CHAPTER III

DESIGN
AND PROCEDURE
CHAPTER-III

DESIGN AND PROCEDURE

This chapter deals with description of sample, design, tools, procedure of data collection and statistical techniques of analysis used to test the hypotheses.

3.1 DESIGN OF THE STUDY

Research studies are distinguished on the basis of their purposes and approaches which may technically be called difference in ‘methods’. The selection of appropriate method or methods to be employed, however, always depends upon the nature of the problem and kind of data necessary for its study. The present study entitled, ‘MENTAL HEALTH OF SECONDARY SCHOOL TEACHERS AS RELATED TO THEIR SELF – CONCEPT, BURNOUT AND ATTITUDE TOWARDS TEACHING PROFESSION’ can be described as descriptive survey / study. ‘A descriptive study is concerned with functional relationships that exist, opinions that are held, processes that are going on, effects that are evident or trends that are developed’ (Best, 1983).

In survey research, data is gathered from a relatively large number of cases at a particular time. It involves a clearly defined problem and definite objectives. The present study was primarily designed to determine the relationship of mental health of secondary school teachers with their self – concept, burnout and attitude towards teaching profession. The correlation technique was employed to determine the relationship between different variables.

3.2 THE SAMPLE

It is not possible to collect the data from all the members of population and thus the investigator resorted to sampling technique. A sample is a miniature picture of the entire population. The process of sampling in a survey means gathering information from the sources which tend to form a cross – section (or representative sampling) of the target population from which, if the time and expenses permitted it could be desirable to obtain data. The population for the
present study consisted of teachers teaching in secondary schools (both govt. and private) of Chandigarh. Stratified random sampling technique was employed by the investigator to select the sample (sub-groups are: gender, teaching subjects and govt./private schools). Two samples were raised, one for the development of mental health questionnaire and other sample from which the data is to be collected.

A stratified random technique of sampling was employed to raise the sample. The population for the present study consisted of all secondary school teachers teaching in various schools of Chandigarh i.e., Government and private schools. A sample of 480 teachers was selected randomly from various schools of Chandigarh comprising of 240 teachers drawn randomly from 12 Government schools (out of 24 senior secondary and 28 secondary schools) and 240 teachers drawn randomly from 14 private secondary schools (out of 12 senior secondary and 35 secondary recognized private schools). Every effort was made to make the selected sample fairly representative of the population. The break up of the sample from different categories i.e. Government – Private, Male – Female and Science – Social sciences is shown in Table 3.1 and the other detailed subdivision from different schools in Table 3.2.

Table 3.1

<table>
<thead>
<tr>
<th>TABLE SHOWING SAMPLE OUTLINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL SAMPLE (480)</td>
</tr>
</tbody>
</table>

- **Government school Teachers (240)**
  - Male Teachers (120)
    - Science (60)
    - Social Science (60)
  - Female Teachers (120)
    - Science (60)
    - Social Science (60)

- **Private School Teachers (240)**
  - Male Teachers (120)
    - Science (60)
    - Social Science (60)
  - Female Teachers (120)
    - Science (60)
    - Social Science (60)

*Note: The number in parenthesis indicates number of teachers.*
**Table 3.2**

**TABLE SHOWING THE BREAK UP OF THE SAMPLE OF DIFFERENT SCHOOLS**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of School</th>
<th>Male Science</th>
<th>Male Social Science</th>
<th>Female Science</th>
<th>Female Social Science</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>1.</td>
<td>GMSSS-10</td>
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<td>2</td>
<td>4</td>
<td>7</td>
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</tr>
<tr>
<td>2.</td>
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<td>8</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>3.</td>
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<td>5</td>
<td>5</td>
<td>5</td>
<td>20</td>
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<td>4.</td>
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<td>3</td>
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<td>15</td>
</tr>
<tr>
<td>5.</td>
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<td>6</td>
<td>8</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>6.</td>
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<td>7</td>
<td>4</td>
<td>25</td>
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<tr>
<td>7.</td>
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<td>3</td>
<td>3</td>
<td>15</td>
</tr>
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<td>3</td>
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<td>7</td>
<td>20</td>
</tr>
<tr>
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<tr>
<td>10.</td>
<td>GMSSS-44</td>
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<td>3</td>
<td>3</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>11.</td>
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<td>9</td>
<td>9</td>
<td>4</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>12.</td>
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<td>2</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>60</strong></td>
<td><strong>60</strong></td>
<td><strong>60</strong></td>
<td><strong>60</strong></td>
<td><strong>240</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of School</th>
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<th>Male Social Science</th>
<th>Female Science</th>
<th>Female Social Science</th>
<th>Total</th>
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<tr>
<td>3.</td>
<td>Sanjay Public-45</td>
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<td>5</td>
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<td>3</td>
<td>18</td>
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<tr>
<td>4.</td>
<td>New Public-18</td>
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<td>6</td>
<td>4</td>
<td>2</td>
<td>17</td>
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<tr>
<td>5.</td>
<td>D.A.V-15</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>6.</td>
<td>M.D.A.V-22</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>7.</td>
<td>Guru Gobind-35</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>19</td>
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<tr>
<td>8.</td>
<td>St Stephens-45</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>9.</td>
<td>S.D Public-32</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>10.</td>
<td>Carmel Convent-9</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>11.</td>
<td>D.A.V – 8</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>12.</td>
<td>St. Joseph-44</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>17</td>
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<tr>
<td>13.</td>
<td>St.Xaviers-44</td>
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<td>3</td>
<td>8</td>
<td>5</td>
<td>20</td>
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<tr>
<td>14.</td>
<td>Sharda Sarvhitkari-40</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>60</strong></td>
<td><strong>60</strong></td>
<td><strong>60</strong></td>
<td><strong>60</strong></td>
<td><strong>240</strong></td>
</tr>
</tbody>
</table>
Another sample of 30 judges and 25 teachers was raised for the development of mental health questionnaire. In addition, 52 teachers were selected for computing test-retest reliability of the questionnaire.

3.3 TOOLS EMPLOYED:
The following tools were used for the collection of data:

1. Teachers Mental Health Questionnaire constructed and developed by the investigator was used to determine the mental health of teachers.
2. Self concept was measured by Personality word list (PWL) developed by Pratibha Deo (1971, Revised version).
3. Burnout Inventory developed and standardized by Menon, P.N., Dutt, S., & Dhir, B.M. (2001) was used to study the burnout of the teachers.
4. Attitude towards teaching profession was measured with the help of attitude scale towards teaching profession developed by Kulsum, U. (2001).

3.4 DESCRIPTION OF THE TOOLS:
3.4.1 Teachers’ Mental Health Questionnaire: Mental Health Questionnaire was developed by the investigator herself as no other standardised tool measuring various aspects of mental health of teachers was readily available. After seeking expert opinion from teachers, psychologists and educationists and review of related literature, six areas were identified which formed the basis of the questionnaire. These areas were physical well-being, anxiety, self-concept, teachers traits, interpersonal relations, initiative and social drive. The questionnaire contains 48 statements distributed equally into the above mentioned 6 areas. Reliability was estimated by test-retest method. The reliability index was 0.688 and concurrent validity computed against mental health inventory by Srivastava and Jagdish (1983) was found to be 0.687.

3.4.2 Personality Word List (PWL) by Deo, Pratibha (1971, Revised version): Personality word list (PWL) developed by Deo, Pratibha (1971) was used as a measure of self concept.
This personality word list is an outcome of a series of attempts to evolve a suitable word list. Originally it consisted of 212 adjectives. It was first prepared in 1963 and then revised in 1971. The personality word list in final revised version contains 90 adjectives in terms of ‘words’, both in Hindi and English. However, for the present study its English version was used by the investigator. Out of 90 adjectives, 56 are related to positive and 34 related to negative traits, both to be scored with separate stencil hand scoring keys. The PWL can be used for age groups which possess reading ability and are mature enough to report about themselves.

Scoring: It is self – rating word list rather than a check list to be rated by the subject. The rating is done on 5-point scale as under:

1. Very much like this
2. Much like this
3. Uncertain
4. Not much like this and
5. Not at all like this.

For the rating scale, the weightages for positive words for the five point scale ranging from ‘Very much like this’ to ‘not at all like this’ were 4, 3, 2, 1 and 0 and for negative words 0, 1, 2, 3 and 4 respectively. The composite score was obtained by subtracting the total negative score from the total positive scores. Scoring was done with the help of separate stencil hand scoring keys for positive and negative words.

Reliability: Reliability was estimated by test-retest method. With a gap of 15 days reliability co-efficient came out to be .89 (N = 595). Taking different time intervals from 15 days to 3 ½ months coefficient of correlation ranged from .62 to .86 (N ranging from 65 to 70). The correlations between consistency scores ranged from .84 to .98. These values indicate a high degree of consistency. This proves that PWL gives a stable and reliable measure of self concept.

Validity: The concurrent validity of various traits in the list ranges from 0.40 to 0.65. The overall validity coefficient of scores of Deo’s personality word list and
self-concept list of Deo and Walia (1965) was 0.56. Moreover the discriminate validity coefficients for the traits of PWL fall in the range of 0.12 to 0.80.

### 3.4.3 Burnout Inventory by Menon, P.N., Dutt, S., & Dhir, B.M. (2001):

Burnout Inventory by Menon, Dutt & Dhir, a modified version of Maslach Burnout Inventory, was used to measure the burnout of teachers as it suited to teachers in India.

The Burnout inventory contains statements about the following three aspects of burnout: Emotional exhaustion, Depersonalization and Reduced Personal Accomplishment. It follows the likert scale technique of Burnout Inventory Construction. Rating scale was planned in such a way that it could be used as self – administering individually as well as in groups. The burnout rating scale was prepared in English.

The inventory covers following three aspects of burnout. Serial number of items belonging to different dimensions are given in bracket:

1. Depersonalization
   (2, 6, 11, 15, 17, 18, 22, 26, 27, 28, 29, 30, 33, 35, 36, 39)

2. Emotional Exhaustion
   (1, 3, 7, 10, 13, 16, 21, 23, 25)

3. Personal Accomplishment
   (4, 5, 8, 9, 12, 14, 19, 20, 24, 31, 32, 34, 37, 38, 40)

**Scoring:** The items in the inventory were rated on seven point rating scale from "never, a few times a year, once a month, a few times a month, once a week, a few times a week and everyday." For positive statements/items, a maximum score of 6 was given to 'Everyday' and 0 to 'never' and for negative statements/items, it was done in the reverse order. The total score was the summation of scores on positive and negative statements.

**Reliability and Validity:** Reliability by test-retest method was found to be 0.891 with an interval of 10 days in two administrations of the inventory. Validity was determined by concurrent validity against Maslach Burnout Inventory (1965). The correlation coefficient was found to be 0.694, which is significant at .01 level.
As such, it is a valid tool for the measurement of burnout of teachers in India.

### 3.4.4 Attitude Scale Towards Teaching Profession by Kulsum, U. 2001

The Ahluwalia attitude inventory (TAI 1978) and attitude scale towards teaching profession by Dhanoa, H.S. (1993) was available but that measured the attitude of student-teachers towards teaching profession. Attitude scale towards teaching profession by Kulsum, U. suits the objectives of the present study and so it was used for the collection of data.

The scale measured the following dimensions of the attitude:
1. Academic aspect of teaching profession
2. Administrative aspect of teaching profession
3. Social and psychological aspects of teaching profession
4. Co-curricular aspects of teaching profession
5. Economic aspect of teaching profession.

**Scoring of Statements**: Initially, there were 73 statements but 18 statements which were not significant based on the t-value were eliminated. Out of 55 statements 25 are favourable (1, 2, 3, 9, 12, 16, 17, 19, 20, 22, 26, 27, 30, 31, 35, 38, 40, 43, 45, 46, 49, 51, 52, 54 and 55) and 30 are unfavourable (4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 18, 21, 23, 24, 25, 28, 29, 32, 33, 34, 36, 37, 39, 41, 42, 44, 47, 48, 50 and 53). The attitude scale is a 4-point rating scale as given below:
   1. Strongly Agree (SA)
   2. Agree (A)
   3. Disagree (D)
   4. Strongly Disagree (SD)

For the purpose of scoring, the favourable statements were given a score of 4, 3, 2 and 1 and for unfavourable statements 1, 2, 3, and 4 respectively. The scores of the respondents ranged from 55 to 220. The total score was the summation of the scores obtained from favourable and unfavourable statements.

The scale is self-administering. Proper directions were given by the investigator. There is no time limit and no right or wrong answers. Hence, the
teachers are free to express their views as they feel. They were ensured that their responses will be kept strictly confidential and will be used only for research purpose.

Reliability and validity: The reliability of the tool was established on a sample of teachers both from primary and secondary schools of Bangalore City. The test-retest reliability was 0.812 and split-half reliability was 0.937. The attitude scale appears to have reasonably high reliability. As such, it is quite an adequate scale for measuring attitude towards teaching profession.

3.5 PROCEDURE ADOPTED FOR DATA COLLECTION

Data were collected in two stages. In the first stage data were collected for the purpose of development of teachers’ Mental Health Questionnaire. The detailed description of the questionnaire development has been given in Chapter IV.

In the second stage, data were collected from 480 secondary school teachers of Chandigarh teaching in various Govt. and Pvt. Schools. The Principals of the respective schools were requested for obtaining permission to collect data. All the tools namely Teachers’ Mental Health Questionnaire, Personality word list, Burnout Inventory and Attitude Scale towards teaching profession were administered personally by the investigator. All possible efforts were made to make the teachers feel at ease and respond to the various tests with full concentration. Their queries were answered in order to satisfy their curiosity and motivate them to answer the questionnaires carefully. Effort was made to get maximum cooperation of the teachers. Prior to the administration, they were assured that their responses will be kept secret. Their cooperation was essential as the findings of the research would be beneficial to all present and future teachers.

3.6 STATISTICAL TECHNIQUES USED

Descriptive statistics like mean, median and standard deviation were worked out to study the general nature of the sample in relation to mental health, self-concept, burnout and attitude towards teaching profession scores.
Skewness and Kurtosis were worked out to see the trend of departure of the sample distribution from the normal probability curve. Coefficient of correlation, Multiple R, and t-test were computed to test the hypotheses.

3.7 OPERATIONAL DEFINITION OF TERMS USED

1. Mental Health: Mental health means the scores obtained by the secondary school teachers on Mental Health Questionnaire developed by the investigator herself.

2. Self Concept: Self concept was measured in terms of scores obtained by secondary school teachers with the help of Personality Word List by Deo, Pratibha (1971).

3. Burnout: Burnout as measured by Burnout Inventory developed by Menon, Dutt & Dhir (2001).

4. Attitude Towards Teaching Profession: Attitudes towards teaching profession was measured in terms of scores obtained by secondary school teachers on Attitude Scale towards teaching profession by Kulsum, U. (2001).

3.8 LAY OUT OF THE THESIS

Chapter I : Introduction
Chapter II : Review of Related Literature
Chapter III : Design and Procedure
Chapter IV : Development of Mental Health Questionnaire
Chapter V : Analysis and Interpretation of Data
Chapter VI : Summary and Conclusions

BIBLIOGRAPHY

Appendix I : First draft of Mental Health Questionnaire
Appendix II : Final draft of Mental Health Questionnaire
Appendix III : Personality Word List
Appendix IV : Burnout Inventory
Appendix V : Attitude Scale Towards Teaching Profession