CHAPTER-IV
METHOD
AND
PROCEDURE
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METHOD AND PROCEDURE

This chapter deals with all the methodological and procedural aspects of the problem. It explains the operational definitions, procedure or design followed in the selection of the sample, hypotheses, gives description of the tools employed and procedure adopted in data collection, besides the statistical operations carried out for the treatment of the data.

OPERATIONAL DEFINITIONS
(1) Mental Health

Mental health is an attitudinal concept toward ourselves and others. It presents a humanistic approach towards the understanding and assessment of the self, positive feeling, attitudes towards self and others.

(2) Moral Judgement

Moral judgement is the ability to evaluate the situation and moral issues as right or wrong keeping in view the knowledge of moral standard.

(3) Intelligence

Intelligence is defined operationally as the ability to deal with numbers, analogies, opposites and synonyms to make categories and to draw inferences. Its measurement (verbal) is the total scores on Group Test of General Mental Ability (Jalota and Singh, 1982).

(4) Parental Behaviour

Parental Behaviour is the behaviour of the parents as perceived by adolescents, i.e., accepting or rejecting behaviour.

SAMPLE

Sampling may be defined as the process of obtaining information about an entire population by examining only a part of it. Generally, the
researchers select only a part of the whole population which can act as representative of the population and is called sample.

Various techniques have been devised for obtaining a sample which represents its population. The adequacy of a sample (i.e., its lack of bias) depend upon our knowledge of the population as well as upon the method used in drawing the sample. Commonly used sampling methods are random sampling, stratified or quota, incidental and purposive sampling. In the present study random sampling was used.

In every research it is not only difficult but also impossible to include the whole population generally. What the research worker does, is to select a representative sample of the whole population, to draw conclusions and to make generalization about the whole population.

The random sampling technique was employed in the present study due to heterogeneous characteristics of the population and according to the purpose of the study. The criteria for randomization in sample are met when every individual in the population has the same chance of being chosen for the sample and when selection of one individual or thing has no influence on the choice of another.

The sample of the present study was drawn from ten high/ Senior Secondary Government and Privately managed Punjabi medium schools of Ludhiana District. Five Government and five privately managed Punjabi medium high/ Senior Secondary schools were randomly selected. From each school 60 adolescents (30 females and 30 males) were taken up randomly. The original sample comprised 600 adolescents out of whom 500 were retained for the analysis; others had to be ignored because complete data about them was not available. Out of the total sample of 500 adolescents, 250 adolescents were selected each from Government and Private schools respectively. Out of 250 Government school adolescents,
125 females and 125 males were selected. Similarly, out of 250 Private school adolescents, 125 were females and 125 were males.

**DESIGN OF THE STUDY**

The Present study was descriptive survey, which was conducted on 500 Government and Privately managed Panjabi medium school adolescents of Ludhiana District studying in class X. The study was conducted in different phases.

Phase I: During the first phase the investigator classified the sample into three categories of mental health, i.e., high (MHₜₐ₉), average (MHₐ) and low (MHₙ). The classification was done on the basis of Kelley’s (1939) criteria of top and bottom 27% cases. Top 27% cases were considered as falling into high mental health level (MHₜₐ₉) while the bottom 27% cases were considered as falling into low mental health (MHₙ). The rest of the adolescents were regarded as having average mental health level (MHₐ).

Phase II: In second phase of the study, the investigator measured such variables as moral judgement, intelligence and parental behaviour. In the present study the techniques of correlational analysis and regression analysis were employed. In order to find out the nature and the extent of relationship of moral judgement, intelligence and parental behaviour with mental health product-moment correlations and regression equations were worked out.

The t-ratios were worked out to find the differences at different levels of mental health. Later on, multistage analysis of these correlates with mental health was done. A diagrammatic representation of the design of the study is shown in Figure 4.1.
Figure 4.1
Design of the Study
N = 500

Government School Adolescents
N=250

Private School Adolescents
N=250

MH₃
MH₂
MH₁

MH₃
MH₂
MH₁

M.J.  I  P.B.
M.J.  I  P.B.
M.J.  I  P.B.
M.J.  I  P.B.
M.J.  I  P.B.

N = TOTAL NUMBER
MH₃= HIGH MENTAL HEALTH GROUP
MH₂= AVERAGE MENTAL HEALTH GROUP
MH₁= LOW MENTAL HEALTH GROUP
M.J. = MORAL JUDGEMENT
I. = INTELLIGENCE
P.B. = PARENTAL BEHAVIOUR
HYPOTHESES

1. (a) There would be significant positive relationship of mental health with moral judgement, intelligence and parental behaviour of school adolescents.
   
   (b) There would be significant positive relationship of moral judgement, intelligence and parental behaviour of school adolescents with high level of mental health.
   
   (c) There would be significant positive relationship of moral judgement, intelligence and parental behaviour of school adolescents with average level of mental health.
   
   (d) There would be significant positive relationship of moral judgement, intelligence and parental behaviour of school adolescents with low level of mental health.

2. (a) Significant mean differences would be there among the school adolescents at different levels of mental health (MH_h, MH_a and MH_i) in respect of such correlates as moral judgement, intelligence and parental behaviour.
   
   (b) Significant mean differences would be there among the male adolescents at different levels of mental health (MH_h, MH_a and MH_i) in respect of such correlates as moral judgement, intelligence and parental behaviour.
   
   (c) Significant mean differences would be there among the female adolescents with regard to moral judgement, intelligence and parental behaviour for each of the three levels of mental health.
   
   (d) Significant mean differences would be there between male and female adolescents at different levels of mental health (MH_h, MH_a and MH_i) in respect of such correlates as moral judgement, intelligence and parental behaviour.
3. (a) Significant mean differences would be there between Government and Private school adolescents with regard to moral judgement, intelligence and parental behaviour for each of the three levels of mental health.

(b) Significant mean differences would be there among Government school adolescents with regard to moral judgement, intelligence and parental behaviour for each of the three levels of mental health (MHₜ, MHₜₐ and MH). 

(c) Significant mean differences would be there among Private school adolescents at different levels of mental health (MHₜ, MHₜₐ and MH) in respect of such correlates as moral judgement, intelligence and parental behaviour.

4. (a) Significant mean differences would be there among male adolescents of Government schools at different levels of mental health, i.e., MHₜ, MHₜₐ and MH in respect of such correlates as moral judgement, intelligence and parental behaviour.

(b) Significant mean differences would be there among female adolescents of Government schools with regard to moral judgement, intelligence and parental behaviour for each of the three levels of mental health (MHₜ, MHₜₐ and MH). 

(c) Significant mean differences would be there between male and female adolescents of Government schools at different levels of mental health, i.e., MHₜ, MHₜₐ and MH in respect of such correlates as moral judgement, intelligence and parental behaviour.

5. (a) Significant mean differences would be there among male adolescents of Private schools with regard to moral judgement, intelligence and parental behaviour for each of the three levels of mental health (MHₜ, MHₜₐ and MH).
(b) Significant mean differences would be there among female adolescents of Private schools at different levels of mental health, i.e., MHₕ, MHₖ and MHₗ in respect of such correlates as moral judgement, intelligence and parental behaviour.

(c) Significant mean difference would be there between male and female adolescents of Private schools with regard to moral judgement, intelligence and parental behaviour for each of the three levels of mental health (MHₕ, MHₖ and MHₗ).

6.(a) Significant mean differences would be there between male adolescents of Government and Private school at different levels of mental health, i.e., MHₕ, MHₖ and MHₗ in respect of such correlates as moral judgement, intelligence and parental behaviour.

(b) Significant mean differences would be there between female adolescents of Government and Private schools with regard to moral judgement, intelligence and parental behaviour for each of the three levels of mental health (MHₕ, MHₖ and MHₗ).

7.(a) Significant variance towards mental health of school adolescents would be contributed by major correlates such as moral judgement, intelligence and parental behaviour.

(b) Significant variance towards high level of mental health of school adolescents would be contributed by major correlates such as moral judgement, intelligence and parental behaviour.

(c) Significant variance towards average level of mental health of school adolescents would be contributed by major correlates such as moral judgement, intelligence and parental behaviour.

(d) Significant variance towards low level of mental health of school adolescents would be contributed by major correlates such as moral judgement, intelligence and parental behaviour.
TOOLS USED
The following tools were used to collect data:
(1) Mental Health Battery (MHB) by Singh and Gupta (1983).

DESCRIPTION OF TOOLS
Mental Health Battery by Singh and Gupta, Hindi version, (1983)
This Mental Health Battery (Appendix-I) consists of six popular indices of mental health i.e., (1) Emotional Stability, (2) Overall Adjustment, (3) Autonomy (4) Security-Insecurity, (5) Self Concept and (6) Intelligence.

Reliability: Both temporal stability reliability and internal consistency reliability of Mental Health Battery (MHB) were computed. There are six parts in this test. Test-Retest reliability of all the six parts of Mental Health Battery from first to sixth part, i.e., emotional stability, overall adjustment, autonomy, security-insecurity, self-concept and intelligence are .876, .821, .767, .826, .786 and .823 respectively and their odd-even reliabilities are .725, .871, .812, .829, .861, and .792 respectively.

Validity: MHB was validated against the different tests developed earlier. Part-I of MHB was validated against Emotional Stability Test developed earlier by Sen Gupta & Singh (1985). This part has .673 concurrent validity. Part II was validated against High School Adjustment Inventory (HSAI) developed earlier by Singh and Gupta (1987) and Hindi adaptation of Bell’s Adjustment Inventory by Mohsin, Shamshad and Jehan (1987). This part has .704 concurrent validity. For Part III and part V construct validity was computed, which was found to be .681 and .601 respectively. Part IV was validated against Neuroticism scale of MPI as adapted by Jalota...
& Kapoor (1975). Its concurrent validity was found .821. Likewise part VI was validated against Jalota Group General Mental Ability Test (1976). This part has .823 concurrent validity.

Scoring: The answers of those items (in each part) which tally with the answers given in the scoring key are given a score of +1. If they don’t tally, they are given a score of zero.


The group test of general mental ability (Appendix-II) is a very popular test for obtaining a measure of intelligence because it has been widely used on Panjabi School Population and also because it is a group test. There are 100 items arranged in ascending order of difficulty. It is a composite test consisting of seven sub-tests: number series, analogies and classifications having 20 items each and inferences, following directions, opposites and synonyms having 10 items each. The subjects are required to write the correct responses on the response sheet provided to them. The norms have been provided in terms of IQs for the various stages. The authors claim the test to be highly reliable and reported the lower limit for test-retest reliability to be .991 and the odd-even reliability to be .93. This test was validated against school examination marks, the validity range between .413 and .500.

Scoring: The tool can be scored with the help of hand scoring key provided for this purpose. A weightage of one point is given if the response is correct and no or zero weightage is given if the response is wrong. Total scores are found by adding all the correct responses.


Parental Behaviour Differential (Appendix-III) has been designed for use with Hindi knowing adolescents of India. The tool seeks to
segregate accepting parents from rejecting parents. The basics of parental acceptance or parental rejection is the perception of the subjects themselves. It may be pointed out that the nature of content of a child’s perception of his parents behaviour has a more important influence over him than what the parents are objectively in term of actual behaviour. A child’s perception of his parental behaviour may be more related to his adjustment than in the actual behaviour of his parents.

**Reliability:** Reliability was calculated by Split-Half method. The reliability coefficient was found to be 0.81.

**Validity:** Two types of validity, i.e., content validity and criterion validity were determined for the tool. The content validity was established on the basis of the opinion of experts. In their judgement, nature of each item of the tool was such that subjects response to it would reflect with fare degree of accuracy, either parental rejection or parental acceptance. For arriving at criterion related validity the method of internal consistency was used. The formula used was Kuder-Richardson formula. The validity coefficient was found to be 0.87.

**Scoring:** The tool can be scored by hand scoring stencil. A weightage of one point is given if the response of the subject reflects parental acceptance and zero weightage is given if the response reflects parental rejection.


The Moral Judgement Test (Appendix-IV) consists of 45 items divided into six parts which are placed in order of difficulty within each part. The test has all multiple choice items. Time limit for completing the test is fixed for 35 minutes including instructions to the students.

**Reliability:** Reliability was calculated by test-retest method. The test being heterogeneous and test item having been arranged logically, the two halves could not have been identical in making contribution to the error variance. The reliability study of the MJT was conducted over a sample of 80.
students (boys = 47, girls = 33, rural = 37, urban = 43). The second administration of the test was given after twelve days. The product moment coefficient of correlation for the two scores was computed. The coefficient of correlation between the two test scores was found to be .84. This coefficient of correlation is fairly high, which testifies the soundness of the test.

Validity: The M.J.T. was validated by the criterion of “content validity.” To determine content validity the test items and a list of outcomes was given to the panel consisting of ten experts in subject matter and ten in test items. The panel was asked to identify which test items correspond to which outcomes. The panel also completed the test so that scoring key could be verified. Comment on item clarity, its objectivity data were used to make modifications in some items. The experts agreed with the author of the test on the assignment of test items to objectives 95% of the time and agreed with the scoring of the test 96% of the time. The co-efficient of predictive validity was found to be .62, which is quite significant. This shows the soundness of the Moral Judgement as predictor of ability of Moral Judgement of the students.

Scoring: For scoring, each correct answer has been assigned a score of one and an incorrect answer a value of zero and in this way, the total score obtained by a student is the total number of his correct responses.

PROCEDURE OF DATA COLLECTION

Prior to the administration of the Mental Health Battery, Group Test of General Mental Ability, Parental Behaviour Differential and Moral Judgement Test in every school, the investigator sought the co-operation of the heads of the institutions and teachers. First of all, the purpose of tests was clarified to the students and rapport was established with them. Then Mental Health Battery by Singh and Gupta was administered according to the instructions given in the manual. The time limit for the test is 35
minutes. After getting the response sheets and questionnaires of this test, students were asked to take rest for 5 minutes and then, the Group Test of General Mental Ability was administered to them. Instructions were given to them. Time limit was 25 minutes. After getting the response sheets and questionnaires of the test students were asked again to take rest for 5 minutes and then, the Parental Behaviour Differential was administered to them. Like other tests instructions were given to them and the time limit for this test was not fixed. However, generally a normal examinee takes about 10 minutes in giving complete answers. After completion of this test students were again asked to take a rest for 5 minutes. After that the Moral Judgement Test was administered to them by giving instructions to them according to the manual. Time limit for this test was 35 minutes.

The tool Mental Health Battery by Singh and Gupta, (1983) was scored with help of scoring- key. The answers of these items (in each part) which tallied with the answers given in the scoring key were given a score of +1. If they did not tally, they were given a score of zero.

The scoring of Group Test of General Mental Ability by Jalota and Singh, (1982) was done by giving weightage of one point if the response was correct and no or zero weightage was given if the responses was wrong.

The scoring of Parental Behaviour Differential by Kaur (1989) was done by scoring stencil. A weightage of one point was given if the responses of the subject reflected parental acceptance and zero weightage was given if the responses reflected parental rejection.

The scoring of Moral Judgement test by Rani (1991) was also done by scoring key. Each correct answer has been assigned a score of one and an incorrect answer a value of zero and in this way, the total score obtained by a student is the total number of his correct responses.
STATISTICAL TECHNIQUES USED

1. Descriptive statistics mainly Mean and SD were worked out.
2. For seeing the differences between the major levels of mental health, i.e., MH_h, MH_a and MH_l t-ratios were calculated.
3. Bivariate correlation ratio between criterion variables of mental health and other predictor variables under study were calculated.
4. Multiple correlations and multiple regressions were computed for predicting three variables of mental health of adolescents.
5. Graphic representation was done wherever necessary.