

CHAPTER-IV

PLAN AND PROCEDURE OF THE STUDY

4.1 INTRODUCTION

The plan and procedure of the study or methodology is an integral part of any research project. It is the systematic analysis of various steps to be adopted in solving a research problem, such as the manner of formulation of the problem, the selection of sample for investigation, the validation of data gathering tools, the process of data collection, analysis and interpretation, and the process of inferences and generalization. In other words, it implies how the research objectives encountered in the research will be tackled.

The present chapter includes the plan and procedure of the present study, i.e., research design, variables of the study, population and sample, tools and techniques, procedure of data collection, and statistical techniques.

4.2 RESEARCH DESIGN

The design of a study is the result of a series of the decision made by the investigator concerning how the study will be conducted. It provides the framework for the study and assists the researcher to plan and implement the study.

For the present study, the investigator has used a **Descriptive Research Design**. Descriptive research studies are designed to obtain pertinent and precise information concerning the current status of the phenomena in its natural setting, which involve the collection of data, measurement, classification, analysis, comparison and interpretation

(Koul, 1998). Descriptive method of research attempts to describe and interpret what exists at present in the form of conditions, practices, processes, trends, effects, attitudes and beliefs (Sidhu, 1996). It deals with the relationships among non-manipulative variables (Best and Khan, 2007). Because the events or conditions have already occurred, the researcher merely selects the relevant variables for an analysis of their relationships. Descriptive research seeks to find the factors seem to be associated with certain occurrences, outcomes, conditions, or types of behaviours.

The present study attempts to examine the relation between parent-adolescent relationships and social competence and emotional competence of adolescent boys and girls, and to explore the effect of parent-adolescent relationships on the social competence and emotional competence of adolescent boys and girls. In this connection, the investigator has also endeavoured to examine the differences between adolescent boys and girls with respect to parent-adolescent relationships, social competence and emotional competence, and the relationship between social competence and emotional competence. Therefore, to carry out the present study, **Descriptive Research Design** has been followed.

Descriptive research can broadly be either quantitative or qualitative. The former uses statistical methods in describing, recording, analyzing and interpreting conditions that exist at present (Koul, 2014). It attempts to draw comparison or contrast and discover relationships between existing non-manipulated variables. The latter uses non-quantifiable relationships between existing variables. In the present study, **quantitative descriptive research design** has been used.

4.2.1 VARIABLES UNDERTAKEN IN THE STUDY

A variable is any feature or aspect of an event, function or process that, by its presence and nature, affects some other events or process. Variables of a study are of two types: independent and dependent variables. In the present study, the following variables have been taken into consideration:

(A) Independent variables: An independent variable is the conditions or the characteristics that the investigator observes or controls in the attempt to ascertain its relationship to observed phenomena. The independent variables in the present study are:

(i) Parent-adolescent relationships: (a) Father-adolescent relationships

(b) Mother-adolescent relationships

The present study covers ten dimensions of the parent-adolescent relationship, namely, protecting, symbolic punishment, rejecting, object punishment, demanding, indifferent, symbolic reward, loving, object reward, and neglecting.

(ii) Gender: Adolescent boys and girls.

(B) Dependent variables: The dependent variables are the conditions or characteristics that appear, disappear or change as the investigator introduces, removes or changes independent variables. The dependent variables in the present study are:

(i) Social competence and

(ii) Emotional competence

4.2.2 POPULATION OF THE STUDY

A population or a universe is a group of individuals, persons, objects or items from which samples are taken for measurement (Saha, 2012).

In the present study, the population refers to the adolescent boys and girls studying in Class IX and X in the private high schools of Darrang District of Assam during the academic year 2015-2016. The total number of private high schools in Darrang District is 44. The total population of the present study is 2226, out of which 1228 are boys while 998 are girls. (Source: Office of the Sarva Siksha Abhiyan Mission, Mangaldai, Darrang, 2015-16)

4.2.3 SAMPLE OF THE STUDY

According to Sidhu (1996), “A sample is a small proportion of a population selected for observation and analysis.” The sample of the present study consists of 300 adolescents (150 boys and 150 girls) studying in class IX and X in the private high schools of Darrang district, Assam.

Purposive sampling technique has been used to select the schools for the present study. Ten private high schools, having provisions for co-education, Assamese as the medium of instruction and at least 40 students including Class IX and X, are selected for the present study.

The investigator has used the **Multistage stratified random sampling technique** to select the sample for the present study. At the initial stage, the investigator selected 400 adolescents (200 boys and 200 girls) studying in the IX and X classes in the private high schools of Darrang district. The Parent-Child Relationship Scale was administered on the initial sample, and the response sheets were scrutinized. On the

basis of the full response of the adolescents on both the ‘Father form’ and the ‘Mother form’ of the Parent-Child Relationship Scale, and the acceptability of responses, 300 adolescents (150 boys and 150 girls) were selected for the final sample. The present study requires data regarding both fathers and mothers behaviour in taking care of their children as perceived by the adolescents. So, the investigator has selected the final sample on the basis of the full response of the adolescents on the Parent-Child Relationship Scale. However, adolescents who gave similar points to the statements of the Parent-Child Relationship scale and who gave the points which were out of norms were excluded from the final sample.

School wise distribution of the sample has been shown in the following table:

Table 1

School wise distribution of the sample

Sr. No.	Name of the Schools	Number of respondents		
		Boys	Girls	Total
1	Jatiya Vidyalaya Assam	15	20	35
2	Pachim Darrang Jatiya Vidyalaya	20	14	34
3	J. B. Jatiya Vidyalaya	14	12	26
4	Kendriya Jatiya Vidyalaya, Mangaldai	20	20	40
5	Kendriya Jatiya Vidyalaya, Pachim Mangaldai	13	17	30
6	Bhupendra Narayan Dev Jatiya Vidyalaya	18	14	32
7	Sankardev Sishu Vidya Niketon	11	13	24
8	Darrang Jatiya Vidyalaya	13	13	26
9	Dalgaon Adarsha Jatiya Vidyalaya	11	15	26
10	Dalgaon Anchalic Jatiya Vidyalaya	15	12	27
Total		150	150	300

4.3 TOOLS AND TECHNIQUES USED

Any systematic investigation requires different data gathering tools and techniques depending upon its nature. Tools and techniques may differ in their complexity, design, administration, and interpretation but each tool is appropriate for the collection of the certain type of evidence or information. The tools used in the present study for the collection of data are briefly described below.

4.3.1 TOOL 1: PARENT-CHILD RELATIONSHIP SCALE (PCRS)

The Parent-Child Relationship Scale developed by Dr. Nalini Rao (revised version 2011) is used to measure the Parent-Adolescent Relationships of adolescent boys and girls. The Parent-Child Relationship Scale measures the characteristic behaviour of parents as experienced by their children. The data available on the items of the scale can be grouped into fairly universal dimensions of children's experience of family interaction with the two parent factor. The tool contains 100 items categorized into ten dimensions. The dimensions are Protecting, Symbolic Punishment, Rejecting, Object Punishment, Demanding, Indifferent, Symbolic Reward, Loving, Object Reward and Neglecting. In the scale, the items are arranged in the same order as the dimensions, and they rotate in a cycle order through the scale. The description of the corresponding item numbers of ten dimensions in the Parent-child relationship scale has been given below:

Table 2
Corresponding item numbers of ten dimensions in the parent-child relationship scale

Sr.No.	Dimensions	Item Numbers	Total
1	Protecting	1 11 21 31 41 51 61 71 81 91	10
2	Symbolic Punishment	2 12 22 32 42 52 62 72 82 92	10
3	Rejecting	3 13 23 33 43 53 63 73 83 93	10
4	Object Punishment	4 14 24 34 44 54 64 74 84 94	10
5	Demanding	5 15 25 35 45 55 65 75 85 95	10
6	Indifferent	6 16 26 36 46 56 66 76 86 96	10
7	Symbolic Reward	7 17 27 37 47 57 67 77 87 97	10
8	Loving	8 18 28 38 48 58 68 78 88 98	10
9	Object Reward	9 19 29 39 49 59 69 79 89 99	10
10	Neglecting	10 20 30 40 50 60 70 80 90 100	10
Grand Total			100

Scoring procedure:

Each respondent scores the tool for both father and mother separately. Items are the same for both father and mother except for three items which are different, in the Father and Mother forms due to the nature of variation in the paternal and maternal relationship with children. Respondents have to rate statements as to their perception of their relationship with either father or mother on a five-point scale ranging from ‘Always to Very rarely’ weighted 5, 4, 3, 2 and 1, on the scale points. The scale is scored separately for each of the parents thus every respondent obtains ten scores for ‘father form’ and ten scores for ‘mother form’ on the ten dimensions of the scale. Each sub-scale yields a score found by summing the scores of the ratings on each item of the sub-scale.

Reliability of the Scale:

The 100 items of Parent-child relationship scale was administered to 194 students twice over a period of four to five weeks. The sample consisted of 96 boys and 98 girls in the age group of 13 to 16 studying in the secondary schools. The test-retest-reliability coefficient ranged from .770 to .871 for the boys' sample and .772 to .873 for the girls' sample over the ten sub-scales. Table 3 gives the summary of test-retest reliability coefficients. All the coefficients of correlations are statistically significant at a level of confidence greater than .01.

Table 3
Test-retest coefficients of correlation on ten parent-child-relationship dimensions of 'Father' and 'Mother' Forms

Sr. No.	Dimensions	Father Form		Mother Form	
		Boys (N=96)	Girls (N=98)	Boys (N=96)	Girls (N=98)
1	Protecting	.871	.832	.873	.862
2	Symbolic Punishment	.809	.840	.809	.790
3	Rejecting	.816	.783	.811	.883
4	Object Punishment	.864	.771	.850	.842
5	Demanding	.784	.792	.821	.801
6	Indifferent	.792	.770	.772	.824
7	Symbolic Reward	.782	.842	.786	.794
8	Loving	.775	.813	.814	.789
9	Object Reward	.807	.863	.802	.778
10	Neglecting	.825	.871	.789	.804

Validity of the Scale:

Face validity of the scale was established at the initial stage when items were reassigned to the dimensions by judges to determine whether or not the items met the predetermined definition of behaviour. Construct validity of the scales was attempted by correlating data of a sample of ninety-three secondary school students on the Parent-Child Relationship Scales with the data obtained on Bronfenbrenner Parent Behaviour Questionnaire. Correlation coefficients ranged from .289 to .578 and were found to be significant at .05 level or above. Scores of 120 students from secondary schools on the five scales of Indian adaptation of Children's Report of Parental Behaviour Inventory, namely, rejection, acceptance, positive involvement, hostile control and lack of discipline were correlated with the scores on the Parent-Child Relationship Scales. All the coefficients of correlation ranging from '.328 to .457' were significant at .05 level or above.

4.3.2 TOOL II: SOCIAL COMPETENCE SCALE (SCS):

The Social Competence Scale developed by Dr. V.P. Sharma, Dr. Prabha Shukla and Dr. Kiran Shukla (revised version 2013) is used to measure the Social Competence of adolescent boys and girls. The scale has been designed in such a way as to get an expression of the composite culture of India and meet the needs and demands of social skills and interpersonal behaviour of Indian social settings and cultural patterns. It has been designed for the Indian children between the age group of 10-15 years of both sexes. The scale consists of 50 items that measure 18 factors of social skills and behaviours, namely, social sensitivity, social maturity, social skills, social relations, social commitment, social appreciation ability, social-emotional integrity, social involvement, social respectability, social leadership,

social cooperation and compliance, social acceptability, social tolerance, social competition, social authority, adult-resource exploitability, social participation and pro-social attitude.

The investigator has selected only 30 items, measuring eight factors of social competence, for the present study. The factors or competencies are – social sensitivity, social maturity, social skills, social relations, social leadership, social tolerance, social competition and pro-social attitude. The description of the corresponding item numbers of eight components in the Social Competence Scale has been given below:

Table 4
Corresponding item numbers of eight components in the social competence scale

Sr. No.	Components	Item Nos. in the original Scale	Item Nos. in the translated Scale	Total
1	Social Sensitivity	1 44	1 27	02
2	Social Maturity	3 10 11 12 13 14 30	3 8 9 10 11 20 30	07
3	Social Skills	22 36 48	16 23 29	03
4	Social Relations	28 39 40	18 24 25	03
5	Social Leadership	2 18 21	2 13 15	03
6	Social Tolerance	6 8 9 15 20	4 6 7 12 14	05
7	Social Competition	7 25 34 35 46	5 17 21 22 28	05
8	Pro-Social Attitude	29 43	19 26	02
Grand Total				30

Scoring procedure:

Each respondent has to score the tool on a five-point scale ranging from ‘very high, high, average, low to very low’ and relative weights assigned to the items are very high with 5 scores and very low with 1 score.

Reliability of the Scale:

The coefficient of temporal stability employing Test-Retest method with an interval of 20 days has been estimated to be $r = .56$ whereas the coefficient of inter-rater reliability has been found to be $r = .67$.

Validity of the Scale:

Apart from the item-validity, the scale has been validated against Kohn's social competence scale and predictive validity to the extent of $r = .72$ was obtained. The scale has also been validated against teacher rating on a five-point scale of the normative pupils of grade VIII and a coefficient of correlation to the extent of $r = .79$ was obtained between teacher's rating and pupils' total score on social competence scale.

4.3.3 TOOL III : THE SCALE OF EMOTIONAL COMPETENCIES

The scale of emotional competencies developed by Dr. H.C Sharma and Dr. R. L. Bharadwaj (Revised version 2007) is used to measure Emotional Competence of adolescent boys and girls. The scale is meant for the age group of 13 to 44 years. The scale can be administered individually as also to groups. It measures five emotional competencies, namely, adequate depth of feeling, adequate expression and control of emotions, ability to functions with emotions, ability to cope with problem emotions, and encouragement of positive emotions separately as well as a whole. The description of the corresponding item numbers of five competencies in the scale is given as under:

Table 5
Corresponding item numbers of five competencies in the emotional competence scale

Sr. No.	Competencies	Item Nos.	Total
1	Adequate depth of feeling	1 6 11 16 21 26	05
2	Adequate expression and control of emotions	2 7 12 17 22 27	05
3	Ability to function with emotions	3 8 13 18 23 28	05
4	Ability to cope with problem emotions	4 9 14 19 24 29	05
5	Enhancement of positive emotions	5 10 15 20 25 30	05
Grand Total			30

Scoring procedure:

It is a five-point scale based on the lines of Likert having five alternatives to each item. Scoring follows a system of 1,2,3,4 and 5 from upper to lower end.

Reliability and Validity of the Scale:

The reliability of the scale was derived by employing two methods, viz., test-retest and split-half method. The test-retest reliability coefficient with an interval of 21 days has been estimated to be .74 and the coefficient of reliability of split-half method has been found to be .76. The validity of this scale has been determined with factor A and C of 16 personality factor questionnaire and found to be 0.64 and 0.69 respectively.

4.3.4 ADAPTATION OF THE TOOLS INTO ASSAMESE LANGUAGE

Prior the administration, the investigator translated the three scales, namely, “Parent-Child Relationship Scale” (PCRS), “Social Competence Scale” (SCS) and “Emotional Competence Scale” (ECS) into Assamese which were initially in the

English version. Then it was given to two specialists in the English language to evaluate the validity of the translation. According to their suggestions and recommendations, some items were modified. The reliability coefficients of the adapted translation of the scales were determined by using the test-retest method. The reliability of the parent-child relationship scale was found .575 to .872 for the father form and .554 to .923 for the mother form and .719 and .695 for the social competence scale and the emotional competence scale respectively. The tools were translated into Assamese because the medium of instruction of the sample schools is Assamese and the respondents also feel at ease in understanding and answering the items.

4.4 PROCEDURES OF DATA COLLECTION

Data collection from the selected institutions is the significant part of the research work. For the collection of required data, at first, the investigator has contacted the authorities of the selected schools to take permission for administering the tests. The Directors/Principals of the selected schools were informed about the purpose of administering the tests and the detailed programme for the collection of data was chalked out. Data were collected as per the arrangement provided by the school authority. Class teacher's cooperation was sought for the purpose as needed. Data were collected in two phases.

In the first phase, prior to the selection of the final sample, the Parent-Child Relationship Scale was administered to the respondents. The investigator explained the instructions of the scale so that the respondents feel at ease to respond. Respondents were asked to rate statements as to their perception of their relationship with father and mother on a five-point scale ranging from 'Always' to 'Very rarely' weighted 5, 4, 3, 2 and 1, on the scale points. The investigator asked

the respondents to read the items carefully and then give the weight of their preference. There was no fix time limit. Ordinarily, the respondents took 40 to 50 minutes to complete the scale.

In the second phase, the investigator administered the Social Competence Scale to the final respondents. Instructions were provided as per the manual. To ensure the full response from the respondents, the investigator paid individual attention to each respondent and tried to establish a cordial relation with them. The respondents took 30 to 40 minutes to complete the adopted scale.

After completion of the Social Competence Scale, the investigator administered the Emotional Competence Scale to the sample. Same procedures were employed to collect data for this scale. The respondents took 20 to 30 minutes to complete the scale.

4.5 STATISTICAL TECHNIQUES USED

Based on the nature of the study the investigator selected several statistical techniques for the present study.

Differential Analysis, i.e., 't' test is applied to find out the significant differences between adolescent boys and girls in parent-adolescent relationships, social competence, and emotional competence.

Correlational Analysis, i.e., Pearson's coefficient of correlation, is carried out to find the relationship between social and emotional competence, and to find the relationship between parent-adolescent relationships and social competence, and emotional competence of adolescent boys and girls.

Multiple Regression Analysis is carried out to find the extent to which the parent-adolescent relationships influence the social competence and emotional competence of adolescent boys and girls.

In the next chapter analyses of data and interpretation of results has been provided.