

## CHAPTER II

### METHODOLOGY

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## CHAPTER II

### METHODOLOGY

#### 2.1 Introduction: Issues and Objectives.

A research starts with the curiosities and questions about a given phenomenon or a set of phenomena. Systematic attempts are then made to explore, analyse and understand the issues under question through suitable conceptual and methodological tools. The process of inquiry and the analytical tools are to a great extent relative to the specific domain of the concern and the conceptual, methodological, heuristic and pragmatic goals of the research (Gon 1980). The present investigation focuses on a critical issue of physical disability. The main objectives have emerged from the need to evaluate the degree of stress and dissatisfaction as experienced by the physically disabled people. The past researches have shown the possible effects of the type of limb injury and amputation (leg or arm), disability causing situation (accident or illness and war), which lead to maladjustment of the physically disabled person. In view of this, it is necessary to formulate certain major issues and develop a systematic strategy toward solving these problems.

As an exploratory study the present investigation was based on the following major issues.

- (i) Given that the type of amputation has an effect on the person, i.e. as a result of accident, disease

or war causalities, when disability sets in, how does the disabled person reacts to it ? What is the nature of crisis as experienced by him when he becomes disabled.

- (ii) Is there any relationship between the type of injury and crisis experience ?
- (iii) Do the disabled civilians and War-disabled people vary in their disability-induced crisis experience ?
- (iv) Are there any differences in crisis experience of the disabled people in terms of their differential patterns of World-hypotheses.
- (v) Are there any differences in crisis experience of the disabled people in terms of their differential patterns of value-types ?
- (vi) What are some of the problems faced by the disabled people ?
- (vii) To what extent the type of amputation (Leg/Arm) has an effect on adjustment problems of the disabled people ?
- (viii) Do the disabled civilians and the war disabled people differ in regard to their problems of adjustment ?
- (ix) Are there any differences in adjustment problems of the disabled people in terms of their differential

patterns of world-hypotheses ?

- (x) Are there any differences in adjustment problems of the disabled people in terms of their differential patterns of value-types ?
- (xi) What measures should be taken toward adequate and productive rehabilitation of these people ?
- (xii) To what extent the physically disabled people could be helped to utilize their maximum abilities ?
- (xiii) To what degree their (physically disabled) rehabilitability is possible ?

## 2.2 The Specific Problem Under Investigation.

The specific problem of the present investigation was to study the effects of the type of limb-injury (i.e. leg-amputation or arm-amputation), disability-causing situation, i.e. accident and illness or war) and the differential patterns of life world hypotheses and the value-types on the disability-induced crisis experience and the problems of adjustment.

## 2.3 Statement of the Problem in Terms of Null-Hypotheses.

From the queries, issues and problems as stated above, the following hypotheses were generated, each followed by the explanation and statement of the specific null-hypothesis

to be tested in the present investigation.

#### Hypothesis 1

The nature of crisis experience is a function of the type of limb injury and the consequent amputation (leg amputation or arm amputation) i.e. the disabled people with L.A. and A.A. differ in their crisis experience. Therefore, the null -hypothesis to be tested would be : The leg-amputated and the arm amputated do not differ in their crisis experience.

#### Hypothesis 2

The nature of crisis experience is a function of the disability causing situation i.e. whether disabled in war or accident. The disabled civilians and the war disabled people differ in their crisis experience. Therefore the null-hypothesis to be tested would be: The crisis experience of the disabled civilians is not differ from that of the war-disabled.

#### Hypothesis 3

The nature of crisis experience in the disabled people is a function of their differential patterns of World-hypotheses (the dominant world-hypothesis) i.e. the disabled people with differential patterns of world-hypotheses differ in their crisis experience. Therefore, the null hypothesis to be tested would be : The disabled

people with differential patterns of world-hypotheses do not differ with regard to crisis experience.

#### Hypothesis 4

The nature of crisis experience in the disabled people is a function of their different dominant value-types (dominant values) i.e. the disabled people with differential patterns of value-types differ in their crisis experience. Therefore, the null-hypothesis to be tested would be: The disabled people with different dominant value-types do not differ with regard to their crisis experience.

#### Hypothesis 5

The degree of adjustment of the disabled people is a function of the type of limb injury and the consequent amputation (leg or arm amputation) i.e. the disabled people with L.A. and A.A. differ in their problems of adjustment (e.g. at home, health, social, emotional and occupational). Therefore, the null-hypothesis to be tested would be : The leg-amputated and the arm-amputated people do not differ in their problems of adjustment.

#### Hypothesis 6

The degree of adjustment of the disabled people is a function of the disability-causing situation i.e.

whether disabled in war or accident. The disabled civilians and the war disabled people differ in their problems of adjustment (e.g. at home, health, social, emotional and occupational). Therefore, the null-hypothesis to be tested would be : The disabled civilians and the war disabled people do not differ in their problems of adjustment.

#### Hypothesis 7

The degree of adjustment of the disabled people is a function of their differential patterns of world-hypotheses i.e., the disabled people with differential patterns of world-hypotheses differ in their problems of adjustment (e.g. at home, health, social, emotional and occupational). Therefore, the null-hypothesis to be tested would be : The disabled people with differential patterns of world hypotheses do not differ with regard to their problems of adjustment.

#### Hypothesis 8

The degree of adjustment of the disabled people is a function of their different dominant value-types i.e., the disabled people with differential patterns of value-types vary in their problems of adjustment. Therefore, the null-hypothesis to be tested would be: The disabled people with different dominant value-types do not differ with regard to their problems of adjustment.

## 2.4 The Variables.

Here, an attempt is being made to define the independent and dependent variables operationally in terms of their levels, types and functions.

### Independent Variables

The major independent variables under investigation were as follows:

- (i) The Type of Limb injury and Amputation:
  - (i) Leg Amputation (L.A)
  - (ii) Arm Amputation (A.A)
- (ii) Disability Causing Situation:
  - (i) Accident, illness (ii) War
- (iii) Type of World-Hypotheses:
  - (i) Formism (iii) Contextualism
  - (ii) Mechanicism (iv) Organicism
- (iv) The Value-Types:
  - (i) Theoretical (iv) Social
  - (ii) Economic (v) Political
  - (iii) Aesthetic (vi) Religious

### (i) The Type of Limb-Injury and Amputation:

A physical disability is any impairment of the physiological structure due to accident and illness or



war. An individual on being physically disabled experiences functional disabilities (motor disabilities) which give rise to other problems of daily living. Also, there is a relationship between the type of limb injury and the psychological maladjustment. The aim here was to draw attention on disabled people leg amputation or arm amputations.

(ii) Disability-Causing Situation

Disability being presumably a permanent impairment represents disturbances in the psychological make-up of the disabled person. People disabled under different causal situations and circumstances such as war or accident and illness, may vary in their crisis experience that they encounter when disability occurs and the consequent adjustment problems and activities of daily living. For the purpose of the present investigation people disabled through accidents, illness or war were selected. Civilians disabled through accident or illness were described as 'disabled civilians', and the Military Personnel disabled through war injury were described as 'War-disabled'.

(iii) World-Hypothesis

Assuming that the nature of crisis experience and adjustment problems encountered are the function of the disabled people's World-Hypothesis, an attempt was made to depict their interrelationships. Stephen Pepper's World Hypothesis scale (1942) was used as a basis for classifying the disabled

people into four dominant World-Hypotheses groups i.e., (Formism, Mechanicism, Contextualism and Organicism).

Pepper (1942) proposed that thinking proceeds by the use of familiar areas of knowledge, usually drawn from everyday experience, as metaphors for the organization of our thinking about new, abstruse problems.

#### (iv) Value-Types

For the present study the role of values was taken as one of the independent variables on the basis of the assumption that the disabled people differ in their crisis experience and adjustment problems in terms of the differential patterns of their value types.

#### Dependent Variables

- (i) Crisis Experience
- (ii) Adjustment Problems

For the present investigation disability-induced crisis experience and adjustment problems were taken as the dependent variables. The conceptual and theoretical aspects of this issue has been discussed in detail in the later part of Chapter 1. The reason for selecting such issues like crisis experience and adjustment problems of the disabled people is the situation which the disabled people face as a result of

their physical disabilities and its devastating, horrifying impact on the disabled person. It is hoped that the development of concepts and attempts to depict the interrelationships between disability and the consequent crisis experience and problems in adjustment, will eventually be of practical use in generating better understanding and information; and in rehabilitating the disabled people back to normalcy.

## 2.5 The Sample:

The sample of the present study consisted of one hundred and ten disabled persons from Baroda, Ahmedabad, Pune and Bombay Cities. The sample was selected according to the following criteria.

- (i) The type of injury (i.e. leg or arm amputation).
- (ii) Disability-causing situation (in accident, illness and War).
- (iii) Age group was from 20 years and above.
- (iv) The education level was decided S. S. C. and above.

## 2.6 Tools:

In the present investigation the following tools were used :

- (i) World Hypothesis Scale
- (ii) The Values Test

(iii) Bell's Adjustment Inventory

(iv) Interview Schedule.

(i) World Hypothesis Scale

The world-hypothesis scale used for the present study was developed by Pepper (1942). It is a 12 itemed inventory, each item consisting of a very brief description of an event of action involving a person, followed by four explanations of the event, and each one representing one of the world hypotheses. The subjects were asked to rank the four explanations in terms of their relative preference ranging from 0 to 4. The total score of a subject is the sum of his responses assigned to four explanations. There was no minimum or maximum score as the score ranged from 0 to 4 or 1 to 4, e.g. two items could be given equal weightages at times in assigning values.

Procedure : Subjects whose scores for their most preferred alternative were greater than 45 and those whose score for the next most preferred alternative were not more than 40 were considered to prefer that alternative primarily. Subjects whose second choice was within 5 points of their first were considered to prefer two orientations. Subjects were then paired and arranged on the basis of these first preferred orientation followed by their second preferred orientation.

The parallel forms reliability ranged from .64 to .88. Its alpha coefficients ranged from .76 to .84, indicating a high degree of internal consistency for all four orientations and for both male and female college students.

The four "relatively adequate" world hypotheses are called Formism, Mechanicism, Organicism and Contextualism.

Formism: The root metaphor of formism is similarity. Formism involves a view of the World as organized primarily on the basis of similarities and differences among entities. The typical formist approach to understanding is to concentrate on classification, it has a rational approach. It has two primitive sources in common sense, differing enough to produce two species of the theory, and it is questionable if the two ever quite completely merge (Pepper, 1942).

Mechanicism: The root metaphor of mechanicism is a machine. It may be a machine, like a watch or a dynamo. Species of mechanicism develop on the basis of the type of machine that is regarded as fundamental (Pepper, 1942). Mechanicism involves a view of the world as if it were a great machine, in which the various phenomena are understood primarily by identifying causal connections between events. (Haidt). It has a pragmatic and analytical approach toward life.

Organicism: The historic event which is the root metaphor

of contextualism is a nearer approximation to the refined root metaphor of organicism. The organicist views the world as an organism, rather than a machine, and hence his primary emphasis is on understanding parts only within wholes, with the notion that no part be understood except as it is within the whole, a whole that is in some sense "greater than its parts" (Laird). The organicist believes that every actual event in the world is a more or less concealed organic process. He believes, therefore, that a careful scrutiny of any actual process in the world would exhibit its organic structure (Pepper, 1942).

Contextualism: The root metaphor of the contextualism is "the historical moment" as it is experienced. It also emphasizes the interconnectedness, and dependence of parts upon each other and upon the patterns of which they are a part (Laird). The acts like doing, enduring, and enjoying, making a boat, running a race, laughing at a joke, persuading an assembly, solving a problem, removing an obstacle, exploring an country, communicating with a friend, creating a poem etc. these acts or events are all intrinsically complex, composed of interconnected activities with continuously changing patterns. These are like incidents or events and the contextualist finds that everything in the World consists of such incidents (Pepper, 1942).

(ii) The Values Test

The values test used in this study was developed by Singh and Sharma based on Spranger's (1928) system of value. It is a 24-item test divided into two parts, and is based on a variety of familiar situations. Two alternative answers are provided to items in Part I consisting of 18 items, and four alternative answers to the 6 items in Part II. The subject records his preference numerically by the side of each alternative answers.

The value test is a self administering one. The directions appear at the top of the sheet (See Appendix) and there is no specified time limit. Most subjects require about fifteen minutes to complete the entire test. The test may be administered in groups or individually. When administered in groups, it is desirable to caution the subject against answering it in collaboration with others, or against spending too much time on it. Omissions are permissible but undesirable.

The total sum of the six final scores for every subject must be the same, and it is also essential that the sum of the marks for two answers to any questions in Part I equal 3, and the sum of marks (ranks) for the four answers to any question in Part II equal 10. The range of total scores in Part I is from 0 to 30, in Part II from 10 to 40. The subtraction of each total in Part II from 39 effects the necessary inversion.

The test has a split half reliability of  $+0.72$  and the repeated test reliability approximates  $+0.82$ . Validity was found to be  $+0.83$ . The reliability and validity for the separate values vary. However, aesthetic and religious values are the most satisfactory and social values the least satisfactory.

The value-test aims to measure the relative prominence of six basic interests or motives in personality; the theoretical, economic, aesthetic, social, political and religious.

The Theoretical: The dominant interest of theoretical man is the discovery of truth. In the pursuit of his goal he characteristically takes a "cognitive" attitude, one that looks for identities and differences; one that clears itself of judgements regarding the beauty or utility of objects, and seeks only to reason. Since the interests of the theoretical man are empirical, critical, and rational, he is necessarily an intellectualist, frequently a scientist or philosopher, his chief aim in life is to order and to systematize his knowledge (Singh<sup>and</sup> Sharma).

The Economic : The economic man is characteristically interested in what is useful. Based originally upon the satisfaction of bodily needs (self preservation), the interest in utilities develops to embrace the practical affairs of the business world, the production, marketing and consumption



of goods, the elaboration of credit, and the accumulation of tangible wealth. This type is thoroughly "practical" and conforms well to the prevailing stereotypes. In his personal life the economic man is likely to confuse luxury with beauty. In his relations with people he is more likely to be interested in surpassing them in wealth than in dominating them (Political attitude) or in serving them (social attitude). (Singh and Sharma).

The Aesthetic: The aesthetic man sees his highest value in form and harmony. Each single experience is judged from the stand point of trace, symmetry, or fitness. He regards life as a manifold of events, he is aesthetic if he finds his chief interest in the artistic episodes of life.

The aesthetic attitude is in a sense diametrically opposed to the theoretical; the former is concerned with the diversity, and the latter with the identities of experience. The aesthetic man chooses, with Kalidas, to consider truth as equivalent to beauty, or else to agree with Mencklen, that, "to make a thing charming is a million times more important than to make it true" (Singh and Sharma). In the economic sphere the aesthetic man sees the process of manufacturing, advertising and trade as a wholesale destruction of the values most important to him. In social affairs he may be said to be interested in persons but not in the welfare of persons; he tends towards individualism and self-sufficiency (Singh and Sharma).

The Social : The highest value of this type is love of people whether of one or many, whether conjugal, filial, friendly or philanthropic. The social man prizes other persons as ends, and is therefore himself kind, sympathetic and unselfish. He is likely to find the theoretical, economic and aesthetic attitudes cold and inhuman. In contrast to the political type, the social man regards love as itself the only suitable form of power, or else repudiate the entire conception of power as endangering the integrity of personality. In its purest form the social interest is selfless and tends to approach very closely to the religious attitude (Singh and Sharma).

The Political: The political man is interested primarily in power. His activities are not necessarily within the narrow field of politics, but whatever his vocation, he betrays himself as a all knowing man (Macht mensch). Leaders in any field generally have high power value. Since competition and struggle play all life, many philosophers have seen power as the most universal and most fundamental of motives. There are, however, certain personalities in whom the desire for a direct expression of this motive is upper most, who wish above all else for personal power, influence and renown (Singh and Sharma).

The Religious: The highest value of the religious man may be called unity. He is mystical, and seeks to comprehend the

cosmos as a whole, to relate himself to its embracing totality. Spranger defines the religious man as one "Whose mental structure is permanently directed to the creation of the highest and absolutely satisfying value experience". (Singh and Sharma). Some men of this type are "immanent mystics, that is, they find in the affirmation of life and in active participation therein their religious experience. A Faust with his Zest and enthusiasm sees something divine in every event (Singh and Sharma).

### (iii) Bell Adjustment Inventory

The Bell 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.

The inventory is self-administering and it has no time limit, but ordinarily it does not require more than twenty five minutes. The use of the 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 (See Appendix F.)

High scores indicate unsatisfactory adjustment in areas i.e. home, health, social, emotional and occupational, and low scores indicate satisfactory adjustment to the above stated areas.

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

(iv) Individual Interviews:

An interview schedule consisting of 19 items was constructed. It was specially designed to get a detailed information about the crisis experience of the individuals. Interviews provided the major bases for developing the coding manual to assess the crisis experience. Each person was interviewed individually, and was asked to speak as long as he could. Interviews were recorded with the help of a tape recorder and the subjects were assured that the information would be kept strictly confidential. With the help of the coding manual (Appendix C) all the interview were analysed separately. Crisis experience were assessed under four major categories i.e. shock, denial, acknowledgement adaptation and change and six dimensions i.e. self-experience, reality perception, emotional experience, cognitive structure, physical disability and attitude toward help and sympathy. A summary coding chart is given below (P.79).

## 2.7 The Procedure of Data Collection

Data for the present study was collected under two phases.

### Phase one:

The various tests i.e. World-hypotheses, the value-test and the Bell's adjustment inventory were administered. The tests were administered individually. In case of the war disabled, instructions were given in a group as they live in the same ward. They were asked not to discuss among themselves and the importance of the need for 'individual opinion' was stressed.

### Phase two:

Individual interviews were conducted in a strictly separate room where others were not allowed to enter during the interview, so that the disabled individual could feel secure and free to give information or say anything that he wanted.

Data collection was done at various places i.e., Baroda (Jyoti Ltd., Friends Society, Centre for the Physically Handicapped near Canara Coffee House, Dandia Bazar, and Orthopedic Ward, S.S.G. Hospital), Ahmedabad (Red Cross Society), Bombay (All India Institute for Medicine

and Rehabilitation) and Pune (Artificial Limb Centre, Military Hospital, Pune).

## 2.8 Analysis of Results

### Part One:

Rationale and Method for the analysis of the interview protocols:

As stated earlier (Phase two) the crisis experience was studied through individual interviews (Appendix-A). For the purpose of analysing the interview protocols a Coding Manual was devised (Appendix-C). The coding manual was developed (refer summary coding chart <sup>p-40</sup> ) on the basis of an inductive (from the data) - cum deductive (Fink, 1967, Gon, 1976) method. Two judges went through one third of the protocols (Chosen randomly from the total of one hundred and ten protocols) independently and tried to delineate a comprehensible set of categories for the purpose of describing the various phases and dimensions of crisis experience. Only those categories were taken on which both the judges agreed to their appropriate and unambiguous connotative value. After all the categories describing the different phases and dimensions of crisis experience were thus decided in the form of a coding manual (Appendix-C) all the interview protocols were individually coded accordingly.

For the purpose of analysing the interview protocols the following steps were followed.

- (i) Frequencies and percentages of the type of limb-injured people in terms of the phases and dimensions of crisis experience.
- (ii) Frequencies and percentages of responses of the disabled civilians and the war-disabled people in terms of the phases and dimensions of crisis experience.
- (iii) Frequencies and percentages of responses of the disabled people with differential patterns of world-hypotheses in terms of the phases and dimensions of crisis experience.
- (iv) Frequencies and percentages of the disabled people with different dominant value-types in terms of the phases and dimensions of crisis experience.

Part Two:

- (v) Means and Standard Deviations of the type of limb-injured people (LA and AA) for different areas of adjustment (i.e. Home, Health, Social, Emotional and Occupational).
- (vi) Means and Standard Deviations of the disabled civilians and the war-disabled people for different areas of adjustment.

- (vii) Means and Standard Deviations of the disabled people with differential patterns of World-Hypotheses, for different areas of adjustment.
- (viii) Means and Standard Deviations of the disabled people with different dominant value-types for different areas of adjustment.
- (ix) T-test and chi-squares of the type of limb-injured people for different areas of adjustment.
- (x) T-test and Chi-squares of the disabled civilians and the war-disabled people for different areas of adjustment.
- (xi) ANOVA t-test and chi-squares of the disabled people with differential patterns of World-Hypotheses for different areas of adjustment.
- (xii) ANOVA and chi-squares of the disabled people with different dominant value-types for different areas of adjustment.



LIST OF ABBREVIATIONS

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AV	Aesthetic value
AA	Arm Amputation
CF	Higher score on Contextualism followed by Formism
CO	Higher score on Contextualism followed by Organicism
CM	Higher score on Contextualism followed by Mechanicism
DC	Disabled Civilians
DF	Degrees of freedom
EV	Economic value
F	Frequency
FC	Higher score on Formism followed by Contextualism
FO	Higher score on Formism followed by Organicism
FM	Higher score on Formism followed by Mechanicism
LA	Leg Amputation
MC	Higher score on Mechanicism followed by Contextualism
MF	Higher score on Mechanicism followed by Formism
MO	Higher score on Mechanicism followed by Organicism
N	Numbers
OC	Higher score on Organicism followed by Contextualism
OF	Higher score on Organicism followed by Formism
OM	Higher score on Organicism followed by Mechanicism
P	Percentage
PV	Political value
RV	Religious value
Ss	Subjects
SV	Social value
TV	Theoretical value
WD	War Disabled

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# CODING CHART

## PSYCHOLOGICAL PHASES AND DIMENSIONS OF

### CRISES EXPERIENCE

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	SELF EXPERIENCE	REALITY PERCEPTION	EMOTIONAL EXPERIENCE	COGNITIVE STRUCTURE
1	2	3	4	5
SHOCK	Experiences of threat to the existing structure, e.g. "when people stare at my arm stump with curiosity 'I feel as if I am a stranger'"	Overwhelming, utter confusion e.g. "Oh! No! 'I never imagined this will ever happen to my life. Now how shall I be able to live a normal life.'"	Emotionally up-set severely disturbed, helplessness, domb-found, etc. e.g. "Oh! No experiences, 'How misearable I am, Now nothing could be done I feel like crying, even that I cannot."	Cognitive inefficiency, confused, failure to think constructively or to plan e.g. "he says I will die.... May live.... will not take help.... who will marry me".
DEFENSIVE RETREAT (Denial)	Denial of injury Attempt to maintain the old structure e.g. "I never think I am handicapped" I am still as normal as I was before".	Denial of reality strong resistance, indulges in wishful thinking e.g. he says "Well, I think I have not lost anything, I am still far better than thousands of others."	Emotional incapsulation, resistance to discussions, unrealistic state of happiness e.g. he says "It is good that this happened, because of this I got monetary help and sympathy from others."	Disorganization in deliberate thinking internalization, aggressive feelings, preoccupied, rigid thinking e.g. "I do not want to talk of my accident.... sit" or "leave me alone.... you can not understand my problems."
ACKNOWLEDGEMENT	Giving up the old existing structure, loss of valued self	Facing reality facts, Acceptance of the self as it is, not as	Depression, bitterness experiences, aware of the self	Defensive breakdown of organized planned thinking,

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