METHODOLOGY

You are always believing ahead of your evidence,
What was the evidence, I could write a poem? I
just believed it. The most creative thing in us is
to believe in a thing.

- Robert Frost

METHODOLOGY

Research is a scientific undertaking, which attempts to extend, correct and verify knowledge with the help of a set of phenomena and systematized techniques. The process of inquiry and the analytical tool are to a great extent relative So a specific domain to concern and the conceptual, methodological, pragmatic goal is the aim of research

In psychological research, the goal of research is to gain an understanding of human behaviour and the myriad factors that affect it, so as to be able to control an predict it. With its emphasis on idiophenomenon, individuality and subjective experience, research in psychology gains an entirely different dimension.

In this chapter, attempt is made to describe various aspects of methodology adopted for generating raw data and statistical techniques used to test the host of hypothesis

3.1 AIMS AND OBJECTIVES

Any research starts with certain queries about the phenomena or a set of phenomena, and systematically attempts to investigate the issue in question through appropriate and methodological tools. The following issues and objectives were the focus of the present study.

i   To examine gender difference, if any, in relation to locus of control, Depression, Adjustment and Parenting Function and also to assess the extent and degree of the same among parents of Thalassaemic children

ii   To examine the relationship between Locus of control, Depression, Adjustment and Parenting Function among parents of Thalassaemic children.

3.2 HYPOTHESES

From the issues, objectives and the problem stated above, the following major hypotheses were generated·

i   The main and interaction effects of Positive Parenting dimensions as a whole would show significant variation in between Mothers and Fathers of Thalassaemic children

ii.   The main and interaction effects of Negative Parenting dimensions as a whole would show significant variation in between Mothers and Fathers of Thalassaemic children

iii   The main and interaction effects of Depression between Mothers and Fathers of Thalassaemic children would show significant variation.

iv   Significant variation in Internal Locus of Control and External Locus of Control would be seen in between Mothers and Fathers of Thalassaemic children

v   Significant variation in Adjustment would be seen between Mothers and Fathers of Thalassaemic children

vi   Significant variation in correlation between Positive Parenting dimensions as a whole and Negative Parenting dimensions as a whole would be expected among Parents of Thalassaemic children

vii.   Positive Parenting dimensions as a whole would not be expected to correlate significantly with Depression, Internal Locus of Control, External Locus of Control and Adjustment in Parents of Thalassaemic children

viii. Negative Parenting dimensions as a whole would be expected to correlate significantly with Depression, Internal Locus of Control, External Locus of Control and Adjustment in Parents of Thalassaemic children.

ix Significant variation in correlation between Depression and Internal/External Locus of Control as well as in between Depression and Adjustment would be expected among Parents of Thalassaemic children

x. Parents of Thalassaemic children would show significant variation in correlation between Adjustment and Internal Locus of Control as well as in between Adjustment and External Locus of Control

3.3 VARIABLES

The variables of the present investigation are as follows

Independent Variables

1 Parents of Thalassaemic children : Mothers and Fathers

Dependent Variables

1. Depression.

For ages, depression has devastating effect on the life of human beings. So it is of great concern to various researchers.

Depression has become a major problem for human beings If a person is ill and has to stay back for 2 - 3 weeks, the individual will naturally get depressed, as he is physically unable to do anything and is completely dependent on others. This condition is much worse, if one

is suffering from life long illnesses like blindness, heart disease and many more One of them is thalassaemia in which an individual is not able to function, normally if blood transfusions are not taken regularly. The parents of such people face a state of helplessness and tend to blame themselves for their child's sufferings This can have a great effect on their personality

Past researches on these phenomena are limited So here, we try to understand the parents of thalassaemic children with respect to depression

2 Locus of Control

To many researchers, locus of control has been of great importance. A person can either have an external or internal locus of control This, in turn, we are trying to study whether a parent believes on luck, chance, and fate or in oneself with respect to their thalassaemic children Always there is a change in locus of control from internal to external or vice versa. This change is often after a sudden incident in one's life like an accident, death of a loved one or physical disability This change can often be a slow process also like consecutive failures, old age, etc

A person being external or internal affects one's life to a great extent and can be seen in their day-to-day life

3 Adjustment.

In this study, we are trying to see parents of thalassaemic children's adjustment in many areas of life A person has to adapt with his bodily functions, therefore the way he adopts is affected Here we are trying to study the adjustment through the areas of home, health, social and emotion

4. Parenting:

The way a parent views his or her child is of utmost importance Even more if their child is suffering form a disease, which is life-long, very expensive and may cause death. The helplessness of the parent may make him or her respond to their child in positive or negative ways As hardly any work has been done on the parenting aspect of an individual, we are trying to find out whether due to a disease that a child inherits from their parents, do their parents adopt deviant or non-deviant patterns of parenting.

Control Variables:

Is this study, we have used various controls to make the study more reliable:

1. Sample consisted of lower socio-economic group.

2. Equal distribution of male and female

3. Sample was selected from various hospitals in Baroda and Ahmedabad

4 Selection of sample was based on two factors.

    a The age of their child, i.e , between 6 and 15 years

    b The IQ level of their child, i e , between 90 and 109 (average range).

5. The sample was selected on the basis of having thalassaemic children without siblings

3.4 SAMPLE

The purposive sample is comprised of 60 parents that are, 60 mothers and 60 fathers having thalassaemic children living in Baroda and Ahmedabad.

The following table shows distribution of sample:

Table 1: Shows distribution of sample

Total No of Parents Selected	Male	Female	Total
60	60	60	120

Data Collection

The data was collected form various Red Cross and Green Cross blood transfusion centres from Baroda and Ahmedabad. The purposive sample comprises of total 60 families - 60 mothers and 60 fathers. Selection of sample was restricted to families with low- socio- economic level having an annual income below Rs 36, 000/-.

Ethical Considerations

Since the disease of Thalassaemia is very serious and it is very hard for parents to accept their child's condition (possibility of death of their child), the researcher was very sympathetic while receiving the information

3.5 TOOLS

Subjects were given four questionnaires in the following manner:

1 Beck's Depression Inventory (BDI, Beck, Ward, Mendelson, Mock and Erbaugh, 1967)

2 The Rotter's Internal-External Locus of Control (Rotter, 1966)

3. Bell's Adjustment Inventory (Bell, 1934)

4 Multi-dimensional Parenting scale (Dr N S Chauhan and Dr C P Khokhar, 1985)

5 Malin's Intelligence Scale for Indian Children (Dr A. J Malin, 1969) – Indian adaptation of Wechsler's Intelligence Scale for Children (WISC, 1949)

Description of the Techniques and Tools used in the Present Investigation:

1. Beck's Depression Inventory (BDI):

The Beck's Depression Inventory used in the present investigation was formulated by Beck in1967 The BDI is a 21 item self-report measure for assessing the severity of depressive symptomatolgy. The form of the instrument was related to two observations.

i. The number of symptoms increased with increasing severity of Depression and there is a step like progression in the frequency of Depression symptoms as follows:

- Non-depressed to mildly depressed
- Mildly depressed to moderately depressed
- Moderately depressed to severely depressed

ii The more intense a particular symptom is likely to be, the more depressed a person is (Beck, 1967) The inventory was designed to include all symptoms integral to the depressed group. Each symptom category was constructed to include a series of statements reflecting varying degrees of severity. The scoring system took into account, the number of symptoms reported by the person, by assigning a numerical score for each symptom The intensity of each system is registered by the score on each category

The questionnaire/instrument consists of 21 items and each group of the 21 items consists of four self-descriptive statements. The score assigned to these statements range from 0 to 3 The scores reflect the severity of the symptom from neutral to maximal severity. Each item represents a behavioural manifestation and is not based on any theory

regarding the aetiology or underlying psychological processes in Depression. The symptom attitude categories of the inventory are:

Item:
1. Mood
2. Pessimism
3. Sense of failure
4. Lack of satisfaction
5. Guilt feeling
6. Sense of Punishment
7. Self-dislike
8. Self-accusation
9. Suicidal ideas
10. Crying spells
11. Irritability
12. Social withdrawal
13. Indecisiveness
14. Distortion of body image
15. Work inhibition
16. Sleep disturbance
17 Fatigability
18 Loss of appetite
19 Weight loss
20 Somatic preoccupation
21. Loss of libido

The individual's total score on the 21 items can be used to gauge the extent of his Depression. There is no arbitrary score that can be used to classify the degree of Depression However, Beck has suggested the following guidelines to interpret the scale (Beck, 1978)

00 – 09   Normal range
10 – 15   Mild depression

16 – 19	Mild moderate depression
20 – 29	Moderate severe depression
30 – 63	Severe depression

Administration:

The BDI is easily self-administered. However, when the need arises the interviewer reads out the statements and asks the respondent to choose any one Standardized instructions have been developed in order to provide uniformity and take additional notes to support the quantitative sores obtained.

Reliability and Validity:

The BDI rates high on reliability and validity. A Pearson's 'r' between the odd and even categories of BDI yielded a reliability coefficient of 0 86, which increased to 0.93 with Spearman-Brown correlation

The concurrent validity, determined by Kruskal-Wallis analysis of various ranks yielded a p-value of difference less than 0.001 (i.e., P<0 001)

Bryson and Pilen (1984) reported an internal reliability coefficient of 0 76. They found that BDI inter-item reliability is comparable across the two sexes and across different methods of test administration The BDI score correlated highly with clinical observer ratings of depression (r = 0 65 to 0.77) In relation to other scales and inventory measures a correlation score of 0 67 with the Hamilton Rating Scale (Schwab, Psialson and Holzer, 1984) and that of 0 57 with Zung's self-rating scale for depression was reported (Reynoulds and Yould, 1981).

2. The Rotter's Internal-External Locus of Control (LOC):

It consists of 23 question pairs using a forced choice former, plus six filler questions. Internal statements are paired with external statements. One point is given for each statement selected. Scores can range from zero (most internal) to 23 (most external)

Rotter (1966) reported that two-factor analysis had been done, one by himself and the other by Franklin (1963). The results were very much the same. Each received one general factor, which accounted for much of the total scale (variance 53% in Franklin's analysis) and several additional factors which involved a few times and which accounted for very little variance Rotter's scale is shown to be more multidimensional than the analysis of Rotter and Franklin (Gurien et al, 1969; McDonald and Treng, 1971, Mirels, 1970; Minton, 1972)

Reliability:

An internal consistency coefficient (Kuder Richadson, 1966) for the two subgroups of Rotter's (1966) sample, test-retest reliability coefficients were computed with a value of 0.72 for 60 college students after one month (for males r = 0 60, for females r = 0 61).

Validity:

Over 50% of the internal-external locus of control investigations has employed the Rotter's scale. It is not possible to list all the findings here Detailed literature reviews are available (Joe, 1971, Lefcourt, 1972; Minton, 1967, Rotter 1966) The literature does indicate that there are individual differences in the perception above one's control, over one's destiny and that the Rotter's scale is sensitive to these differences

Discrimination:

Rotter reports that correlation with Marlowe-Crowe Social desirability Scale range from –0 07 to –0 35 More recent studies have uncovered high coefficients (Altrocchi et al, 1963; Father, 1967, Hielle, 1971; McDonald, 1972) ranging from –0.02 to –0.42.

Administration:

The scale is self-administered and can be completed in 15 minutes. It has been used with adolescents and older subjects, and most frequently with college students. No upper or lower age limits have been established

Scoring:

The individual's score is the total number of external items endorsed. The highest score is 23 (highly external) while the lowest score is zero (highly internal). The six filler items are not scored.

3. Bell's Adjustment Inventory (BAI):

The Bell's Adjustment Inventory was originally developed by Bell (1934) for counselling adults whose personal problems pertain to any of the categories included in the test. It is suitable for use with both sexes The measurement of five types of adjustments by the one blank permits location of specific adjustment difficulties. The inventory has 160 items. The total sum may be used to indicate the general adjustment status.

Administration:

The inventory is self-administering and has no time limit, but ordinarily it does not require more than twenty-five minutes.

Scoring Procedure:

The use of small letters a, b, c, d, and e, corresponding to the five measures of adjustment, as well as the numbers, enable the worker to discover readily the particular question relating to each measure. High scores indicate unsatisfactory adjustment in areas, e g , home, health, social, emotional and occupational, and low scores indicate satisfactory adjustment to the above stated areas. Responses on items are recorded according to the scoring key. Total scores are calculated for each area and for each individual It ranges from excellent, good, average, unsatisfactory and very unsatisfactory according to the norms.

These ranges were further reduced to satisfactory, average and unsatisfactory for the convenience of analysis

Reliability:

The test-retest reliability was found to be different for each area: home adjustment 0 91, health 0 81, social 0 88, emotional 0.91, occupational 0 85 and total score 0 94.

4. The Multi-Dimensional Parenting Scale (MDPS):

Dr N.S Chauhan and Dr C. P Khokhar developed the Multi-Dimensional Parenting Scale in 1985 The scale has been standardized as a partial requirement of the doctoral project Its

efficacy has been further tested in three more doctoral researches at Meerut.

The scale has 56 items for seven areas of parenting (negative – positive dimensions) They are as follows

I	Hate	- Love
II	Discouragement	- Encouragement
III	Rejection	- Acceptance
iv	Dependence	- Independence
v	Autocratism	- Democratism
vi.	Submission	- Dominance
VII	Conservatism	- Progressivism
viii	Parenting as a whole	- Parenting as a whole

Administration:

The sale runs into four pages It is a five point rating verbal scale that can be administered individually and group-wise in about thirty minutes

Scoring:

There are eight types of scores separately for negative dimensions of parenting behaviour. A single score is constituted of 'area x item x rating' value. The use of stencils gives ready scores and avoids the multiplication procedure. The tester collects the appropriate printed score on the stencil and adds up the raw scores area wise Thus single scores for the 14 areas are got

Interpretations of the raw scores are then converted into Z-scores for diagnostic purposes. The Z-score conversions are given in the manual So, categories of 'Z-40 and below for the positive dimensions and Z-60

and above for the negative dimensions indicate 'deviant parenting', operationally meaning, less of positive and more of negative parenting functions.

Reliability:

The internal consistency of the scale has been determined in two ways. The scale has been administered twice with a time interval of one month on a group of 50 parents. Again, its scores for 'odd' and 'even' items have been split into two halves separately for the positive and negative dimensions of parents. The coefficients of reliability are given below

a	Positive Dimensions	...Test-Retest	Split-Half
i	Love	.. 0.65	.. 0 76
II	Encouragement	...0 627	0 692
III.	Acceptance	...0.656	. 0.75
IV	Independence	...0.625	. 0 723
v	Democratism	. 0.58	0.62
VI	Dominance	0.592	. .0 615
VII	Progressivism	.. 0 529	0 592
VIII	Parenting as a whole	...0 589	.0 62

b.	Negative Dimensions	...Test-Retest	. Split-Half
I	Hate	...0 437	0 64
II	Discouragement	...0.673	0 726
III	Rejection	. 0.663	0.58
IV.	Dependence	. .0.69	0 796
v	Autocratism	.. 0 865	0 89
VI	Submission	.. 0 779	0 783
VII.	Conservatism	. 0.564	...0 561
VIII	Parenting as a whole	...0.878	. .0 921

Validity:

No other test is available in this field Decisions of the wards of treatment of the parents have been the criterion measure. Opinions of 30 parents have been obtained for comparison with 5 point scores of their wards. The coefficient of validity for the two dimensions is given below

a	Positive Dimensions.	..Validity
i.	Love	...0 80
ii	Encouragement	.. 0.71
iii.	Acceptance	...0.76
iv	Independence	...0.74
v.	Democratism	...0 58
vi	Dominance	.. 0 63
vii	Progressivism	. 0 634
viii	Parenting as a whole	...0.67

b	Negative Dimension	. Validity
ix	Hate	. 0 62
x	Discouragement	.. 0 81
xi	Rejection	. 0 72
xii	Dependence	... 0 74
xiii	Autocratism	.. 0 89
xiv	Submission	0 64
xv.	Conservatism	.. 0.57
xvi	Parenting as a whole	.. 0 72

5. Malin's Intelligence Scale for Indian Children (MISIC):

Dr. A. J. Malin, in 1969 developed this Indian adaptation of Wechsler's Intelligence Scale for Children, better known by the acronym WISC, which was developed by Dr David Wechsler in 1949

Before entering into the details of the major revisions involved in the adaptation of the WISC it will be useful to give a general description of the test

The original WISC is an individual intelligence test or scale for children from the ages of 5 to 5 11. The Indian adaptation covers only ten years from 6 to 15.11.

The original scale is comprised of twelve subtests divided into Verbal and Performance groups as follows

Verbal	Performance
1. Information	7 Picture Completion
2. Comprehension	8 Picture Arrangement
3. Arithmetic	9. Block Design
4 Similarities	10 Object Assembly
5 Vocabulary	11. Coding
6 Digit Span	12 Mazes

The Indian adaptation omits the Picture Arrangement (8) of the Performance Scale as it proved to be too culturally biased both as to the content and the form.

Administration:

The subtests may be administered in any order according to the convenience for rapport establishment Instructions are given in the manual as to how to administer each subtest It takes around two hours and can be given in two parts in case the subject gets tired

Scoring:

Having totalled the respective subtest raw scores, they can be easily converted onto Test Quotients (TQ's) by the means of the Table accompanying the manual

After the conversion of raw scores into TQ's, the TQ's should be added and the average of each group, i e. Verbal and Performance Tests, should be taken separately.

Finally, to obtain tne Full Scale IQ, both the average TQs of the Verbal and Performance tests are added and then divided to obtain the IQ

The levels of IQ given by Dr. Wechsler are as follows

140 and above	Very Very Superior Intelligence
130-139	Very Superior Intelligence
120-129	Superior Intelligence
110-119	Above Average Intelligence
90-109	Average Intelligence
80-89	Dull Normal Intelligence
70-79	Borderline Intelligence
69 and below	Mental Defectiveness

Reliability and Validity:

The original WISC established its reliability subtest wise by using the split-half method with appropriate correction for full length of the test by Spearman-Brown formula, which yielded a total coefficient of 0.91.

The Indian adaptation established its reliability with the Test-Retest method and yielded a Pearson's Product Moment coefficient of correlation of 0.91 for the full scale IQ results.

For the original WISC, Wechsler did not provide any validity data and instead argued about having some sort of Construct Validity The Indian adaptation however, has established Concurrent as well as Congruent Validity The former was obtained from school ranking and yielded a coefficient of 0 61, whereas Congruent Validity was obtained was obtained from an adapted version of the California Short Form Test of Mental Maturity for the upper age levels and from Goodenough Draw-a-Man Test for the lower age levels Both yielded a coefficient of 0 63