

Name of the Project : A Study on User's Preferences and Expectations on Assistive Devices used by Persons with Visual Impairment and Low Vision in Southern States of India.

Year of Commencement : Oct 2015

Year of Completion : Dec 2016

Principal Investigator : Mr. G.Tagore, Research Officer

Organisation : NIEPVD, Reg. Centre, Chennai

Abstract:

Assistive devices are used to support, maintain or improve the functional abilities of persons with disabilities. Persons with visual impairment normally uses various types of assistive devices in their day-to-day life for their mobility, education, games, activities of daily living, etc. The present Study aims at identifying the usefulness and preferences of assistive devices used by persons with visual impairment and low vision. It also aims to find out the expectations from the users and to suggest measures to improve the usability of the assistive devices. Data was collected by using semi structured Interview Schedule from 227 samples from the Southern States of India and Union Territory of Puducherry. In the findings, more than 90% of the users stated that the devices like Braille Slate-Interpoint A4, Taylor Frame, Daisy Player, JAWS Screen Reading Software, NVDA Screen Reading Software, Chess Board and Audible Cricket Ball are extremely useful for them. The users prefer the Daisy Player, Braille Slate-Interpoint A4, Folding White Cane, JAWS Screen Reading Software, Taylor Frame, Chess Board and Audible Cricket Ball. The minimal/non-use of the presently available devices was very few and most of the devices are in use. Device specific expectations and suggestions are discussed in detail. Common expectation from the users is for servicing facility for the assistive devices and they suggest that the Sales Centers for assistive devices can also be developed into workshops for servicing assistive devices.

Name of the Project : **EMPOWERMENT OF VISUALLY IMPAIRED WOMEN**
Year of Commencement : **April 2010**
Year of Completion : **April 2011**
Principal Investigator / Partner Organisation : **Dr. I. Arivanandam, Regional Director I/C NIVH, Reg. Centre , Chennai**

Background : At present the visually impaired women wishes to come out of their homes, ambitiously pursue higher studies, seek employment and ascertain their roles vis- a-vis sighted women and men in the mainstream society. In the society they encounter with the harsh realities of the environment and face multifarious hardships and difficulties. Therefore, it is necessary to take some suitable measures to ensure the advancement and empowerment for enjoyment of human rights and fundamental freedom set out in the UN Convention. So, it is imperative that the abilities of the women are enhanced to tackle the additional problems and multiple discriminations. It can be achieved through sensitisation and effective training. Thus, an exclusive endeavour was proposed to develop workable training modules to sensitize and empower them. These modules would be replicable for sensitization, advancement and empowerment of studying and working visually impaired women.

Objective :

To identify the additional problems faced by studying and working women.

To design sensitization modules aimed at improving self esteem, level of awareness and readiness for assuming leadership roles by visually impaired women.

- a. **Brief about the Project** : The present study was conducted on the visually impaired women studying and working in the different organisations and to focus their specific problems in the schools/ colleges and work places. The empirical study was used in the present study. Existing psychometric tools were used by the investigator with the help of qualified psychologists. Two modules of sensitization were prepared in consultation with experts in the field. These materials were aimed to increase the awareness level, improve self efficacy and self esteem and prepare the women for leadership. Sensitization programmes were conducted based on these modules, each for a duration of two days. The tools of measurement were used to measure the impact. Thereafter, the modules were finalized.

Outcome of the Project :

The major findings of the study were as follows:

1. The women with visual impairment felt that they were discriminated for being women and being visually impaired. And their parents did not show interest in their education.
2. Their social skills were very much affected as well as their independent living skills were far below the skills possessed by their non disabled counterparts. Due to these reasons, the visually impaired women felt most unsafe on roads, in colleges and university campus and in work places. In college campus, their sighted classmates did not freely allowed them into their peer groups.
3. At work places, their colleagues were insensitive to their special needs and there were several impediments to participate in the social life. They further felt that they were not assigned jobs commensurate to their skills, qualification and status.
4. The working women and students expressed that they had very little hope for getting married and having a family and very much concerned about their security.

Name of the Project : SURVEY OF SERVICES FOR THE BLIND AND LOW VISION PERSONS IN THE SOUTHERN REGION

Year of Commencement : October 2007

Year of Completion : October 2008

Principal Investigator / : Dr. I. Arivanandam, Regional Director I/c, Regional Partner Organisation Centre, Chennai

Background:

The Regional Centre had worked on preparing a 'Directory of Organizations serving visually handicapped persons in the Southern Region' during 1992-1995. However, a great deal of changes have come about during the last about 12 years. Use of information technology, wider deployment of CBR services and a greater emphasis on programmes for children with low vision as also those with multiple disabilities have brought about a major shift in the nature and scope of services during this period. It has, therefore, become imperative to re-compile and update information about the existing services for blind and low vision persons in the States of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu and Pondicherry (UT). The present project sought to fulfil this vital need of this information-compilation.

Objectives:-

- a) To make services rendered to blind and low vision persons easily known to all concerned in the region and outside;
- b) To generate the much needed information about these services, which could serve as a meaningful and easily accessible date-base compatible with IT requirements;
- c) To assemble at one place information which could be of immense help to interested and needy potential users, researchers and care-providers as well as policy makers.

Brief about the project

An updated list of institutions and agencies serving the visually impaired was obtained from the concerned State/UT Departments as well as other sources such as leading NGOs. The earlier Directory brought out by the Regional Centre in 1995 was also used as an essential building block. A Questionnaire was prepared for collecting data and was suitably tried out before finalization. The principles of brevity precision and conciseness was the underlying features of the questionnaire, since experience has shown that lengthy and complicated questionnaires hardly evoke much response. The questionnaire was forwarded to the Institutions etc. by post/by email, wherever applicable. The project investigator was assigned to visit the defaulting institution/agency and collect the responses personally. Wherever necessary, clarifications was also sought for on unclear/vague responses received by post/mail.

Outcome of the Project:-

On the basis of the responses received, a comprehensive directory was compiled. The data thus collected was amalgamated with the Online Directory of Services conducted at the level of NIVH Dehradun for making it available to the beneficiaries online. One print copy for official reference was retained in the Regional Centre's library.

Name of the Project: Indian Adaptation Of Nottingham Adjustment Scale

Project Submitted By: Dr. I Arivanandham

Project Submitted in: 2006

Object of the Project: Three objective;- 1) To translate the Nottingham Adjustment Scale in Tamil Language, 2) To establish validity and reliability for the Tamil version of the Nottingham Adjustment Scale. 3) To set norms for the Scale to use on Tamil visually impaired population.

Methodology: The Nottingham Adjustment scale was first translated with due care to convey the exact meaning of the English version. Opinion from five senior psychologists well versed in both the languages was sought to establish the validity of the

translation. The selection of subjects was done using a complex random sampling method on a homogenous group sample. Only subjects within the age group 13 to 35 years were selected. The sample had equal representation of congenital and adventitious handicapped. Subjects were chosen from institutions of visually impaired persons in Chennai, Madurai, Coimbatore and Tiruchirapalli. Besides the translated version of the test, a Schedule containing demographic details, covering personal data, disability details and other socio-economic background, was used for collection of data. The data collected from the samples group and the scores of the subjects were analysed using statistical tests. The scores of the test were analysed for establishing validity, reliability and setting of norms.

Sample base: 100 visually impaired persons.

Findings: The outcome of the project is the Tamil version of the NAS usable among the Tamil speaking visually impaired persons particularly the youth who pursue education or vocational training irrespective of their educational background. Since the items included in the Scale under various sub-dimensions of adjustment demanded no modification it establishes their universal applicability. This instrument will aid both in the research and study of visually impaired and also in their rehabilitation.

Projects of Category 1, second sub-category:

Included here are projects dealing with pedagogical techniques to overcome the hurdles in learning process. There are three project included in this sub-category.

Name of the Project : **Problems of Visually Impaired College Students: Areas of Support Required.**

Project Submitted By **: Dr. I. Arivanandham**

Project Submitted in : **2007**

Object of the Project: To systematically study the problems faced in academic and non academic activities of visually impaired students; Specific attention to be paid on problems faced by visually impaired lady students. To study the perception of the visually impaired students on available social support for their education. Document the finding and suggest measures that will pave the way to ameliorate the conditions of Visually Impaired College Students.

Methodology: Representative sample (both boys and girls) of visually impaired students with at least one year of experience as students in regular colleges or university department, selected from institutions in Chennai, Delhi, Kolkata and Mumbai. Structured Interview Schedule with a total of 94 items and with two parts used. First part included activities of daily routine; second part pertains to academic and non-academic activities, problems of availing support structures and their perceptions of support structures. Interview schedule prepared in consultation with professionals in the field and tested in a pilot study on 10 VH students. The data collected were statistically analysed using SPSS and statistical tables generated for observation and interpretation. Data base limited to college and university students of large cities hence findings have a limited applicability.

Sample base: 182 students (99 male and 83 female)

Findings: In academic activity no problem was faced in seeking admission. However, serious problems were faced in following lectures and class room instructions. Speed of delivery of lectures and following black board writing were major problems. High cost and none availability of aids and appliances were reasons for such problems. Securing reader services was also a problem. Non-availability of computer based services compounded this problem. Problem for organising scribes for writing examinations was even more difficult than finding readers. Assessing library was an area of difficulty, made worse by lack of books in Braille and audio books.

In non-academic activities stay and hostel facilities pose a serious problem. Extra curricular and cultural activities in the institutions are not inclusive. For those not staying in college hostels commuting is a major problem as general public not helpful in identifying public transport and boarding them.

Obtaining concessions and other facilities provided by the government was difficult owing to the negative attitude of the officials. The women students faced all this and in addition they also had to face gender related problems.

Finally the study suggests some remedial measures for these problems.

Projects of category number two deal the career ambitions, career opportunities, avenues of career advancement for those already employed and also job satisfaction for VH persons. Six projects were submitted under this category.

Name of the Project: Career Aspirations Of Young Persons With Visual Impairment

Project Submitted By: Mr. I Arivanandham

Project Submitted in: 2000

Object of the Project: To have a profile of the aspirations and perspectives of the young visually impaired persons and to observe demographic variations. To study career plans and future perspectives of the target group both in urban and rural areas. To evaluate whether the goals and ambitions are realistic. To evaluate whether the target group perceives visual disability as an obstacle for planning future activities and finally to develop suitable guidance modules.

Methodology: The data collection was designed to keep three major variables in mind viz. personal data, area of career aspiration and future perspectives in the area. The total sample base had equal representation of rural and urban areas. Furthermore, in each location equal representation of both the sexes was ensured. The age group of respondents was between 14 years to 25 years. Data was collected in the urban areas of Chennai and in the CBR block area and rural areas of Vellore and Tiruchirapalli. Non-probability sampling technique was used for selecting the sample. The tools used for collecting responses were, interview schedule, goal perception test and level of aspiration test.

Sample base: Study was conducted on 100 visually impaired respondents.

Findings: The study establishes that there is a high significant difference in aspirations of visually impaired in areas of education, vocation, self employment training, self employment and income, and future perspectives in the areas of marriage, selection of life partner, seeking membership to a club, in attending social functions and

willingness to keep friendship with sighted persons. On the other hand there is no significant difference in the aspirations of persons of both areas in the variables like, contributing to society, in becoming a member of political party, aspiration for house, turnover in self-employment, job preference and vocational preference. Majority of the respondents set realistic and achievable goals, but respondents of the rural area were more aspirant than those in the urban area. Most of the respondents perceive favourable factors in their respective environments. However, those considering visual impairment as a barrier are higher in rural areas. Persons in rural areas are more interested in developing communication and mobility skills, while those in urban areas are more developing daily living and home management skills. Persons in urban areas are more interested in developing employment oriented skills while those in rural areas are more interested in developing self employment oriented skills. Very few of the respondents are interested in developing rural self employment oriented vocational skills.

Name of the Project: A Study To Identify Work Opportunities For The Blind In the Unorganised Sector In The Southern States

Project Submitted By: Mr. A K Mittal

Project Submitted in: 2001

Object of the Project: The project seeks to study: 1) specific income-generating self-employment activities for the blind and visually impaired in the southern states; 2) to prepare a comprehensive list of self-employment activities for the blind; 3) to suggest modifications, etc. of work tool or simple technology to make more self employment opportunities accessible to the blind and visually impaired; 4) To make a Project Bank to assemble at one place all related information of such activities for potential blind entrepreneurs; and 5) The document the basic information about schemes for self employment ventures run by central and state governments.

Methodology: Purposive sampling technique was used to gather data. The samples are small scale units and cottage industries run by self employed entrepreneurs and rural/agro-based activities. Samples were drawn from southern states of Tamil Nadu, Kerala, Karnataka, Andhra Pradesh and the Union Territory of Pondicherry. Equal numbers of

units were selected from each state. The criterion of selecting the unit was based on the number of operation of the unit that could be performed by blind and visually impaired. If 60% of the operations could be performed by them independently the activity was considered viable for visually handicapped. Cluster approach was adopted to evaluate the financial viability of the activity.

Sample base: 141 units

Findings: Out of the activities studied a total of 106 activities were found viable for the blind and the visually impaired. 65 of these activities were found viable for persons with total loss of sight and 41 for persons with low vision. It was not found feasible to present all the profiles in the report to create a bank of various types of information relating to employment opportunities. The report contains 10 illustrative profiles for the benefit of potential blind entrepreneurs and interested vocational training institutions. The report also contains the basic features of 11 central and state government schemes in the region to help self employment.

Name of the Project: A Study To Identify Jobs Requiring The Use of Computers Which Can Be Performed By Visually Impaired Persons

Project Submitted By: Mr. A K Mittal

Project Submitted in: 2002

Object of the Project: The project seeks : 1) To establish clear links between existing/forthcoming computer-training programmes for job-possibilities; 2) to identify the jobs relating to the use of computers for blind persons in South India; 3) to concentrate on organised sectors in south India; and 4) to correlate computer training programmes and job-placement.

Methodology: The sample for study was various Information Technology based jobs performed by sighted persons. Purposive sampling method was adopted. Sample was drawn from Railway, Post and Telegraph, Telecom and corporate sectors in the major cities of south India. A structured Interview Schedule consisting of four sections— General Information, Job Design, Accessibility for the Blind and Conclusion, was designed to record observation. The organisation included in the sample were located from telephone directory, daily newspapers, and through referral sources.

Sample base: 50 computer based jobs

Findings: A total of fifty jobs requiring the use of computers were studied in the major cities of the southern region. An attempt has been made to explore the qualifications, skills and on the job training requisites for each of the 50 computer based jobs studied. 50 activities belonging to four major sectors studies. On the basis of this study 40 computer related jobs were identified for Blind and Visually Impaired persons. Of these, 38 were found viable (28 fully, 10 partially) for persons with total loss of sight. Two jobs were found viable (1 fully, 1 partially) exclusively for persons with low vision, which had no applicability for persons with total sight loss. The study provides insights from vocational training programmes and centres for the VH to revamp their training programme and design a new curriculum for better computer education and on the job training. It provides information for government and private employers to identify computer based jobs for employment of the VH persons. It also provide information to develop a useful career guide for the educated VH persons.

Name of the Project: Job Satisfaction, Work Efficiency and Promotion Prospects For Visually Handicapped Employees in Government And Public Sector Undertakings in The Southern States – An Evaluation Study

Project Submitted By: Mr. A K Mittal

Project Submitted in: 2002

Object of the Project: To study the employment scenario, determine the degree of efficiency, job satisfaction and promotional aspects of visually handicapped employees in government and public sectors in the Southern India.

Methodology: Purposive sampling technique adopted, for data collection job satisfaction questionnaire and work efficiency assessment schedule consisting of two parts—face sheet to record employment details as per official records and the actual Schedule completed by the employer – prepared. Sample consisted of VH employees working in government and public sector and their employers drawn from the southern states of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. The criteria of sampling was that the VH employee should have been working for at least up to 2 years. Data was collected

from a cross section of jobs titles and designations, excluding persons holding group-D posts and those working in Government institutions for the blind. Each state had at least two subjects (1 male and 1 female) to maintain gender balance. However, where such representation was not possible data was collected with available subjects.

Sample base: 80 visually handicapped subjects and their employees covered.

Findings: Majority of the employees possessed job satisfaction. State wise those from Andhra Pradesh most satisfied and Tamil Nadu least. Sex wise men more satisfied than female. Educational qualification wise those with primary education most satisfied and those with post graduation and above least. Younger employees were less satisfied than those above 50 years of age. People with higher basic pay were less satisfied. Sector wise those in Public sector most satisfied, followed by those in state sector, while those in central government jobs least satisfied.

Work efficiency of majority of the subject very high. State wise those from Kerala had the highest rating and those from Tamil Nadu the lowest. Sex wise female more efficient. Those with Higher Secondary education received highest rating and those with secondary education the lowest ratings. Employees above 50 years of age more efficient than those aged up to 30 years. Sector wise those working in public sector most efficient and those in central government least.

Promotional aspects were best in Andhra Pradesh and lowest in Central Government. Promotional prospects of men was better than that of women. Those with primary, secondary and higher secondary education had better promotional prospects than those with graduation. Senior people with over 50 years in age had better promotional prospects than those with up to 30 years of age.

No clear trend emerged on basic pay.

The study draws two correlations from the above findings: There is significant correlation between job satisfaction and promotion prospects and that there was an accepted correlation between job satisfaction and work efficiency.