



IMPACT ASSESSMENT

OCTOBER'21

Impact Assessment Study of Fitment of Cochlear Implant to 100
Hearing Impaired Children

Submitted by TISS

Introduction

“People with disabilities are vulnerable because of the many barriers that we face: attitudinal, physical and financial. Addressing these barriers are within our reach and we have a moral duty to do so.... But most important, addressing these barriers will unlock the potential of so many people with so much to contribute to the world.”

Stephen Hawking

As per Census 2011, in India, out of the 121 Cr population, about 2.68 Cr persons are ‘disabled’ which is 2.21% of the total population. Out of these 2.68 Cr, 19 % of the population are hearing impaired.

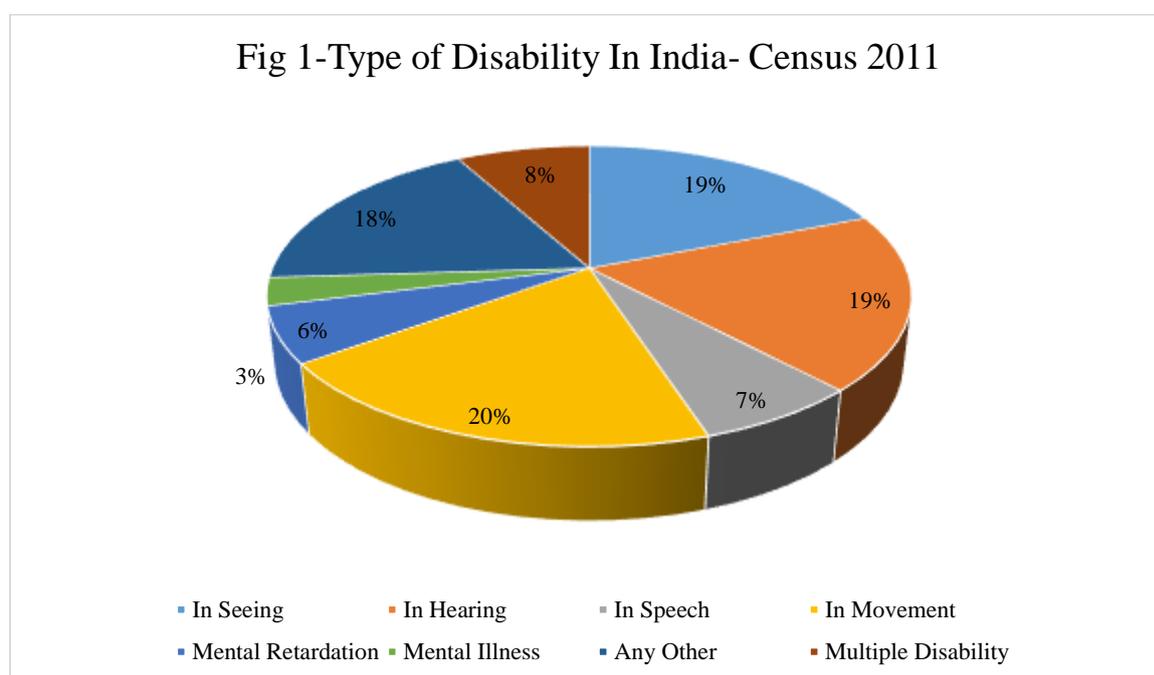


Fig 1- Type of Disability in India

In order to support this section of the population, Ministry of Social Justice and Empowerment, Government of India (GoI) started ADIP (Assistance to Disabled Persons for Purchase/Fitting of Aids/Appliances) Scheme with the main objective to assist the needy disabled persons in procuring durable, sophisticated and scientifically manufactured, modern, standard aids and appliances that can promote their social, psychological rehabilitation by reducing the effects of disabilities and enhance their economic potential.¹ The scheme is implemented through implementing agencies which is given financial assistance for purchase, fabrication and

¹ <https://disabilityaffairs.gov.in/content/page/adip.php>

distribution of such standard aids and appliances that are in conformity with the objectives of the scheme.

For this project which is being funded by Airport Authority of India (AAI), Artificial Limbs Manufacturing Corporation of India (ALIMCO) is the Implementing Agency. This project was started in the year 2017 with the objective of bringing children having congenital hearing loss to normal stream of life, by implantation of cochlear implant.

Tata Institute of Social Sciences (TISS) has conducted the Impact Assessment of this project in October'20.

Methodology

The population of this study was 100. The list of these 100 beneficiaries were provided by AAI and a sample of 30 was drawn through stratified random sampling. The strata considered were caste and gender.

Sr. No.	Gender	Number	Percent
1	Female	10	33.3
2	Male	20	66.7
Total		30	100.0

Sr. No.	Social Category	Number	Percent
1	General	10	33.3
2	OBC	14	46.7
3	SC	5	16.7
4	ST	1	3.3
Total		30	100.0

A semi-structured Interview-schedule was designed to collect data from the parents of the beneficiaries. Refer Appendix A for Interview Schedule.

Findings from the Study

Following are the findings from the assessment/Study:

- 1. More than half of the beneficiaries able to completely hear-** Approximately 57% of the beneficiaries can completely hear after the implant. As per the mother of one child who couldn't hear at all, the child didn't use the implant.

Sr. No.	Child Audibility after the Implant	Number	Percent
1	Completely	17	56.7
2	Partially	12	40.0
3	Can't hear at all	1	3.3
Total		30	100.0

- 2. One-third of the beneficiaries leading a normal life-** While one-third of the respondents felt that their child is leading a normal life, around 63% of the parents mentioned that their children can hear and understand but is unable to talk clearly or speak complete sentences.

Sr. No.	Life after implant	Number	Percent
1	Yes (Completely)	10	33.3
2	Yes (Partially)	19	63.3
3	No	1	3.3
Total		30	100.0

- 3. Satisfaction Level High among respondents-** While majority of the respondents (96.7%) were completely satisfied with the implant, 3.3% was not satisfied. However, the dissatisfied respondent admitted that the child didn't use the implant.

Sr. No.	Satisfaction about Implant	Number	Percent
1	Yes	29	96.7
2	No	1	3.3
Total		30	100.0

- 4. Maintenance of the implant tool a major issue –** While the implant has been effective for almost all the children, maintaining it has been very difficult for most of them. Considering 87% of the respondents falls below the income level of INR 1.2 lakhs per annum, the cost of the battery and repairing cost in case of any damage is very high.

- 5. Regular Speech Therapy is the game changer post implant-** After the implant, undergoing speech therapy, which is used to treat communication problem and speech disorder, helped the children a lot in speaking clearly. However, cost of undergoing therapy is too high for many parents.

Recommendation

Following are the major recommendation to further improve the effectiveness of the project:

- 1. Supporting the speech therapy and battery cost-** Support in bearing the battery cost and speech therapy may improve the effectiveness of the program. Undergoing speech therapy improves the communication problem to a great extent. However, paying for the therapy sessions is difficult for most of the respondents as they come from income level of less than INR 1.2 lakhs per annum. Similarly bearing the battery cost may prove to improve the effectiveness of the project.
- 2. Liasoning with repair service provider-** Around 26% respondents mentioned that it took 45 days to 2 months to get the damaged implant repaired and the child had to live without it for so long. It may be recommended that a tie-up can be done with the repairing service provider for better and quick service so that the beneficiary can make the best use of implant.

Conclusion

Overall, the study suggest that the project has been effective in giving the children from poor strata with hearing disability, a major support to communicate. While reaching the project objective of making the children lead a normal life might take few years, this initiative has instilled hope among parents that their children can be a part of the mainstream.

Case Study

Kadiyam Yamini



Kadiyam Yamini is a 7-year-old girl from a village of Vizianagram district of Andhra Pradesh. Her father is a worker at a goldsmith shop and earns INR 6000 per month. When the child was around 2 years old, the family started noticing that she doesn't speak. They took her to the doctor where it was diagnosed that she can't hear. In the year 2017, the parents got to know about the free Cochlear Implant surgery, for which they applied immediately. Their application was selected and the implant was done in 2018.

After the implant, an NGO named Shaksham started her speech therapy. There were gaps in the therapy because of Yamini's grandfather's death and now Covid 19. However, as per her speech therapist, her listening skills are excellent. She pays attention during her therapy sessions and has also started speaking words clearly. Her mother also attends the sessions so that she can help her daughter at home.

Yamini's mother and teacher believes that she will be able to lead a completely normal life after the completion of her speech therapy sessions.

Appendix A



1. Interviewing (Video Call) parents of 30 children (Selected through Stratified Random Sampling)
2. Observing 30 children (Video Call)

For Parents of beneficiaries (Total 30 parents to be interviewed)	
1. Date-	
2. Name-	
3. Relationship with child-	
4. Location-	
5. Contact Number-	
6. Child's Name-	
7. Child's gender-	M F Other
8. Child's Age (In Years at present)-	
9. Family Income (Per Annum in INR)-	a. Below 50,000 b. 50,001- 1,20,000 c. 1,20,001- 3,00,000 d. 3,00,001- 5,00,000 e. Above 5,00,000
10. Total number of family members –	
11. Father's Occupation-	
12. Mother's Occupation-	
13. Father's Education (Completed)-	a. Illiterate b. Primary Education c. Senior Secondary Education d. Higher Secondary Education e. Graduation f. Above Graduation
14. Mother's Education (Completed)-	g. Illiterate h. Primary Education i. Senior Secondary Education j. Higher Secondary Education k. Graduation l. Above Graduation
15. Religion-	a. Hindu b. Muslim

- c. Sikh
- d. Christian
- e. Buddhist
- f. Others (Mention)

16. Caste –
- a. SC
 - b. ST
 - c. OBC
 - d. General
 - e. Others

17. When was Cochlear Implant done? (Date)

18. Age of your child (In years) during the implant-
- a. Below 1 year
 - b. 1-2 years
 - c. 2-3 years
 - d. 3-4 years
 - e. 4-5 years
 - f. Above 5 years

19. In which Hospital was the Implant done?

20. How did you come to know about the Implant?
- a. Through ALIMCO
 - b. Through Hospital/doctor
 - c. Through Newspaper/posters
 - d. Through some awareness campaign
 - e. Others (Please mention)-

21. Were you aware of the type of Implant that was to be provided to the child?

Yes/No

If Yes, how did you know about the Implant Tool?

22. Can your child hear after the Implant?
- a. Completely
 - b. Partially
 - c. Can't hear at all
 - d. Other (explain)

23. Does your child lead a normal life after the implant?

- a. Yes (Completely)
- b. Yes (Partially)
- c. No

Interviewer should take brief explanation of the answer

24. Are you satisfied with the Implant? a. Yes b. No (Reason)
25. Did you pay for the treatment? a. Yes (Totally) b. Yes (Partially) c. No d. Other (Explain)
26. If the answer to above query is a or b, then How did you manage the remaining payment?
27. Any limitations/challenges in getting the implantation done? a. Yes (explain) b. No
28. Any suggestion for further improvement of this project.
29. Any further expectations from AAI (Funding Agency)?

Investigator's need to observe if the children can hear on Video Call and write their observation here:

Note for Investigator-

1. Please make sure that no one from the Implementation or Funding Agency is present with the parents during interview
2. Please make at least 3 case stories of children (beneficiary)
3. Please collect photograph of case stories with a written consent from their parents that they do not have any objection in providing the case stories and the photograph.



CI/SO/2017- 18/692. Shreelatha Tejavath Kommalu



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CI/SO/2017- 18/692. Shreelatha Tejavath Kommalu



Sr. no. 5.CI/SO/2017- 18/374. Attem Manusri d o Attem Ravi



Sr. no 24.CI/SO/2017- 18/578. Bharani Chander Goud s/o Balram Goud



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