CHAPTER IV

RESEARCH METHODOLOGY
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RESEARCH DESIGN

APPROACH AND METHODOLOGY

This chapter deals with approach, nature of data, sources, sample, tools and techniques of data collection and procedure followed in conducting the field work for the purpose of this study.

APPROACH:

Both qualitative and quantitative methodological approaches are useful depending upon the context, nature and perspective of the research enquiries. As the majority of the physically disabled are from less educated poor rural areas who have conservative socio-cultural characteristics, mere quantification of data may not be of much help to unravel social realities of the problems of the disabled. Rather the disabled's own understanding expressed uninterruptedly will unravel many facts which cannot be obtained through administration of structured tools. Apart from that, different people take and accept the trauma in life in different ways and the responses cannot be restricted to structured questions. On the other hand complete dependence on the qualitative methodologies will not allow precise quantification. However, for
were adopted. Hence, the present study was a long term extensive field study involving both quantitative and qualitative approaches. Openended pre-tested interview schedules on the onehand and observation, interaction with the concerned people (Prolonged personal discussions) on the other hand were utilized for gathering information. The requirements of the study as spelt out in the objectives shown below could be fulfilled with the above approach.

THE OBJECTIVES OF THE STUDY:

This study is conducted with the main objective of exploring the world of 'The Disabled' persons with lower-limb disabilities. Attempts were made to understand and document the social and other related problems which form a boundary of a special kind that affects their personality and stands in the way of their Total Rehabilitation. The focus of this study is to find out through investigation and analysis of those physically disabled who got successfully integrated themselves in the society. Those cases not successfully rehabilitated are also included in the study so that the problem and process involved in the total rehabilitation - i.e. assuming normal roles of adults in the family, marriage, work lives, and their complete participation in the community life as independent useful members of the society can be well understood. Other objectives of the study are :-
1. To probe into the meaning of disability with special reference to lower-limb disability.
2. Their personal efforts to overcome the disability.
3. The extent of support given by the family.
4. Attitude of disabled towards life.
5. Adjustment mechanism they have developed in coping their disability.
6. To find out how to reach the unreached disabled in the rural areas.
7. Investigation into the concept of 'Total Rehabilitation' of the disabled and to find out their felt-need.
8. Identification of the hurdles and finding out measures for the removal of these hurdles in the path of total rehabilitation.

9. The study attempts to ascertain the extent to which the disabled who have been taken care of under rehabilitation programmes have been able to assume family and work roles and participate in the community.

10. To examine personal and socio-economic characteristics of this group with a view to suggest appropriate rehabilitation measures.

11. To examine the age of the onset, extent and the cause of the disability by examining respondents' medical reports and their responses.

12. To examine the educational achievements, employment
status and the nature of employment of the respondents.

13. To identify the motivational agents or sources in respect of education and training, employment, rehabilitation and family life.

14. To determine the differences between actual and expected achievement of the respondent in respect of rehabilitation.

15. To assess the attitude of families, relatives, friends and employers towards the disabled by analyzing the responses of the disabled.

16. To assess the impact of the rehabilitation programmes in order to suggest improvement in it.

HYPOTHESES:- It may be helpful at this stage to highlight some of the major hypotheses of the study.

The following are the hypotheses for this study.

(1) Earlier the age of incidence of disability the higher/better the adoptability to disability and coming to term with it.

(2) The greater the support of the relatives and members of families the higher the possibility of rehabilitation.

(3) Once an impairment occurs, early detection and rehabilitation can ameliorate the condition of the disabled.
(4) In developing country like India, most of the disability can be avoided through planned preventive methods.

(5) Family and community based rehabilitation programmes are more suitable, acceptable and helpful for a country like India (Keeping in mind its socio-economic and cultural conditions) as compared to institution based-rehabilitation services, elsewhere. Most of what is needed to be done for the disabled could be done by families and other people in the community if they had the right information and motivation.

(6) Nature of the disability problems in a country is influenced by the level of its economic and social development and by other factors, such as, climate, population distribution, availability of food and water, socio-cultural system etc.

(7) Correct social attitude can go a long way in the process of rehabilitation and facilitating the psychological adjustment of individuals as well as in the restoration of confidence in his or her ability to function normally.

(8) Social apathy and ostracism ultimately lead to a large number of the disabled to a life of beggary and servitude.

(9) Through a well organized association if the disabled can make their voice heard for proper rehabilitation and fulfilling the needs of all their members, then it will be easier
for them to get their demands fulfilled.

(10) The medical and vocational rehabilitation facilities which are made available by the government and various voluntary organizations are being availed by mainly elite and middle-class of the society.

TOOLS AND TECHNIQUES USED FOR THIS STUDY :- As mentioned earlier pre-tested openended interview schedule was the main tool of this study. Other techniques are observation, informal interviews (talks) with the disabled and their family members, doctors connected with rehabilitation, other personnel connected with medical as well as social rehabilitation, the employers of physically handicapped persons, the colleagues of handicapped persons who work with them etc.

Observation of the handicapped persons at family setting or worksite by spending a few days with them is another method. The investigator has adopted this technique without causing any inconvenience to the handicapped persons, his family or his employers.

Last but not the least, some of the case studies which are important as well as unusual are also included in this study. This throws valuable lights on the individual effort of physically handicapped persons in the process of his own rehabilitation.
Around 24 case studies were carried out on representative sample from different categories outlined above. Disabled persons were observed in their family environment and working place to record the interpersonal relations. Care was taken not to disturb the normal life pattern of the persons under study. It was decided to record observation on second visit after allowing the first visit for building up rapport and the acclimatization to the presence of a stranger. Intra familial social behaviour was also carefully observed.

The data thus collected from the interview schedules are analyzed. The qualitative data from indepth interviews and case studies were supplemented with the quantitative data from the interview schedules.

The schedule is designed to tap information from the disabled about personal and socio-economic characteristics, nature and extent of the handicap, their education, employment and rehabilitation. Special care is given to extract all information related to rehabilitation both information from them and observation of them. As the kind of information likely to be received could not be anticipated, the schedule contained mostly openended questions. As the schedule had to be filled in by the investigator, the questions were in English. Translated schedules in spoken Hindi and Oriya were also prepared by the investigator for his use during the interviews.
PILOT STUDY :- A pilot study was conducted prior to the main study to get an insight into the actual problems which are likely to be faced by the investigator during the main study. The main aim of pilot study was to see the reaction of respondents to some important and sensitive questions and to reframe the questions (in case, needed) in such a way that they will gladly speak out everything they feel. In other-words, the main aim of this pilot study was to detect the shortcomings and minor defects in the techniques to be used and in the design of the study and to rectify them.

AREA SELECTED FOR PILOT WORK :- As planned earlier, the area of the pilot study was restricted to Delhi and nearby area only. (Here nearby area included only Faridabad which is only one hour journey from Delhi). As Delhi was the base station of the investigator and as it had two major and fifteen minor rehabilitation centres and as people from all parts of India and all strata of society avail of these opportunity, it was decided that not only for pilot study but also for the main study, Delhi was to be included as one of the areas. Moreover, the familiarity of the language (Hindi) and the location of different areas of Delhi, prompted the investigator to conduct his pilot study here. The investigator did not face any communication or location of disabled people during his pilot study.
THE SAMPLE FOR THE PILOT STUDY:— Fiftytwo physically handicapped persons with lower-limb disability who have been medically rehabilitated were selected and interviewed. The main aim of taking this group as described earlier was that these people have undergone major trauma in their life and had visible defects which made them more prone to social stigma. Care was taken to give proper representation to three different strata of society, namely, higher, middle and lower class. This was decided according to the income and education of the respondents or their parents. Care was also taken to give representation to ladies. It is important to note that only those persons were interviewed who have been rehabilitated for minimum period of six months and whose age ranged between 10 to 50 years i.e. the most productive period of man’s life. This sample consisted of people with disability caused by accidents (Roads, agricultural, domestic etc.). A small group of polio cases who were using orthopaedic appliances with visible defects in the lower-limb were also included.

TECHNIQUES FOR THE PILOT STUDY:— An open ended schedule which was to be tested was the main tool of the pilot study. Other tools were informal interviews and informal discussions with the disabled, their family members, doctors and other people connected with medical and social rehabilitation, the employers of physically handicapped persons, the colleagues of handicapped persons who work with them etc. The investigator observed some handicapped persons at family setting and work-
sites by spending a few hours with them without causing any inconvenience to the handicapped persons, his family members or his employers. Last but not the least, the investigator conducted some case studies of some interesting cases which were of importance to this study. This threw valuable lights on the individual effort of physically handicapped persons in the process of his own rehabilitation.

**BRIEF DESCRIPTION OF THE SCHEDULE USED:** The schedule which was administered to the physically handicapped persons with lower-limb disability was entitled: "Schedule for exploring the problems of handicapped people with lower-limb disability." There were 108 questions through which the investigator tried to collect the required information. This schedule was translated into Hindi and Oriya and the investigator memorized them for use in the field. Each interview took around two hours on an average. At times it took two/three sittings to complete the schedules.

The first category of questions consisted of personal information of the disabled, like, name, age, sex, marital status, educational qualification, income - own and family etc. The second category of questions were about the disability of the respondent like, how and when the disability occurred, his occupation prior to it and after it.

The third category of questions were on his aspiration about life (whether he/she wants to do a job or marry if
he/she has not etc.), his view about his own and others disability, whether or how it could have been prevented, what measures he has taken for his medical social rehabilitation etc.

The fourth category of questions were on his feelings about the attitudes of family members towards him and towards his disability his present position in the family, his status, whether he is still earning etc.

Fifth category of questions were on his feelings about the attitudes of friends and relatives towards him, his position in the society prior to disability and after the disability etc.

Sixth category of questions were on his feelings about the attitude of his employers, other workers both senior and junior towards him, is he still in the same job or he has to change his job after disability etc.

Seventh category of questions were on his untold problems in the society, whether he feels inferiority complex, if so, can he think or does he think that he will be totally rehabilitated. It is important to note here that a ten point scale - a ladder type was incorporated in the schedule. This
scale was originally developed by Cantril and has been successfully used in some Indian Studies (Ramalingaswami, 1972). The investigator has also successfully used this scale in his earlier study entitled "Role of Yoga in Community Health Programme." The basic idea behind this scale is that it is a ten point rating scale presented in the form of a ladder which makes it visually effective and can be adopted very easily to suit the purpose of the study. One of the important aspects of any kind of study on rehabilitation is what the respondents feel about it, i.e. whether helpful or not before and after rehabilitation. This scale was used precisely for this purpose.

Eighth category of questions were on his suggestions for the betterment of the physically handicapped people. As it is the wearer who knows where the shoe pinches, so it is the disabled man who is the best advisor of what should be done for them.

PROCEDURE ADOPTED FOR THE PILOT STUDY:-- A list of around one hundred addresses were collected from the rehabilitation and Artificial limb department of All India Institute of Medical Sciences, New Delhi. The investigator selected some cases which were relevant to the study and can be easily located and then personally contacted them to conduct interviews, observation and case studies.
Apart from that, different rehabilitation centres were contacted to obtain help and guidance for contacting and interviewing the disabled people. The local Rotary clubs and Lions clubs were also contacted. The investigator attended some of the small rehabilitation camps of these clubs and also some orthopaedic appliance presentation ceremonies of these clubs.

An influential handicapped introduced to the investigator to some of the pioneers in this fields who not only encouraged the investigator but also promised all kind of help, when required. The investigator attended one very interesting meetings of handicapped persons at Faridabad where a disabled lady was organizing a welfare society of disabled people of that area. Around fifty disabled people assembled at that first meeting from and around Faridabad and the investigator selected a few cases which are of importance to his study and interviewed them there and included in the study.

The investigator observed that locating the house of the disabled and interviewing them is really a time consuming task as the investigator had to be detained 2 to 3 hours after the interview. The investigator decided to interview the rest of the sample either at the work site, hospital site, markets where they used to work as sales man and other similar places. A small number of baggers with lower-limb disability were also interviewed in Delhi. The investigator
started his interviews of disabled people by interviewing some disabled students and staff of Jawaharlal Nehru University.

During the time of interview, all the respondents co-operated fullheartedly. The investigator took the photographs of some of the respondents. After conducting 52 smooth interviews, the investigator felt that the following changes could be incorporated in the interview schedule of the disabled people.

CHANGES SUGGESTED IN THE INTERVIEW SCHEDULE AND THE METHODOLOGY OF THE STUDY: After careful analysis of the interview schedules of 52 respondents and from the personal experience of the investigator, it was proposed to make some changes.

It is felt that instead of taking only serious lower-limb disability, mild lower-limb disability and medium lower-limb disability should be also included because there may be difference in the degree of the problem but not in the quality. In other words, they also face similar kind of problems.

It is also felt that polio may be given more representation as it is one of the major causes of lower-limb disability. Some questions with similar responses were clubbed together in
one question of the schedule. Most of the questions were all right and needed no change at all. In 3 questions slight modification were needed so as to make the meaning clear.

OUT COME OF THE FIELD SURVEY :- After completing the pilot study, the investigator visited his home district which is also one of the fields of the investigator for his study on disability. The investigator met the Chief Medical Officer and the District Statistical Officer to enquire about the disabled population of that district. Both of them showed interest in the investigator's work but failed to help him substantially with data. Contrary to his belief, the investigator was told that the case of polio in the district is as high as in other places in India, but, they failed to give the exact figure. But certainly the lower-limb disability caused by accidents (Road, Industrial agricultural or domestic) was really negligible as expected.

The investigator visited a near by district named, Koraput which is a tribal belt now developing with different industrialization namely NALCO, HAL and Paper Mills etc. The investigator was shocked to find a large number of people with lower-limb disability (both accidental and polio effected). On meeting the CDMO and the District Collector, the investigator was told that lower-limb disability here was significantly high for some mysterious reasons. These two districts were included in the final study along with Cuttack and Sambalpur.
THE SAMPLE FOR THE MAIN STUDY: - As mentioned earlier, the main sample of the study are people suffering from lower-limb disability. A total number of 414 respondents of this category were interviewed within a span of ten years from mainly three different pockets of India.

The sample consisted of people with lower-limb disability caused by accidents (road, domestic, agriculture, industrial etc.) and crippling diseasees. A small number of polio cases who fell victims to this disease at a very early age were also included in this study.

Those disabled with defect or deformity which causes an interference with normal function of bones, muscles and joints of the lower-limb constituted the study sample. The lower-limb defects or disability may arise out of fractures, amputation, post-polio paralysis etc. If such a disability reduces at least 25% functional ability of a person, he has been included in the current study. It is to be noted here that lower-limb disabilities caused by degrading diseases like leprosy, fileria etc. were not included in this study as they are of different categories and are viewed differently by the society.

Care was taken to give proper representation to three different strata of the society namely higher, middle and lower class. This was decided according to the occupation, income and education of the respondents and their parents. A special index has been used for this purpose.
INDEX OF SOCIO- ECONOMIC STATUS :-

In order to place an individual respondents family at a particular point in a continuum of his socio-economic status, a weighted index has been devised on the line of Mohsini and Gandhi (Mohsini and Gandhi ,1982). Three observations related to the occupation, income and education of the parents of the respondents have been taken into account. As the components or indicators - to compute the socio-economic status. Each of these variables has been further classified into categories with varying values. The scores given against each category of a variable are shown in the following table.

<table>
<thead>
<tr>
<th>EDUCATION</th>
<th>OCCUPATION</th>
<th>INCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATEGORIES</td>
<td>WEIGHTAGE</td>
<td>CATEGORIES</td>
</tr>
<tr>
<td>Illiterate</td>
<td>0</td>
<td>No work</td>
</tr>
<tr>
<td>Primary(1-4)</td>
<td>1</td>
<td>Labourer</td>
</tr>
<tr>
<td>Middle(5-7)</td>
<td>2</td>
<td>Farmer</td>
</tr>
<tr>
<td>Secondary(8-10)</td>
<td>3</td>
<td>Business</td>
</tr>
<tr>
<td>Non SSC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSC completed</td>
<td>4</td>
<td>Service</td>
</tr>
<tr>
<td>Degr.incomplete</td>
<td>5</td>
<td>Retired</td>
</tr>
<tr>
<td>Bchelar Degree</td>
<td>6</td>
<td>Technical</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>6</td>
<td>Teacher</td>
</tr>
<tr>
<td>Professional</td>
<td>6</td>
<td>Own Industry/</td>
</tr>
<tr>
<td>/Technical</td>
<td></td>
<td>Farm</td>
</tr>
</tbody>
</table>
The weighted scores of the three components have been considered to obtain a geometric mean value by the use of the formula given below:

\[ \text{Geometric Mean} = \sqrt{E \cdot O \cdot I} \]

where \( E \), Education score
\( O \), Occupation Score
\( I \), Income Score
\( N \), Number of components (Here it is 3)

The scale of socio economic status ranges from 1 to 6 which represents the following three categories:

1. **Low Socio-economic Status**: Those who obtain a root value 1 & 2.
2. **Medium Socio-economic Status**: Those who obtain a root value 3 & 4.

**THE MAIN STUDY**:

In order to have a valid, meaningful and representative sample of data for this study, three categories of areas were included in this study. The first category included those areas where the rate of physical disabilities are maximum, the second category included the area with medium density of physically disabled population and the last category included...
the area with least number of physical disabled. Care was taken to select those areas which are situated at different parts of India.

It was planned to obtain two types of data. The first set was in the form of interviews with the physically disabled people with serious lower-limb disability. The interview was carried out either at their residences or at the work sites as desired by them. The second type of data included informal discussion with the personnel, connected with the rehabilitation work. Case studies have been carried out on important and unusual cases.

IDENTIFICATION OF THE FIELD - AREA:

After scrutinising 50 private and public organizations in India which are working for the rehabilitation of the physically disabled persons, six regional limb fitting centres and twenty seven peripheral limb fitting centres (As designated by the Artificial Limbs Manufacturing corporation of India - ALIMCO- situated in Kanpur) were found to be most appropriate institutions for this study.

Detailed study of the six regional limb fitting centres situated at Jaipur, Trivandam, Nagpur, Madras, Calcutta and Cuttack showed that Jaipur and Cuttack were found to be ideal for the proposed study as one represents the area with
maximum number of physical handicapped people (Rajasthan-NSS study, 1983) and the other represent the with minimum of physically handicapped persons (Orissa-NSS study-1983). It is proposed to select Delhi area for the study as it represents the medium density of handicapped persons.

Another reason for selecting Delhi, Jaipur, and Cuttack is that all these three places have major rehabilitation centres which render free services and people of all strata of society from different parts of India come to avail these facilities. It may safely be assumed that people availing services from these centres represent a cross section of Indian disabled.

Another interesting feature in these three areas is that the major cause of disability (i.e. how he or she becomes disabled) differs. In Jaipur (though disabled from all over India visit it) the physically handicapped are mainly from agricultural accidents. Road accidents and domestic accidents are comparatively lower. But in Delhi, the major cause of disability is road accidents. Interestingly in Orissa, the major cause is either domestic accidents or attack from wild animals. Road accidents causing disability is really negligible. (Mohan, 1983 and NSSO, 1983)
Procedure followed for conducting Field Work

As discussed in the preceding lines, the study was conducted by the investigator through field work extended over a long period from July 1982 to March 1992.

The field work had been conducted in four phases.

Phase I  Planning  Phase Planning From July 1982
(Enquiries, Contacts, Reading Literature)

Phase II  Pilot  Study (Pilot Study to test the Schedule and methodology). 1983

Phase III  Main  Study 1983-92

Phase IV  Analysis, Interpretation and write up 1991-1992

PHASE I:— PLANNING

This phase of field work started from July 1982 and continued up to January 1983. During this phase the investigator finalized the rehabilitation centres to be included, persons to be contacted and interviewed. The investigator met some important disabled in Delhi who helped him more than one ways to plan out his study. He was introduced to people working in the field of rehabilitation in both governmental and voluntary agencies. He moved around various libraries and rehabilitation centres to get a feel of the problem. Considering the feasibilities of the aspect, the investigator decided to focus his
study on Jaipur, Delhi and a few places of Orissa mentioned earlier in this chapter. The selected centres were contacted and were requested for their help and co-operation in this study. With their help, the persons who have been rehabilitated were contacted and the details from the case records were noted down. After obtaining preliminary information an effort was made to contact these persons at the place of their residence or their work site.

PHASE II :- PILOT STUDY

In the light of the objectives of the study and experience gained from the first phase of the field work, the investigator developed the research tools. At that time the tools were in crude form. The investigator devoted a period of two months from July 1983 and completed the pilot study in September 1983. During this time the tentative schedule was tested in New Delhi and adjoining areas of Faridabad.

Judging the suitability of local conditions, adequacy and appropriateness of items in terms of eliciting the required information, practicability and considering other constraints involved, certain items in respect to each tools were modified. Some official records, government plan and policies were also collected during this phase.
PHASE III :- THE FIELD WORK :- (The main study)

This phase indicates the actual data collection process which was carried out in the field. The tools needed were finalized before embarking upon this phase. The investigator held discussions with the people connected with the rehabilitation centres where he was to conduct the final study for the smooth conduct of his field work in those centres. Besides, he held discussions with the guiding teacher, other faculty members and research scholars of the Centre of Social Medicine and Community Health of J.N.U., New-Delhi and made certain changes and refined the tools as per the suggestions received from some of them. And thus, the investigator was ready to set out for data collection in the field with the tools as given in the APPENDIX.

Once in the field, the investigator tried to win the confidence of the disabled by building up a good rapport with them. The investigator stayed in the guest house of the Rehabilitation department of the S.M.S. Hospital of Jaipur where Dr. Sethi of "Jaipur Foot" fame and Dr. Kasliwal were of great help. In Delhi, the investigator stayed in his hostel room and regularly visited the rehabilitation centre of AIIMS, New-Delhi where Prof. Verma, inventor of first squating leg, Mr. Agarwal and Mr. Mullah were of great help. In the rehabilitation centre of Boiroi, Olatapur, Cuttack he was greatly helped by Dr. Annapurna Mishra, the training coordinator of the rehabilitation centre. In the vocational
rehabilitation Centre at Bhubaneswar, the psychologist, Mr. Krishen Chander was of great help. The investigator was teaching in the Government college of Koraput, so he found no difficulty in locating and interviewing the tribal disabled of Koraput district. At present the investigator is teaching in Sambalpur district, and thus the disabled of Sambalpur districts were also interviewed without any problem. Kalahandi being the home district of the investigator, he took special interest in interviewing the disabled who were in the minority among the disabled in Orissa. Some interesting cases were given special importance and were observed more closely to be included in the 'case studies'. Here the investigator resorted to qualitative approach to gather the relevant information.

While conducting the interviews the investigator used to ask questions and interact with the interviewees in the regional language that was either Oriya or Hindi. Very few educated people who could express themselves completely in English were interviewed in English. Interpreters were avoided as far as possible. However for a very small number of respondents the services of interpreters who were not related or known to the respondents were utilized. During informal discussions and interview the investigator used tape recorder to record the conversation which were being transcribed later in the evening, the same day. Data were collected unobstructively without questioning or arguing, providing more scope to the respondents to speak freely what they felt. The investigator also took some photographs of some of the respondents. As
taking photographs of each of the disabled was a very expensive exercise, he gave up this idea and a small number of disabled were captured in the camera. Information thus collected put in files and systematically arranged objective wise.

**PHASE IV :- FINAL VISIT TO THE FIELD**  
During this phase, the investigator revisited the field after a long gap once again to update most of his previous information and to be confirmed on various findings. He took this opportunity to thank the people who had helped him during the field work by personally meeting them and expressing his gratitude for their help.

**DATA ANALYSIS AND INTERPRETATIONS :** The information so gathered was arranged/processed objective wise. Effort was made to use the statistical procedure. Qualitative data from depth interviews and case studies were supplemented with quantitative data from the interview schedule.

Quantified data pertaining to personal information of the disabled, medical, vocational and social rehabilitation, education and employment status, family and social lives, perception and views of the disabled about their problems and prospects, hopes, aspirations and achievement etc were analyzed. These data were analyzed through frequency and percentage analysis as given in the Chapter IV in this study. Perception of the needs and problems as felt by the disabled, per-
ception about total rehabilitation programmes, their expectations and suggestions were analyzed qualitatively.

In quantitative analysis, data were identified, discerned, classified, compared, and critically interpreted from the point of view of the objectives under study. The impact of rehabilitative measures on the disabled as perceived by them was analyzed in descriptive terms using classification, comparison and case studies and critical assessment and cross validation of the views expressed by the investigator without bias.

BRIEF DESCRIPTION OF THE STUDY LOCATION

JAIPUR: As planned, the first target of the investigator was the rehabilitation research centre of the S.M.S. Hospital which is assisted by the Mahabir Bikalanga Sahayata Samiti of Jaipur (Rajsthan). It is one of the famous institutions which uses non-formal, low cost indigenous technology integrated with the modern well-equipped high cost Western technology. The famous 'Jaipur Foot' invented by Dr. P.K.Sethi which won him several awards including the Magassay award attracts people from all over the country, specially from north India. Poor disabled are given financial help for their journey, get free prosthetics aid (Jaipur foot) and are accommodated in the village-like atmosphere of the Mahabir Bikalanga Sahayata Samiti. For people with money, who can afford to spend can stay in the hospital-like atmosphere of the Rehabilitation
Research Centres. 'Jaipur foot' provided to the disabled are prepared at the workshop of the centre within a short time keeping in mind special disability of the patients. This indigenously designed, low cost, culturally accepted, sturdy (standing the test of the climate) is tailor made for all the patients and at times in front of him.

Jaipur, the capital of Rajasthan, is well connected thorough road, train and air. Dr. P.K.Sethi and Dr. S.C. Kasliwal were of great help to the investigator during his investigation in Jaipur. Most of the staff of the rehabilitation centre were very helpful and cooperative.

New Delhi: The rehabilitation centre of All India Institute of Medical Sciences was included in the study and the disabled rehabilitated by this centre were interviewed. This is one of the oldest departments of AIIMS. The prosthetic workshop of the centre has been catering to the needs of the disabled. Delhi being a metropolitan city, people from all the states can be found here. Naturally this specialized and referral rehabilitation centre receives patients from all over India. However, majority are from Delhi and neighboring areas.

Dr. Verma and Mr. Mullah of AIIMS have invented squatting leg which is found to be very useful to the rural disabled. Dr. S.K.Verma, the head of the department of the centre and Mr. Agarwal, the social psychologist of this centre were of great help to the investigator during the study here.

Delhi, being the capital of India is well connected by
rail, road and air. Personnel of this centre were very helpful during the study.

ORISSA: The investigator belongs to Orissa and is familiar with the language and the areas there. Brief description of Kalahandi, Koraput, Sambalpur, Cuttack and Bhubaneswar are presented here in this section.

Bhubaneswar: This town in Eastern Orissa is the capital of the State. A small number of respondents were interviewed at the Vocational Rehabilitation Centre for the Handicapped at S.I.R.D. Campus adjoining Stewart School in Bhubaneswar. This centre is under National employment Service, Directorate of employment and Training under the Ministry of Labour, Government of India. Physically disabled above the age of 14 avail the vocational rehabilitation services at this centre. The main aim of the centre is to rehabilitate the physically handicapped persons through employment oriented training and training for self employment, education and allied fields thus enabling them to live an independent, productive and useful life in the society. A small number of physically disabled who had completed training and some who are currently undergoing training at this centre were interviewed. Bhubaneswar being the capital of Orissa is well connected by rail, road and air. Mr Krishen chander, the psychologist of the centre who is also busy with his ph.D. thesis on the "Evalua-
tion, Training and Adjustment Aspects of the Disabled" was of great help especially in exchanging his views on some sensitive issues on the disabled.

CUTTACK: This is one of the most advanced districts situated in the eastern part of Orissa. As decided earlier, the National Institute of Rehabilitation Training and Research which is under the Ministry of Welfare, Government of India, situated at Olatpur (Bairoi p.o., Cutack Dist.) was Studied. The investigator stayed at Bhubaneswar and used to visit the centre at Olatpur by bus which belongs to the Institute. Dr. (Mrs.) Annapurna Mishra, the programme Co-ordinator of the centre was of great help to the investigator during his Investigation at the centre.

The centre is situated at a beautiful rural atmosphere and most of the patients were from various parts of Orissa. Very few non-oriya patients were found here. This place is connected by bus service which is not frequent. This centre has a well equipped library and the investigator made use of the library and was helped by the librarian.

Sambalpur: This is one of the developing districts of western Orissa. As planned earlier, the investigator took the help of the District welfare Officer, Director of the Regional National Sample Survey Organisation was also contacted for help. The
investigator stayed at Bargarh where he is at present posted, and carried on the study from that base. After identification of the respondents the investigator used to meet them either at their work place or at their residence. A small number of them were spotted by the investigator in the weekly market and some were contacted during the month long 'Dhanujatra Festival' which is one of the very important local festivals of Bargarh. Some other respondents were spotted at the 'Seetal Sathi', the famous regional festival of Sambalpur. This semi-developed area, which is often called as the "rice bowl" of Orissa has smaller number of disabled. Some of the colleagues of the investigator accompanied him to interior area of the district and helped to build a rapport with the respondents as they belong to that area. Members of Rotary clubs and Lions clubs of the area were also contacted for help in identifying the probable respondents of that area.

Koraput: This is one of the backward tribal districts of south Orissa bordering Andhara Pradesh, is covered with extensive forests. As the investigator got his first posting as a lecturer in the Government College of the district head quarter of Koraput, it was of great help to him as he planned to include this area of low density of disabled and some of the peculiar causes of disability here. The A.D.M. and the S.D.O. were ex-J.N.U. friends of the investigator. They helped the investigator quite a lot through the welfare officer of the district. The investigator used to visit the voluntary agencies/organizations in the district situated in the interior.
parts of the district. They used to help the investigator with vehicles to reach the unreached areas of Koraput tribal villages. Various officers of the "Officers club of Koraput" which was a meeting place of officers constituted a source of help. The investigator took full advantage of his being a member of that club. During saturdays and Sundays the investigator used to visit the previously planned interior tribal areas to contact the respondents. The investigator stayed for a full week at the famous mela (festival) of GUPTESWARA in an interior area bordering Madhya Pradesh and Jeypore town of Koraput District during Shivaratri. The investigator also visited the village of most dangerous and primitive tribe called, the "BONDA" with the help of the project officer of the Bonda Development Agency, in the Bonda hills of Koraput. He could interview only three Bondas in this study, two which were disabled by wild animal attack in the jungle and the other had a bad fall from the tree and lost the use of his lower limb. For this part of the study the investigator had to travel extensively throughout the Koraput District. The District Tourist officer was a great help to the investigator during the visit to 'Godba' tribe and the 'Dongoria Kondh' tribe villages of Koraput. Some of the students also helped and accompanied him to their own village and helped as guide to the interior parts of this district which is full of jungles and often helped in introducing their known disabled of their village to the investigator and thus helped in building up a rapport with the respondents in a short time.
KALAHANDI: This is the home district of the instigator and he is fluent in the local and tribal dialect. This district is in the western part of Orisa. It is one of the most backward districts of India. Poverty and illiteracy are rampant here. Famine is a regular feature of this district and that is why it is generally termed as the "Little Ethiopia of India".

Familiarity with the interior parts of this district helped him a lot and made the work easier. Almost all the officers were well known to the investigator and they helped him in the identification of the probable respondents of this study. The District welfare officer, the District Statistical officer, the District Public Relation Officer, District Cultural Officer were of great help. Here also the A.D.M. (General) and the A.D.M. (D.R.D.A.) were both ex-J.N.U.ites who were class mates of the investigator. The investigator made full use of these contacts for the research work. The interior area of Lanjigarh and Khariar of this district were visited with the help of relatives and ex-J.N.U.ite lecturers of those areas. A good number of low caste disabled and tribals were interviewed in this area. Small number of disabled tribals who used to come down to weekly markets of various places of Kalahandhi were also contacted and interviewed. Rotary Club, Lions club and the Satsang of "Jai Guru" cult were of great help to the investigator during his investigation in this district.
PRECAUTIONS TAKEN FOR THE QUALITY AND RELIABILITY OF THIS STUDY :- The investigator had adopted the following three methods for ensuring the quality of this study.

Firstly, the investigator decided not to interview the target disabled unless a decent rapport was built with them. Use of interpreter was avoided as far as possible except for the very important cases where their service could not be avoided.

Secondly, the investigator took care to avoid seeking help from the members of the respondents family for the interview as they could influence the respondents' opinion and also because of the reason that the respondent might not feel free to give unbiased responses.

Thirdly, The respondents were given due respect and importance during the interview and were rendered small help wherever required.

WHY ONLY LOWER-LIMB DISABILITY :-

Limitations of an individual researcher is the compelling reason to restrict the scope of this study to only the orthopedically disabled with only lower-limb disability.
UTILITY OF THIS STUDY:— Understanding of the psycho-social factors that contribute for additional burden apart from the physically disability itself, will help better management of rehabilitation. Improvement of the psycho-social environment of the disabled persons will lead to his speedy integration into mainstream of life. This study will focus on the disabled people and will help us to identify the crucial factors and phases of the rehabilitation that need to be corrected for better management of rehabilitative services from the view point of the disable in India.