Methods and Procedures
CHAPTER - III

METHODS AND PROCEDURES

In this chapter, the selection of subjects, experimental design, collection of data, administration of tests, treatment, the statistical techniques employed to analyze the data etc. have been presented. This investigation was done primarily to focus on the specific effect of vocational guidance to parents (mothers only) on psycho-motor performance during vocational training of the mentally retarded individuals (their wards).

3.1. DESIGN OF THE STUDY

The design of the study included the following:

3.1.1 RESEARCH DESIGN

Pre and post experimental design was followed with two groups. In one group (experimental group) vocational guidance (group and individual guidance) was given. Group guidance of the mothers was done by holding small group sessions; individual guidance was provided through personal contacts as per schedules prepared for vocational guidance for mothers of mentally retarded individuals.

The mothers of the other group (control group) were not given any such vocational guidance. The mentally retarded individuals and their mothers of the two groups, however, were evaluated for variables chosen for study initially at the time of intake and were again evaluated after a period of three months.

<table>
<thead>
<tr>
<th>Type of Group</th>
<th>Pre test</th>
<th>Treatment</th>
<th>Post test</th>
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<tbody>
<tr>
<td>Experimental Group</td>
<td>Initial Evaluation</td>
<td>Vocational Guidance to parents for 3 months</td>
<td>Subsequent Evaluation</td>
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<tr>
<td>(N=50)</td>
<td></td>
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<tr>
<td>Control Group</td>
<td>Initial Evaluation</td>
<td>No Vocational Guidance to parents for 3 months</td>
<td>Subsequent Evaluation</td>
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<td>(N=50)</td>
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The effect of the treatment (group and individual guidance) to parents (mothers only) of mentally retarded was measured by the difference in the pre test and post tests scores of both control and experimental groups. The variables of the study were selected psychological variables i.e. attitude, self-confidence, emotional competence and adjustment of mothers of mothers of mentally retarded individuals and the selected psycho-motor variables namely behaviour problems, weight, strength, agility and psycho-motor vocational performance of the mentally retarded individuals.

3.2 SAMPLE

A sample means the representative proportion of the population selected for observation and experimentation. The criteria for identification depend upon the size and scope of the study, subject availability, expenses in both time and money, and complexity of data analysis. All the above mentioned factors were taken into consideration in sample selection. A special permission for data collection was taken officially from the heads of the institutes with the assurance of keeping the information confidential and that the information would be used for academic benefit only. The research was carried out at the different institutes of Chandigarh and adjoining areas where the vocational training areas included candle making, book binding, chalk making, diya making, shagun- envelope making, file making, carry bag making, paper making and salesmanship for running sale counters etc. Regular parent teacher meetings were held at these institutes where the problems of these individuals were discussed. One hundred mentally retarded individuals were selected in the age range of 16 to 30 years who were taking vocational training, having mild to moderate (IQ 35-70) mental retardation as judged on psychological tests and diagnosed as mentally retarded by the Consulting Psychologist of the institutes as per ICD 9 (International classification of diseases, 9th session).

To meet the purpose of the present study, the sample also consisted of mentally retarded individuals who were living in Chandigarh and adjoining areas. Amongst the cases defined above, the sample was selected consecutively from
the month of August, 2003 onwards. The sample also consisted of 100 parents (mothers) of these mentally retarded individuals. The intake of the subjects continued till the required number of cases reached N=100 for each of the mentally retarded individuals and their mothers. The total group for each of mentally retarded individuals and their mothers was further divided into two groups randomly i.e. 50 each for control group and experimental group.

The criteria for inclusion and exclusion are as follows.

3.2.1 INCLUSION CRITERIA

Individual diagnosed as mentally retarded on the basis of Physician’s Diagnosis and Psychological Assessment.

a) Individual diagnosed to be suffering from mild (IQ 50-70) and moderate (IQ 35-49) mental retardation as per ICD-9.

b) Individual age range was 16 to 30 years.

c) Individual undergoing vocational training.

3.2.2 EXCLUSION CRITERIA

a) Individual with no associated physical handicap.

b) Individual with no associated independent psychiatric or neurological problems.

Due emphasis was laid on inclusion and exclusion criteria before the subjects were divided into two groups. Homogeneity of the groups was ensured prior to the administration of pre test. A meeting with all the parents, teachers and heads of the institutions was held by the researcher. The purpose of this study along with various testing procedures and treatment (i.e. guidance schedules) were explained to them in detail individually by the researcher. Parents, especially mothers were made to grasp the importance of the study so that they did not have any confusion whatsoever regarding the perseverance and interest they would be required to put in during the collection of data. All the
mothers agreed to cooperate whole heartedly. It was found that most of the fathers of the mentally retarded individuals would not be available. Thus, researcher with the help of experts decided to include only one parent i.e. mothers of mentally retarded individuals in the sample.

A simple random technique was adopted for classification of groups of 100 mentally retarded individuals with their respective 100 mothers.

- Mentally retarded individuals (N=100) were assigned the following two groups, each comprising of 50 subjects:
  1. Control group (n=50)
  2. Experimental group (n=50)

- Accordingly, mothers of mentally retarded individuals (N=100) were assigned the following two groups, each comprising of 50 subjects:
  1. Control group (n=50)
  2. Experimental group(n=50)

CONTROL GROUP: No specific treatment was given to the mothers of mentally retarded individuals included in the control group. Their wards continued with their vocational training.

EXPERIMENTAL GROUP: The specific vocational guidance treatment designed for the mothers of mentally retarded individuals included in the experimental group was given. Their wards continued with their vocational training.

The design of treatment schedule was classified step wise which is produced as under:

In light of objective of affecting the psycho-motor performance of the mentally retarded individuals during vocational training, guidance schedules were designed for their parents. The following group and individual guidance schedules were prepared and followed for the study. These schedules are presented in the following pages:
<table>
<thead>
<tr>
<th>S. No.</th>
<th>Group Guidance Steps</th>
<th>Duration (approx.)</th>
<th>Activities</th>
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<tbody>
<tr>
<td>1</td>
<td>Explaining the purpose</td>
<td>2 minutes</td>
<td>Initiate the group guidance session by briefly explaining the purpose of meeting of the counselor i.e. vocational guidance to the mothers of mentally retarded individuals for management of their wards during vocational training.</td>
</tr>
<tr>
<td>2.</td>
<td>Brainstorming and clarifying options</td>
<td>4 minutes</td>
<td>Work out a list of all the possible job options open to their wards and help the mothers to clarify the job option for action.</td>
</tr>
<tr>
<td>3.</td>
<td>Familiarizing with the rules</td>
<td>4 minutes</td>
<td>Subjects to be familiarized with the following rules:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Group guidance is a cooperative job. Work together to help each other in understanding of how to solve problems relating to vocation and vocational training of the mentally retarded individuals.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2. Look at problems of mentally retarded individuals faced during their vocational training.</td>
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<td></td>
<td></td>
<td></td>
<td>3. Try to listen to others and mentally retarded individuals patiently.</td>
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<td></td>
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<td></td>
<td>4. Stick to topic, do not get side tracked.</td>
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<td></td>
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<td></td>
<td>5. Speak freely whenever anyone has</td>
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</table>
6. Have trust in other members of the group.

7. Do not feel that one has to come to group solutions or agreement. The purpose of group is to explore problems relating to vocation and problems faced by mentally retarded individuals during training together.

8. Let others know that they are not alone in what they feel; if one has experienced the same feelings/problems, tell them.

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<tr>
<td><strong>4.</strong></td>
<td>Clarifying and developing plan of action</td>
<td>4 minutes</td>
</tr>
<tr>
<td></td>
<td>Help the mothers of mentally retarded individuals to clarify the problems for action and also assist them to think possible consequences of their action.</td>
<td></td>
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</table>

| **5.** | Eliciting the problems of mentally retarded individuals faced by the mothers | 7 minutes |
|   | Make mothers feel free to express vocational problems of their mentally retarded children. Help the parents by accepting and facilitating to express their problems relating to vocational training of their mentally retarded wards and causing other problems. |

| **6.** | Guiding the mothers of mentally retarded individuals by | 7 minutes |
|   | Explain the following |
|   | (A) Quick tips (B) Steps to be followed |
|   | • Define the problems of mentally retarded individuals |

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<table>
<thead>
<tr>
<th>Step</th>
<th>Activity Description</th>
<th>Time</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>using information / content related to vocational management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>• Make concerted effort to avoid the problems of mentally retarded individuals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>• Add miscellaneous information to the problems of mentally retarded individuals.</td>
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<td></td>
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<tr>
<td>4</td>
<td>7. Facilitating assertion</td>
<td>5 minutes</td>
<td>Help the mothers of mentally retarded individuals to carry out the plan of action to avoid problems they have identified and to improve psycho-motor performance needed during vocational training.</td>
</tr>
<tr>
<td>5</td>
<td>8. Evaluating progress</td>
<td>2 minutes</td>
<td>Check whether the plan of action has been successful or not and decide on further action, if necessary.</td>
</tr>
<tr>
<td>6</td>
<td>9. Recycling process</td>
<td>3 minutes</td>
<td>Whether action has been successful or not, it may be useful to recycle through the helping process to establish the next step.</td>
</tr>
<tr>
<td>7</td>
<td>10. Arranging for further contact</td>
<td>3 minutes</td>
<td>Suggest convenient time for further contacts.</td>
</tr>
<tr>
<td>8</td>
<td>11. Referring on</td>
<td>2 minutes</td>
<td>Discuss with the mother on the type of help needed from others in the process of action</td>
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<tr>
<td>9</td>
<td>12. Terminating contact</td>
<td>2 minutes</td>
<td>Fade out the visit by leaving the door open for further contacts.</td>
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Note: This group guidance schedule by Mukherjee (2003) used for giving guidance to the parents of mentally retarded was procured from YWCA, Guidance and Counseling laboratory, Chandigarh with permission and modified according to the need of the present study.
INDIVIDUAL GUIDANCE SCHEDULE FOR VOCATIONAL GUIDANCE FOR MOTHERS OF MENTALLY RETARDED INDIVIDUALS (DURATION 35-45 MINUTES)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Steps of Individual Guidance</th>
<th>Duration (approx.)</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Explaining the purpose</td>
<td>4 minutes</td>
<td>Initiate individual guidance by assisting the parent of the mentally retarded individual so as to enable the parent to understand herself, problems related to her ward and performance during training and other situations in a meaningful and realistic way.</td>
</tr>
<tr>
<td>2.</td>
<td>Rapport building</td>
<td>4 minutes</td>
<td>Encourage the mother of the mentally retarded individual to express freely her ideas, views and feelings without any fear or inhibitions and hence establish with her a relationship of mutual respect.</td>
</tr>
<tr>
<td>3.</td>
<td>Introducing the rules</td>
<td>4 minutes</td>
<td>Instill faith in the parent not to hide any of her feelings or problems. Ensure co-operation. Be a good listener. Expect the parent to be a good listener too. Inculcate mutual trust. Focus on the problem. Seek time to time feedback.</td>
</tr>
<tr>
<td>4.</td>
<td>Assessment and diagnosis</td>
<td>4 minutes</td>
<td>Pick up problems communicated by the mother of the mentally retarded child. Enlist and assess the areas of</td>
</tr>
</tbody>
</table>
5. Formulating guidance goals

7 minutes
Facilitate concrete goal setting to ensure sustained level of motivation. Suggest types of intervention strategies. Expect verbal commitment to work on specific problems. Facilitate behaviour change. Make efforts to enhance coping skills, promote decision making and facilitate the mother's potential.

6. Guidance for implementing interventions and problem solving

7 minutes
Once the secure setting is achieved, let the intrapersonal problems emerge on surface. Give guidance for encouraging mother to select appropriate intervention strategies, identify possible risks and benefits and discuss the possible time it may take. Respect the mother's values and beliefs.

7. Facilitating assertion

5 minutes
Ensure appraisals to verify implementation of strategies that have been decided upon.

8. Evaluating progress and recycling the process

4 minutes
Developing an objective of understanding of the implementation of strategies through interactions on the basis of observation and appraisals communicated by the
Note: This group guidance schedule by Mukherjee (2003) used for giving guidance to the parents of mentally retarded was procured from YWCA, Guidance and Counseling laboratory, Chandigarh with permission and modified according to the need of the present study.

The guidance to the mothers of the mentally retarded was given with a concern of elevating their spirit to be able to help their ward in performance during vocational training. A blend of several factors such as rapport building, empathy, understanding and acceptance and above all a sense of commitment were kept in mind. A brief description of these has been given in Chapter 1. Accordingly, sufficient guidance/information about jobs and vocational courses which might be of use to parents of mentally retarded wards was also given to them through information leaflets and visual aids.

The researcher on identifying the sample had an idea in advance about the members, their needs, problems, experience, etc. following which the researcher selected the members randomly to form the two groups. The researcher often had to explain her role. The main theme was underlined that each member had the responsibility of understanding and helping each of the other members as well as striving to solve his own problems. Each member was expected to take responsibility for confidentiality. It was believed in principle that inter-personal relationships between members would have a therapeutic

<table>
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<th>parent regarding the individual's training.</th>
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<tbody>
<tr>
<td>9.</td>
<td>Arranging for next contact</td>
<td>3 minutes Fix up the next appointment according to the convenience of the mother of the mentally retarded individual.</td>
</tr>
<tr>
<td>10.</td>
<td>Terminating contact</td>
<td>3 minutes Leave politely with a feeling that the mother can proceed forward without any further assistance and yet to be able to rebuild the contact whenever required.</td>
</tr>
</tbody>
</table>
potential. It was communicated to the mothers that attendance was considered to be a crucial matter in group guidance. The members of a group generally responded better because when one member ceased to talk, another would step in to sustain the process. The group guidance continued for 45 minutes only to attain the objectives. The mothers could evaluate the gains made by each of them individually as they would arrive at a unanimous conclusion that the group could then be ended.

Process of individual guidance implies continuous chain of changes that takes place in the client (mother of mentally retarded individual) in promoting personality changes in a desired direction. The kind of change that guidance process aimed at is briefly stated as follows: (1) awareness on the part of the mother of mentally retarded individual, (2) psychological and behavioural change in a desired direction through which the mother of the individual could achieve her goals, and (3) understanding her potentialities, limitations and how to utilize them best in achieving her goals.

According to Rao (2007), the individual guidance process is the same for all problems and for all individuals. In vocational and educational guidance, the major emphasis is on collecting factual information and helping the counselee to understand this information in a proper perspective. In such situations the emotional problems, though present, are not the main concern of the counselor. In such a situation, the decision-making and planning model occupies the counselor’s attention. Some of the major points followed are given in the following pages.

Physical setting: It was decided to carry out group and individual guidance under certain optimal conditions which included special attention for physical settings. The place where individual guidance was rendered to the mothers of mentally retarded was free from outside disturbance and gave a feeling of warmth and comfort with enough light that was neither too flashy, nor too dull nor depressing and had good ventilation. In short, the corner chosen for group and individual guidance had a relaxed atmosphere where the mothers of mentally retarded could talk in a relaxed mood.
Privacy: To avoid exclusive reliance on memory, recording of the interview was done for understanding and appreciating what the parent had said. The mother of the mentally retarded was not kept ignorant of it. The purpose of the recording was made sufficiently clear to them with regard to ethics. It was ensured that privacy with its all ethical and professional obligations would be maintained (Recording was done by making brief notes).

Belief and attitude change and value orientation: Researcher tried to modify the values, beliefs and attitude of the mother, thereby affecting a change in their response. The researcher adopted a ventral attitude. The individual’s right of faith was respected; hence the researcher did not exercise extra constitutional powers to interfere with the fundamental rights or to affect a change in response of the mother of mentally retarded as it was a highly sensitive issue. There was no question of forcing the value system on the mother of the mentally retarded. But in situations of value conflicts, the counselor tried to clarify the issues to overcoming the confusions of the client adopting an attitude of unreserved acceptance.

Acceptance: The principle of accepting each person to be a person of self worth was adopted with a deep concern in mind of otherwise a possibility of elevating the misery of the mother of mentally retarded in guidance situation. Acceptance was revealed by words, gestures, postures and the mother’s as well as researcher’s experience of the feeling of being unconditionally liked, respected and understood. In this sense, acceptance was regarded as an essence of a special guidance situation.

Understanding: One of the basic needs of an individual is the need to be understood as it touches the deepest feelings of the individual who feels loved, liked and accepted. Understanding others in a social situation as well as understanding oneself has been the prime concern of human beings of all ages. It is essentially the perception of another’s attitudes, meanings and feelings.
understand is to clearly grasp what is sought to be understood - a person, object, event, idea or word. While giving guidance to the mother of mentally retarded, mother’s understanding of herself was kept in mind:

Communication and empathy: Empathy is the capacity to feel ‘into’ (while sympathy is to feel ‘with’) and this was best understood by seeing how a mother felt with her own child with a problem. Empathy is an interrelationship between two people and this inner relationship borders on a sort of sacred relationship which is an essential condition in guidance. The researcher used five dimensions of empathy: (i) tone – the expressive and non-verbal dimensions conveying harmony and unity, (ii) pace – the appropriate timing when counselor leads, (iii) flexibility – the ability of the researcher/counselor to adapt himself to the client’s situation, (iv) perception of client’s frame of reference and (v) repertoire of leads – the resourcefulness of the counselor to vary his methods of approach. Thus, empathy as a skill or capacity was used to view the researcher’s subjective world as if it were her own.

Rapport: Since the subjects were expected to be influenced by the researcher’s orientation philosophy and value system, researcher’s skills such as establishment of rapport and empathy helped in success of guidance session.

Warm, friendly and understanding conditions were kept in mind for effective relationship between the researcher and the subjects. A warm, friendly and trusting mutual relationship was achieved which had grown out of co-operative effect and was sustained throughout guidance sessions. Gestures such as moving out to receive the mother, greeting her warmly, putting her at ease and directing her attention away from the problem were some of the basic techniques of rapport used by the researcher. Sensitiveness to the mother’s needs and moods also helped to sustain the rapport.

Attentiveness: Attentiveness was one of the important skills used by the researcher to understand the essence of content and feeling expressed by the
mother. The non-verbal behaviour of the mother was also observed such as facial expressions, postures, gestures, inflections in tone and periods of silence. The researcher sustained, extended and deepened the mother’s knowledge about the problems that helped to establish rapport and to gain insight into her problems.

Guidance Relationship: Guidance is an interpersonal relationship of mutual trust and confidence on the part of both the client and the researcher/counselor with the concern for the well being of the client on the part of the researcher/counselor. There was an unconditional acceptance and a sense of commitment on the part of the researcher. Thus, the counseling relationship encompassed the whole of the guidance situation thereby affecting its progress at every stage.

Some of the areas of vocational guidance for parents included enabling the mothers to discover potentialities and interests of their wards, making them understand occupational requirements, making available information about vocational training, assisting in choice of vocation, training the mothers for entrepreneurship with their mentally retarded individuals, training the mothers for adjustment of mentally retarded in a chosen vocation, assisting the mothers to attain emotional competence, helping the mothers to get properly adjusted in life and assisting the mothers to help their wards for better performance.

Further, following are some more points considered for guidance of mothers of mentally retarded individuals:

- To have a brainstorming session amongst mothers: It is a popular tool to develop highly creative solution to the problem. It helps to break out of stale and established patterns of thinking and develop new ways of looking at things.
- To suggest to mothers to reach out to help the mentally retarded individuals in trouble while managing his work/training and not to be afraid of one’s physician, a qualified mental health professional or counselor in
case the individual shows symptoms of behaviour problems, lethargy or lack of interest but seek help for them.

- To suggest to mothers to strengthen or maintain good social relationships amongst the mentally retarded individuals and their associates i.e. maintain their emotional reserves; to nurture one’s ties to family and friends: to give more attention to the people who nurture and support the mentally retarded individuals.

- To make the mothers realize the need for having positive attitude, to laugh and feel as these aspects of life play an important role in enhancing vocational performance of mentally retarded individuals.

- To be realistic, for unrealistic beliefs regarding mentally retarded individuals can add to anxiety towards reaching work targets and hence feeling of poor adjustment. Not to expect the mentally retarded individuals to like or share their opinion with each other. To help the mother moderate expectations of their own selves and others to be willing to be human.

- To write about one’s troubles. While writing is no substitute for professional consultation, it could help ventilate one’s feelings. A daily session with pen and paper could serve as a good release of problems leading to negative feelings such as anxiety, depression etc. or as an adjunct to psychotherapy. Some people have important insights or they discover solutions to their problems while writing.

- To get a massage done for the mentally retarded individuals. Effective massage therapy relaxes muscles, eases muscles spasms and pain, increases blood flow in the skin and muscles, relieves from feeling of anxiety depression etc. and induces relaxation as it would make one feel good. To maintain one’s balance during extreme negative feelings as these would improve the child’s physical and motor performance.

- Not to expect absolute harmony in one’s relationships. Real life involves occasional conflicts even between people who work/train together or among family members. Mentally retarded individuals are slow in
managing their kind of problems. The mothers or care takers can help by working through disengagements than ignoring. This ultimately results in feeling psychologically and physically healthy, to make for recreation especially with their mentally retarded wards.

- To listen to soothing music to minimize feeling of not being capable to meet targets of learning skills for a particular chosen vocation.

Following are some of the major steps followed for vocational guidance to the mothers of mentally retarded individuals:

Brainstorming, clarifying options, evaluating options, developing plans for action, facilitating assertion, evaluating progress, recycling the process, arranging for further contact, referring on and terminating contact.

In brief, some quick tips for guidance for managing mentally retarded individuals to their mothers are: to help following instructions, to avoid hassles, to control change, to take a break, to find help and access resources. It is important to define their problems relating the vocation of mentally retarded individuals as to what makes one feel that one has any physical or emotional discomfort like feeling ill, anxious, depressed, difficulty to take instructions, to repeat skills and the like. To identify these causes, one must become aware of the mentally retarded individual's realistic physical capacity, mental capacity and learning abilities in different situations. The mothers and mentally retarded children themselves have to find whether there is any person, place or thing that bothers any of them in any way, if there is any obvious tension felt in muscles, anything that makes the ward's heart pound, hands cold and clammy or a knot in stomach or a headache to break things, that make him withdrawn or irritated to break out in a rash. Most valuable tool may be to help the mentally retarded individual learn to relax in the face of the symptoms mentioned (anxiety, depression etc.). A slow walk and talk, practicing yogic/other exercises like deep breathing, stretching, exercise etc. could give the mentally retarded individual a break and progressive muscle relaxation. This will give them reasonable time to meet deadliness and complete the work. To help the ward learn to relax would be subject to practice over a due time for one to know exactly what to do to replace negative symptoms/behaviours such as poor conduct, display of certain emotions etc.
3.3 SELECTION OF VARIABLES

Following were the selected variables of the mothers of mentally retarded individuals:

1. Attitude of mothers towards mentally retarded individuals.
2. Self Confidence of the mothers of mentally retarded individuals
3. Emotional Competence of the mothers of mentally retarded individuals
4. Adjustment (marital and social) of the mothers of mentally retarded individuals

Following were the selected variables of mentally retarded individuals:

1. Behaviour Problems of mentally retarded individuals.
2. Weight of mentally retarded individuals.
3. Strength of the mentally retarded individuals.
4. Agility of mentally retarded individuals
5. Psycho-motor Vocational Performance of mentally retarded individuals.

3.4 TOOLS

Following tools were used to collect the data for the selected variables of study. The details of the tools used for the study of various variables are discussed in the following pages. The details have been taken from the respective manuals of the tests and presented briefly in this chapter for the academic benefit only. The copies of the tests used for the study are also appended in the index for academic benefit only.

3.4.1 TOOLS TO MEASURE VARIABLES OF MOTHERS OF MENTALLY RETARDED INDIVIDUALS

3.4.1.1 VARIABLE OF ATTITUDE

Objective: To study the attitude of mothers of mentally retarded individuals.

Equipment: Optimistic Pessimistic Attitude Scale by Prashar (1995)
Description: Optimistic Pessimistic Attitude Scale by Prashar (1995) was used to measure the attitude of mothers of mentally retarded individuals. Attitude plays a great role in one’s life and controls one’s behaviour in day to day social life. The aim of man’s life is affected by the attitude of one’s behaviour and the aim of this test is to measure optimistic and pessimistic attitude based on which the attitude of the individual and his personality behaviour could be depicted. In this questionnaire there are 40 statements of which 20 are hoping on optimistic lines and 20 on pessimistic lines.

Reliability and Validity: The reliability was worked out by 2 methods (N=100) and coefficient of correlation was worked out. The r value was found to be 0.62 and 0.74 respectively. The value for the validity for optimistic attitude found to be 0.72 and for pessimistic attitude it came out to be 0.68. The coefficient of correlation for extrovert personality and optimistic attitude was found to be 0.86, whereas for introvert personality and pessimistic attitude it was 0.71. The face validity calculated was 0.77 (N=10).

Instruction and Administrating of the Test: There are 40 statements. Against each statement there are 2 responses: agree and disagree. The statement has to be tick marked according to the response of the subject. There is no time limit but the questionnaire should be filled as soon as possible.

Scoring: When the response for optimistic statement is agreed, score 1 is to be given and for not agreed, 0 is given. For pessimistic statement when agreed, 0 is given and in case of disagree, 1 is given. A final total score is calculated. For optimistic attitude the item numbers included are 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40; for pessimistic attitude the item number included are 1, 3, 5, 7, 9, 11, 13, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39. (See Annexure 3).

Higher the score, better the optimistic attitude, lesser the pessimistic attitude and hence, better the overall attitude.
3.4.1.2 VARIABLE OF SELF-CONFIDENCE

Objective: To study self confidence of the mothers of mentally retarded individuals.

Equipment: Agnihotri’s Self Confidence Inventory by Agnihotri (1987).

Description: Self Confidence Inventory by Agnihotri (1987) was used to measure the level of self confidence of mothers of mentally retarded individuals. The test has been designed in Hindi and English to assess the levels of self confidence among adolescents and adults. Self-confidence inventory has a total of 56 items.

Reliability and Validity: The reliability of the inventory was determined by split-half method, K-R formula 20 & Test-Retest (after one month) method. The obtained reliability coefficient by Split-half method was 0.91, by K-R formula 20 was 0.89 & by Test-Retest method was 0.78. In item-analysis, validity coefficient was determined for each item by bi-serial correlation method and only few items were retained which held 0.23 or above bi-serial correlation with the total score. The inventory was also validated by correlating the scores obtained on this inventory with the scores obtained on Basavanna’s (1975) Self-confidence Inventory. The obtained validity coefficient was 0.82, significant at 0.01 level.

Instructions and Administrating of the Test: The inventory is self-administering in nature. In group administration, the instructions given in test-booklet may be read aloud by the examiner in order to facilitate starting at a time. Each and every question has two responses – Right & Wrong. Subject has to mark any one response according to his/her confidence level. Subject has to give answers according to instructions given in the manual. There is no fixed time-limit. Ordinarily an individual takes 20 minutes to complete the inventory.

Scoring: The inventory can be scored manually. A score of one is awarded for a response indicative of lack of self confidence i.e. for making cross (X) response to wrong items (2,7,23,40,44,45,53,54,55) and for making cross (X) response to rest of the items. (See Annexure 4)

*Hence lower the score, higher the level of self confidence.*
3.4.1.3 VARIABLE OF EMOTIONAL COMPETENCE

Objectives: To study emotional competence of mothers of mentally retarded individuals.


Description: Emotional Competence Scale by Sharma and Bhardhwaj (1995) was used to measure emotional competence mothers of mentally retarded individuals. Emotional competence is an efficiency to deal effectively with several dissociable but related processes. It is a blending of fine competencies (Coleman, 1970). The scale has 30 items to measure five emotional competencies. The different competencies are:

1. Adequate depth of feeling.
2. Adequate expression and control of emotions.
3. Ability to function with emotions.
4. Ability to cope with problem emotions.
5. Encouragement of positive emotions.

Reliability and Validity: The reliability of the scale has been derived by employing two methods, viz. test-retest and split half methods. The obtained coefficient of reliability was enumerated for test-retest methods for an interval of 21 days. The coefficient of reliability (n=100) for Adequate Depth of Feeling was 0.78, Adequate Expression and Control of Emotions: 0.85, Ability to function with Emotions: 0.87, Ability to Cope with Problem Emotions: 0.75, Encouragement of Positive Emotions: 0.95 and for total Emotion Competence: 0.74, whereas for split half method coefficient of reliability (n=100) for Adequate Depth of Feeling was 0.71, Adequate Expression and Control of Emotions: 0.79, Ability to Function with Emotions: 0.82, Ability to Cope with Problem Emotions: 0.77, Encouragement of Positive Emotions: 0.81 and for total Emotional Competence:
0.76. The validity of the scale has been determined with factor A and C of 16 personality factor questionnaire and was found to be 0.64 and 0.69 respectively.

Instruction and Administrating of the Test: This scale can be administered individually and also to groups. After establishing a good rapport with the subject, the tester ought to read instructions formally, while subjects read them silently along with him. The subjects are asked to respond to any one alternative of each item by marking a (√) tick.

Scoring: It is a five point scale based on the Line of Likert having five alternatives to each item. The subject has to choose one of the five options. The evaluator has to score these from 1 to 5 to obtain raw scores. These raw scores are further converted into Z scores as stated in the manual. (See Annexure 5)

*Higher the score, better the emotional competence.*

3.4.1.4 VARIABLE OF ADJUSTMENT

ADJUSTMENT

Objective: To study over all adjustment [marital adjustment and social adjustment (which further measures social maturity and emotional adjustment)] levels of mothers of mentally retarded individuals.

Equipments: The psychological inventories on adjustment used were:

a. Marital Adjustment Inventory by Singh (1987)

b. Deva’s Social Adjustment Inventory by Deva (1990)

Brief description of these inventories is given below:

(a) MARITAL ADJUSTMENT

Description: Marital Adjustment Inventory by Singh (1987) was used to measure marital adjustment of mothers of mentally retarded individuals. This inventory was
meant for literate adults that can also be used for illiterates with the difference that in this case, it will cease to be self-administering and self-explanatory. For illiterates, examiner should interview the subject, have opinions of the subject, and then should he/she fill in the inventory.

Reliability and Validity: The coefficients of reliability of the inventory are reported in the manual. These were determined for correcting the odd-even terms and applying the Spearman-Brown-prophecy formula.

Instruction and Administering of the Test: The inventory has two forms, Form-A for husbands, Form-B for wives. Accordingly the form was used for the parents of mentally retarded individuals in the present study. Each form contains ten questions. Each question may be replied either in Yes or No only. Each Yes or No item is then to be answered by placing (✓) Yes on only one point out of ten points on the rating scale ranging from +10 (most favourable) to +1 (least favourable). Only selected answers are recorded and scored. The total score obtained is interpreted as per the scoring key given in the manual to indicate the General Marital Adjustment Score of either husband or wife.

Scoring: The inventory can be accurately scored in five minutes. Thus, to obtain the score for general marital adjustment, use the scoring key was used to sum up the score for each subject. Each subject may have maximum 10 scores and minimum 1 score and zero score when the reply is other then expected according to the scoring key of the test. (See Annexure 6)

Higher the score, better the marital adjustment.

(b) SOCIAL ADJUSTMENT

Description: Deva’s Social Adjustment Inventory was used to test the social adjustment of the mothers of mentally retarded individuals. This test was developed by Deva in 1990 and named as SAI. The test is reliable and valid would mean that an instrument constructed to measure social adjustment can be employed only for the
community for which has been designed. The present inventory has been constructed for the Hindi knowing subjects of North India.

Reliability and Validity: The inventory has yielded satisfactory reliability and validity indices as pointed earlier. The test-retest reliability after a period of 2 months was 0.91 the validity of the two scales has come out to be 0.81 and 0.79 respectively.

Instruction and Administering of the Test: The inventory has no time limit, but, it is expected that on an average, a person would need 45 minutes to complete the inventory. The inventory is consumable. The responses are to be recorded on the consumable test form provided.

Scoring: There are 3 scoring stencils. Each stencil has a pattern of holes which reveal the responses. Adjacent to each hole in the key, there is a number indicating the weight to be given to it; the total social adjustment scores can be obtained by simply adding the emotional adjustment and social maturity scores. (See Annexure 7)

Lower the score, better the social maturity, better the emotional adjustment and hence, better the social adjustment.

3.4.2 TOOLS TO MEASURE VARIABLES OF MENTALLY RETARDED INDIVIDUALS

3.4.2.1 VARIABLE OF BEHAVIOUR PROBLEMS

Objective: To study behaviour problems of the mentally retarded individuals.

Equipment: Behaviour Problem Measurement Scale for mentally retarded individuals (निष्ठुरकृतियों के लिए व्यवहार मापन सारणी) was developed in 2003.

Description: The Behaviour Problem Measurement Scale for mentally retarded individuals (निष्ठुरकृतियों के लिए व्यवहार मापन सारणी) was developed in 2003 by the investigator under the guidance of supervisor and has been used to measure
behaviour problems of mentally retarded individuals. While developing the scale, the investigator gathered the information about behaviour problems of mentally retarded individuals. The scale has been adapted from Problem Behaviour Checklist by Peshawaria et al. (1999), NIMH quoted by Annapurna in 1997 using it as a guideline to develop the relevant items included in the scale. The developed scale caters to the Indian conditions in terms of language, relevance and applicability of items/symptoms, norms and scores. It is a scale adapted in Hindi language to be filled in by the parents of mentally retarded individuals and was modified in 2003 by the researcher according to the need of the present study so that it could be used as a guideline for guidance/counseling of parents. The following criteria has been adopted for the selection for items.

1. The selection of items should be relevant to the attribute to be measured.
2. Items should be stated in simple, clear and precise words.

The test contains 75 questions/items to assess the behaviour problems which are further categorized under eight headings

1. Odd Behaviour
2. Aggressive/Destructive Behaviour
3. Stressful and Anxious Behaviour
4. Display of Fear and Depressive Behaviour
5. Emotionally Unstable Behaviour
6. Insecure and Compulsive Behaviour
7. Withdrawal and Alienated Behaviour
8. Behaviour Related to Physical Well-being

All the statements in the scale are in the form of question which are to be responded in the form of yes or no. In the scale the subjects are required to register their response to one of these. The scale has been appended at the end.
Reliability and Validity: The reliability of the test was found by administering the test to another sample of 30 subjects using test-re-test method. Sufficient time interval of above 2 weeks was given between the first and second administration of the test. For reliability, test re-test reliability was obtained with two weeks interval. The values of reliability coefficient obtained was 0.09106 (test- retest) for various items which were highly significant. Content validity, as its name implies is concerned with analyzing the subject content of instruments. After such analysis, the instruments is either accepted or rejected on its face value. For the present scale, the content validity was determined by comparing the items in the tests with content and objectives of each domain and were given to experts. The test was found to possess content validity as there was correspondence between the table of specifications and the test items included.

Instruction and Administering the Test: The mothers of the mentally retarded individuals were asked about their ward’s behaviour problems including those experienced during the last one year by administering the scale. The investigator explained the purpose of the scale and assured that the information will be kept confidential. Investigator also urged them to follow the instructions given on the scale carefully and extended full co-operation. They were also informed that there was no time limit and no right or wrong responses. The mothers of the mentally retarded individuals were asked about the mentally retarded individuals illness and behaviour problems during the last 12 months. They were made to understand that all questions may not be applicable to their ward but they were to respond to each of the items whether not true (score 1) or true (score 0).

Scoring: Each item has 1, 0 against it. The subject is required to choose one of these in terms of true or not true response respectively. At the end of each category of factor, the scores for each category are added separately Further, a grand total of the score is obtained at the end of the scale. (See Annexure 8)  

*Higher the score, lesser the behaviour problems.*
3.4.2.2 VARIABLE OF WEIGHT

Objective: To study the weight of the mentally retarded individuals.

Equipment: Krup’s Personal Weighing Scale (Ducher’s model, spring balance design).

Description: Krup’s Personal Weighing Scale was used to measure weight of the mentally retarded individuals. It is a highly accurate and sensitive scale manufactured as per international specifications. It is sturdy and has durable steel construction. It consists of anti-rust coated parts. Its vital parts are precisely hardened. It is portable and light in weight. It has superb finish. Height – weight chart is also affixed on the scale. It is very economical in price. The weighing scale has a capacity of 125 kg. The minimum graduation of the scale is 0.5 kg. The size of the weighing scale is 29x26x5.5 cm. The net weight of the weighing scale is 2.3 kg.

The subject is to be instructed to stand bare feet and erect without holding anything on the Krup’s Personal Weighing Scale. The subject is also instructed not to move till the researcher notes the weight score.

Scoring: The weight score for each subject is to be recorded from the scale in kilograms. Precautions are to be taken to avoid ‘0’ error.

*Higher the reading, more the weight.*

3.4.2.3 VARIABLE OF STRENGTH

a) ARM STRENGTH

Objective: To study arms strength of the mentally retarded individuals.

Equipment: A soft ball, a measuring tape and a pointer.
Description: A Soft Ball Throw Test by Singh (1986) was used to measure arm strength of mentally retarded individuals. The subject takes a soft ball, stands behind the take off line and throws the ball with a full strength. Three trials are permitted to each subject simultaneously.

Additional Pointer: Measurement is taken from the take off line to the point where the ball touches the ground first.

Scoring: The distance is measured in feet from the take off line to the point where ball touches the ground. Best of the three attempts are recorded as score.

*Greater the reading for distance of throw, better the arms strength.*

b) ABDOMINAL STRENGTH

Objective: To study the abdominal strength of the mentally retarded individuals.

Equipment: A mat and a stop watch

Description: A Test of Sit-ups (Singh, 1986) was administered to measure abdominal strength of mentally retarded individuals. The subject is asked to assume a position on the floor with knees bent to an angle, a little less than 90 degrees and hands clasped behind the neck. The feet are held down by the partner. The subject brings down his head and elbows forward in a care up motion, touching the position, the subject is to go back to his starting position.

Additional Pointer: The fingers remain locked behind the neck throughout the exercise. The feet are held firmly by the partner at one position.

Scoring: The number of correctly executed sit ups performed in one minute is recorded as his score.

*More the number of sit ups, better the abdominal strength.*
3.4.2.4 VARIABLE OF AGILITY

Objective: To measure agility of mentally retarded individuals.

Equipment: A track layout of Zigzag run and a stop watch.

Description: Zigzag Run Test was used to measure agility of mentally retarded individuals. This test was designed by Singh (1986) especially for mentally retarded children. They named it as Zigzag Run test. A floor plan and course-by run was use by the researcher as prescribed by the author.

Instruction and Administering of the Test: There are two points marked on the track as the ‘Start’ and ‘Finish’. The track has arrow heads to guide the direction in which to run. The subject is instructed to start only when the evaluator says ‘go’. Stopwatch is used to record the time taken from the start point to the finish point.

Scoring: The subject is made to undertake the Zigzag Run in two attempts. The stopwatch is pressed ‘ON’ at the start of the run and pressed ‘OFF’ at the end of the run. The readings are taken in seconds. The average of the two readings is taken as the final score. (See Annexure 9)

Lesser the time taken, better the agility.

EQUIPMENTS AND INSTRUMENTS RELIABILITY FOR PHYSICAL AND MOTOR PARAMETERS:

All the instruments required for the collection of data was obtained from the reputed supplier of standard firms which cater to the requirement of various research laboratories in India and abroad. The reliability of these instruments was ensured and calibrated by their manufacturers. This made the instruments/equipments used in the study to measure the performance of the subjects on different variables reliable and precise. Their reliability was further
ensured by their repeated use on the same subject by the same tester under similar conditions.

TESTER'S COMPETENCY AND RELIABILITY OF TESTS

To ensure that the investigator was well versed with the techniques of conducting the tests, the investigator had attended practice sessions in testing procedure under the expert guidance of her supervisor. The tester's competency was evaluated together with the reliability of the tests. The reliability coefficient for total of four measurements of physical and motor parameters (i.e. weight, arm strength, abdominal strength and agility) was found out when the scores of separate testing (N = 20) for these physical and motor parameters were recorded and correlated. The standardized alpha value was found out as given below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient of Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>0.97</td>
</tr>
<tr>
<td>Arm Strength</td>
<td>0.99</td>
</tr>
<tr>
<td>Abdominal Strength</td>
<td>0.94</td>
</tr>
<tr>
<td>Agility (Zigzag Run)</td>
<td>0.98</td>
</tr>
</tbody>
</table>

3.4.2.5 VARIABLE OF PSYCHO-MOTOR VOCATIONAL PERFORMANCE

Objective: To measure psycho-motor vocational performance during vocational training of the mentally retarded individuals.

Equipment: The Psycho-motor Vocational Performance Scale (Kaur J., 2002).

Description: The Psycho-motor Vocational Performance Scale was used to measure psycho-motor vocational performance of mentally retarded individuals. The vocational performance scale is now a standardized tool which was prepared by the author with the help of experts for its contents and relevance. The scale tends to measure psycho-motor vocational performance needed for
any vocation of mentally retarded individuals. This scale measures various vocational performance dimensions (psychological, motor and vocational) of the mentally retarded individuals. This scale has been developed specially to give an idea of their overall psycho-motor vocational performance. In the development of this scale, the procedure adopted included collection of relevant information and preparation of statements.

Instructions and Administration of Scale: This scale is administered to determine the level of skill developed in psycho-motor vocational performance of mentally retarded individuals. The responses are to be filled by the researcher in consultation with the training expert. The researcher is to read out carefully the instructions given on the questionnaire and record the evaluation on the response sheet.

Reliability and Validity: Co-efficient of variance was calculated for the 15 dimensions namely: understanding instructions, handling material, efficiency in repeating skills, mobility within the work area, sequence of doing things, independence in doing work, co-operation, quality of work, quantity of work, winding up and overall performance. Each dimension was scored on a 9 point rating scale with the help of vocational trainer in the range from extremely undesirable to extremely desirable (the values of co-efficient of variation for various dimensions of vocational training were found to include 10 of the 15 dimensions finally included). These indicate a high reliability and validity to be used to measure the psycho-motor vocational performance of mentally retarded individuals to determine the nature and extent of skills to be developed for a vocational. Reliability coefficients for these 10 respective dimensions were: 0.8451, 0.8764, 0.8764, 0.9689, 0.8471, 0.9160, 0.7910, 0.8985, 0.9120 and 0.8083.

Scoring: Of the 10 dimensions in scale, each dimension has to be scored on 9 point rating scale i.e. for measures of ratings 1, 2, 3, 4, 5, 6, 7, 8, 9 for extremely undesirable, strongly undesirable, moderately undesirable, mildly undesirable,
neutral, mildly undesirable, moderately desirable, strongly desirable and extremely desirable, to evaluate each dimension of vocational skills. Higher score is to be interpreted as a better performance. The reason behind this scoring is to have simple form of scoring while evaluating the relevant level of skills developed for the psycho-motor vocational performance of mentally retarded individuals. The values obtained reflect the cumulative assessment of the trainees in the relevant vocational skills done by their evaluators. (See Annexure 10)

3.5 PROCEDURE

The procedure for data collection included the following:

3.5.1 PRE-TEST

Pre-test was taken by both the control and experimental groups. The groups of mentally retarded individuals were subjected for measurement of selected variables of attitude, self-confidence, emotional competence and adjustment of mothers of mentally retarded individuals and selected variables of behaviour problems, weight, strength, agility and psycho-motor vocational performance of mentally retarded and the groups were subjected for measurement. The tests administered are shown under the heading 'Tools'. Scores for all the variables were collected for further analysis.

3.5.2 TREATMENT

Treatment i.e. vocational guidance of mothers was administered only to the experimental group. The treatment included vocational guidance (group and individual guidance) for mothers of mentally retarded individual. This treatment was given to the mothers of mentally retarded individuals for three months. Vocational guidance was given - once a group guidance session in small groups of mothers and at least once a month individual guidance session through personal contacts. A total of three sessions (35-45 minutes duration each session of group and individual guidance) were held in three months. The mentally retarded individuals continued with their vocational training.
3.5.3 POST TEST

The post test was taken by the control as well as the experimental groups after a period of three months. The groups of mentally retarded individuals were again subjected for measurement of selected variables of attitude, self-confidence, emotional competence and adjustment of mothers of mentally retarded individuals and selected variables of behavior problems, weight, strength, agility and psycho-motor vocational performance of mentally retarded individuals. All tests were administered again as shown under the heading ‘Tools’. Scores for all the variables were collected again for analysis for each subject.

3.6 COLLECTION OF DATA

The data were collected in strict compliance with the design and procedure of the experiment from the sample of the study by administering tests for attitude, self-confidence, emotional competence and adjustment on mothers of mentally retarded individuals and for behavior problems, weight, strength, agility and psycho-motor vocational performance on mentally retarded individuals. The relevant tests were administered to the mentally retarded individuals and their mothers according to the instructions given in the respective manuals by the authors of these tests. They were urged to answer the question truthfully. They were assured that the records would be kept confidential. After the testing was over, the test protocols of each subject were scored according to the set principles given in their respective manuals. The raw scores were further subjected to statistical treatments. Gain scores pertaining to the mothers’ variables [i.e. attitude, emotional competence and marital adjustment (sub variable of adjustment)] and variables of mentally retarded individuals (i.e. weight, strength and psycho-motor vocational performance) and reduced scores for mothers’ variables [i.e. self confidence and social adjustment (sub variable of adjustment)] and variables mentally retarded individuals (i.e. behaviour problems and agility) of both the groups respectively were beneficial and taken for analysis.
3.7 STATISTICAL TECHNIQUES AND ANALYSIS OF DATA

Descriptive and inferential statistics such as frequency distribution, class intervals, mid points and smoothed frequencies of pre and post tests of control and experimental groups were calculated for all the psychological variables of mothers (i.e. attitude, self confidence, emotional competence and adjustment) and psycho-motor variables of mentally retarded individuals (i.e. behaviour problems, weight, strength, agility and psycho-motor vocational performance). The t-test was used to find the significance of difference between control and experimental groups at the level of pre testing and between mean gain scores of all the variables of control and experimental groups of mentally retarded individuals and their mothers at 0.05 and 0.01 levels. In addition, Karl Pearson’s coefficient of correlation was also found out on the total of post tests groups (N = 100) to get an overall idea of relationship between the variables of the mentally retarded individuals and those of their mothers.

3.8 LAY OUT OF THESIS

Chapter I – Introduction
Chapter II – Review of Literature
Chapter III – Method and Procedure
Chapter IV – Analysis and Interpretation of Data
Chapter V – Summery and Conclusions
Bibliography
Appendices