been employed on the scores of teacher stress of teacher educators belonging to three categories of educational qualifications in all the selected teacher education institutions at three levels of emotional intelligence (high, average and low). Teacher stress has been studied as a dependent variable. Emotional intelligence has been studied as an independent variable and has been used for the purpose of classification viz., high emotional intelligence, average emotional intelligence and low emotional intelligence groups. The layout of the design has been presented in the Figure 3.12 below:

![Diagram]

**FIG. 3.12:** THE SCHEMATIC REPRESENTATION OF THE 3×3 FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO EMOTIONAL INTELLIGENCE AND EDUCATIONAL QUALIFICATIONS
12. The factorial design $2 \times 3$ has been employed on the scores of teacher stress of male and female teacher educators in all the selected teacher education institutions at three levels of emotional intelligence (high, average and low). Teacher stress has been studied as a dependent variable. Emotional intelligence has been studied as an independent variable and has been used for the purpose of classification viz., high emotional intelligence, average emotional intelligence and low emotional intelligence groups. The layout of the design has been presented in the Figure 3.13 below:

**FIG. 3.13:** THE SCHEMATIC REPRESENTATION OF THE $2 \times 3$ FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO EMOTIONAL INTELLIGENCE AND GENDER
13. The factorial design $3 \times 3$ has been employed on the scores of teacher stress of teacher educators belonging to government, government-aided and self-financed teacher education institutions at three levels of emotional intelligence (high, average and low). Teacher stress has been studied as a dependent variable. Emotional intelligence has been studied as an independent variable and has been used for the purpose of classification viz., high emotional intelligence, average emotional intelligence and low emotional intelligence groups. The layout of the design has been presented in the Figure 3.14 below:

**FIG. 3.14:** THE SCHEMATIC REPRESENTATION OF THE $3 \times 3$ FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO EMOTIONAL INTELLIGENCE AND TYPE OF TEACHER EDUCATION INSTITUTION
14. The factorial design $3 \times 3$ has been employed on the scores of teacher stress of teacher educators with three different age levels in all the selected teacher education institutions at three levels of emotional intelligence (high, average and low). Teacher stress has been studied as a dependent variable. Emotional intelligence has been studied as an independent variable and has been used for the purpose of classification viz., high emotional intelligence, average emotional intelligence and low emotional intelligence groups. The layout of the design has been presented in the Figure 3.15 below:

![Figure 3.15](image)

**FIG. 3.15:** **THE SCHEMATIC REPRESENTATION OF THE 3×3 FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO EMOTIONAL INTELLIGENCE AND AGE OF TEACHER EDUCATORS**
15. The factorial design $3 \times 3$ has been employed on the scores of teacher stress of teacher educators of three levels of teaching experience in all the selected teacher education institutions at three levels of emotional intelligence (high, average and low). Teacher stress has been studied as a dependent variable. Emotional intelligence has been studied as an independent variable and has been used for the purpose of classification viz., high emotional intelligence, average emotional intelligence and low emotional intelligence groups. The layout of the design has been presented in the Figure 3.16 below:

**FIG. 3.16:** THE SCHEMATIC REPRESENTATION OF THE $3 \times 3$ FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO EMOTIONAL INTELLIGENCE AND TEACHING EXPERIENCE OF TEACHER EDUCATORS
The factorial design 3X2X2 has been employed on the scores of teacher stress of teacher educators belonging to three levels of locus of control (individual locus of control, chance control and control by powerful others) in all the selected teacher education institutions at two levels of family environment (rich and poor) and further at two levels of emotional intelligence (high and low). Teacher stress has been studied as a dependent variable. Locus of control, emotional intelligence and family environment have been studied as independent variables and used for the purpose of classification viz.; individual locus of control, chance control and control by powerful others; rich and poor family environment; high emotional intelligence and low emotional intelligence respectively. The layout of the design has been presented in the Figure 3.17 below:

**FIG. 3.17: THE SCHEMATIC REPRESENTATION OF THE 3X2X2 FACTORIAL DESIGN ON THE SCORES OF TEACHER STRESS IN RELATION TO LOCUS OF CONTROL, FAMILY ENVIRONMENT AND EMOTIONAL INTELLIGENCE OF TEACHER EDUCATORS**
3.3 TOOLS EMPLOYED

The following tools have been employed in the present investigation:

3.3.1 TOOL I PERSONAL DATA BLANK - PREPARED BY THE INVESTIGATOR

3.3.2 TOOL II TEACHER STRESS SCALE DEVELOPED BY OTTO (1983) AND ADAPTED BY MAX SMITH AND SID BOURKE (1992)

3.3.3 TOOL III LOCUS OF CONTROL SCALE PREPARED BY SANJAY VOHRA (1992) BASED ON LEVENSON’S SCALE OF LOCUS OF CONTROL (1973)

3.3.4 TOOL IV FAMILY ENVIRONMENT SCALE BY BHATIA AND CHADHA (1993) BASED ON THE FAMILY ENVIRONMENT SCALE BY MOOS (1974)

3.3.4 TOOL V EMOTIONAL INTELLIGENCE SCALE DEVELOPED BY ANUKOOL HYDE, SANJYOT PETHE AND UPINDER DHAR (2002)

3.4 PROCEDURE

In order to conduct the study, 96 teacher education institutions have been selected with at least 3 years of standing and affiliated to the three universities of Punjab State i.e., Guru Nanak Dev University, Amritsar; Panjab University, Chandigarh and Punjabi University, Patiala. Personal data blanks of teacher educators have been filled and different categorizes have been identified. Further, four tools relating to teacher stress, locus of control, family environment and emotional intelligence have been administered among the teacher educators of all the selected teacher education institutions. The investigator visited all the institutions personally to collect the data. Principals and other staff members were requested to co-operate in the research work. The collection of data took eight months. The obtained data have been scored and given the statistical treatment. Thereafter, analysed data have been appropriately interpreted for meaningful results and conclusions.
3.5 STATISTICAL TECHNIQUES EMPLOYED

The following statistical techniques have been employed to analyse the obtained data:

1. Means and standard deviations of various sub-groups have been computed to understand the nature of data.

2. Two-way analyses of variance have been employed on the scores of teacher stress of various sub-groups in relation to three dimensions of locus of control, two dimensions of family environment and three dimensions of emotional intelligence independently.

3. Three-way analysis of variance has been employed on the scores of teacher stress of various sub-groups in relation to locus of control, family environment and emotional intelligence.

4. To study the significance of various sub-groups, t-tests have been employed.

5. Bar-graph representations have been prepared to study the nature of teacher stress among various categories of teacher educators.